GHD Limited

SPECIFICATION
of work to be done and materials to be used in carrying out the works shown on the accompanying drawings

I-Site/RWB1 Works

Project Specification

160 Rora Street, Te Kuiti, New Zealand
Project Ref: 12545999

Printed: 20 January 2023

masterspec

Specification built using Masterspec software
Project ID: 232682 - 281686

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1013 DOCUMENT CONTROL

1 DOCUMENT CONTROL

Document Control

1.1 PREPARED BY

Company:	~
Postal Address:	~
Street Address:	~
City:	~
Telephone:	~
Email:	~

1.2 DOCUMENT DETAILS

Project Name:	~
Project Number:	~
File Reference:	~
Client:	~
Client Contact:	~
Version:	~

1.3 REVISION CONTROL

Issue:	Outline / Developed Design / Building Consent / Construction / As Built
Revision:	~
Amendment Details:	~
Issued to:	~
Date of Issue:	~
Reviewed by:	~
Approved by:	~

1.4 AUDIT CONTROL

Date:	~
Author:	~
Approved by:	~

1220 PROJECT

1 GENERAL

This general section describes the project including:

- A description of the work
- Design construction safety
- Principal's Health & Safety matters
- Site description, features and restrictions
- Design parameters for design by contractor
- Archaeological discovery

1.1 READ ALL SECTIONS TOGETHER

Read all general sections together with all other sections.

1.2 DESCRIPTION OF THE WORK

~

1.3 RESTRICTED BUILDING WORK

This project includes Restricted Building Work.

1.4 NO RESTRICTED BUILDING WORK

This project does not include Restricted Building Work.

Design Construction Safety

1.5 DESIGN CONSTRUCTION SAFETY

The project designers are unaware of unusual or atypical features, which a reasonably experienced contractor may not be aware of, that may present a hazard or risk during a typical construction process. The Contractor is still required to undertake its own assessment, to determine if they consider there are any further safety matters and provide for these in carrying out the construction of the work.

1.6 DESIGN CONSTRUCTION SAFETY MATTERS

The project has the following unusual or atypical features, which a reasonably experienced contractor may not be aware of, that may present an unexpected hazard or risk during a typical construction process.

ITEM	COMMENT
~	~
~	~

Provide particular health and safety procedures and methods to mitigate these hazards or risks, and specifically include them as well as any other health and safety matters in the site Health and Safety Plan (refer to section 1260 PROJECT MANAGEMENT for Plan requirements). The Contractor is still required to undertake its own assessment, to determine if they consider there are further safety matters and provide for these in carrying out the construction of the work.

1.7 DESIGN CONSTRUCTION SAFETY REPORT

Refer to the separate project design construction safety report ~.

Provide particular health and safety procedures and methods to mitigate any hazards or risks in the report, and specifically include them as well as any other health and safety matters in the site Health and Safety Plan (refer to section 1260 PROJECT MANAGEMENT for Plan requirements). The Contractor is still required to undertake its own assessment, to determine if they consider there are any further safety matters and provide for these in carrying out the construction of the work.

Principal's Health & Safety Matters

1.8 PRINCIPAL'S KNOWN SITE HAZARDS

Site hazards known to the principal are:
~

1.9 PRINCIPAL'S SITE HEALTH AND SAFETY PLAN

Obtain a copy of the principal's site health and safety plan.

Site

1.10 SITE

The site consists of: ~
As shown on drawing: ~

1.11 LEGAL DESCRIPTION

The site of the works, the street address and the legal description are shown on the drawings.

1.12 EXISTING BUILDINGS

Existing buildings consist of: ~
Refer drawing(s): ~

1.13 EXISTING SERVICES

The following are the network utility services:
Electrical: ~
Communications: ~
Water: ~
Gas: ~
Stormwater: ~
Foul water: ~

The services are also shown on the drawings.

1.14 SITE FEATURES

~

Site environment - Durability

1.15 EXPOSURE ZONE

The exposure zone is to NZS 3604, Section 4 Durability, 4.2 Exposure zones and NZBC E2/AS1.
The site zone is: ~

Site environment - Wind

1.16 WIND DESIGN PARAMETERS - NON SPECIFIC DESIGN

The design wind pressures are to NZS 3604, Table 5.4 Determination of wind zone, up to and including Extra High Wind Zone.
Building wind zone ~ (refer to NZS 3604, table 5.4)

1.17 WIND DESIGN PARAMETERS - SPECIFIC DESIGN

The design wind pressures are to AS/NZS 1170.2.
SLS ~ Pa
ULS ~ Pa

Site environment - Seismic

1.18 EARTHQUAKE ZONE - NON SPECIFIC DESIGN

The zone is to NZS 3604, Section 5 Bracing design, 5.3 Earthquake bracing demand.
The earthquake zone is: ~

1.19 EARTHQUAKE - SPECIFIC DESIGN

The earthquake design is to NZS 1170.5, in particular the intent of NZS 1170.5, 1.2 **Determination of earthquake actions**.

~	Building type, importance level (to AS/NZS 1170.0, table 3.2)

Archaeological discovery

1.20 REPORT FINDING ANY ANTIQUITIES AND ITEMS OF VALUE

Report the finding of any fossils, antiquities and other items of value, to the Contract Administrator. All to remain undisturbed until approval is given for removal.

Pre-1900, items or evidence of human activity on the site, come under the Heritage New Zealand Pouhere Taonga Act 2014. If such items or evidence is discovered work must stop immediately and the Contract Administrator must be notified immediately. The site may be classified as an Archaeological Site under the Act, and the Contract Administrator or Owner must contact the Heritage New Zealand for authority to proceed.

Post-1900 items remain the property of the owner, pre-1900 items may remain the property of the owner or the Crown subject to what is found.
Known archaeological information relating to this site includes the following: -
~

1232 INTERPRETATION & DEFINITIONS

1 GENERAL

This general section relates to definitions and interpretation that are used in this specification.

Definitions

1.1 DEFINITIONS

Hold point:	A stage of the construction where the contract administrator and any other nominated person requires notice to be given that particular work is to be carried out. Work may not proceed on that particular part until the contract administrator and any other nominated person has advised that work can continue. A notice period of 2 Working Days is required unless stated otherwise.
Notification point:	A stage of the construction where the contract administrator and any other nominated person requires notice to be given that particular work is to be carried out. Work may continue and the contract administrator and any other nominated person may choose whether or not they wish to witness the particular work being carried out. A notice period of 2 Working Days is required unless stated otherwise.
Product:	A thing or substance produced by natural process or manufacture.
Proprietary:	Identifiable by naming the manufacturer, supplier, installer, trade name, brand name, catalogue or reference number.
Provide and fix:	"Provide" or "fix" or "supply" or "fix" if used separately mean provide and fix unless explicitly stated otherwise.
Required:	Required by the documents, the New Zealand Building Code or by a statutory authority.
Review:	Review by the contract administrator and other consultants is for general compliance only. Review does not remove the need for the contractor to comply with the stated requirements, details and specifications of the manufacturers and suppliers of individual components, materials and finishes. Neither can the review be construed as authorising departures from the contract documents.
Working day:	Working day means a calendar day other than any Saturday, Sunday, public holiday or any day falling within the period from 24 December to 5 January, both days inclusive, irrespective of the days on which work is actually carried out.
Workplace:	Workplace means the place where work is being carried out, or is customarily carried out, for a business or undertaking including any place where a worker goes, or is likely to be, while at work (under Health and Safety at Work Act 2015).

1.2 PERSONNEL

Principal:	The person defined as "Principal" in the conditions of contract.
Contractor:	The person contracted by the principal to carry out the contract.
Contract administrator:	The person appointed by the principal to administer the contract on the principal's behalf. Where no person has been appointed by the principal, it means the principal or the principal's representative.

1.3 ABBREVIATIONS

The following abbreviations are used throughout the specification:

AAMA	American Architectural Manufacturers Association
AS	Australian Standard
AS/NZS	Joint Australian/New Zealand Standard
ASTM	American Society for Testing and Materials
AWCINZ	Association of Wall and Ceiling Industries of New Zealand Inc.
BCA	Building Consent Authority
BRANZ	Building Research Association of New Zealand
BS	British Standard

COP	Code of practice
CSIRO	Commonwealth Scientific and Industrial Research Organisation
HERA	Heavy Engineering Research Association
LBP	Licensed Building Practitioner
MBIE	Ministry of Business, Innovation and Employment
MPNZA	Master Painters New Zealand Association Inc
NZBC	New Zealand Building Code
NZS	New Zealand Standard
NZS/AS	Joint New Zealand/Australian Standard
NZTA	New Zealand Transport Agency
NUO	Network Utility Operator
OSH	Occupational Safety and Health
PCBU	Person Conducting a Business or Undertaking (under Health and Safety at Work Act 2015)
RBW	Restricted Building Work
SARNZ	Scaffolding and Rigging New Zealand Inc
SED	Specific Engineering Design
TA	Territorial Authority
TNZ	Transit New Zealand (Transit New Zealand is now New Zealand Transport Agency NZTA - some specifications are still prefixed TNZ)

1.4 DEFINED WORDS

Words defined in the conditions of contract, New Zealand Standards, or other reference documents, to have the same interpretation and meaning when used in their lower case, title case or upper case form in the specification text.

1.5 WORDS IMPORTING PLURAL AND SINGULAR

Where the context requires, words importing singular only, also include plural and vice versa.

1232S1 EXPLANATION OF SCHEDULE SECTIONS

1 GENERAL

This general section provides an explanation of schedule sections and their relationship to general sections and work sections. Specific schedule sections contained within this specification are also identified.

1.1 EXPLANATION OF SCHEDULE SECTIONS

A schedule section identifies work sections that contain common requirements, as identified in the title of the schedule section. For example 1235S1 SCHEDULE OF SHOP DRAWINGS identifies work sections that have requirements for shop drawings. Details of the requirements are contained in the identified work sections with additional requirements contained in the general section 1235 SHOP DRAWINGS.

Some schedule sections are identified by the 4 digit CBI (Co-ordinated Building Information) number of the general section that they relate to, followed by the letter "S" followed by a numeral (1-9). The numeral allows for multiple schedule sections to be associated with the same general section.

Other schedule sections that do not share a common CBI number with a general section, have their own unique 4 digit CBI number, followed by the letter "S" followed by a numeral. These schedule sections contain additional subject content relating to the schedules and the identified work sections.

1.2 SCHEDULE SECTIONS

The following Schedule sections are contained within the specification:

1235S1	Schedule of Shop Drawings
1237S1	Schedule of Warranties
1238S1	Schedule of As Built Documentation
1239S1	Schedule of Operation & Maintenance Info
1270S1	Schedule of Samples & Prototypes
1270S2	Schedule of Spares & Maintenance Products
1278SR	Schedule Of Slip Resistance Testing

1233 REFERENCED DOCUMENTS

1 GENERAL

1.1 REFERENCED DOCUMENTS

Throughout this specification, reference is made to various New Zealand Building Code Compliance Documents (NZBC __), acceptable solutions (__ AS_) and verification methods (__ VM_) for criteria and/or methods used to establish compliance with the New Zealand Building Code.

Reference is also made to various standards produced by Standards New Zealand (NZS, AS/NZS, NZS/AS), overseas standards and to listed Acts, Regulations and various industry codes of practice and practice guides. The latest edition (including amendments and provisional editions) at the date of this specification applies unless stated otherwise.

It is the responsibility of the contractor to be familiar with the materials and expert in the techniques quoted in these publications.

Documents cited both directly and within other cited publications are deemed to form part of this specification. However, this specification takes precedence in the event of it being at variance with the cited documents.

1.2 DOCUMENTS

Documents referred to in the GENERAL sections are:

NZBC F5/AS1	Construction and demolition hazards
AS/NZS 1170.2	Structural design actions - Wind loads
NZS 1170.5	Structural design actions - Earthquake actions - New Zealand
AS/NZS 3012	Electrical installations - Construction and demolition sites
NZS 3109	Concrete construction
NZS 3114	Specification for concrete surface finishes
NZS 3602	Timber and wood-based products for use in building
NZS 3604	Timber-framed buildings
NZS 4210	Masonry construction: Materials and workmanship
NZS 4781	Code of Practice for Safety in Welding and Cutting
AS/NZS 5131	Structural steelwork - Fabrication and erection
NZS 6803	Acoustics - Construction Noise

Building Act 2004
Building Regulations 1992
Health and Safety at Work Act 2015
Health and Safety at Work (General Risk and Workplace Management) Regulations 2016
Health and Safety at Work (Hazardous Substances) Regulations 2017
Health and Safety in Employment Regulations 1995
New Zealand Building Code
Heritage New Zealand Pouhere Taonga Act 2014
Resource Management Act 1991
Smoke-free Environments Act 1990

WorkSafe NZ	Guidelines for the provision of facilities and general safety in the construction industry
WorkSafe NZ	Good Practice Guidelines - Excavation Safety
WorkSafe NZ	Scaffolding in New Zealand - Good Practice Guidelines

1234 DOCUMENTATION

1 GENERAL

This general section relates to documentation required by the Territorial Authority / Building Consent Authority for compliance with the New Zealand Building Code. It also includes documentation relating to:

- Substitutions
- Manufacturers' documents
- Branded work sections
- Care of construction documents
- Confidentiality of documents
- Receipt of construction documents

Building Consent Authority documentation

1.1 BUILDING CONSENT

Obtain the original building consent forms and documents from the owner and keep them on site, preserve the condition of consent forms and documents. Liaise with the building consent authority for all notices to be given and all inspections required during construction to ensure compliance. Return the consent form and documents to the owner on completion.

1.2 BUILDING CONSENT COMPLIANCE

It is an offence under the Building Act 2004

- to carry out any work not in accordance with the building consent.
- to carry out Restricted Building Work by anyone other than a Licensed Building Practitioner licensed for that type of work.

The resolution of matters concerning building code compliance to be referred to the contract administrator for a direction and then if required to the BCA for consent.

Where any alteration is requested by the territorial authority or any other authority, do not undertake such alteration until the matter has been referred to the contract administrator for direction.

1.3 PROJECT PERSONNEL

Provide names and contact details of the contractor's key personnel and tradespersons who are involved with the project. Review the list once a month and reissue it if changes have been made.

Licensed Building Practitioner documentation

1.4 LICENSED BUILDING PRACTITIONERS

Provide LBP details. Provide names, LBP numbers, areas of practice and contact information. Provide this information to the BCA before commencing work on the Restricted Building Work in the form required by the BCA. Advise the BCA of any change to an LBP previously advised.

Include the following as applicable

- Site LBP
- Carpenter
- Foundations 1 Concrete foundation walls and concrete slab-on-ground constructor
- Foundations 2 Concrete or timber pile foundations constructor
- Bricklaying and block laying 1 Brick / masonry veneer
- Bricklaying and block laying 2 Structural masonry - Bricklayer / Blocklayer
- Roofing 1 Concrete / clay tile roofer
- Roofing 2 Profiled metal roofer and/or wall cladding installer
- Roofing 3 Metal tile roofer
- Roofing 4 Membrane roofer
- Roofing 5 Torch on membrane roofer
- Roofing 6 Liquid membrane roofer
- Roofing 7 Shingle / slate roofer
- External plastering 1 Solid plasterer
- External plastering 2 Proprietary Plaster Cladding Systems (PPCS) plasterer

Also provide names and contact details of the following

- Registered drainlayer

- Registered plumber
- Registered gasfitter
- Registered electrician

1.5 RECORD OF WORK

Where Restricted Building Work is carried out by a LBP, on completion provide a Record of Work. Provide copies to both the BCA and the Contract Administrator.

Compliance information

1.6 DOCUMENTATION REQUIRED FOR CODE COMPLIANCE

Information may be required either as a condition of the contract documents or as a condition of the building consent. It may include the following:

- Applicators approval certificate from the manufacturer / supplier
- Manufacturer's / supplier's warranty
- Installer / applicator's warranty
- Producer Statement (PS1) - Design
- Producer Statement (PS3) - Construction from the applicator / installer
- Producer Statement (PS4) - Construction review from an acceptable suitably qualified person

Refer to the general sections for the requirements for compliance information to be provided by the contractor.

Refer to the building consent for the requirements for compliance information to be provided by the contractor.

Obtain required documents from the relevant parties for delivery to the contract administrator after the final inspection has been carried out by the BCA.

1.7 PRODUCER STATEMENTS

When producer statements verifying construction are required, provide copies to both the Building Consent Authority and the Contract Administrator. Provide producer statements in the form required by the BCA.

Residential building contract

1.8 CHECKLIST

If requested provide evidence of the prescribed checklist given to the residential client.

1.9 DISCLOSURE STATEMENT

If requested provide evidence of the disclosure statement given to the residential client.

1.10 BUILDING CONTRACT

If requested provide evidence of the written building contract that the residential customer has signed.

1.11 DOCUMENTATION REQUIRED ON COMPLETION

As soon as practicable after completion of the building work, provide in writing the following information and documentation to the client and the relevant territorial authority.

Information and documentation relating to:

- The identity of the building contractor and the subcontractors who carried out the work.
- Maintenance requirements for any products incorporated in the building.

If applicable also provide any guarantee or insurance obtained by the building contractor in relation to the building work.

Substitutions

1.12 ACCEPTABLE PRODUCT/MATERIAL SUPPLIERS

Where a product or material supplier is named in SELECTIONS, the product/material must be provided by the named supplier. Where more than one named supplier, any one of the named suppliers will be acceptable.

1.13 NO SUBSTITUTIONS

Substitutions are not permitted to any of the specified products and systems listed in a section unless specified otherwise. If a product is not available then immediately contact the contract administrator for direction.

1.14 PROPOSED SUBSTITUTIONS

Substitution of products or systems contained within branded work sections is not allowed. The contractor may propose substitutions to products within non branded work sections, when the contractor has determined that the proposed substitution is an alternative to the specified product. The Contract administrator is not bound to accept any substitutions. Submit a draft proposal detailing the substitution to the contract administrator before proceeding with full notification.

1.15 NOTIFICATION OF SUBSTITUTIONS

Notify the contract administrator of proposed substitution of specified products. Notification to include but not be limited to:

- Product identification
- Manufacturer's name, address, telephone number, website and email address
- Detailed comparison between the properties and characteristics of the specified product and the proposed substitution
- Statement of NZBC compliance including durability
- Details of manufacturer warranties

Plus an assessment of:

- Any changes required to the programme including any extension of time required
- Any consequential effects of the proposed substitution
- Any effect the substitution may have on Health & Safety requirements
- Allowance for time and cost for re-design and documentation (if applicable)
- Allowance for time and cost for obtaining an amendment to the Building Consent (if applicable)
- Any change in cost associated with the proposed substitution

and if requested:

- All current manufacturer's literature on the product
- Accreditations and appraisals available
- Reference standards
- Product limitations
- Samples
- List of existing installations in the vicinity of the project

1.16 ACCEPTANCE OF SUBSTITUTIONS

Acceptance of any proposed substitutions will be given in writing by the contract administrator.

Amendments to issued Building Consent

1.17 CONTRACTOR AMENDMENTS TO BUILDING CONSENT

Where the contractor has sought acceptance of a substitution or a variation which is for the contractor's own convenience and the substitution or variation requires an amendment to the Building Consent, the contractor must apply for and obtain the required amendment.

The contractor must:

- Obtain approval for substitutions from the contract administrator.
- Prepare and provide to the BCA all documentation required for the amendment.
- Pay all fees and other costs associated with this amendment.
- Where the amendment affects other approved plans, also amend those plans.

1.18 PRINCIPAL AMENDMENTS TO BUILDING CONSENT

Where the principal is proposing a substitution or a variation which requires an amendment to the Building Consent, the contractor must provide to the principal information that the contractor has that is required for the amendment.

The principal will:

- Prepare and provide to the BCA all documentation required for the amendment.
- Pay all fees and other costs associated with this amendment.
- Where the amendment affects other approved plans, also amend those plans.

Manufacturer's documents

1.19 MANUFACTURER'S AND SUPPLIER'S INSTALLATION REQUIREMENTS

Manufacturer's and supplier's requirements, instructions, specifications or details mean those issued by them for their particular product, material or component and are the latest edition.

1.20 CONTRACTOR TO OBTAIN CURRENT DOCUMENTATION

Where manufacturer’s installation, application and execution requirements are referred to in this specification, the Contractor must ensure they are fully aware of this documentation. Whenever necessary obtain and keep on site the relevant latest version of such documentation and make it available to workers carrying out that part of the work.

1.21 DOCUMENTATION PROVIDED FOR BUILDING CONSENT

Documentation including manufacturer’s installation instructions, specification data sheets, producer statements, BRANZ and similar appraisals may be included in the issued Building Consent. These documents have been provided only to demonstrate compliance with the NZBC.

Branded work sections

1.22 BRANDED PRODUCTS / SYSTEMS

Where branded products and systems are specified, all products and components of the system must be as per the specification.

1.23 CROSS REFERENCED WORK SECTIONS

If any related work is cross referenced to a generic work section, but only the equivalent branded section is included in the specification, use that branded section. Confirm with the contract administrator if there is any doubt.

Care of construction documents

1.24 CONSTRUCTION ISSUE

Take receipt of the plans, specifications and other documents issued “for construction”. Keep at least one copy on site available for use by all on site workers. Keep a record of copies provided to others including subcontractors. Protect the documents as appropriate. Obtain replacement copies for documents that have become damaged.

1.25 REVISIONS TO CONSTRUCTION ISSUE

Where revised plans and other documents are issued ensure that superseded documents are deleted from the working sets. Ensure that subcontractors are provided with amended documents. Delete superseded documents by either:

- removing them from the working copy of the construction issue; or
- marking them as superseded

1.26 RETURN DOCUMENTS ISSUED FOR CONSTRUCTION

On completion of the contract works:

- Keep such copies of the plans, specification and other documents as reasonably required for contractor’s record purposes.
- Retrieve all other copies no longer required by parties.
- Agree method of disposal of such documents with the Contract Administrator.

The Contract Administrator will advise whether such documents shall be:

- delivered to the Contract Administrator/Owner; or
- disposed of by normal waste disposal methods; or
- disposed of by secure document disposal methods.

Confidentiality of documents

1.27 CONFIDENTIALITY OF DOCUMENTS

Documents shall not be given or copied to others who do not require them for carrying out services required for the construction of the works. Documents are only to be used for the contract. Maintain confidentiality of documents.

2 SELECTIONS

Receipt of construction documents

2.1 INITIAL ISSUE & REVISIONS - HARD COPIES

Initial issue: ~
Revisions: ~

2.2 DOCUMENT RECEIPT - HARD COPIES

Hard copies of plans, specifications and other documents issued for construction shall be ~

2.3 DOCUMENT RECEIPT - ELECTRONIC DOCUMENTS

Electronic documents issued for construction shall be ~

1235 SHOP DRAWINGS

1 GENERAL

This general section relates to common requirements for the preparation, submission and review of shop drawings referred to in this specification and in separate specifications/documents relating to this project. Detailed requirements for shop drawings for particular parts of the work are included in the specific work section.

1.1 SCHEDULE SECTION

Refer to 1235S1 SCHEDULE OF SHOP DRAWINGS for work sections contained in this specification that have requirements for shop drawings.

1.2 SHOP DRAWING FORMAT

Prepare shop drawings at appropriate scales to enable good legibility. Unless otherwise specified in a work section, submit shop drawings in the format as listed in SELECTIONS.

1.3 PROGRAMME FOR SHOP DRAWINGS

Allow time in the programme for the preparation, coordination and review of shop drawings. Allow also for such resubmission and further review as may be required prior to fabrication. No extension of time will be allowed for resubmission and further review.

1.4 COMMUNICATION WITH SHOP DRAWING DETAILER

Agree and arrange for such direct contact as is appropriate between detailer, consultant and others whose input may be required in the preparation of the shop drawings. Such direct communication does not relieve the contractor of the need to carry out their own coordination and check of shop drawings.

1.5 CONTRACTOR COORDINATION OF SHOP DRAWINGS

Before submitting the shop drawings for review, carry out coordination to ensure that allowance has been made for all other parts of the work that relate to the work detailed in the shop drawings.

1.6 COORDINATION WITH SITE MEASURE

The contractor is solely responsible for coordination of shop drawing dimensions with site measurements. The reviewer's dimensional review is limited to visual/aesthetic matters only

1.7 SHOP DRAWING REVIEW

Submit shop drawings to the named reviewers for review, in due time to ensure conformance with the contract programme.

- Where no time is stated in a specific section allow 10 working days for review by the reviewer. Where a large number of drawings are involved more time will be necessary.
- Where no person is named as the reviewer, submit the shop drawings to the contract administrator.

Shop drawing review indicates only that the shop drawing interpretation of the design concept has been reviewed without the need for further modification, other than the corrections indicated by the reviewer.
The reviewer may advise that:

- The shop drawings have been reviewed and work may proceed; or
- The shop drawings have been reviewed and work may proceed subject to notes, annotations or comments provided; or
- The shop drawings have been reviewed and work may proceed subject to notes, annotations or comments provided. Resubmitted revised shop drawings shall be provided for the record, or
- Work may not proceed. Revise and resubmit shop drawings

1.8 RESPONSIBILITY

Review of shop drawings does not relieve the contractor of responsibility for the correctness of the shop drawings, site dimensions, the overall design, coordination and performance, or for ensuring the work is carried out in compliance with the contract documents. It does not remove the need for the contractor to comply with the stated requirements, details and specifications of the manufacturers and suppliers of individual components, materials and finishes. Review cannot be construed as authorising departures from the contract documents.

1.9 RESUBMISSION OF SHOP DRAWINGS

Reviewed drawings which are required to be resubmitted to correct comments or notations indicating where the shop drawings are at variance with the contract documents, are to be modified and resubmitted to the reviewer for re-review. Allow 5 working days for re-review by the reviewer.

1.10 WORK MAY PROCEED

Before proceeding with any fabrication, installation or erection, advice must be obtained from the named reviewers that work may proceed. Where no named reviewer has been nominated advice must be obtained from the contract administrator.

1.11 BIM MODEL

BIM (Building Information Model) is being used for the construction of the works. Refer to SELECTIONS for details of the BIM model and the information required to be included.

2 SELECTIONS

2.1 SHOP DRAWING FORMAT

Submit the shop drawings in the following format

	Format/Size
Hardcopy	~
Electronic copy	PDF
CAD file	~

2.2 BIM (BUILDING INFORMATION MODEL) FORMAT

~

1235S1 SCHEDULE OF SHOP DRAWINGS

1 GENERAL

This schedule section identifies work sections in the specification that have requirements for the preparation, submission and review of shop drawings.

1.1 ASSOCIATED SECTIONS

Read in conjunction with:

- 1232S1 EXPLANATION OF SCHEDULE SECTIONS
- 1235 SHOP DRAWINGS
- Identified Work Sections

Shop drawings

1.2 SHOP DRAWINGS

Refer to the following sections:

5214R	Resco Compact Laminate Toilet & Shower Partitions
5231	Interior Doors & Windows
5311AC	Autex Carbon Neutral Acoustic Ceiling Solutions

1.3 SHOP DRAWINGS - ADDITIONAL ITEMS

Refer to separate documentation for shop drawing requirements not contained within this specification.

1237 WARRANTIES

1 GENERAL

This general section refers to the requirements for warranties/guarantees, referred to within this specification and referred to within separate specifications/documents relating to this project. It includes:

- Warranties for parts of the work required by the principal in a required form
- Installer/applicator warranties for parts of the work in the installer's/applicator's standard form
- Manufacturer/supplier warranties provided with products, appliances and the like in the manufacturer's/supplier's standard form
- Guarantees provided by contractor in the contractor's standard form

These guarantees/warranties are in addition to any warranties, implied warranties, or guarantees that are required by the Building Act, the Building Regulations, or the building consent.

1.1 SCHEDULE SECTION

Refer to 1237S1 SCHEDULE OF WARRANTIES for work sections contained in this specification that have requirements for warranties.

Warranties

1.2 PROVIDE WARRANTIES

Provide executed warranties in favour of the principal in respect of, but not limited to, materials, components, service, application, installation and finishing called for in that specified section of work. The terms and conditions of the warranty in no case negate the minimum remedies available under common law as if no warranty had been offered. Failure to provide the warranty does not reduce liability under the terms of the warranty called for in that specified section of work.

- Conform to the WARRANTY AGREEMENT form included in the specification/conditions of contract.
- Commence warranties from the date of practical completion of the contract works (unless otherwise stated).
- Maintain their effectiveness for the times stated.
- Provide executed warranties prior to practical completion.

1.3 WARRANTIES - INSTALLER/APPLICATOR

Where installer/applicator warranties are offered covering execution and materials of proprietary products or complete installations, provide such warranties to the contract administrator. These warranties may be provided in lieu of the warranties that are otherwise required provided that these warranties are subject to similar conditions and periods.

Provide warranties in favour of the principal. The terms and conditions of such warranties in no case negate the minimum remedies available under common law as if no warranty had been offered. Failure to provide the warranty does not reduce liability for execution and materials for that part of the work.

1.4 WARRANTIES - MANUFACTURER/SUPPLIER

Where warranties are offered covering materials, equipment, appliances or proprietary products, provide all such warranties to the contract administrator.

Provide warranties in favour of the principal. The terms and conditions of such warranties in no case negate the minimum remedies available under common law as if no warranty had been offered. Failure to provide the warranty does not reduce liability for execution and materials for that part of the work.

Submission

1.5 REVIEW BY CONTRACTOR

Obtain the warranties from the installers, applicators, manufacturers and suppliers at the earliest possible date and review to ensure that they are correctly filled out and executed. Where warranties are executed as a deed, ensure that a duplicate copy is provided for execution by the owner/principal. Keep safe and secure until required for submission.

1.6 WARRANTIES - REQUIRED BY BUILDING CONSENT AUTHORITY

Obtain copies of warranties required as a condition of the building consent in the form required for submission to the BCA. Keep safe and secure until required at the time of the BCA final inspection and Code Compliance Certificate.

1.7 WARRANTIES - REQUIRED BY CONTRACT

Obtain copies of warranties listed in the contract documents. Provide all warranties at the same time. If the project has an operations and maintenance documentation provision, present the warranties with the operations and maintenance information. If no operations and maintenance documentation provision exists, present the warranties to the contract administrator in a loose-leaf binder with a contents index suitably labelled and including the project name and details. Provide a title on the binder edge "Warranties for (project name)"

1.8 WARRANTIES - SUBMISSION NZIA SCC CONTRACT

Refer to the contract conditions for any requirement relating to the time for submission for warranties and guarantees. Submit all warranties to the architect no later than the date of the contractor's advice of achieving practical completion.

1.9 WARRANTIES - SUBMISSION NZS3902:2004 CONTRACT

Refer to NZS 3902 Housing, alterations and small buildings contract. Submit warranties to the owner no later than the time the builder gives Notice of final completion to the owner.

1.10 WARRANTIES - SUBMISSION NZS3910:2013 CONTRACT

Refer to NZS 3910 Conditions of Contract for building and civil engineering construction, clauses 11.5 and 11.6 for requirements relating to the time for submission of warranties and guarantees. Submit all warranties/guarantees to the engineer no later than the date that the contractor notifies that it believes the contract works qualify for practical completion.

1.11 WARRANTIES - SUBMISSION NZS3915:2005 CONTRACT

Refer to NZS 3915 Conditions of contract for building and civil engineering construction (where no person is appointed to act as engineer to the contract), clause 11.5 for requirements relating to the time for submission for warranties and guarantees. Submit all warranties/guarantees to the principal before or at the time of the issue of the provisional defects liability certificate the end of the defects liability period.

1.12 WARRANTIES - SUBMISSION NZS3916:2013 CONTRACT

Refer to NZS 3916 Conditions of contract for building and civil engineering – Design and construct, clauses 11.5 and 11.6 for requirements relating to the time for submission of warranties and guarantees. Submit all warranties/guarantees to the engineer no later than the date that the contractor notifies that it believes the contract works qualify for practical completion.

2 SELECTIONS

Project warranties / guarantees

Guarantees - Contractor - Master Build Services Ltd

2.1 MASTER BUILD SERVICES LTD - 10 YEAR KIWI GUARANTEE

Provide a 10 Year Kiwi Guarantee, include all costs in the contract price. Detach the guarantee application form from the guarantee agreement. Complete the form, obtain all required signatures (builder and owner). Send the completed form to Master Build Services for approval along with a copy of the building contract (include a full scope of work for any addition/alteration work), prior to any work commencing. Obtain the Master build Services acceptance letter and provide this to the owner along with the guarantee document. On completion of the building work complete the notice of practical completion form, obtain all required signatures (builder and owner) and forward the form to Master Build Services.

2.2 MASTER BUILD SERVICES LTD - 10 YEAR STANDARD GUARANTEE

Provide a 10 Year Standard Guarantee (including all optional cover), include all costs in the contract price. Detach the guarantee application form from the guarantee agreement. Complete the form, obtain all required signatures (builder and owner). Send the completed form to Master Build Services for approval along with a copy of the building contract (include a full scope of work for any addition/alteration work), prior to any work commencing. Obtain the Master build Services acceptance letter and provide this to the owner along with the guarantee document. On completion of the building work complete the notice of practical completion form, obtain all required signatures (builder and owner) and forward the form to Master Build Services.

2.3 MASTER BUILD SERVICES LTD - 10 YEAR PREMIUM GUARANTEE

Provide a 10 Year Premium Guarantee (including all optional cover), include all costs in the contract price. Detach the guarantee application form from the guarantee agreement. Complete the form, obtain all required signatures (builder and owner). Send the completed form to Master Build Services for approval along with a copy of the building contract (include a full scope of work for any addition/alteration work), prior to any work commencing. Obtain the Master build Services acceptance letter and provide this to the owner along with the guarantee document. On completion of the building work complete the notice of practical completion form, obtain all required signatures (builder and owner) and forward the form to Master Build Services.

Guarantee - Contractor - New Zealand Certified Builders Association

2.4 HALO - 10 YEAR RESIDENTIAL GUARANTEE INSURANCE

Provide the Halo 10 year residential guarantee insurance application and obtain all required signatures. Submit the application to the insurer along with payment of the premium prior to the commencement of construction. Provide the application acceptance confirmation and policy document to the owner.

Weathertightness and watertightness warranty

2.5 WEATHERTIGHTNESS AND WATERTIGHTNESS WARRANTY

A warranty is required from the contractor for a minimum period of 2 years, covering the weathertightness of the complete building envelope and the watertightness of all liquid supply and disposal systems and fittings. This general warranty is in addition to any specific warranties required.

Provide this warranty in favour of the principal. The terms and conditions of this warranty in no case negate the minimum remedies available under common law as if no warranty had been offered. Failure to provide the warranty does not reduce liability for execution and materials for that part of the work.

- Conform to the standard form WARRANTY AGREEMENT included in the contract documents.
- Commence the warranty from the date of Practical Completion.
- Maintain its effectiveness for the time stated.

1237S1 SCHEDULE OF WARRANTIES

1 GENERAL

This schedule section identifies work sections in the specification that have requirements for warranties.

1.1 ASSOCIATED SECTIONS

Read in conjunction with:

- 1232S1 EXPLANATION OF SCHEDULE SECTIONS
- 1237 WARRANTIES
- Identified Work Sections

Warranties

1.2 WARRANTIES

Refer to the following sections:

5133BL	Bestwood Wall Linings
5133S	Seratone Panels By Laminex
5214R	Resco Compact Laminate Toilet & Shower Partitions
5311AC	Autex Carbon Neutral Acoustic Ceiling Solutions
5511LC	Laminex™ Cabinetry
5517LB	Laminex Benchtops
6411J	Jacobsen Vinyl Surfacing
6700R	Resene Painting General
6746D	Dulux Powder & Industrial Coatings
6758AA	Autex Acoustic Wall Coverings, Panels & Tiles

1.3 PROJECT WARRANTIES

Refer to section 1237 WARRANTIES for project warranties.

1.4 WARRANTIES - ADDITIONAL ITEMS

Refer to separate documentation for warranties not contained within this specification.

1237WA WARRANTY AGREEMENT

1 SPECIFICS

1.1 PARTIES TO THE WARRANTY AGREEMENT

Principal: ~
.....

Contractor: ~
.....

Warrantor: ~
.....

1.2 BACKGROUND

The principal has entered into a contract with the contractor for carrying out the contract works. The warranted works / materials are part of the contract works. The contractor has agreed to arrange for the provision of a warranty in respect of the warranted works / materials for the warranty period on the terms set out in this warranty. The warrantor has agreed to provide a warranty in respect of the warranted Works / materials for the warranty period on the terms set out in this warranty agreement.

1.3 LOCATION

Project name: ~
.....

Project address: ~
.....

1.4 WARRANTED WORKS

Warranted works: ~
.....

Warranty period: ~ years from the date of practical completion of the contract works.

1.5 WARRANTED MATERIALS

Warranted materials: ~
.....

Warranty period: ~ years from the date of practical completion of the contract works.

2 WARRANTY TERMS

2.1 WORKS ARE AS REQUIRED IN THE CONTRACT

The warrantor warrants to the principal that the warranted work performed /materials supplied shall be as required in the contract. If not otherwise specified the work shall be of good trade practice with materials and fittings of merchantable quality.

2.2 WARRANTY ADDITIONAL TO OTHER OBLIGATIONS

This warranty shall be in addition to and shall not derogate from any manufacturer's warranty or any warranty implied by law, or any contract defects liability obligations, attaching to any part of the warranted works.

2.3 WARRANTOR TO REMEDY DEFECTS

The warrantor agrees that if within the warranty period, the warrantor is advised by the principal in writing of any defect in the warranted works / materials for which the warrantor is liable under the terms of this warranty, the warrantor will promptly take steps to remedy the defect / replace defective materials.

2.4 CARRYING OUT REMEDIAL WORK / REPLACEMENT OF DEFECTIVE MATERIALS

Any remedial work / replacement of defective materials which the warrantor is liable to undertake / provide under this warranty shall be carried out:

- to the standard required by the contract,
- in a prompt and timely manner,
- without unnecessary inconvenience to any occupants,
- at the warrantor's cost,
- subject to reasonable access being provided to the warrantor for the purpose of carrying out the remedial work.

2.5 WHERE COST OF REPLACEMENT IS OUT OF PROPORTION TO THE DEFECT

Where the cost of replacement of work and/or materials is out of all proportion to the consequences of the defect, or where the defect may not be reasonably capable of rectification without substantial expense which is out of all proportion to the cost of the contract works, the warrantor may:

- where the defect or defective material is reasonably rectified by repair rather than by replacement, the warrantor's obligation under this warranty shall be only to repair or otherwise make good the defect; or
- propose reasonable monetary compensation in lieu of remedying the defect; or
- propose a combination of both repair and compensation.

2.6 PRINCIPAL SHALL CONSIDER REASONABLE PROPOSALS

The principal must consider the warrantor's reasonable proposals and the parties shall endeavour in good faith to reach agreement. Where agreement cannot be reached, the dispute shall be resolved in accordance with the disputes clause in this warranty.

2.7 FAILURE BY WARRANTOR TO PERFORM REMEDIAL WORK

If the warrantor fails to promptly, adequately and satisfactorily carry out the remedial work or to propose acceptable repair/compensation, the principal may then arrange for the remedial work to be carried out by others.

If the warrantor fails to promptly, adequately and satisfactorily provide replacement materials or to propose acceptable repair/compensation, the principal may then arrange for the replacement materials to be supplied by others.

The principal shall first give the warrantor 10 working days notice, or such other reasonable time as agreed by the principal, to carry out and complete the remedial work / supply replacement materials. If the warrantor does not complete this work / supply replacement materials within the time, the principal shall then advise the warrantor in writing that the work will be carried out / materials will be supplied by others.

In such an event the warrantor is not released from obligations under this warranty, which continues in full force and effect, except in respect of the defect remedied / materials supplied by the principal or by another person contracted by the principal. The reasonable cost of the remedial work carried out by such other persons including all reasonable costs of the principal is to be paid to the principal by the warrantor on demand.

2.8 WARRANTOR NOT LIABLE FOR

The principal agrees that the warrantor is not liable for any defect or damage caused by any of the following:

- Wilful act or negligence of the principal or any person other than the warrantor.
- Fire, explosion, earthquake, war, subsidence, slips, faulty materials or workmanship other than caused by the defect in the warranted work.
- Any force of nature which the warrantor could not have reasonably foreseen.
- Any neglect or unnecessary delay by the principal in giving notice to the warrantor of a defect in the warranted works becoming apparent.
- Design faults, errors or discrepancies, unless the warrantor undertook the design of the part of the warranted works that is the subject of the defect.
- Use of the Warranted Works by the Principal or other person in any manner or for any purpose not being the intended manner of use or purpose of the Warranted Works.
- Failure by the principal or other persons to maintain the warranted works in accordance with good practice and any manufacturer's stated or recommended instructions or requirements.
- Fair wear and tear.

2.9 WARRANTY MAY BE ASSIGNED

The principal may assign the benefit of this warranty to any person.

2.10 DISPUTES

Any dispute between the principal and the warrantor arising out of this warranty is to be referred to arbitration before a sole arbitrator. If within 15 Working Days of notice of dispute, the principal and the warrantor cannot agree upon a single arbitrator, either party may request the president of the Arbitrators and Mediators Institute of New Zealand Incorporated (AMINZ) to appoint an arbitrator.

3 SIGNATORIES

3.1 SIGNED BY THE WARRANTOR

....
Signed Date

.....
Print name of person(s) authorised to sign

....
Signed by witness, include occupation and address Date

3.2 SIGNED BY THE PRINCIPAL

....
Signed Date

.....
Print name of person(s) authorised to sign

....
Signed by witness, include occupation and address Date

3.3 NOTE

The warranty shall be executed by the warrantor and the principal in the manner required for execution of a deed. In the case of a natural person, the person shall sign and their signature shall be witnessed by another person, a witness must not be a party to the deed.
Sign the warranty on behalf of a company by having 2 or more directors sign, or if there is only 1 director, by that director whose signature must be witnessed, or if the constitution of the company so provides, a director, or other person or class of person(s) whose signature(s) must be witnessed, or by 1 or more attorneys appointed by the company in accordance with section 181 of the Companies Act 1993.
Execute the warranty on behalf of a body corporate (other than a company) by affixing its seal, which shall be attested in the manner provided for in the rules of, or applicable to, the body corporate. If signing for another type of entity for example an incorporated society, trust, school board etc. follow the protocol required for the execution of a deed.

1238 AS BUILT DOCUMENTATION

1 GENERAL

This general section relates to common requirements for the preparation, submission and review of as built documentation referred to within this specification and referred to within separate specifications/documents relating to this project. Detailed requirements for as built documentation for particular parts of the work may be included in specific work sections.

1.1 SCHEDULE SECTION

Refer to 1238S1 SCHEDULE OF AS BUILT DOCUMENTATION for work sections contained in this specification that have requirements for as built documentation.

1.2 AS BUILT DOCUMENT REQUIREMENTS

Where requirements for the as built documents and records are not stated in a specific section, they shall include:

As built drawings recording:

- The actual positions as constructed of all sewer, stormwater, sanitary plumbing, piped and ducted services, electrical and mechanical services.
- Inverts and locations of services at key points within the building and at the property lines.
- Dimension services in relation to the structure and building grid lines.
- Ductwork, piping, conduit and equipment, including such items provided for future use.
- Depth of various elements of foundations in relationship to the ground floor level
- Field changes of dimensions
- Other significant deviations and changes which are concealed in construction and cannot be identified by visual inspection
- Access doors and panels

Records of:

- Products and materials selected for alternatives specified
- Approved substitutions and accepted alternatives
- Other approved changes and deviations to items specified.

1.3 PROVISIONAL AS BUILT DOCUMENTS

Prior to practical completion provide provisional/draft as built documents in sufficient detail to allow the principal to operate, maintain, adjust and re-assemble the contract works and to allow for review by the reviewer. Where no named reviewer has been nominated, submit the as built documentation to the contract administrator. Submit in hard copy and electronic form.

1.4 AS BUILT DOCUMENT REVIEW

As built document review indicates only that the reviewer is satisfied that the documents are legible. The review is not a check of the accuracy or completeness of the documents, however the reviewer may comment on any aspect of the documentation and require the documents to be revised and resubmitted. Review of as built documents does not relieve the contractor of responsibility for their correctness.
Where no time is stated in a specific section, allow 10 working days for review by the reviewer. Where a large amount of documentation is involved more time will be necessary.

1.5 COMPLETE AS BUILT DOCUMENTS

Prior to the end of the defects notification/liability period, provide complete as built documents reflecting any review requirements, with all Information of good quality and properly titled, numbered, cross-referenced and dated. Provide documents in sufficient detail to allow the principal to operate, maintain, adjust and re-assemble the contract works. Submit in hard copy and electronic form to the contract administrator.

1.6 AS BUILT DOCUMENTS - ELECTRONIC COPY

Provide an electronic copy of the as built documents in the following format:

Drawings:	PDF format (in addition provide DWG files if available)
Other documents:	PDF format

1238S1 SCHEDULE OF AS BUILT DOCUMENTATION

1 GENERAL

This schedule section identifies work sections in the specification that have requirements for the submission of as built documentation.

1.1 ASSOCIATED SECTIONS

Read in conjunction with:

- 1232S1 EXPLANATION OF SCHEDULE SECTIONS
- 1238 AS BUILT DOCUMENTATION
- Identified Work Sections

As built documents

1.2 AS BUILT DOCUMENTS

Refer to the following sections:

5311AC Autex Carbon Neutral Acoustic Ceiling Solutions

1.3 AS BUILT DOCUMENTS - ADDITIONAL ITEMS

Refer to separate documentation for as built documentation requirements not contained within this specification.

1239 OPERATION & MAINTENANCE

1 GENERAL

This general section relates to operation and maintenance (O&M) documentation referred to within this specification and referred to within separate specifications/documents relating to this project. This documentation is required by the principal so that they can operate and maintain the contract works.

1.1 SCHEDULE SECTION

Refer to 1239S1 SCHEDULE OF OPERATION & MAINTENANCE INFO for work sections contained in this specification that have requirements for:

- Information for operation and maintenance
- Operation and maintenance manuals
- Maintenance contract proposals

Operation and maintenance documents

1.2 OPERATION AND MAINTENANCE INFORMATION - BUILDING ACT

Provide in writing the information and documentation prescribed by regulations made under the Building Act, to the owner/principal and the relevant territorial authority.

1.3 OPERATION AND MAINTENANCE INFORMATION

Provide operation and maintenance documentation necessary to operate and maintain the works. This documentation is to include:

- Contractors name and contact details.
- A complete list of subcontractors' names, addresses and telephone numbers noting which portions of the contract each provided.
- A complete list of equipment and appliances including serial numbers, manufacturers' names and sources of supply.
- Copies of all manufacturers' and suppliers' product literature containing maintenance requirements/instructions, for any products in the building work.
- Information for operation and maintenance as required by work sections.
- Operation and maintenance manuals as required by work sections.
- Maintenance contract proposals as required by work sections.
- Final as built documents.
- Originals of all warranties and guarantees properly executed.
- Other information listed or referred to in this general section.
- Operation and maintenance information required by other project documents.

1.4 MAINTENANCE REQUIREMENTS

Provide details of any maintenance requirements required by the Building Act. In addition provide maintenance requirements for items including:

- Details of suggested building washing programme.
- Details of suggested re-painting programme.
- Location of flushing points for sub soil drainage systems.
- Location of surface water filter systems requiring regular cleaning.
- Overflow relief gully location and means of keeping charged.

1.5 APPLIANCE MANUALS AND OPERATING INSTRUCTIONS

Provide appliance manuals and operating information for all appliances including details of all isolating valves and switches including:

- Water supply isolating valve.
- Location of isolating valves for appliances including dishwasher, clothes washer and fridge with and icemaker connection.
- Gas supply isolating valve.
- Electrical main switch and all sub boards.
- Location of isolating switches for electrical appliances including cooker and cook top, kitchen extract system, electric under floor heating.
- Fire and heating device operating instructions.

1.6 EQUIPMENT AND APPLIANCE MANUALS AND OPERATING INSTRUCTIONS

Provide equipment and appliance manuals and operating information including details of all isolating valves and switches.

1.7 SELECTIONS INFORMATION

Provide details of actual selections used in the construction of the works including:

- Tapware type and supplier details.
- Sanitary ware including accessories type and supplier details.
- Light fitting type and supplier details.
- Door hardware type and supplier details.
- Carpet type and colour including underlay and the supplier details.
- Vinyl flooring type and colour including supplier details.
- Overlay timber floor type and supplier details.
- Tile type and supplier details.
- Fire supplier details.
- Aluminium joinery system and finish.
- Paint type and colours used.

Include brochures and other information included with the items supplied.

1.8 SELECTIONS INFORMATION - SUBSTITUTIONS

Provide details of any selections used in the construction of the works that are different from what was specified.

Documentation format

1.9 O&M DOCUMENTATION FORMAT

Unless otherwise specified in a work section,

- Provide O&M drawings at scales appropriate to the detail to enable good legibility.
- Provide manufacturers documentation at the original scale.
- Provide written text generally in A4 format using a font not less than 10 point.

Submit O&M documentation in both hard copy and as electronic portable document format (PDF) files.

Submission and review

1.10 O&M DOCUMENTATION SUBMISSION & REVIEW

Unless otherwise specified in a work section, provide draft O&M documentation no later than the date of practical completion or the date on which the principal takes occupation of the works, whichever occurs first.

Submit O&M documentation to the named reviewer for review.

- Where no time is stated in a specific section, allow 10 working days for review by the reviewer. Where a large amount of documentation is involved more time will be necessary.
- Where no person is named in a specific section as the reviewer, submit the O&M documents to the contract administrator.
- Submit a proposed index system (as required for final documentation) to the contract administrator for review.

O&M review indicates only that the reviewer is satisfied that the documents are legible. The review is not a check of the accuracy of the documents, however the reviewer may comment on any aspect of the documentation and require the documents to be revised and resubmitted. Review of operation and maintenance documentation does not relieve the contractor of responsibility for the correctness of the documentation.

The reviewer may advise that:

- The O&M documentation has been reviewed and has been accepted without the need for further modification. The information can be included in the final documentation; or
- The O&M documentation has been reviewed and the information can be included in the final documentation subject to revision required by notes, annotations or comments provided; or
- The O&M documentation has been reviewed and is not acceptable, refer to notes, annotations or comments provided. Resubmit corrected/altered documentation for review.

Amalgamate the reviewed accepted and corrected O&M documentation into the final O&M documentation

Final documentation

1.11 SUBMISSION OF FINAL DOCUMENTATION

Prior to the end of the defects notification/liability period, provide complete O&M documentation in both hardcopy and electronic form.

1.12 FINAL O&M DOCUMENTATION - HARDCOPY

Provide the hard copy version of the O&M documentation in a loose-leaf binder with a contents index identifying operation and maintenance documents, requirements, manuals, operating instructions and selections. In addition include the project name, contractor's name and the date of practical completion on the index page.

Include indexed sections to identify all operation and maintenance manuals that are not contained within the binder. Provide a copy of the front cover or other identifying feature of the manual within the section with a note stating "this manual has been provided separately".

Provide a title on the binder edge "Operation and maintenance instructions for (project name)". If more than one binder is required identify each binder by number and ranking (e.g. Volume 2 of 3) and group information logically between the binders for ease of reference.

Provide operation and maintenance manuals clearly and neatly marked on the spine or front cover so as to identify the project name. Where operation and maintenance manuals are a collection of loose leaf documentation, provide documentation in a loose-leaf binder as described above.

1.13 FINAL O&M INFORMATION - ELECTRONIC COPY

Provide a copy of all hardcopy information in PDF format arranged in logical named folders. In addition provide DWG files of documentation if available.

1.14 REVIEW OF FINAL DOCUMENTATION

The contract administrator may review the final documentation and require alteration and resubmission.

2 SELECTIONS

O&M Documentation

2.1 FINAL DOCUMENTATION - INFORMATION FOR OPERATION AND MAINTENANCE

Provide a complete electronic copy to the contract administrator.

Provide two hardcopy sets of completed O&M documentation to the contract administrator. At least one set is to contain all available original documentation. The contractor is to retain a third hardcopy set for their records.

Provide any documentation (including required original documentation) as required to the relevant territorial authority.

2.2 FINAL DOCUMENTATION - OPERATION AND MAINTENANCE MANUALS

Provide a complete electronic copy to the contract administrator.

Provide two hardcopy sets of completed maintenance manuals to the contract administrator. At least one set is to contain all available original documentation. The contractor is to retain a third hardcopy set for their records.

Provide any documentation (including required original documentation) as required to the relevant territorial authority.

Maintenance contract proposals

2.3 MAINTENANCE CONTRACT PROPOSALS

Unless otherwise specified in a work section, provide maintenance contract proposals to the contract administrator no later than the date of Practical Completion. Provide in electronic and hardcopy form.

1239S1 SCHEDULE OF OPERATION & MAINTENANCE INFO

1 GENERAL

This schedule section identifies work sections in the specification that have requirements for the submission of:

- Information for operation and maintenance
- Operation and maintenance manuals
- Maintenance contract proposals

1.1 ASSOCIATED SECTIONS

Read in conjunction with:

- 1232S1 EXPLANATION OF SCHEDULE SECTIONS
- 1239 OPERATION & MAINTENANCE
- Identified Work Sections

Information for operation and maintenance

1.2 INFORMATION FOR OPERATION AND MAINTENANCE

Refer to the following sections:

5133BL	Bestwood Wall Linings
5311AC	Autex Carbon Neutral Acoustic Ceiling Solutions
5511LC	Laminex™ Cabinetry
5517LB	Laminex Benchtops
6700R	Resene Painting General
6746D	Dulux Powder & Industrial Coatings
6758AA	Autex Acoustic Wall Coverings, Panels & Tiles

Operation and maintenance manuals

1.3 OPERATION AND MAINTENANCE MANUALS

There are no work section requirements.

Maintenance contract proposals

1.4 MAINTENANCE CONTRACT PROPOSALS

There are no work section requirements.

Additional Items

1.5 ADDITIONAL ITEMS

Refer to separate documentation for the submission of operation and maintenance requirements not contained within this specification.

1260 PROJECT MANAGEMENT

1 GENERAL

This general section relates to project management requirements including:

- Meetings
- Reporting
- Cost control
- Communicating and records
- Confidentiality
- Programming
- Hold points and notification points
- Working hours
- Health and safety

Site Meetings

1.1 PURPOSE OF SITE MEETINGS

The purpose of site meetings is to:

- Ensure that the Contractor has all information required to construct the work
- To address and clarify aspects of construction of the work including quality
- To address issues relating to project delivery including, site progress and cost.

1.2 SITE MEETING ATTENDANCE

The following persons to attend:

- Principal
- Contract administrator
- Project manager
- Contractor
- Architect
- Designer
- Engineer
- Quantity surveyor
- Services consultants when needed
- Subcontractors when needed (contractor to inform them)

1.3 REPORTING

The following reports are required to be presented at site meetings:
Contractor: A detailed status report

1.4 SITE MEETING MINUTES

The contract administrator is to keep full minutes of all site meetings and arrange distribution to all those involved within 3 working days.

The minutes are to record

- Documentation and information issued and required
- Directions and variations issued
- Confirmation of contract insurances
- Programme items
- General business
- Site health and safety
- Payment claim processing including costing variations

Project Control Group (PCG) meetings

1.5 PURPOSE OF PCG MEETINGS

The purpose of PCG meetings is:

- To consider matters arising from the regular site meetings that fall outside of the scope of those meetings.
- To address issues relating to project delivery including quality, programme and cost.
- To allow reporting by consultants.

1.6 PCG ATTENDANCE

The following persons to attend:

- Principal
- Contract administrator
- Project manager
- Contractor
- Architect
- Engineer
- Quantity surveyor
- Other consultants

1.7 PCG REPORTING

The following reports are required to be presented at PCG meetings:

Contract administrator:	A report on matters addressed at the site meetings
Contractor:	A detail status report
Consultants:	A status report

1.8 PCG MINUTES

The designated person is to keep full minutes of all PCG meetings and arrange distribution to all those involved within 5 working days.

Design meetings

1.9 PURPOSE OF DESIGN MEETINGS

The purpose of design meetings is to:

- consider matters arising from design by the contractor in relation to parts of the work being carried out on a design build or performance specification basis by the contractor.
- review and assess design aspects of such work on other designed parts of the work.
- provide value engineering advice on parts of the work where design changes are required or are being considered to meet the project financial performance requirements.

1.10 DESIGN MEETING ATTENDANCE

The following persons to attend:

- Principal
- Contract administrator
- Project manager
- Contractor
- Architect
- Designer
- Engineer
- Quantity surveyor
- Other consultants

1.11 DESIGN MEETING MINUTES

The designated design manager is to keep full minutes of all design meetings and arrange distribution to all those involved within 5 working days.

Reporting

1.12 CONTRACTORS DETAILED STATUS REPORT

A contractor's detailed status report is to address the following:

- Progress performance, addressing actual progress against the programme and any variance from the programme.
- Procurement progress on parts of the work being undertaken under a monetary allowance including the time by which direction must be given on monetary allowances to conform to the programme.
- Details of measures being taken to get work back on programme where there has been a delay and details of any future events that will or are likely to affect compliance with the programme.
- Compliance with the issued Building Consent and notification of any work or inspections that have not been passed by the BCA inspector.
- Compliance with the issued Resource Consent and any compliance issues.
- Site health and safety including any notifiable incidents.
- Details of any discrepancies in the contract documents that require clarification or

determination
- A list of information requests by the contractor, the date when they were made, the person who they were directed to and the date by which a response is required.
- A variation report including progress on agreed variations, variations to be agreed and anticipated variations and the time implication of variations.
- Variation costing and the adjusted contract price including an assessment of the cost of known and potential variations.
- Review of sums not yet directed for expenditure.

Cash flow estimates

1.13 CASH FLOW ESTIMATES

The contractor is required to submit to the contract administrator a detailed cash flow estimate of all payments to which the contractor considers they will be entitled to under the contract. Where no time is stated in the conditions of contract, provide the cash flow estimate within 20 working days of the date of award of the contract. The contractor shall subsequently submit such revised cash flow estimates at 3 month intervals.

Cost control

1.14 MEASUREMENT

Give reasonable notice to the contract administrator before covering up work which requires to be measured.

1.15 DAYWORK VOUCHERS

To be signed by the contractor's representative as confirming the labour, times and materials used, before being supplied to the contract administrator.

Communicating and records

1.16 MEANS OF COMMUNICATION

Communications between the parties shall be as follows: -

Directions:	In writing delivered by email with a copy by post or hand
Meeting minutes:	In writing delivered by email
RFI's:	(Requests for information) by email or in writing to the contract administrator

1.17 DELIVERY OF COMMUNICATIONS

Deliver communications to the addresses listed in the contract agreement by means as allowed. Where such addresses are not included in the contract agreement:
- deliver to the addressee by hand; or
- post to the postal address stated in the project directory; or
- deliver to the street address as stated in the Project Directory; or
- send by email to the email address stated in the Project Directory; or
- where agreed, deliver via a file hosting service or an electronic project management system.

1.18 SERVICE OF NOTICES

Serve notices to the addresses listed in the contract agreement by means as allowed.

1.19 CHANGE OF ADDRESS

The principal, contractor and the contract administrator must notify the others if they change their address for delivery or transmission of communications.

1.20 RECORDS

Ensure all records specified are kept, held and collated on site in a form that makes the information easily accessible when it is needed. Distribute copies as and when necessary to those persons entitled under the contract to that information.

1.21 EXISTING STRUCTURES PHOTOGRAPHS

Before commencing work take digital photographs recording existing conditions of existing buildings and structures, including adjacent areas that may be affected by the carrying out of the contract works. Include adjacent roadways and footpaths and neighbouring buildings and the like. Where there is existing damage to adjacent buildings and/or structures, ensure that the photographs adequately record the extent of the damage or failure. Refer to SELECTIONS.

1.22 PROGRESS PHOTOGRAPHS

Take digital photographs recording progress. Refer to SELECTIONS.

1.23 SPECIFIC PHOTOGRAPHS

Take digital photographs recording specified subject matter. Refer to SELECTIONS.

Confidentiality

1.24 CONFIDENTIALITY - PUBLICITY

Unless specifically agreed photographs and other images of the work are not to be used by the contractor, subcontractors, material suppliers and others involved in the construction of the works.

Photographs taken for record purposes may be kept but must not be passed to other persons.

1.25 CONFIDENTIALITY AGREEMENT

Where required as a condition of the contract arrange for workers to provide a confidentially agreement. Workers who have not provided such an agreement shall be excluded from the site.

Programming

1.26 PROGRAMME

Include the proposed sequence of all significant on-site and off-site activities, including any intermediate key dates mentioned in the contract. Identify the critical path. Provide a tabulated schedule of information for each activity in order of:

- brief description
- duration in suitable time unit
- earliest start and latest finish time
- total float
- key dates for the supply of information or materials by others.

Identify the dates by which particular information, material or plant need to be supplied or arranged by the contract administrator. Also identify any constraints which may have been imposed by the programme.

Supply copies of the programme to the following:

Contract administrator	1
Architect	1
Designer	1
Principal	1
Quantity surveyor	1
Site supervisor	1

Monitor the programme by:

- recording progress regularly on the site chart
- informing the contract administrator promptly of any circumstances affecting any part of the programme structure and timing
- reviewing the programme once a month making alterations as needed and agreed to and re-issuing the required copies.

Hold Points and Notification Points

Refer to section 1232 INTERPRETATION & DEFINITIONS for definition of hold points and notification points.

1.27 HOLD POINTS

The following hold points are in addition to hold points nominated in work sections. Notify of hold point work/item, do not to proceed further with work/item until advised to continue.

Notify:	Contract administrator
Notification:	2 working days prior to work/item being carried out.

Hold Point Schedule

Location	Hold Point	Requirement
~	~	~
~	~	~

1.28 NOTIFICATION POINTS

The following notification points are in addition to notification points nominated in work sections. Notify of notification point work/item, continue with the work/item and subsequent work unless advised otherwise.

Notify: Contract administrator
Notification: 2 working days prior to work/item being carried out.

Notification Point Schedule

Location	Notification Point	Requirement
~	~	~
~	~	~

Working hours

1.29 WORKING HOURS

Work on site is not restricted. Comply with territorial authority consent conditions and noise and nuisance controls.

1.30 WORKING HOURS RESTRICTIONS

Comply with territorial authority consent conditions and noise and nuisance controls, in addition work on site is restricted to:

Weekdays: ~
Saturdays: ~
Sundays: ~
Public holidays: ~

Work outside these hours may be permitted with the contract administrators consent. Allow a minimum of 24 hours notice (in writing) when seeking the contract administrators consent. If the contract administrator consent is given obtain any required permits and permission for such work

Health and safety

1.31 HEALTH AND SAFETY LEGISLATION

Refer to the requirements of the Health and Safety at Work Act 2015. Comply also with all other relevant New Zealand safety legislation.

The Contractor will ensure, so far as is reasonably practicable, that, each subcontractor they engage and each separate contractor is aware of and complies with its obligations under health and safety-related law.

For the purpose of health and safety-related law, the contract administrator and others involved in contract administration and observation and construction monitoring will not at any time have management or control of the Workplace.

1.32 HEALTH AND SAFETY REGULATIONS, CODES AND GUIDES

Comply with:

- Relevant New Zealand safety legislation including, Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, also Health and Safety in Employment Regulations 1995 as amended by that Regulation and the appropriate Health and Safety at Work Regulations.
- WorkSafe NZ publications including "Guidelines for the provision of facilities for general safety in the construction industry".
- Relevant codes of practice, guides, guidelines and standards.

Until further regulations are made under the Health and Safety at Work Act 2015 to cover them, the transitional provisions of the Act continue in force until revoked or amended.

1.33 HEALTH AND SAFETY IMPLEMENTATION

Take all practical steps to make the site and the contract works safe and to provide and maintain a safe working environment. Ensure that all those working on or visiting the site are aware of the rules governing site safety, are properly supervised and are not unnecessarily exposed to hazards and risks.

Co-operate, consult and co-ordinate health and safety matters with each PCBU including all subcontractors, suppliers, separate contractors, others engaged on the project and others who may be affected by the construction of the works.

Identify any significant hazards and risks.

Maintain proper procedures for dealing with any emergencies that may arise. Immediately investigate accidents, identify their cause and maintain a register of accidents and serious harm. Provide a copy of any report which the contractor is required to make to a public authority on any accident which is associated with carrying out the contract works and results in serious harm to any person.

Refer to individual work sections for detailed requirements on this project.

1.34 SUSPENSION OF HAZARDOUS WORK

On the request of the contract administrator, acting on reasonable grounds, suspend any identified hazardous activities and proceed to eliminate, isolate or minimise them in order to comply with the Act, without prejudice to any other rights of the principal under the contract.

1.35 SITE SAFETY PERSON

Appoint a suitably qualified site safety person to co-ordinate site safety and to attend all site meetings.

1.36 HEALTH AND SAFETY PLAN

Prepare and submit a health and safety plan to the contract administrator before commencing work on site. Include in that plan all people on site and the general public, as well as the following items and any other necessary items:

- identification of existing and potential construction hazards and risks
- Any design construction safety matters identified in section 1220 PROJECT and/or any separate project design construction safety report.
- safety procedures to eliminate, isolate or minimise construction hazards and risks
- the equipment to be used to minimise the hazards and risks
- the maintenance of a register of hazards and risks for the site
- the name and qualifications of the site safety person
- emergency procedures
- first aid facilities and safety equipment
- the methodology for notifying, recording and investigating accidents and injuries.

Advise the contract administrator of unusual or atypical features in the Plan in addition to any features already identified in section 1220 PROJECT and/or any separate project design construction safety report. Keep a copy of the plan in the site office.

1.37 MAINTAIN HEALTH AND SAFETY PLAN

Maintain health and safety plan and alter to accommodate changing situations and /or substitutions. Advise contract administrator of changes.

1.38 COMPLY WITH SITE SAFETY PLAN

Carry out all construction operations in accordance with the submitted health and safety plan.

1.39 INFORM WORKERS OF HAZARDS AND RISKS

Inform workers and others on the site of:

- hazards and risks they may be exposed to while working or other legitimate activities
- hazards and risks they may create while working which could harm others
- how these hazards and risks may be minimised
- emergency procedures
- the location of first aid facilities and safety equipment.

1.40 EXPLOSIVES

Do not use explosives except with the written approval of the territorial authority/WorkSafe NZ. Comply with their safety requirements and use construction blasters holding a current, appropriate Approved Handler Certificate and Controlled Substance Licence issued by WorkSafe NZ, to the Health and Safety at Work (Hazardous Substances) Regulations.

1.41 POWDER-ACTUATED FASTENING TOOLS

Comply with the requirements of WorkSafe NZ and the Health and Safety at Work Act 2015. Powder-actuated fastening tool operators to have the appropriate current Certificate and/or Licence and tools to have the appropriate certificate of fitness if necessary.

2 SELECTIONS

Meetings

2.1 SITE MEETINGS

Frequency: ~
Start date: ~
Time: ~
Venue: ~
Convener: ~

2.2 PCG MEETINGS

Frequency: ~
Start date: ~
Time: ~
Venue: ~
Convener: ~

2.3 DESIGN MEETINGS

Frequency: ~
Start date: ~
Time: ~
Venue: ~
Convener: ~

Photographs

2.4 EXISTING STRUCTURES PHOTOGRAPHS

Copies required: ~
Recipient: ~

2.5 PROGRESS PHOTOGRAPHS

Position: ~
Frequency: ~
Copies required: ~
Recipient: ~

2.6 SPECIFIC PHOTOGRAPHS

Subject matter: ~
Frequency: ~
Copies required: ~
Recipient: ~

1270 CONSTRUCTION

1 GENERAL

This GENERAL section relates to common requirements for construction issues including:

- Quality control and assurance
- Noise and nuisance
- Set-out and tolerances
- Common execution requirements
- Qualifications
- Common product requirements
- Common requirements for samples and prototypes
- Common requirements for spare and maintenance products
- Cleaning during the works
- Removal of protection
- Completion requirements
- Commissioning
- Practical completion submission
- Defects period submissions
- Completion submissions

1.1 SCHEDULE SECTION

Refer to 1270S1 SCHEDULE OF SAMPLES & PROTOTYPES for work sections contained in this specification that have requirements for samples and prototypes.

Refer to 1270S2 SCHEDULE OF SPARES & MAINTENANCE PRODUCTS for work sections contained in this specification that have requirements for spares and maintenance products.

Quality control and assurance

1.2 QUALITY ASSURANCE

Carry out and record regular checks of material quality and accuracy, including:

- Concrete quality and finish.
- Dimensional accuracy of structural column locations (following completion of foundations).
- All perimeter columns and frames for plumb.
- Levels of all floors relative to the site datum.
- Framing timber moisture content.

Where any material, quality or dimension falls outside specified or required tolerances, obtain written direction from the contract administrator. Where building consent approval is affected, confirm remedial action with the Building Consent Authority.

Provide all materials, plant, attendances, supervision, inspections and programming to ensure the required quality standards are met by all project personnel.

1.3 PROVIDE QUALITY PLAN

Prepare a quality plan for the execution of the contract works and submit a copy of the quality plan to the Contract Administrator within 10 Working Days of the date of award of the contract. The quality plan shall describe the procedures for meeting the requirements of the contract in respect of:

- Materials and workmanship
- Monitoring and maintaining subcontractors' performance
- Record keeping
- The level of documentation for signing off the contract works as complete
- Procedures to ensure that all persons engaged in undertaking the contract works are qualified, experienced and trained for the work they are undertaking
- Inspection and testing required by the contract
- Auditing the quality plan

1.4 REVIEW OF QUALITY PLAN

Within 5 working days of the contractor submitting a quality plan to the contract administrator for review, the contract administrator may advise that:

- they have completed their final review, or
- that they have undertaken a review and require resubmission of the quality plan.

Review by the contract administrator of the quality plan does not make the quality plan a contract document. The contractor at all times remains responsible for the construction of the Works. If resubmission of a quality plan is required, the contract administrator will give their reasons. The contractor shall take account of the reasons and resubmit a revised quality plan within a period of 5 working days.

1.5 COMMENCEMENT OF WORK

Do not commence any part of the contract works, other than establishment, setting out and site preparation until the contract administrator has completed their final review of the quality plan.

1.6 NOTICE

Give notice to the contract administrator and any other nominated person of hold points and notification points. Refer to work sections and 1260 PROJECT MANAGEMENT for hold points and notification points required.

1.7 NOTIFIABLE WORK

Lodge notice of the intention to commence any notifiable work and any work that will at any time include any notifiable work, in accordance with Health and Safety in Employment Regulations 1995.

Noise and nuisance

1.8 LIMIT CONSTRUCTION NOISE

Minimise the effects of noise generation by including in the planning of the work such factors as placing of plant, programming the sequence of operations and other management functions. Limit construction noise to comply with the requirements of NZS 6803, the requirements of the Resource Management Act sections 326, 327 and 328 and the Health and Safety in Employment Regulations 1995 clause 11.

1.9 ACCEPTABLE NOISE LEVELS

Refer to NZS 6803 Tables 2 and 3 for the upper limits of construction work noise received in residential zones, dwellings in rural areas, industrial areas and commercial areas, note also the allowed adjustments. Do not exceed these limits or any limits imposed by regional councils or territorial authorities.

1.10 PROVIDE INFORMATION TO NEIGHBOURS

Provide information to neighbours of any noise generation from the site liable to constitute a problem. Explain to them the means being used to minimise excessive noise and establish with them the timings most suitable for the noise generating work to be carried on.

Discuss with any complainant the measures being used to minimise noise. Where possible modify these measures to accommodate particular circumstances. Finally, determine the sound level at the location under discussion using methods and observation reporting as laid down in NZS 6803. If the noise level is above the upper limits of NZS 6803, table 2 and table 3, cease the noise generating operation and remedy the problem.

1.11 ADDITIONAL NOISE CONSTRAINTS

As well as complying with the preceding clauses, comply with the following on this contract:
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1.12 INCONVENIENCE TO OTHERS

When the works are to be carried out in or around occupied premises, ascertain the nature and times of occupation and use. Carry out the works in a manner to minimise inconvenience, nuisance and danger to occupants and users.

1.13 ROADWAY AND FOOTPATH

Keep the adjacent footpath and road clear at all times. Where work must be carried out in the roadway or footpath, obtain required consents from the territorial authority. Where temporary use is made of the footpath or roadway for deliveries and the like ensure that public safety is protected and the goods and materials moved as soon as practicable. Sweep, wash and otherwise clean the roadway/footpath and restore it to its previous condition.

1.14 VEHICLE CROSSING

Make good damage that has occurred as a result of carrying out the contract works. Where there has been significant damage, contact the territorial authority and obtain instructions for making good. Pay the territorial authority costs associated with making good.

1.15 DIRT AND DROPPINGS

Remove dirt and droppings deposited on public or private thoroughfares from vehicles servicing the site to the satisfaction of the appropriate authorities and the contract administrator.

1.16 DAMAGE AND NUISANCE

Take precautions to prevent damage and nuisance from water, fire, smoke, dust, rubbish and all other causes resulting from the construction works.

1.17 SMOKE FREE REQUIREMENTS

In accordance with the Smoke Free Environments Act 1990 smoking is not allowed on site.

1.18 RESTRICTIONS

Do not:

- light rubbish fires on the site.
- bring dogs on to or near the site.
- bring radios/audio players on to the site.

Set-out and tolerances

1.19 SURVEY INFORMATION

Locate and verify survey marks and datum points required to set out the works. Where these do not exist or cannot be located advise the contract administrator who will arrange for the required points to be established.

Record and maintain their position. Re-establish and replace disturbed or obliterated marks.

1.20 DATUM

Establish a permanent site datum to confirm the proposed levels and their relationship to all other existing and new levels.

1.21 SET-OUT

Set out the work to conform with the drawings.

1.22 SET-OUT BY LICENSED CADASTRAL SURVEYOR

Before commencing construction provide the contract administrator with a certificate prepared by a licensed cadastral surveyor that the set-out is complete and that the building is accurately placed on the site.

During construction provide the contract administrator with a certificate, prepared by the same licensed cadastral surveyor confirming the set-out of the foundations and grid lines. Necessary adjustments are to be determined and agreed to by the contract administrator before proceeding further.

1.23 CONFIRM HEIGHT IN RELATION TO BOUNDARY

Arrange for the licensed cadastral surveyor to provide a certificate certifying that the building has been constructed within the allowed height in relation to boundary. Obtain details from the principal of the person they have engaged to carry out this certification and advise the surveyor when they can carry out the required survey.

Provide the certificate to the local authority. Provide a copy of the certificate to the contract administrator.

1.24 USE OF SET-OUT INSTRUMENTS

Permit without charge, the use of instruments already on site for checking, setting out and levels.

1.25 CHECK DIMENSIONS

Check all dimensions both on drawings and site, particularly the correlation between components and work in place. Take all dimensions on drawings to be between structural elements before linings or finishes, unless clearly stated otherwise.

1.26 TOLERANCES

All work to be level, plumb, and true to line and face. Unless otherwise specified in specific work sections of this specification, tolerances for structural work shall comply with the following:

	To NZS 3109 Concrete construction

Concrete construction:	Clause 3.9 Tolerances for reinforcement Table 5.1 Tolerance for precast components Table 5.2 Tolerance for in situ construction To NZS 3114 Concrete surface finishes
Masonry construction:	To NZS 4210 Masonry construction: Materials and workmanship Clause 2.6.5 Tolerances Table 2.2 Maximum tolerances
Structural steelwork:	To NZS 3404.1 Steel structures standard Section 14.4 Tolerances (after fabrication) Section 15.3 Tolerances (erection)
Timber framing:	To NZS 3604 Timber-framed buildings Clause 2.2 Tolerances Table 2.1 Timber framing tolerances

Refer to work sections for tolerance requirements for finishes.

Execution

1.27 EXAMINE PREVIOUS WORK

Before commencing any part of the work carefully examine the previous work on which it depends, to ensure it is of the required standard.

1.28 REPORT DEFECTIVE PREVIOUS WORK

Refer defects to the contractor to be remedied, if the remedy is outside the scope of the contract documents the contractor shall obtain direction from the contract administrator. Do not carry out work over previous work that is defective and will affect the required standard.

1.29 EXECUTION GENERALLY

Construct the work in accordance with the documents issued for construction including any direction that may have been given by the contract administrator that varies the construction document.

1.30 EXECUTION - NO DETAIL IS PROVIDED

The documents issued for construction will not include all details relating to every material, junction and interface with other materials.

Where the detail provided is of a general nature, or where no detail is provided, refer to the manufacturer's documents for information relating to installation and execution of that part of the work.

Where there is more than one method or detail appropriate to the part of the work in question, refer the options to the Contract Administrator for direction as to which detail or method to use.

1.31 EXECUTION - ACCEPTABLE SOLUTION IS REFERRED TO

Where a NZBC Acceptable Solution is referred to in the specification but not shown on the plans, obtain a copy of that Acceptable Solution and make it available to the workers carrying out that part of the work.

1.32 MINIMISE DELAYS DUE TO WEATHER

Use appropriate techniques and methods to prevent damage and minimise delays due to weather.

Defective or damaged work

1.33 DEFECTIVE OR DAMAGED WORK

Repair defective, damaged and marked elements, or replace them where repair is not possible or will not be acceptable. Adjust operation of equipment and moving parts not working correctly. Refer to individual work sections for any special requirements.

Hot work - fire safety

1.34 HOT WORK

Generally, to NZS 4781 Code of Practice for Safety in Welding and Cutting, includes but not limited to: Welding; flame cutting; disc cutting; grinding; bitumen blowers; blow lamps; brazing; burning off; soldering; use of hot air guns.
Note - where the standard refers to the use of asbestos, alternative fire-resistant materials are to be used.

1.35 COMBUSTIBLE MATERIAL

Manage fire risk to adjacent combustible materials by isolating hot work at a safe distance away, or store combustible materials away from fire hazards. Additional precautions may be necessary if combustible material cannot be separated from hot work, refer to NZS 4781, 6.1.4.

1.36 HOT WORK PERMIT

A hot work permit, issued by the main contractor, is required when it is not possible to isolate hot work from adjacent fire hazards. Refer to example in NZS 4781, Appendix A.

1.37 FIRE SYSTEMS

Fire systems should remain operational where possible while welding or cutting work is performed. Where required, shield fire systems to NZS 4781 clause 6.4.

1.38 DURING SUSPENDED WORK

Maintain a fire watch at least 30-minutes after hot works are suspended e.g. during lunch breaks or overnight, to NZS 4781, clause 6.2.7.
For hot works in confined spaces, prevent potential ignition of flammable gases, to NZS 4781 clause 6.5.

Qualifications

1.39 QUALIFICATIONS GENERALLY

The work is to be carried out by workers and / or supervisors who are experienced, competent and familiar with the materials and the techniques specified. Workers must also be familiar with the manufacturers' and suppliers' installation and application instructions and standard details provided by them in relation to the use of the products for this project. If requested provide evidence of qualification / experience.

1.40 QUALIFICATIONS WORKERS – RESTRICTED BUILDING WORK

Where restricted building work (RBW) forms part of the contract works, workers, or supervisors of that work must be licensed building practitioners (LBP) holding current licenses for the particular restricted building work.
For rare instances where non-RBW also requires an LBP refer to individual work sections for details.

1.41 QUALIFICATIONS WORKERS – MANUFACTURER / SUPPLIER REQUIREMENTS

Where required by a manufacturer or supplier, workers must be specifically trained /approved / accredited / registered / licensed / certified by them. Refer to individual work sections for details.

1.42 QUALIFICATIONS WORKERS – LICENSED UNDER STATUTE

Where workers and / or supervisors of work are required to be licensed, registered or similar under legislation, they must have a current license before they start the work and maintain currency until their part of the work has been completed and all documentation that is required has been provided.

1.43 QUALIFICATIONS WORKERS – INDUSTRY QUALIFICATION REQUIREMENTS

Where workers and / or supervisors of work are required to be trained / licensed / certified or similar under industry rules or contractual requirements, they must have a current qualification before they start the work and maintain currency until their part of the work has been completed. Refer to individual work sections for details.

1.44 QUALIFICATIONS – PRODUCER STATEMENTS

Where producer statements are required for parts of the work, ensure that person is suitably qualified and authorized to issue such producer statements.

1.45 REPLACEMENT OF PERSON

Should it be necessary to replace a person, ensure that records of work, producer statements, warranties and the like required for the part of the work they have carried out are obtained.

Ensure that the replacement person takes responsibility for the work they carry out and that they are able to provide such records of work, producer statements, warranties and the like required as a condition of the contract and the building consent.

Products

1.46 NEW PRODUCTS

Products to be new unless stated otherwise, of the specified standard, and complying with all cited documents.

1.47 COMPATIBILITY OF PRODUCTS

Ensure all parts of a construction or finish are compatible and their individual use approved by the manufacturers and suppliers of other parts of the system. Source all parts of a system from a single manufacturer or supplier.

1.48 DELIVERY, STORAGE & HANDLING OF PRODUCTS

Protect products during transit and delivery on site and / or off site. Reject and replace goods that are defective or damaged or will not provide the required finish.

Handle products carefully to avoid damage and distortion and in accordance with codes of practice and the manufacturer's or supplier's requirements. Avoid any contact with potentially damaging surfaces or conditions.

Store products to avoid visual damage, environmental damage, mechanical damage and distortion. Store in accordance with codes of practice and the product manufacturer's or supplier's requirements. Maintain the proper condition of any protective packaging, wrapping and support.

Refer to individual work sections for any special requirements.

1.49 SUBSTRATE CONDITIONS

Ensure substrate conditions are within the manufacturer's or supplier's stated guidelines both before and during the installation of any material, product or system. Obtain written instructions on the necessary action to rectify unsatisfactory conditions.

1.50 INSTALLING PRODUCTS

Install in accordance with the manufacturer's or supplier's technical literature. Ensure that all installers are familiar with the required substrate conditions and the manufacturer's or supplier's specified preparation, fixing and finishing techniques.

1.51 COMPLY WITH STANDARDS

Comply with the relevant and/or cited Standard for any material or component. Obtain certificates of compliance when requested by the contract administrator.

1.52 CONDITION OF PRODUCTS

To be in perfect condition when incorporated into the work.

1.53 INCOMPATIBLE PRODUCTS

Separate incompatible materials and metals with separation layers, sleeves or gaskets of plastic film, bituminous felt or mastic or paint coatings, installed so that none are visible on exposed surfaces.

Samples

1.54 SAMPLES FOR REVIEW

Where specified in the work sections submit samples and any nominated supporting documentation to the named reviewer and notify the contract administrator of the submission. Where no person is named as the reviewer, submit to the contract administrator.

Samples for review may be described as a portable sample for review, portable control sample, fixed sample for review or fixed control sample. A portable sample refers to a sample that is easily movable, convenient for carrying. A fixed sample refers to a sample that is not portable. If the location of a fixed sample is not defined in the work section, obtain direction from the contract administrator.

For samples that are located on site, or by agreement with the contract administrator are located off site, notify the reviewer and contract administrator of their location and availability for review.

Timing for the provision and review of samples is to be included in the contract programme. Where no time is stated in a work section allow 10 working days for each review. Allow for such resubmission and further review as may be required. No extension of time will be allowed for resubmission and further review.

Obtain written instructions in relation to the samples from the contract administrator. Do not proceed further with related work items until advised to continue.

Samples may be incorporated in the finished work if confirmed in writing by the contract administrator, otherwise allow to completely remove any fixed samples. Remove from the site any rejected samples.

Refer to SAMPLES clauses in work sections for further detail.

1.55 CONTROL SAMPLES

Samples become control samples if an instruction is given by the contract administrator to that effect. Control samples will be used for comparison purposes throughout the contract. Control samples may be portable or fixed in place, refer to SAMPLES clauses in work sections for further detail.

Control samples that are to remain on site, or otherwise in the care of the contractor, are to be maintained in original condition.

If confirmed by the contract administrator, fixed control samples may be incorporated in the finished work, otherwise allow to remove fixed control samples from site when instructed by the contract administrator.

1.56 OTHER SAMPLE REQUIREMENTS

Where specified in the work sections obtain samples for the purposes described.

Prototypes

1.57 PROTOTYPES - TESTING

Where specified in the work sections provide and test prototypes. Timing for the provision, testing, disassembling, re-assembling, retesting and review of prototypes and test results is to be included in the contract programme. Where no time is stated in a work section allow 10 working days for each review of test results. Submit test results to the named reviewer and to the contract administrator. Where no person is named as the reviewer submit test results to the contract administrator.

Obtain written instructions in relation to the prototype from the contract administrator. Do not proceed further with related work items until advised to continue.

Refer to PROTOTYPES - TESTING clauses in work sections for further detail.

1.58 PROTOTYPES - REVIEW

Where specified in the work sections provide prototypes for review. Timing for the provision, disassembling, re-assembling and review of prototypes is to be included in the contract programme. Where no time is stated in a work section allow 10 working days for review by the named reviewer. Where no person is named as the reviewer notify the contract administrator for direction.

Obtain written instructions in relation to the prototype from the contract administrator. Do not proceed further with related work items until advised to continue.

Refer to PROTOTYPES - REVIEW clauses in work sections for further detail.

1.59 PROTOTYPES - GENERAL

Refer to the PROTOTYPES - TESTING and PROTOTYPES - REVIEW clauses in work section for details on what is to happen after the review and or testing of the prototype is complete. Where no information is provided refer to the contract administrator for direction.

Prototypes may become control samples if an instruction is given by the contract administrator to that effect.

Spares & maintenance products

1.60 SPARES & MAINTENANCE PRODUCTS

Collect, protect, package, label and store safely all spares and maintenance products specified in the work sections. Give the contract administrator an inventory of all spares and maintenance products.

If no instruction is given within a work section for the location of spares and maintenance products, then deliver to the owner ~.

If no instruction is given within a work section for timing in relation to the provision of spares and maintenance products, then provide at practical completion.

Refer to SPARES & MAINTENANCE PRODUCTS clauses in work sections for further detail.

Cleaning during the works

1.61 PERIODIC SITE CLEANING

Carry out periodic site cleaning during the contract period. Place waste material in appropriate storage pending removal from the site. Keep food waste separate from construction waste.

1.62 TRADE CLEANING

Keep the work area clean, remove of all debris, unused and temporary materials and elements from the site as work progresses and on completion. Refer to individual work sections for any specific requirements.

1.63 SPECIAL SITE CLEANING

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Remove protection

1.64 REMOVE PROTECTION

Remove all temporary markings, labels, packaging and coverings to products unless instructed otherwise, or where they are required for protection.

Maintain temporary protection until removal is required by the manufacturer/supplier, the execution of the work or the requirements of individual work sections. Re-establish protection as necessary.

Remove temporary protection and special protection immediately prior to practical completion or before when there is no further risk of damage.

Refer to individual work sections for any special removal requirements.

Completion

1.65 SPECIAL REQUIREMENTS

Refer to individual work sections for any special completion requirements.

1.66 LEAVE WORK

Leave work to the standard required for the following procedures.

1.67 COMPLETION - TESTS & CERTIFICATION

Carry out tests as detailed in the work sections. If testing identifies a failure to meet performance requirements, notify the contract administrator and any nominated recipient, identify and correct the cause of failure and repeat the test. Submit test results and certification documentation to the contract administrator and any nominated recipient.

1.68 REMOVE CONSTRUCTION WASTE

Remove all debris, unused materials and the like from the site. Arrange for material to be recycled to be collected or delivered to the recycler.

1.69 COMPLETE ALL SERVICES

Ensure all services are complete and operational, with all temporary labelling removed, required labelling fixed and service instructions provided.

1.70 CLEANING BY CONTRACTOR

Clear the contract works of all construction materials, waste, dirt and debris. Clean the contract works including:

- Wipe all surfaces to remove construction dust.
- Clean out service ducts and accessible concealed spaces.
- Clean out all gutters and rainwater heads.
- Wipe dust from both sides of glass. Take particular care when removing paint or cementitious materials to not damage the glass. Do not use metal scrappers that may damage the glass.

- Remove adhesive residue left by labels and other temporary protection/markings.
- Clean out the interior of all cabinetry.
- Wash down external concrete including driveways and concrete masonry. Take care when waterblasting to not cause damage to the surface or allow water to enter the building.
- Remove rubbish and building material from the area immediately adjacent to the contract works.

1.71 CLEANING BY COMMERCIAL CLEANER

In addition to cleaning carried out by the contractor, use a commercial cleaning company to clean the whole of the interior of the building, including all appliances, equipment, fittings, surfaces and finishes to leave it without any blemish. Cleaning to include:

- Clean and wash down all external surfaces to remove dirt, debris and marking.
- Clean all interior surfaces including cabinetwork, joinery, sanitary and hardware items.
- Clean all floor finishes.
- Clean and polish all glass, both sides. Take particular care when removing paint or cementitious materials to not damage the glass. Do not use metal scrappers that may damage the glass.

Commissioning

1.72 SPECIAL REQUIREMENTS

Refer to individual work sections for any special commissioning requirements.

1.73 MOVING PARTS

Adjust, ease and lubricate all doors, windows, drawers, hardware, appliances, controls and all moving parts to give easy and efficient operation.

1.74 COMMISSIONING - TESTS & CERTIFICATION

Carry out tests as detailed in the work sections. If testing identifies a failure to meet performance requirements, notify the contract administrator and any nominated recipient, identify and correct the cause of failure and repeat the test. Submit test results and certification documentation to the contract administrator and any nominated recipient.

1.75 INSTRUCTION AND DEMONSTRATION

Provide instruction and demonstration to the owner/occupier to the extent that is listed below and as required for them to reasonably occupy and use the building. This is to include at least the following:

- Location and isolation of all services connections.
- Operation of all emergency systems.
- Locking and security arrangements.
- Operation of basic building services including lighting, heating, mechanical ventilation, air conditioning and security.
- Special cleaning requirements and procedures.
- Any other features that the owner/occupier needs to know about.

1.76 SECURITY AT COMPLETION

Remove any temporary lock cylinders and complete final keying prior to handing over keys to the principal on completion of the works. Leave the works secure with all accesses locked. Account for all keys/cards/codes and hand to the principal along with an itemised schedule, retaining a duplicate schedule signed by the principal as a receipt.

Practical completion submission

1.77 ADDITIONAL PRACTICAL COMPLETION INFORMATION

In addition to requirements in the contract and contained elsewhere in the specification provide the following information submissions for practical completion:

- All documents which the contractor has obtained on behalf of the owner/occupier.
- Information required by the owner/occupier to be able to use the building.
- Advice that NUO accounts in the contractor's name have been closed and as appropriate changed to be in the name of the owner/occupier.
- A list of persons to be contacted to carry out any emergency or remedial work including 24 hour/7 day contact details.

1.78 ADDITIONAL PRACTICAL COMPLETION REQUIREMENTS

Refer to the conditions of contract for the definition of practical completion and the conditions relating to practical completion.

In addition to the requirements in the contract, the following conditions also apply:

- ~

Defects period submissions

1.79 DEFECTS REMEDIATION - SUBMISSIONS

Provide the following at periods required by the contract administrator, where no period is stated, provide this information monthly:

- A copy of the contractor's check list identifying remaining defects and omissions to be completed recording progress made in completing and correcting the items.
- A copy of lists issued by the principal/employer identifying omissions and defects recording progress made in completing and correcting the items.
- A copy of lists issued by the contract administrator identifying omissions and minor defects recording progress made in completing and correcting the items.

Completion submissions

1.80 FINAL COMPLETION - SUBMISSIONS

In addition to requirements in the contract and contained elsewhere in the specification provide:

- Contractors advice that all defects have been corrected and omissions and deferred work completed.
- All documents which the contractor has obtained on behalf of the owner/occupier.

1270S1 SCHEDULE OF SAMPLES & PROTOTYPES

1 GENERAL

This schedule section identifies work sections in the specification that have requirements for:

- The submission of samples
- The submission of prototypes for review
- The provision and testing of prototypes

1.1 ASSOCIATED SECTIONS

Read in conjunction with:

- 1232S1 EXPLANATION OF SCHEDULE SECTIONS
- 1270 CONSTRUCTION
- Identified Work Sections

Samples

1.2 SAMPLES

Refer to the following sections:

5311AC	Autex Carbon Neutral Acoustic Ceiling Solutions
5517LB	Laminex Benchtops
6700R	Resene Painting General
6746D	Dulux Powder & Industrial Coatings

1.3 SAMPLES - ADDITIONAL ITEMS

Refer to separate documentation for sample requirements not contained within this specification.

Prototypes

1.4 PROTOTYPES - REVIEW

There are no work section requirements.

1.5 PROTOTYPES - TESTING

There are no work section requirements.

1.6 PROTOTYPES - ADDITIONAL ITEMS

Refer to separate documentation for prototype requirements not contained within this specification.

1270S2 SCHEDULE OF SPARES & MAINTENANCE PRODUCTS

1 GENERAL

This schedule section identifies work sections in the specification that have requirements for spares and maintenance products.

1.1 ASSOCIATED SECTIONS

Read in conjunction with:

- 1232S1 EXPLANATION OF SCHEDULE SECTIONS
- 1270 CONSTRUCTION
- Identified Work Sections

Spares & maintenance products

1.2 SPARES & MAINTENANCE PRODUCTS

Refer to the following sections:

5133BL	Bestwood Wall Linings
5311AC	Autex Carbon Neutral Acoustic Ceiling Solutions
5511LC	Laminex™ Cabinetry
5517LB	Laminex Benchtops

1.3 SPARES & MAINTENANCE PRODUCTS - ADDITIONAL ITEMS

Refer to separate documentation for sample requirements not contained within this specification.

1278SR SCHEDULE OF SLIP RESISTANCE TESTING

1 GENERAL

This section relates to the testing of surfaces for slip resistance. It includes:

- test methods and minimum test values required for slip resistance testing.
- general reporting requirements.

This section includes schedules identifying work sections with:

- slip resistant surfaces exempt from testing and slip resistant surfaces that have been tested and comply with NZBC D1/AS1 requirements for testing.
- surfaces that require slip resistance testing.

1.1 ASSOCIATED SECTIONS

Read in conjunction with:

- 1232S1 EXPLANATION OF SCHEDULE SECTIONS
- Work sections identified in the schedule(s)

1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

BPN	British Pendulum Number
COF	Coefficient of friction
SDV	Slope design value
SRV	Slip resistance value

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC D1/AS1 Access routes
AS 4586 Slip resistance classification of new pedestrian surface materials

Slip resistance - surfaces not requiring testing

1.4 SLIP RESISTANCE - SURFACES EXEMPT FROM TESTING

Walking surfaces on access routes that do not require testing for slip resistance include surfaces identified in NZBC D1/AS1, Table 2 as acceptable. These surfaces are covered in the following Work sections:

6411J Jacobsen Vinyl Surfacing

1.5 SLIP RESISTANCE - PREVIOUSLY TESTED SURFACE

Walking surfaces on access routes that have previously been tested for slip resistance and found to comply with NZBC D1/AS1 requirements are covered in the following Work sections:

6411J Jacobsen Vinyl Surfacing

Slip resistance - surfaces requiring testing

1.6 SLIP RESISTANCE - SURFACES REQUIRING TESTING

Refer to the following work sections for surfaces to be tested for slip resistance, including location, test condition, slope requirement and specific reporting requirements:

6411J Jacobsen Vinyl Surfacing

1.7 TEST METHODS & MINIMUM TEST VALUES

Refer to tables below for test methods and minimum test values required for the stated test condition.

Test condition:	Minimum test value required:	Test method:
Level access wet	39 SRV	Wet pendulum test method of AS 4586, Appendix A using the Slider 96 rubber.

Sloping access wet	Refer to sloping access wet table below, select BPN value for stated slope.	Wet pendulum test method of AS 4586, Appendix A
Stairs wet - with slip resistant nosings	39 SRV	Wet pendulum test method of AS 4586, Appendix A using the Slider 96 rubber.
Stairs wet - without slip resistant nosings	50 BPN	Wet pendulum test method of AS 4586, Appendix A
Wet areas primarily used barefoot	“B” Classification	Obtain classification from the ramp method of AS 4586, Appendix C
Level access dry	0.4 COF	Obtain slip resistance value from the dry floor friction test method of AS 4586, Appendix B
Sloping access dry	Refer to sloping access dry table below, select COF value for stated slope.	Obtain slip resistance value from the dry floor friction test method of AS 4586, Appendix B
Stairs dry - with slip resistant nosings	0.4 COF	Obtain slip resistance value from the dry floor friction test method of AS 4586, Appendix B
Stairs dry - without slip resistant nosings	0.525 COF	Obtain slip resistance value from the dry floor friction test method of AS 4586, Appendix B
Contaminated walking surfaces	R~	Obtain classification from the oil-wet inclining platform test method of AS 4586, Appendix D

Sloping access wet - minimum test values required for a given slope

Minimum test value required (SDV)	Maximum gradient	Maximum slope in degrees
42 BPN	1 in 39	1.5°
43 BPN	1 in 29	2.0°
44 BPN	1 in 23	2.5°
45 BPN	1 in 20	3.0°
45 BPN	1 in 17	3.5°
46 BPN	1 in 15	4.0°
47 BPN	1 in 13	4.5°
48 BPN	1 in 12	5.0°
49 BPN	1 in 11	5.5°
50 BPN	1 in 10	6.0°

Sloping access dry - minimum test values required for a given slope

Minimum test value required (COF)	Maximum gradient	Maximum slope in degrees
0.433	1 in 39	1.5°
0.444	1 in 29	2.0°
0.455	1 in 23	2.5°
0.466	1 in 20	3.0°
0.477	1 in 17	3.5°
0.488	1 in 15	4.0°
0.499	1 in 13	4.5°
0.504	1 in 12	4.76°
0.521	1 in 11	5.5°
0.525	1 in 10	5.7°
0.543	1 in 9	6.5°
0.557	1 in 8	7.125°

1.8 GENERAL REPORTING REQUIREMENTS

Provide slip resistance test results to the contract administrator, including a statement that the tested surface meets or exceeds the nominated minimum test value. Refer to individual work sections for additional requirements. If no time is nominated for the submission of test results in the work section, then provide test results prior to practical completion.

If testing identifies a failure to meet performance requirements, notify the contract administrator and manufacturer/supplier. Consult with the manufacturer/supplier to identify the cause, then correct the failure and repeat the test.

Slip resistance - additional items

1.9 SLIP RESISTANCE - ADDITIONAL ITEMS

Refer to separate documentation for slip resistance requirements not contained within this specification.

3821 TIMBER FRAMING

1 GENERAL

This section relates to the supply and erection of timber framing, as a framed structure, or as part of a partitioning system.

1.1 RELATED WORK

Refer to ~ for ~.
Refer to 4161 UNDERLAYS, FOIL AND DPC for underlays, foils and DPC.

1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:
SG Structural grade to NZS 3604, 1.3 **Definitions**

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC B2/AS1	Durability
AS/NZS 2904	Damp-proof courses and flashings
NZS 3602	Timber and wood-based products for use in building
NZS 3603	Timber structures standard
NZS 3604	Timber-framed buildings
NZS 3622	Verification of timber properties
NZS 3631	New Zealand timber grading rules
NZS 3640	Chemical preservation of round and sawn timber
WorkSafe	Guidelines for the provision of facilities and general safety in the construction industry.
BRANZ BU 582	Structurally fixed cavity battens

***A copy of** NZS 3604 **Timber-framed building, must be held on site.**

1.4 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and supplier's documents relating to this part of the work:
~

Manufacturer/supplier contact details

Company:	~
Web:	~
Email:	~
Telephone:	~

1.5 DIMENSIONS

All timber sizes except for roof battens are actual minimum dried sizes.

2 PRODUCTS

Materials

2.1 TIMBER FRAMING, TREATED

Species, grade and in service moisture content to NZS 3602, NZBC B2/AS1 and treatment to NZS 3640, NZBC B2/AS1. Structural grade (SG) to NZS 3604, NZS 3622 with properties to NZS 3603.

2.2 TIMBER FRAMING, CHEMICAL FREE

Species, grade and moisture content in service as set out in NZS 3602, NZBC B2/AS1.

2.3 APPEARANCE TIMBERS

Graded to NZS 3631, treated where required by NZBC B2/AS1, NZS 3602, table 1, and treatment to NZS 3640.

2.4 STRAPPING

Treated to NZBC B2/AS1, NZS 3602, table 1 and to NZS 3640, clause 6.3.1.

Species:	Radiata pine
Grade:	SG6
Size:	70mm x 45mm, 45mm x 45mm or 45mm x 19mm

2.5 EXTERIOR CAVITY WALL BATTENS - TIMBER - NON-STRUCTURAL

H3.1 Radiata pine battens, minimum 20mm thickness, width and height to match timber framing studs. Temporary fix battens before being fixed into the framing with the cladding fixings. To NZS 3602, table 1, reference 1D.10, Requirements for wood-based building components to achieve a 50-year durability performance.

2.6 DPC

Refer to 4161 UNDERLAYS, FOIL AND DPC section

Components

2.7 NAILS

Type to NZS 3604, section 4, **Durability**, and of the size and number for each particular types of joint as laid down in the nailing schedules of NZS 3604, sections 6 - 10.

2.8 SCREWS

Wood screws to the requirements of NZS 3604, 2.4 Fastenings and Fabrication, and section 4, **Durability**, and of the type, number and form required for each screw application to NZS 3604, sections 6 - 10.

2.9 BOLTS AND COACH SCREWS

Bolts and coach screws complete with washers, to the requirements of NZS 3604, clause 2.4.5 Bolts and Coach Screws, and section 4, **Durability**, and of the type, number and form required for each particular junction to NZS 3604, sections 6 - 10.

2.10 THREADED RODS

Use stainless steel threaded rods of the required length, with washers and nuts at both ends, when stainless steel bolts of the required length are not available.

2.11 TIMBER CONNECTORS AND FIXINGS

Supply for each particular joint the connectors and fixings as noted on the drawings. Comply with the requirements of the manufacturer, NZS 3604, section 4, **Durability**, and of the number and form required for each particular junction to NZS 3604, sections 6-10.

2.12 BRACING STRAPS

Nail-on type to the requirements of NZS 3604, section 4, **Durability**, and of the number and form required for each particular application to NZS 3604, sections 6-10.

2.13 POWDER ACTUATED FASTENERS

To type, size and charge required by the powder actuated tool manufacturer for each particular member and the substrate.

2.14 CORROSION RISKS

For interior timber, treated with copper-based timber preservatives (H3.2 or higher), use a minimum of hot-dipped galvanized steel fixings and fasteners.

For exterior timber, timber in damp areas and timber subject to occasional wetting, use only stainless steel (or equivalent) fixings and connectors, when the timber is treated with; Copper Azole (CuAz, Preservative code 58), Alkaline Copper Quaternary (ACQ, Preservative code 90), Micronise Copper Azole (code 88) or Micronised Copper Quaternary (code 89).

3 EXECUTION

Conditions

3.1 PROTECT TIMBER

Protect all timber against damage and from inclement weather. Ensure that any variation in moisture content is kept to a minimum, before and after erection and before enclosure.

3.2 EXECUTION

Execution to comply with NZS 3604, except as varied in this specification. Execution to include those methods, practices and processes contained in the unit standards for the National Certificate in Carpentry and the National Certificate in Joinery (cabinetry, exterior joinery, stairs).

3.3 SEPARATION

Separate all timber framing timbers from concrete, masonry and brick by: -

- a full length polyethylene damp-proof membrane overlapping timber by at least 6mm; or
- a 12mm minimum free draining air space

3.4 FRAMING MOISTURE CONTENT

Maximum allowable equilibrium moisture content (EMC) for non air-conditioned or centrally heated buildings, for framing to which linings are attached.

- At erection: 24% EMC maximum
- At enclosure: 20% EMC maximum
- At lining: 16% EMC maximum

3.5 TOLERANCES

Permissible deviations from established lines, grades and dimensions equal to or less than the following. Multiples of given limits are not cumulative.

- Deviation in plan, up to 10 metres, 5mm
- Deviation in plan, over 10 metres, 10mm total

- Deviation from horizontal, up to 10 metres, 5mm
- Deviation from horizontal, over 10 metres, 10mm total

- Deviation from vertical position per 3 metres, 3mm

- Deviation from horizontal and vertical, within openings, 3mm.

Application

3.6 SET-OUT

Set-out framing generally in accordance with the requirements of NZS 3604, to carry superimposed loads, and as required to support sheet linings and claddings. When necessary provide framing to suit required cladding/lining control joints and sheet joints.

3.7 SET TIMBERS

Set timbers true to required lines and levels with mitres, butt joints, laps and housings cut accurately to provide full and even contact over the whole of the bearing surface.

3.8 TIMBER CUTTING

Select and cut spanning members to minimise allowable defects and avoiding knots and short grain on edges in the middle third, and shakes, splits and checks at mid-span and close to ends.

3.9 TIMBER PLATES AND FURRING

Fix to steelwork with bolts and washers or approved proprietary fastenings at 1 metre maximum spacing and not less than 2 fixings to each member, or to engineering specific design.

3.10 HOLES AND NOTCHES

Limit holes and notches, checks and half-housing for the structure to those allowable in NZS 3604. Neatly form holes and notches for services without lessening the structural integrity of the member.

3.11 CUTTING

Cutting for straightening to comply with NZS 3604, 8.5.3, **Straightening studs**.

3.12 EXPOSED TIMBER CONNECTORS AND FIXINGS

Do not use steel timber connectors and fixings on any structural framing exposed to view unless detailed on the drawings.

3.13 POWDER-ACTUATED FASTENING TOOLS

Comply with the requirements of WorkSafe and the Health and Safety at Work Act 2015. Powder-actuated fastening tool operators to have the appropriate current Certificate and/or Licence and tools to have the appropriate certificate of fitness if necessary.

3.14 ADDITIONAL FRAMING

Position and fix all necessary members for the fixing of all services, fittings, fixtures, edges of linings or claddings, and to provide lateral support to load carrying framing.

3.15 FORM NAILED JOINTS

Fully drive nails in all structural joints with the number and location for each particular joint, to the requirements of the nailing schedules of NZS 3604. Where splitting could occur, pre-drill to 80% of nail diameter.

3.16 FORM BOLTED JOINTS

Drill for and set bolts to ensure full bearing and development of the joint strength, with tension to just set the washers into timber or to engineering specific design.

3.17 FIT CONNECTORS AND FIXINGS

Fit connectors and fixings to obtain full bearing over all contact surfaces and full development of the required loading capacity for that particular joint and in accordance with the manufacturer's requirements or to engineering specific design.

3.18 FIT BRACING

Fit and fix subfloor, wall and roof bracing elements to the requirements of the manufacturer or to NZS 3604, to develop the full number of bracing units required.

3.19 DPC TO LOSP TREATED TIMBER

Refer to 4161 UNDERLAYS, FOIL AND DPC section

3.20 DPC TO TIMBER

Refer to 4161 UNDERLAYS, FOIL AND DPC section

Completion

3.21 CLEAN UP

Clean up timber framing as the work proceeds so no offcuts, chips, sawdust or any other matter or items remain behind the claddings or linings.

3.22 LEAVE

Leave work to the standard required by following procedures.

3.23 REMOVE

Remove debris, unused materials and elements from the site.

4 SELECTIONS

4.1 INTERIOR WALL FRAMING - RADIATA PINE

Member	Species	Grade	Treatment
Non structural walls:	Radiata pine	SG8	H1.2
Structural and braced walls:	Radiata pine	SG8	H1.2

4.2 DPC

Refer to 4161 UNDERLAYS, FOIL AND DPC section

5113G GIB® PLASTERBOARD LININGS

1 GENERAL

This section relates to the supply, fixing and jointing of GIB® plasterboard linings and accessories to timber and steel framed walls and ceilings to form:

- standard systems
- superior finish quality systems
- bracing systems
- fire rated garage boundary wall systems
- wet area systems
- GIBFix® Framing systems

1.1 RELATED WORK

Refer to ~ for ~.

1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

AWCINZ	Association of Wall and Ceiling Industries New Zealand

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC C/AS2	Protection from fire
NZBC E2/AS1	External moisture
AS 1397	Continuous hot-dip metallic coated steel sheet and strip - Coatings of zinc and zinc alloyed with aluminium and magnesium
AS/NZS 2588	Gypsum plasterboard
AS/NZS 2589	Gypsum linings - Application and finishing
NZS 3604	Timber-framed buildings
AS/NZS 4600:2005	Cold-formed steel structures
ISO 5660.1	Reaction-to-fire tests - Heat release, smoke production and mass loss rate - Part 1: Heat release rate (cone calorimeter method)
ISO 5660.2	Reaction-to-fire tests - Heat release, smoke production and mass loss rate - Part 2: Smoke production rate (dynamic measurement)
BRANZ Technical Paper P21	BRANZ Technical Paper P21: A wall bracing test and evaluation procedure (2010)
NASH	Residential and Low-Rise Steel Framing Part 1 2010 Design Criteria

1.4 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer and Supplier documents relating to this part of the work.

- GIB® Site Guide (September 2018)
- GIB® Noise Control Systems (September 2017)
- GIB® Fire Rated Systems (October 2018)
- GIB Aqualine® Wet Area Systems (March 2007)
- GIB Toughline® Aqua (July 2018)
- GIB Ezybrace® Systems (2016)
- GIB Ezybrace® Bracing Software
- GIB Ezybrace® Systems (June 2011), with amendments (December 2014)
- GIB Ezybrace® for Steel Frame Housing (NASH) Software (2011)
- GIBFix® Framing System (2016)
- GIB Rondo® Metal Ceiling Batten Systems

	- GIB-Cove® - GIB RocTape® - GIB Goldline™ Platinum Tape-on Trims (January 2006) - GIB UltraFlex® high impact corner mould (September 2004) - GIB® Tough Systems (Nov 2014)
BRANZ Appraisal 928 (2016)	GIB Ezybrace® Systems 2016
BRANZ Appraisal 427 (2007)	GIB Aqualine® Wet Area Systems
BRANZ Appraisal 928 (2016)	GIB Ezybrace® Systems 2016
GreenTag Certification	WWLCG001-001-A-2015 - GreenTag™ GreenRate / Level B for: - GIB® Standard (10mm & 13mm) - GIB Fyreline® (10mm, 13mm, 16mm & 19mm) - GIB Braceline® (10mm & 13mm) - GIB Noiseline® (10mm & 13mm) - GIB Toughline® (13mm) - GIB Wideline® (10mm & 13mm)

Copies of the above literature are available at:

Company:	Winstone Wallboards
Web:	www.gib.co.nz
Telephone:	0800 100 442

Requirements

1.5 NO SUBSTITUTIONS

Substitutions are not permitted to any specified GIB® systems, GIB® system components, GIB® plasterboard, associated GIB® products or GIB® accessories.

1.6 INSTALLER WORK SKILLS AND QUALIFICATIONS

GIB® plasterboard fixers and plasterers to be experienced competent workers, familiar with GIB® plasterboard lining systems installation and finishing techniques. Submit evidence of experience on request. For example:

- National Certificate of Interior Systems; or
- Certified Business member of AWCINZ.

Performance

1.7 INSPECTIONS AND ACCEPTANCE

Allow for inspection of the finished plasterboard surface:

- before applying sealer and
- before applying finish coatings or decorative papers,

so that after assessment of the type and/or angle of illumination and its effect on the completed decorative treatment, group approval and acceptance of the surface can be given.

1.8 FIRE RATING REQUIREMENTS

Provide the GIB® fire resistant rated garage boundary wall systems. Refer to SELECTIONS for system/FRR.

1.9 SOUND INSULATION REQUIREMENTS

Provide the GIB® Noise Control Systems. Refer to SELECTIONS for system/STC. Include for forming and treating of perimeters of openings and penetrations in the elements to ensure the specified performance. Ensure absence of adjoining flanking paths.

1.10 BRACING REQUIREMENTS

Braced wall systems to NZS 3604 when tested to BRANZ Technical Paper P21, using:

- GIB Ezybrace® Systems (2016) and/or GIB Ezybrace® Bracing Software (2016)
- GIB Ezybrace® Systems (2011)
- GIB Ezybrace® for Steel Frame Housing (NASH) Software 2011 (to NASH Residential and Low-Rise Steel Framing Part 1 2010 Design Criteria)

Refer to drawings for location and type.

1.11 SURFACE FIRE PROPERTIES - UNFINISHED BOARD

All GIB® unfinished plasterboard sheet materials achieve a Group Classification of, Group 1-S to NZBC C/AS2, Table 4.3, following testing in accordance with ISO 5660.1 and ISO 5660.2.

2 PRODUCTS

Materials

2.1 GIB® PLASTERBOARD

Gypsum plaster core encased in a face and backing paper formed for standard and water resistance use to AS/NZS 2588. Refer to SELECTIONS for location, type, thickness and finish.
GIB® Standard plasterboard
GIB Wideline® plasterboard
GIB Ultraline® high quality surface plasterboard
GIB Fyreline® fire resistant plasterboard
GIB Braceline® & GIB® Noiseline® dual purpose wall bracing & noise control plasterboard
GIB Aqualine® wet area plasterboard
GIB Toughline®
GIB Toughline® Aqua

2.2 GIB® COVING

GIB-Cove® plasterboard coving. Refer to SELECTIONS for profile and size.

Components

2.3 CEILING BATTENS

GIB® Rondo® metal ceiling battens, batten joiners and perimeter channel.

2.4 GIBFIX® ANGLES

GIBFix® Angles, 45mm x 45mm angles, 2.4m or 2.7m long.

2.5 SCREWS

GIB® Grabber® drywall type screws as follows:

Grabber® type	**Used for fixing:**
High Thread	GIB Ezybrace® or Standard systems to timber
Self Tapping	Standard systems to light gauge steel or timber
Dual Thread Screws	GIBFix®, GIB Ezybrace®, or Standard systems, to light gauge steel or timber
Wafer Head Needle Tip	Light gauge metal to timber not directly under plasterboard
Pancake Head Drill Tip	Light gauge metal to light gauge metal directly under plasterboard

Refer to GIB® requirements for appropriate details.

2.6 TAPE ON TRIMS AND EDGES

GIB® Goldline™ tape-on trims
GIB® UltraFlex® high impact corner mould
GIB® Levelline® Tape on Trim

2.7 METAL ANGLE TRIMS

GIB® galvanized steel slim angle trims.

2.8 CONTROL JOINTS

GIB® Rondo® P35 control joints.
GIB® Goldline™ tape-on trims
GIB® plastic W-profile control joints.

Accessories

2.9 ADHESIVE

Timber frame and/or steel frame:
GIBFix® One ultra low VOC water based wallboard adhesive

GIBFix® All-Bond solvent based wallboard adhesive

2.10 JOINTING COMPOUND

Bedding compound:	GIB Tradeset®, GIB Lite Blue®, GIB MaxSet®, GIB ProMix® All Purpose, GIB Plus 4®
Finishing compound:	GIB ProMix® All Purpose, GIB® Trade Finish®, GIB® Trade Finish® Lite, GIB ProMix® Lite, GIB® U-Mix, GIB Plus 4®, GIB Trade Finish® Multi
Cove:	GIB-Cove® Bond

2.11 JOINTING TAPE

GIB® jointing tape.

2.12 ACOUSTIC SEALANT

GIB Soundseal® ultra low VOC water based highly flexible acoustic sealant.

2.13 FIRE/ACOUSTIC SEALANT

GIB Fire Soundseal® ultra low VOC, mulit use acoustic sealant that resists passage of smoke and fire.

2.14 GAP FILLER

GIB® Gap Filler ultra low VOC multi-purpose acrylic flexible filler

3 EXECUTION

Conditions

3.1 DELIVERY, STORAGE & HANDLING OF PRODUCTS

Refer to 1270 CONSTRUCTION for requirements relating to delivery, storage and handling of products.

3.2 ROUTINE MATTERS

Refer to 1250 TEMPORARY WORKS & SERVICES for protection requirements.
Refer to 1270 CONSTRUCTION for requirements relating to defective or damaged work, removal of protection and cleaning.

3.3 LEVELS OF PLASTERBOARD FINISH

Provide the selected plasterboard surfaces to the pre decorative levels of finish specified in AS/NZS 2589.

3.4 CONFIRM LEVELS OF PLASTERBOARD FINISH ACCEPTANCE

Before commencing work, agree in writing upon the surface finish assessment procedure towards ensuring that the quality of finish expectations are reasonable and are subsequently obtained and acceptable.

Do not apply decorative treatment until it is agreed in writing by the contractor, subcontractors and decorator that the specified plasterboard Level of Finish has been achieved.

"Levels of plasterboard finish" is a tool for specifying the required quality of finish when installing and flush stopping GIB® plasterboard **prior** to the application of a range of decorative finishes under various lighting conditions. Refer to **AS/NZS** 2589.

3.5 SUBSTRATE

Do not commence work until the substrate is plumb, level and to the standard required by the sheet manufacturer's requirements. Refer to GIB® Site Guide (September 2018).

3.6 TIMBER FRAMING - GIBFIX® FRAMING SYSTEM

Ensure that the timber framing is to the manufacturers requirements for the GIBFix® Framing System.

If GIB EzyBrace® systems are used in conjunction with GIBFix® Framing System, ensure that the positioning of the GIB HandiBrac® panel hold-down brackets are to the manufacturers recommended placements for the GIBFix® Framing System.

3.7 TIMBER FRAME MOISTURE CONTENT

Maximum allowable moisture content to AS/NZS 2589 for timber framing at lining: 18% or less for plasterboard linings. Refer to NZBC E2/AS1 and GIB® Site Guide (Sept 2018).

3.8 METAL FRAMING

Metal framing, to which gypsum lining is fixed, shall comply with AS 1397, AS/NZS 4600, or NASH Residential and Low-Rise Steel Framing Part 1 2010 Design Criteria as applicable. Where adhesion of gypsum linings is required, surfaces shall be free of oil, grease, dust and other foreign materials. Refer to the metal framing manufacturers specifications where high density gypsum linings (>800 kg/m³) such as GIB Braceline® and GIB Noiseline® are specified for fixing to light gauge steel framing.

3.9 PROTECTION

Protect surfaces; cabinetwork, fittings, equipment and finishes already in place from the possibility of water staining and stopping damage. Refer to GIB® Site Guide (Sept 2018).

Application

3.10 INSTALL CEILING BATTENS

Install to GIB® Rondo® Ceiling Batten Systems requirements.

3.11 INSTALL GIBFIX® ANGLES

Install GIBFix® Angles to the wall and ceiling junctions to the GIBFix® Framing System requirements. Install GIBFix® Angles before installation of GIB® plasterboard linings.
Run GIBFix® Angles as continuous lengths between framing members. If joints are necessary for the GIBFix® Angles, overlap the angles by a minimum of 300mm and fix as per manufacturers requirements. When jointing GIBFix® Angles, locate the shorter section at the top of the stud.

3.12 LINING WALLS AND CEILINGS GENERALLY

Form to GIB® Site Guide (September 2018). Ensure bulk insulation thickness shall not exceed that of the wall framing.

3.13 BOARD ORIENTATION

Minimise joints by careful sheet layout using the largest sheet sizes possible, and generally fixing horizontally. Where part sheets are required for various stud heights they should be positioned so the cut sheet is as low as possible to keep joints below eye level.

3.14 BOARD INSTALLATION FOR GIBFIX® SYSTEM

Fix the GIB® plasterboard to the GIBFix® Angle side over the stud first and then fix the GIB® plasterboard to the GIBFix® Angle only side (not over the stud). If the GIBFix® Angle only side must be fastened off first, provide additional fixings for the GIBFix® Angle to the stud, to the manufacturers requirements.

3.15 FORM NOISE CONTROL SYSTEMS

Form to GIB® Noise Control Systems requirements.

3.16 FORM WET AREA SYSTEMS

Form to GIB Aqualine® Wet Area Systems requirements.

3.17 FORM BRACING SYSTEMS

Form bracing systems to:

- GIB Ezybrace® Systems (2016)

3.18 FORM CONTROL JOINTS

Form control joints to GIB® Site Guide (September 2018) requirements.

3.19 INSTALL COVES

Install to GIB-Cove® literature using GIB-Cove® Bond.

3.20 INSTALL TAPE-ON TRIMS

Install to GIB® Goldline™ Tape-on trims literature and/or GIB® Ultraflex high impact corner mould literature.

Finishing

3.21 FINISHING GENERALLY

To GIB® Site Guide (September 2018) and AS/NZS 2589.

Completion & Commissioning

3.22 COMPLETION MATTERS

Refer to 1270 CONSTRUCTION for completion requirements and if required commissioning requirements.

3.23 CLEAN DOWN

Clean down completed surfaces to remove irregularities and finally sand down with fine paper to the sheet manufacturer requirements, to leave completely smooth and clean.

3.24 REMOVE

Remove debris, unused materials and elements from the site.

3.25 LEAVE

Leave work to the standard required by following procedures.

4 SELECTIONS

Plasterboard

4.1 GIB® WATER RESISTANT SYSTEMS WALLS

Location	Plasterboard type / Lining requirements	Thickness	Finish Level
TOILETS	GIB Aqualine® plasterboard	13mm	

4.2 GIB® SOUND RATED SYSTEMS

4Refer to GIB® Noise Control Systems

Location	Plasterboard type / Lining requirements	STC / System specification	Finish Level
Toilets	13mm Noiseline to external face of perimeter walls	~	4
Meeting Rooms	13mm Noiseline	~	4

Accessories

4.3 GIBFIX® FRAMING SYSTEM COMPONENTS

Brand/type: GIBFix® Angles
Fixings: GIB® Grabber® Dual Head Screws

4.4 GIB® TAPE ON EDGE OR CORNER TRIMS

Brand/type: ~

4.5 GIB® EDGE PROFILES

Brand/type: ~

5133BL BESTWOOD™ WALL LININGS

1 GENERAL

This section relates to the supply and installation of wall linings incorporating the **Bestwood** ™ range of panel product.
It includes:

Bestwood™ Melamine
Bestwood™ Natural Wood Veneer
Bestwood™ Recon Wood Veneer

Associated components and accessories necessary to complete the installation.

Bestwood ™ is a business unit o**New Zealand Panels Group**

1.1 RELATED WORKS

Refer to ~

1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

FSC	Forest Stewardship Council
FSC CoC	Forest Stewardship Council Chain of Custody certification
PEFC	Programme for the Endorsement of Forest Certification
MDF	Medium density fibreboard
FR MDF	Flame retardant medium density fibreboard
MR MDF E0	Moisture resistant medium density fibreboard, low formaldehyde
~	~

The following definitions apply specifically to this section:

FSC CoC	CoC certification applies to those who process, transform or trade forest products, providing a guarantee about the production and source of FSC-certified products and tracking the production and distribution of the products.
FSC Forest Management (FM) Certification	A forest management unit independently FSC inspected and certified that it complies with the internationally-agreed FSC Principles.
~	~

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC C/AS2	Protection from fire
NZBC C/VM2	Protection from fire
NZBC 3.4(a)	Internal Surface Linings
ISO 5660.1	Reaction to Fire Tests - Heat Release Smoke Production and Mass Loss Rate Part 1: Heat Release Rate (Cone Calorimeter Method)
BS EN 635	Plywood. Classification by surface appearance.
BS EN 636	Plywood. Specifications

1.4 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are:
Product brochures
Technical Data Sheets
Environmental Choice Licence
Handling & Cleaning Recommendations

Manufacturer/supplier contact details:

Company:	**Bestwood™** - a business unit of New Zealand Panels Group
Web:	www.bestwood.co.nz
Email:	sales@bestwood.co.nz
Telephone:	0800 866 678

1.5 WARRANTY - MANUFACTURER/SUPPLIER

10 years	for Melamine™
7 years	for **Bestwood** ™ Natural and Recon Wood Veneers

Refer to **Bestwood™** Terms & Conditions of Trade for material warranty details and conditions, available on the web site.

- Provide this warranty on **Bestwood™** standard form (if unavailable, use the standard form in the general section 1237WA WARRANTY AGREEMENT).
- Commence the warranty from the date of Practical Completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

1.6 WARRANTY - INSTALLER/APPLICATOR

Provide an installer warranty:

2 years	For installation

- Provide this warranty on the installer standard form (if unavailable use the standard form in the general section 1237WA WARRANTY AGREEMENT).
- Commence the warranty from the date of Practical Completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

Requirements

1.7 QUALIFICATIONS

Installers to be experienced, competent trades people familiar with the **Bestwood™** materials and techniques specified. If requested provide evidence of qualification / experience prior to commencing work.

1.8 NO SUBSTITUTIONS

Substitutions are not permitted to any of the specified **Bestwood** ™ materials, components and associated product listed in this section.

1.9 INFORMATION FOR OPERATION AND MAINTENANCE

Refer to the general section 1239 OPERATION & MAINTENANCE for provision of the following general operation and maintenance information as electronic PDF format documents:
~
Provide maintenance documentation in accordance with **Bestwood** ™ Handling & Cleaning Recommendations as necessary for the Principal to maintain the works. Provide documentation no later than the date of Practical Completion or the date on which the Principal takes occupation of the works.

Provide this information prior to Practical Completion.

1.10 MAINTENANCE MATERIALS

Provide maintenance materials listed in SELECTIONS to the Principal for ongoing maintenance requirements.

Performance

1.11 SURFACE FIRE PROPERTIES

Bestwood™ materials tested to ISO 5660.1 and which achieve a Group Number Classification to NZBC C/AS2, table 4.3, as determined in accordance with NZBC C/VM2 Appendix A, are as follows:
Melamine ™ in all colours,

on 12mm and 18mm 1-S
MDF FR:
Light coloured wood veneers, (Pine), both coated and uncoated,
on 12mm and 18mm 1-S
MDF FR:
Dark coloured wood veneer, (Sapele), uncoated,
on 12mm and 18mm 1-S
MDF FR:
Dark coloured wood veneer, (Sapele) coated,
on 12mm and 18mm 2-S
MDF FR:

Quality control and assurance

1.12 INSPECTIONS

Give sufficient notice so that inspection may be made of the following, before installation;

- Pre-assembled lining panels fabricated and ready to be delivered to site.
- Site-assembled lining panels on site ready for installation.
- Areas of the building prepared to receive the lining panels.

2 PRODUCTS

Materials - Wood Veneer

2.1 BESTWOOD™ NATURAL WOOD VENEER

Bestwood™Natural Wood Veneer, a range of natural wood overlays 0.5mm thick when sanded, prior to bonding to various substrates. Supplied in a range of sheet sizes and thicknesses (depending on core substrate) in various timber species, panels can be cut differently to create numerous effects in the veneer grain. Panels are finished with edging to match the surface veneer. Refer to SELECTIONS for timber species and grain options.

Materials: - Substrates

2.2 PLY

A range of speciality plywood panels can be overlaid with **Bestwood™ Melamine**or **Bestwood™ Wood Veneer**. Is also available with 'appearance grade' face, Super E0, E0 and E1 low formaldehyde, marine-bonded options. Refer to SELECTIONS for panel sizes and face options.

Accessories

2.3 PANEL JOINTERS

To **Bestwoood** ™ required profiles for particular locations. Spacers may be required between panels to create a negative detail. Refer to detail design drawings.

2.4 SCREWS

Stainless steel; length sufficient to penetrate into the background support up to the shank. Exposed screws for fixing to match the panel being attached. Refer to NZBC requirements for fixing centres.

2.5 NAILS

Length sufficient to penetrate into the background support at least half the nail length, except if into Radiata pine, then three-fifths their length. Refer to NZBC requirements for fixing centres.

2.6 INSERTS, BOLTS AND FASTENERS

Fixings to be the appropriate type, finish, size and spacing to **Bestwood** ™ details.
Items to be installed in corrosive environments to be stainless steel.

2.7 ADHESIVES - CONTACT

As recommended by the adhesive manufacturer for the **Bestwood** ™ panel product or pre-finished joint being used.

Finishes - timber veneer panels

2.8 HEAVY-DUTY COATING SYSTEM

Two-pack, clear acrylic polyurethane coating applied to manufacturer's recommendations.

3 EXECUTION

3.1 DELIVERY, STORAGE & HANDLING OF PRODUCT

Refer to the general section 1270 CONSTRUCTION for requirements relating to delivery, storage and handling of product.

3.2 ROUTINE MATTERS

Refer to 1250 TEMPORARY WORKS & SERVICES for protection requirements.
Refer to 1270 CONSTRUCTION for requirements relating to defective or damaged work, removal of protection and cleaning.

Conditions - site

3.3 TRANSIT & DELIVERY

Load, transport and unload fittings without distortion or damage and keep covered to protect from the weather. Deliver fittings to the site only when floor, wall and ceiling surfaces are in place and the fittings can be immediately placed in their final location. Keep products dry in transit. Take delivery of products dry and undamaged. Deliver all materials in original unopened packaging with manufacturer's information labels intact.

3.4 STORAGE

Store panels and associated components in a dry and securely locked area. Provide supervision when the secure area is unlocked while panels and cartons are being distributed. Sign off each package from the specification schedule as released. Store panels flat and level on original pallet or on a minimum of three identical bearers evenly spaced apart.

Pre-Installation

3.5 PRE-INSTALLATION REQUIREMENTS

Check work previously carried out and confirm it is of the required standard for this part of the work.

Moisture content:	Timber frame 18% maximum
	Concrete masonry RH 75%
	~

Ensure all rooms/areas are completely decorated and all services installed in preparation for panel lining installation. Ensure all protective films remain intact until panel installation is complete and work area is clean.

3.6 SITE MEASURE

Site check and confirm dimensions prior to wall linings being fixed. Before proceeding, confirm any dimension not shown or unknown. Verify positions of electric power outlets, wiring to light fittings included in joinery fixtures, water supplies and waste pipe locations.

3.7 SUBSTRATE

Ensure substrate and support fixings will allow work of the specified standard. Ensure adjacent wall and floor finishes are complete prior to panel installation.

3.8 SUPPORT

Confirm fixing points needed for all panels and confirm that the appropriate continuous support frame, nogging or lining at each fixing point location are provided.

3.9 CO-ORDINATION

Do not proceed if support frame, nogging or services do not match the requirements of the panels. Check all necessary components are included.

Installation

3.10 PANEL LININGS - GENERAL

Execution to include those methods, practices and processes contained in the current syllabus for the National Certificate in Carpentry and the National Certificate in Joinery

3.11 SHRINKAGE

Arrange jointing and fixing so that shrinkage in any part and direction does not impair the strength or appearance of the finished work or damage the adjoining work.
Allow a 2-3mm gap at edges of linings for sheet expansion; and;

2 - 3mm	at each sheet joint; or
6 - 9mm	at 3.6 metres; or
8 - 12mm	every 4.8 metres

In areas with an expected high level of internal moisture, allow a gap of 4 - 6mm every 1.2 metres.

3.12 STANDARDS AND TOLERANCES

Refer to the general section 1270 CONSTRUCTION for general requirements. Provide reasonable tolerances at connections between the joinery fittings and the building fabric so that any irregularities are adequately compensated for in the site fixing.

3.13 NATURAL TIMBER VENEER PANELS

Select timber for match or uniformity or symmetry of colour or grain of adjacent pieces. Finish to same standard on all faces. Clash exposed edges of panels with matching edge tapes and finishes.

3.14 FIXING LININGS

Before fixing, the substrate moisture content must be less than 18% and the sheets fillet stacked on site to pre-condition. Provide edge clearances and dimensional increases to **Bestwood** ™ requirements and fix boards vertically with vee-butt joints and with all edges fully supported. Minimum 10mm, maximum 15mm from the edge, 150mm centres along edges and 200mm centres on intermediate supports. Seal exposed board surfaces immediately after fixing.

Assembly

3.15 MACHINING

Carry out machining within the practices required for the particular **Bestwood** ™ panel product being used. Machine drill holes, cut recesses and form joints ready for assembly to the componentry manufacturer's requirements. Ensure work is accurate, square and true to line.

3.16 ASSEMBLY

Carry out gluing, dowelling, and other operations necessary for the proper assembly of the linings as detailed with fixings concealed unless detailed otherwise.

3.17 GLUE JOINTS

Use glue joints where provision for shrinkage is not required. Cross-tongue or otherwise reinforce. Surfaces in contact to have an even sawn or planed finish and be free of contamination. Mix, apply and set to the glue manufacturer's requirements with adequate pressure applied to ensure intimate contact that will be maintained while the glue sets.

3.18 PANEL CONNECTOR JOINTS

Locate and drive connectors to **Bestwood** ™ requirements. Fit plastic trim caps where detailed. Conceal or hide from sight other connector heads.

3.19 FIXING ON SITE

- Scribe fit and conceal fix rigidly in place square, level, plumb and true to line and face as detailed and to the required standard.
- Assemble fittings on-site if brought in sections.

Finishing - Natural Timber Veneer panels

3.20 PRE-COATING/FINISHING REQUIREMENTS

Check work previously carried out and confirm it is of the required standard for specified finish. Carry out such additional preparatory work as required bringing the substrate to suitable condition.

3.21 COATING SYSTEM - PREPARATION

- Fill timber defects with proprietary wood filler (e.g. cracks, holes, etc.)
- Sand timber to a smooth even finish using 180 grit paper.
- Remove all sanding dust using air guns and tack rags.
- Ensure substrate is free from dust, grease, dirt and other contaminants.
- Ensure moisture content of the timber is less than 15% immediately before commencing coating operations.

3.22 COATING SYSTEM - APPLICATION

To coating manufacturer's requirements. Protect the surfaces of finished work if pre-finished or until coatings or coverings have been applied. Raw or unfinished veneer board surfaces should be clear sealed immediately after fixing to minimise the effects of atmospheric moisture or direct sunlight and to resist marking during construction activities.

Completion & Commissioning

3.23 ROUTINE CLEANING

Carry out routine trade cleaning of this part of the work including periodic removal of all debris, unused materials and elements from the site.

3.24 DEFECTIVE OR DAMAGED WORK

Repair damaged or marked elements. Replace damaged or marked elements where repair is not possible or will not be acceptable. Leave work to the standard required for following procedures.

3.25 LEAVE

Leave work complete, clean and without blemish and to the standard required by follow-on procedures.

3.26 REMOVE

Remove debris, unused materials and elements from the site.

3.27 PROTECTION

Protect finished surfaces from damage. When working with **Bestwood™**panels, do not remove protective film until lining installation is complete and the work area is clean.
Provide the following temporary protection of the finished work generally:
~

4 SELECTIONS

For further details on selections go to www.bestwood.co.nz.
Substitutions are not permitted to the following **Bestwood™** product and/or associated components, unless stated otherwise.

4.1 SURFACE FIRE PROPERTIES

Group Number	Panel/Finish	Location
~	~	~

Materials - unfinished

4.2 BESTWOOD™ - NATURAL WOOD VENEER

Location:	Customer Srevice Desk, Banquette Seating
Supplier:	Bestwood™ - a business unit of New Zealand Panels Group
Brand/type:	Bestwood™ Natural Wood Veneer
Sheet size:	~mm x ~mm
Sheet thickness:	15mm Battens, 30mm Benchtop and 18mm Banquette
Substrate:	Plywood - Birch
Edge treatment:	Bestwood™ Edging to match the Natural Veneer panel face. 1.9mm for a solid look and edge protection
Veneer:	NZ Tawa
Finish:	Refer Coating System section

Finishing - natural timber veneer panels

4.3 COATING SYSTEM

Location:	Customer Services, Banquette Seating
Manufacturer/supplier:	Resene
Type/Brand:	Polythane
Duty:	Medium - Heavy
Colour:	Clear

Accessories

4.4 ADHESIVES

Location:	Customer Services, Banquette Seating
Manufacturer/supplier:	CRC
Type/Brand:	Ados F3

Spares & maintenance products

5133S SERATONE® PANELS BY LAMINEX

1 GENERAL

This section relates to the supply and fixing of **Laminex New Zealand** prefinished Seratone® wall or ceiling linings:
It includes:

- Classic (dry, wet and hygiene areas)
- Specialty (dry, wet and hygiene areas)
- Aqua (dry, wet and hygiene areas)
- Space (dry area only)

1.1 RELATED WORK

Refer to ~ for ~.

Documents

1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC C/AS1-AS2	Protection from fire
NZBC C/VM2	Protection from fire
ISO 5660.1	Reaction-to-fire tests - Heat release, smoke production and mass loss rate - Part 1: Heat release rate (cone calorimeter method)
ISO 9705	Fire Tests - Full scale room test for surface products
BRANZ Appraisal 790	Seratone Wall and Ceiling Linings

1.3 MANUFACTURER DOCUMENTS

Manufacturer and supplier documents relating to work in this section are:
Laminex New Zealand publication: Seratone® technical information
BRANZ Appraisal 790 - Seratone Wall and Ceiling Linings

This literature gives in depth details of design and installation methods referred to in this specification. For specific design applications contact Laminex New Zealand customer services.

Manufacturer/supplier contact details

Company:	**Laminex New Zealand Ltd**
Web:	www.laminexnewzealand.co.nz
Email:	info@laminex.co.nz
Telephone:	0800 303 606

Warranties

1.4 WARRANTY - MANUFACTURER/SUPPLIER

Provide a Laminex New Zealand material warranty:

15 years:	Wet wall lining

- Provide this warranty on Laminex New Zealand Ltd standard form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

1.5 WARRANTY - INSTALLER/APPLICATOR

Provide an installer warranty:

2 years:	For installation

- Provide this warranty on the installer standard form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

Requirements

1.6 NO SUBSTITUTIONS

No substitutions to be made to any specified Laminex New Zealand panel linings, or associated products, components or accessories.

Performance

1.7 SURFACE FIRE PROPERTIES

Seratone Aqua is tested to ISO 9705 and achieve a Group Number Classification of 3. Seratone® Classic and Seratone® Specialty have been tested to ISO 5660.1 and achieve a Group Number Classification of 3 to NZBC C/AS2, Table 4.3 as determined in accordance with NZBC C/VM2 Appendix A.

2 PRODUCTS

Materials

2.1 BATTENS

Radiata pine, minimum 50mm x 25mm, SG6 grade framing, treated to H1.2.

2.2 DAMP-PROOF COURSE

Heavy kraft paper strip laminate saturated and coated with bitumen or a synthetic hi-impact polyethylene film such as Thermakraft Supercourse 500.

2.3 SERATONE CLASSIC AND SERATONE SPECIALTY PANELS

For dry, wet and hygiene applications **-** Seratone® Classic and Seratone® Specialty 4.5mm thick, lightweight high density oil-tempered fibreboard panel coated with a multi-layered paint system.

2.4 SERATONE AQUA PANELS

Seratone Aqua is a compact, solid-core panel for dry, wet and hygiene applications – Seratone® Aqua is available as 2.7mm and 4.5mm thick panels. Refer SELECTIONS for sizes.

Components

2.5 SERATONE STANDARD ALUMINIUM JOINTERS

For dry and wet applications **-** Seratone® Standard aluminium jointers, colour matched to Seratone® Classic, Seratone® Specialty and Seratone Aqua colours.

2.6 PVC MOULDINGS

For dry and wet applications. PVC mouldings are for use in dry and wet areas and are available in Polar White as a Jointer, External Corner, Internal Corner and Capping. Bath Flashing, Cornice, 2 piece Jointer and 2 piece Internal Jointer are also available in Polar White. All PVC mouldings are available in 2400mm lengths. They are distributed by Soudal, phone 07 847 5540, www.soudal.co.nz. The PVC range requires a medium level of installation expertise.

Accessories

2.7 SILICONE SEALANT

For dry, wet and hygiene applications - Silicone sealant, colour matched to Seratone® Classic colour Polar only.

For Polar:	Sika Silasil NG, Ice White
	Sika Silasil NG, translucent
	Fuller Sanitary 770
	Soudal Silaseal Forever White, Gorilla Kitchen & Bathroom Sealant
	Soudal 240FC MS, Gorilla MS Sealant

2.8 CONSTRUCTION ADHESIVE

Type:	Sika; Showerbond or Nailbond Premium, Sika 123 MS Bond
	HB Fuller Maxbond
	Bostik Shower Grip
	Soudal 240FC MS, Soudal FixAll 220LM, Soudal MS Sealant or Nailpower Shower Grab

2.9 TAPES

Double-sided:	Soudal Gator VHB Double Sided foam tape. 12mm x 2mm x 30mtr (56665), Danco 6620 12mm wide double sided PE foam tape
Bond breaker:	Soudal Gator Bond Breaker Tape, Danco 100 or equal polyethylene based tape.

3 EXECUTION

Conditions

3.1 HANDLING AND STORAGE

Store panels in dry conditions and stack flat on full width gluts at 550mm centres. Take care to avoid breakage, damage to edges and corners and scratching of surfaces. Always lift without sliding.

3.2 SUBSTRATE

Ensure the building is completely enclosed before starting this work. Timber framing must be straight and properly aligned. Timber moisture content must not exceed 18% and all other adjacent materials free from dampness. Studs at 600mm centres maximum for 1200mm wide sheets and 450mm centres maximum for 900mm wide sheets. Nogs at 600mm centres. Where walls are lined, ensure that linings are flat sound and properly fixed.

3.3 PRECONDITIONING

Precondition panels by separating and open stacking, for at least 48 hours, in the space where they are to be installed. Remove edge tape from the panels packaged in pairs taking care not to damage the protective film.

3.4 TECHNIQUE

Before beginning this work obtain confirmation of the proposed layout of jointers and other visual considerations of the finished work. Ensure that panel batch numbers are the same for each installation, to maintain colour consistency.

Application - preparation

3.5 STRAP WALLS

Ensure moisture content is less than 18%. Strap concrete and masonry walls with battens. Separate timber from concrete/masonry with a damp-proof course. Fix battens at 600mm centres maximum for 1200mm wide sheets and 450mm centres for 900mm wide sheets, with nogs at 600mm centres.

3.6 CUTTING OF PANELS

Where required cut panels with a rail/plunge saw, laminate cutter, router, table saw, circular saw or hand saw (hand saw Seratone Classic & Specialty only) taking care to protect edges.

3.7 CUT PANELS IN WET AREAS – SERATONE CLASSIC AND SERATONE SPECIALTY

Where cuts are made in panels for wet areas, apply polyurethane or priming paint to all cut edges and to the rear of the panel to provide a 75mm band around penetrations and edges. Keep the silverseal band to the bottom. Run a bead of silicone around any fittings on the face of the panel before fitting face plates and tap flanges. For best results use a two component epoxy, such as Everdure.

Application - fixing of panels

NOTE: When fixing direct to the steel framing the steel surface should be abraded with Scotch-Brite then de-greased (using Sika Cleaner 205 or similar), then wiped with a clean dry cloth before any of the following fixing operations are carried out.

3.8 ADHESIVE FIXING TO STUDS/LINING MATERIAL

For dry, wet and hygiene areas:

- Apply adhesive, in 10mm continuous beads without blobs to the face of the lining material at 400mm centres or to the face of all the framing.
- Align panel and push onto the adhesive.
- Provide temporary or double sided foam tape support to panel until the adhesive cures.

3.9 ADHESIVE AND DOUBLE-SIDED TAPE FIXING TO STUDS

For dry, wet and hygiene areas:

- Apply double sided tape continuously to the right of centre of each stud.
- Apply adhesive in 10mm continuous beads without blobs beside the double sided tape down the face of each stud (avoid contamination of double sided tape).
- Apply adhesive in 10mm continuous beads without blobs to the face of all horizontal timber framing (dwangs etc).
- Remove paper release liner from double sided tape.
- Align panel and press firmly to ensure full contact between panel and framing.

3.10 ADHESIVE AND DOUBLE-SIDED TAPE FIXING TO LININGS

For dry, wet and hygiene areas:

- Apply double sided tape continuously to the back of the Seratone panel at 400mm centres.
- Apply adhesive in 10mm continuous beads without blobs to the back of the panel between the strips of double sided tape (at 400mm centres).
- Remove paper release liner from double sided tape.
- Align panel and press firmly to ensure full contact over the entire surface area of the panel.

Application - jointing method

3.11 SERATONE STANDARD ALUMINIUM JOINTERS AND PVC MOULDINGS

For dry and wet applications - Fix PVC mouldings in position with flat head nails at 300mm centres. Fix aluminium jointers in position with countersunk screws at 300mm centres. Alternatively, fix mouldings or jointers with adhesive. In wet areas, apply a bead of antifungal silicone into the moulding or jointer before inserting the panel. Refer to the Seratone® Technical Information for diagrammatic views of this operation.

3.12 SILICONE JOINTS

For dry, wet and hygiene applications - Apply bond breaker tape behind all joints to be finished with silicone. Mask each side of the joint and apply silicone to the manufacturer requirements. Disposable gloves are to be used to avoid bacterial contamination. Immediately, remove masking and allow to cure. Refer to the Seratone® Technical Information for diagrammatic views of this operation.

Completion

3.13 REMOVE

On completion, remove protective film from all panels and remove debris, unused materials and elements from the site.

4 SELECTIONS

For further details on selections go to www.laminex.co.nz.
Substitutions are not permitted to the following, unless stated otherwise.

Materials

4.1 SERATONE AQUA PANELS

4.5mmLocation:	Accessible Showers
Manufacturer:	Laminex New Zealand
Colour:	Polar White Square Tile
Panel size:	1200 x 2400
Panel thickness:	4.5mm

Components

4.2 SERATONE ALUMINIUM JOINTERS

Manufacturer:	Laminex New Zealand
Colour:	To match Seratone® lining

4.3 HOLDFAST PVC MOULDINGS

Manufacturer:	Holdfast
Colour:	White

Accessories

4.4 SILICONE SEALANT

Manufacturer: Selley's
Colour: White

5151 INTERNAL TRIM

1 GENERAL

This section relates to simple lengths of trim fixed on site as of isolated internal members, with simple end joints.
It includes:

- timber
- MDF
- metal
- plastic

1.1 RELATED WORK

Refer to ~ for ~.

Documents

1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC C/AS1, C/AS2	Protection from fire
NZS 3602	Timber and wood-based products for use in building
NZS 3604	Timber-framed buildings
NZS 3610	Specification for profiles of mouldings and joinery

1.3 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and supplier's documents relating to this part of the work:
~

Manufacturer/supplier contact details

Company:	~
Web:	~
Email:	~
Telephone:	~

Performance

1.4 FIRE PROPERTIES

For all Risk Groups covered by NZBC C/AS2.
All trim to have the appropriate Group Number to match that of the wall or ceiling to NZBC C/AS2, Table 4.3. Except that, there is no requirement for trim that does not exceed 5% of the wall or ceiling area to NZBC C/AS2, 4.17.6.d).

Requirements

1.5 SUSTAINABLE TIMBER

This project uses FSC Certified sustainable timber.

Abbreviations and definitions:
FSC

- Forest Stewardship Council

FSC Forest Management (FM) Certification

- A forest management unit independently FSC inspected and certified that it complies with the internationally-agreed FSC Principles.

FSC Chain of Custody (COC) Certification

- COC certification applies to those who process, transform or trade forest products, providing a guarantee about the production and source of FSC-certified products and tracking the production and distribution of the products.

Organisation website details:
FSC website:- https://nz.fsc.org/en-nz
FSC suppliers lists:- https://info.fsc.org/certificate.php#result

2 PRODUCTS

Materials

2.1 CERTIFIED SUSTAINABLE TIMBER

Refer to SELECTIONS for details of amount, type, suppliers.
Certified Sustainable FSC- COC Certified (or similar pre-approved) timber from forest to installation. Contractor to obtain and track all timber FSC-COC certificates and receipts showing FSC-COC numbers, including signed FSC outsourcing agreements between parties (ie FSC timber broker and non-FSC door joiner).
FSC suppliers lists:- https://info.fsc.org/certificate.php#result

2.2 TIMBER TRIM

To NZS 3610 and to profiles detailed on the drawings. Timber species, grade and treatment to NZS 3602.

2.3 MDF TRIM

Refer to SELECTIONS for type.

2.4 METAL TRIM

Refer to SELECTIONS for type.

2.5 PLASTIC SKIRTING

Refer to SELECTIONS for type.

2.6 PROPRIETARY TRIM

Refer to SELECTIONS for type.

Components

2.7 NAILS

Bright steel to dimension requirements of NZS 3604. Use galvanized where prone to dampness.

2.8 BRADS

Bright steel of a length three times the thickness of the member being fixed. Use cadmium plated where prone to dampness.

2.9 SCREWS, STEEL

Bright steel of a length to penetrate the substrate up to the shank. Use stainless steel in wet areas.

2.10 SCREWS, CHROME PLATED

Chrome plated of a length to penetrate the substrate up to the shank.

3 EXECUTION

Conditions

3.1 GENERALLY

To comply with NZS 3604, except as varied in this specification. Execution to include those methods, practices and processes contained in the unit standards for the National Certificate in Carpentry and the National Certificate in Joinery (cabinetry, exterior joinery, stairs).

3.2 STORAGE

Take delivery of trims undamaged and unmarked and store on site under cover, away from moisture, heat and direct sunlight in adequately ventilated area and clear of areas where work is in progress, to ensure materials are of the required standard when fixed in place.

3.3 ACCLIMATISE MATERIALS

Remove materials from packaging, separate and allow to acclimatise in the proposed installation area for 48 hours minimum prior to installation.

3.4 ENSURE

Ensure that the substrate to trims will allow work of the required standard. If it does not, do not proceed until the substrate has been remedied.

Application - Generally

3.5 INSTALL TIMBER TRIM

Use full lengths. Fit with scribed internal joints, mitred external joints and, mitred and returned at stop ends. Fix plumb, level and true to line and face using nails or brads to suit. Leave secure and with no movement possible.

3.6 INSTALL PLASTIC SKIRTING

Joint fit and fix, level and true to line and face all to the skirting manufacturer's requirements.

3.7 INSTALL PROPRIETARY TRIM

Use full lengths. Scribe joint and fix securely, plumb, level and true to line and face to the trim manufacturer's requirements.

3.8 INSTALL PROPRIETARY METAL TRIM

Mitre and weld where direction changes. Fold and weld stop ends. Site measure and carry out all fabrication in a workshop. Screw fix securely, plumb, level and true to line and face, all as detailed.

Application - MDF trim

3.9 NAIL FIX

Use full lengths. Fit with scribed internal joints, mitred external joints and returned on itself at stop ends. Fix plumb, level and true to line and face using 40mm or 50mm brads to suit, ensuring fixing to a minimum depth of 25mm into framing timber. Leave secure and with no movement possible. Punch brads and fill with stopping compound to maintain the smooth surface.

3.10 ADHESIVE FIX

Use full lengths. Fit with scribed internal joints, mitred external joints and returned on itself at stop ends. Fix plumb, level and true to line and face using wallboard adhesive.

3.11 PNEUMATIC FASTENER FIX

Use full lengths. Fit with scribed internal joints, mitred external joints and returned on itself at stop ends. Fix plumb, level and true to line and face using resin coated narrow crown staples. Use fastener length to provide fixing depth into timber frame equal to the moulding thickness. Leave secure and with no movement possible. Fill with stopping compound to maintain the smooth surface.

3.12 SCREW FIX

Use full lengths. Fit with scribed internal joints, mitred external joints and returned on itself at stop ends. Predrill pilot holes equal to shaft diameter, a minimum 25mm from ends and curves. Fix plumb, level and true to line and face using trim manufacturer's required fasteners or particleboard screws. Leave secure and with no movement possible.

Finishing

3.13 PUNCH

Punch all nail heads below the face of trim ready to receive stopping, as specified under painting preparation.

3.14 COUNTERSINK

Countersink screw heads not less than 2mm below the faces of trim to be painted. Stop and finish off flush with the face, as specified under painting preparation.

3.15 PELLETING

Countersink screw head 6mm below the faces of trim which is to be clear finished. Glue in grain-matched pellets not less than 6mm thick and cut from matching timber. Finish off flush with the face.

Completion

3.16 LEAVE

Leave the whole of this work free of blemishes, undamaged and to the standard of finish required for following procedures.

3.17 PROTECTION

Protect the completed work and make good before any surface finish is applied.

3.18 REPLACE

Replace damaged or marked elements.

3.19 REMOVE

Remove debris, unused materials and elements from the site.

4 SELECTIONS

4.1 CERTIFIED SUSTAINABLE TIMBER - SOURCING

The following timber from sourced to installed to be FSC FM Certified and COC Certified.

ITEM 1

Manuf/supplier:	~
FSC Cert No.	No ~, expires on ~
FSC license	No ~, expires on ~
Location:	~
Product/type:	~
Species:	~
Origin country:	~
Amount:	~

ITEM 2

Manuf/supplier:	~
FSC Cert No.	No ~, expires on ~
FSC license	No ~, expires on ~
Location:	~
Product/type:	~
Species:	~
Origin country:	~
Amount:	~

FSC suppliers lists:- https://info.fsc.org/certificate.php#result

4.2 INTERNAL TIMBER TRIM

Manufacturer:	Hume Pine
Species/grade:	Radiata Pine
Finish:	Paint

Member	Reference	Code reference
Architrave	~	
Skirting	60x10 D4S square dressed skirting to match existing	
Cornice	40x18 Bevelled Cornice to match existing	
Mould	~	
Bead	~	
Batten	~	
Rail	~	
Pelmet	~	

5214R RESCO COMPACT LAMINATE TOILET & SHOWER PARTITIONS

1 GENERAL

This section relates to the supply and installation of **RESCO** compact laminate systems, using proprietary, prefabricated toilet partitions and screens.

1.1 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC C/AS2	Protection from fire
IS EN 438-4	High-pressure decorative laminates (HPL) - sheets based on thermosetting resins (usually called laminates) - part 4: Classification and specifications for compact laminates of thickness 2mm and greater
JIS Z 2801: 2000	Antimicrobial products - Test for antimicrobial activity and efficacy

1.2 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and supplier's documents related to this section are:

Resco Storm:	Product Information Guide Installation Instructions and CAD drawings
Resco Series 5000:	Product Information Guide Installation Instructions and CAD drawings
Resco Multicube®:	Product Information Guide Installation Instructions and CAD drawings
Resco Kindycube®:	Product Information Guide Installation Instructions and CAD drawings
Resco Screens:	Product Information Guide Installation Instructions and CAD drawings

Resco Antibac Fact Sheet
Resco Colour Sample Folder
Fire Test Report FH5110, Group Classification 3
Greenguard Compliance Gold Certification 25453-420 - Maica Laminates Sdn Bhd

Manufacturer/supplier contact details

Company:	**RESCO Ltd**
Web:	www.resco.co.nz
Email:	service@resco.co.nz
Telephone:	0800 800 950 Auckland: 09 415 5720 Hamilton: 07 850 1025

Warranties

1.3 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:

10 years:	Compact laminate panel integrity
2 years:	Hardware

- Provide this warranty on the RESCO Ltd standard form.
- Commence the warranties from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

1.4 WARRANTY - INSTALLER/APPLICATOR

Provide an installer/applicator warranty.

2 years:	For installation when installed by a RESCO install team

- Provide this warranty on the RESCO Ltd standard form.
- Commence the warranties from the date of completion.

Refer to the general section 1237 WARRANTIES for additional requirements.

Requirements

1.5 NO SUBSTITUTIONS

Substitutions are not permitted to any specified RESCO brand products, components or accessories.

1.6 QUALIFICATIONS

Installers to be experienced, competent and familiar with the materials and techniques specified. Installation to RESCO shop drawings and RESCO Installation Manual current at the time of installation.

1.7 SHOP DRAWINGS

Provide RESCO shop drawings and RESCO Installation Manual for the project. Refer to the general section for timing and review requirements.

Performance

1.8 SURFACE FIRE PROPERTIES

Group Number to NZBC C/AS2, Table 4.3. Refer to SELECTIONS.

1.9 ENVIRONMENTAL PERFORMANCE

Indoor Air Quality performance: Low chemical emissions.

2 PRODUCTS

Materials - RESCO Series 5000 toilet/shower partitions

2.1 PARTITION PANELS

Machine finished 13mm compact laminate panels with black core made from thermosetting resins to IS EN 438-4. Edges are black polished finish. Certified antimicrobial to JIS Z 2801: 2000 to certify panels eradicate 99% of microorganisms within 2 hours. Refer to SELECTIONS, colour and length options.

2.2 ALUMINIUM TRIM - HEAD RAIL

Interpon powder coated oval 40mm x 20mm extruded aluminium 6060 alloy X-884 headrail. Refer to SELECTIONS for colour option.

2.3 ALUMINIUM TRIM - WALL CHANNELS

Interpon powder coated continuous full height extruded aluminium 6060 alloy A-866 wall channels. Refer to SELECTIONS for finish and colour option.

2.4 FASCIAS

13mm compact laminate fascias with rebated door stops to allow doors to be fitted flush with adjacent fascias.

2.5 DOORS

13mm compact laminate in-line doors with rebated door stops to allow doors to be fitted flush with adjacent fascias.

2.6 HARDWARE PER DOOR

RESCO standard option: Antimicrobial concealed fixed hardware - 1 Easy Glide slide lock, 3 matching concealed fixed Gravity Hinges and 1 Doorstop/Coat hook in high gloss thermoset enamel-coated zinc alloy.

2.7 PEDESTALS

Bead blasted 304 alloy stainless steel height adjustable pedestals with top-end fixing integrated in the system and bottom-end flange-fixed to floor. Pedestals are inserted into aluminium extrusions with enough room to prevent buckling under high impact and still allow for a 100mm adjustment range.

2.8 PARTITION PANELS

Machine finished 13mm compact laminate panels with black core made from thermosetting resins to IS EN 438-4. Edges are black polished finish. Certified antimicrobial to JIS Z 2801: 2000 to certify panels eradicate 99% of microorganisms within 2 hours. Refer to SELECTIONS for colour and length options.

2.9 ALUMINIUM TRIM - HEAD RAIL

Interpon powder coated oval 120mm x 50mm extruded aluminium 6060 alloy A-863 headrail. Refer to SELECTIONS for colour option.

2.10 ALUMINIUM TRIM - DOOR STILES//PEDESTALS

Interpon powder coated 70mm extruded aluminium 6060 alloy full length tubular A-862 door stiles with clashing rebated door stops lined with wool pile. These also act as the pedestal with the top of door stiles to be 4 x screw fixed to headrail and screw fixed to floor bracket. Refer to SELECTIONS for finish and colour.

2.11 ALUMINIUM TRIM - WALL CHANNELS

Interpon powder coated continuous full height extruded aluminium 6060 alloy A-866 wall channels. Refer to SELECTIONS for finish and colour option. Refer to RESCO CAD drawings for fixing points.

2.12 FASCIAS

13mm Compact Laminate fascias with machined edges that slot and fix into the aluminium extrusions.

2.13 DOORS

13mm compact laminate doors with polished bull-nose machined edges.

2.14 HARDWARE PER DOOR

Resco standard hardware - 3 stainless steel Hold Open or Hold Closed gravity hinges, 1 Antimicrobial Easy Glide slide lock and 1 Doorstop/Coathook in high gloss thermoset enamel coated zinc alloy.

Materials - RESCO Storm® toilet/shower partitions

2.15 PARTITION PANELS

Machine finished 13mm compact laminate panels with black core made from thermosetting resins to IS EN 438-4. Edges are black polished finish. Certified antimicrobial to JIS Z 2801: 2000 to certify panels eradicate 99% of microorganisms within 2 hours. Refer to SELECTIONS for colour and length options.

2.16 ALUMINIUM TRIM - HEAD RAIL

Interpon powdercoated rectangular 80mm x 40mm extruded aluminium 6060 alloy A-850 headrail. Refer to SELECTIONS for colour options.

2.17 ALUMINIUM TRIM - DOOR STILES / PEDESTALS

Interpon powdercoated 50mm extruded aluminium 6060 alloy full length tubular A-855 door stiles with clashing rebated door stops lined with wool pile. These also act as the pedestal with the top of door stiles to be screw-fixed to head rail and screw-fixed to floor pin and bracket. Refer to SELECTIONS for finish and colour.

2.18 ALUMINIUM TRIM - WALL CHANNELS

Interpon powdercoated continuous full height extruded aluminium 6060 alloy A-866 wall channels. Refer to SELECTIONS for finish and colour option. Refer to RESCO CAD drawings for fixing points.

2.19 FASCIAS

13mm Compact laminate fascias with machined edges that slot and fix into the aluminium extrusions. Refer to SELECTIONS for finish and colour option.

2.20 DOORS

13mm Compact laminate doors with polished bullnose machined edges. Refer to SELECTIONS for finish and colour option.

2.21 HARDWARE PER DOOR

Resco standard hardware - 3 stainless steel Hold Open or Hold Closed gravity hinges. 1 Antimicrobial Easy Glide slide lock and 1 Doorstop/Coathook in high gloss thermoset enamel coated zinc alloy.

Materials - RESCO Multicube® suspended toilet/shower partitions

2.22 PARTITION PANELS

Machine finished 13mm compact laminate panels with black core made from thermosetting resins to IS EN 438-4. Edges are black polished finish. Certified antimicrobial to JIS Z 2801: 2000 to certify panels eradicate 99% of microorganisms within 2 hours. Refer to SELECTIONS for colour and length options.

2.23 ALUMINIUM TRIM - HEAD RAIL

Interpon powder coated 120mm x 44mm extruded aluminium 6060 alloy Multicube® A-867 headrail. Refer to SELECTIONS for colour option.

2.24 ALUMINIUM TRIM - WALL CHANNELS

Interpon powder coated continuous full height extruded aluminium 6060 alloy A-866 wall channels. Refer to SELECTIONS for finish and colour option. Refer to RESCO CAD drawings for fixing points.

2.25 FASCIAS

13mm compact laminate fascias with rebated door stops to allow doors to be fitted in line.

2.26 DOORS

13mm compact laminate doors allowing doors to be fitted in line with fascias.

2.27 HARDWARE PER DOOR

RESCO standard option: Antimicrobial concealed fixed hardware - 1 Easy Glide slide lock and 1 Doorstop/Coathook in high gloss thermoset enamel coated zinc alloy.

Materials - RESCO Kindycube® partitions

2.28 PARTITION PANELS

Machine finished 13mm compact laminate panels with black core made from thermosetting resins to IS EN 438-4. Edges are black polished finish. Certified antimicrobial to JIS Z 2801: 2000 to certify panels eradicate 99% of microorganisms within 2 hours. Refer to SELECTIONS for colour and length options.

2.29 ALUMINIUM TRIM - WALL CHANNELS

Interpon powder coated continuous full height extruded aluminium 6060 alloy A-866 wall channels. Refer to SELECTIONS for finish and colour option. Refer to RESCO CAD drawings for fixing points.

2.30 DOORS

13mm compact laminate doors with polished bull-nose machined edges.

2.31 HARDWARE PER DOOR/CUBICLE

2 grey nylon coated drop hinges, grey nylon coated pedestals, 1 grey nylon coated toilet roll holder.

Materials - RESCO screens

2.32 FULL SCREEN

Machine finished 13mm compact laminate panels with black core. Edges polished finish only. 13mm compact laminate panels made from thermosetting resins to IS EN 438-4. Front edge supported by an aluminium round post fixed to the floor and ceiling. Fixed to the wall by a powder coated A-866 U-channel. Refer to CAD drawings for fixing points. Allow for sufficient fixings in the ceiling, to meet manufacturer's requirements. Refer to SELECTIONS, colour and length options.

2.33 KINDY SCREEN

Machine finished 13mm compact laminate panels with black core. Edges polished finish only. 13mm compact laminate panels made from thermo-setting resins to IS EN 438-4. Fixed to the wall with a powder coated A-866 U-channel. Front end supported by Nylon coated grey pedestals fixed to floor. Refer to SELECTIONS, colour and length options.

2.34 MODESTY SCREEN

Machine finished 13mm compact laminate panels with black core. Edges polished finish only. 13mm compact laminate panels made from thermosetting resins to IS EN 438-4. Fixed to the wall with a stainless steel channel. Fix top of screen at a typical height of 1500mm above finished floor level. Refer to CAD drawings for fixing points. Refer to SELECTIONS, colour and length options.

2.35 SHOWER SCREEN AND SEAT

Machine finished 13mm compact laminate panels with black core. Edges polished finish only. 13mm compact laminate panels made from thermosetting resins to IS EN 438-4. Fitted to the wall or division panel with a powder coated A-866 U-channel. Screen should be braced to the seat for support. Refer to SELECTIONS for colour and size.

3 EXECUTION

Conditions

3.1 HANDLE AND STORE

Store inside and keep in original packaging until needed. Do not store in sun or rain or at high temperatures. Do not walk over the panels. Use caution, machined edges may be razor sharp. Do not slide panels; lift them carefully to prevent scratching. Ensure free of dust and debris. Large panels are a two man lift.

3.2 SUBSTRATES AND PLUMBING FITTINGS CHECK

Before commencing installation of the RESCO system ensure all substrates are plumb, level and in true alignment, all flooring surfaces are ready and all plumbing fittings are properly positioned. Ensure adequate provisions are made for fixing to relevant walls.
Ensure that the back wall is sufficiently solid to support the cubicles.

Confirm actual measurements match shop drawings as the cubicles are custom made.

3.3 PROTECT

Protect adjoining areas, surfaces and finish from damage.

Application

3.4 INSTALL

Carry out the installation to the requirements of RESCO Ltd, relevant shop-drawings and the latest version of RESCO Installation Manual for the project.

Completion

3.5 REPLACE

Replace any damaged or marked elements.

3.6 LEAVE

Leave work with parts fully and freely working and to the standard required by RESCO Ltd.

3.7 REMOVE

Ensure the cubicles have been cleaned and remove debris, unused materials from the site.

4 SELECTIONS

For further details on selections go to www.resco.co.nz.
Substitutions are not permitted to the following, unless stated otherwise.

Performance

4.1 SURFACE FIRE PROPERTIES

Group Number	Panel/Finish	Location
3	Compact Laminate	~

Toilet and cubicle partitions

4.2 RESCO SERIES 5000 TOILET / CUBICLE PARTITIONS

Location:	Level 1 Toilets
Brand:	RESCO
System type:	Series 5000
Panel:	13mm pre-finished compact laminate panel
Panel colour:	Resco Antibac range, light brushed platinum M20109
Aluminium trim:	Interpon powder coated range, Silver Pearl
Toilet size:	950 Male WC and 980 Female WC
Shower size:	1690
Door hardware:	RESCO standard (antimicrobial concealed fixed option)
Hinge hold:	Hold Open

5231 INTERIOR DOORS & WINDOWS

1 GENERAL

This section relates to the supply and installation of interior:

- doors
- windows
- doors and frames
- doorsets

1.1 RELATED WORK

Refer to ~ for ~
Refer to glazing sections for glazing
Refer to painting sections for finishes

Documents

1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

AS/NZS 1170.1	Structural design actions - Permanent, imposed and other actions
NZS 3602	Timber and wood-based products for use in building
NZS 3604	Timber-framed buildings
NZS 3610	Specification for profiles of mouldings and joinery
NZS 4223.3	Glazing in buildings - Human impact safety requirements

Window & Glass Association NZ (WGANZ) documents:

PQAS	Powder Coating Quality Assurance System
SFA 3503-03	Anodic Oxide coatings on wrought aluminium for external architectural application (2005)

1.3 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are:
~

Copies of the above literature are available from ~

Web:	~
Email:	~
Telephone:	~
Facsimile:	~

Requirements

1.4 SHOP DRAWINGS

Refer to the general section 1235 SHOP DRAWINGS for the requirements for submission and review and the provision of final shop drawings.

Provide shop drawings to show the general arrangement including, but not be limited to:
~

If requested provide the following additional information:
~

Submit shop drawings for review to ~. ~ working days (at least) before fabrication is planned to commence.

Complete shop drawing review before commencing fabrication.

1.5 SUSTAINABLE TIMBER

This project uses FSC Certified sustainable timber.

Abbreviations and definitions:
FSC

Forest Stewardship Council
FSC Forest Management (FM) Certification
A forest management unit independently FSC inspected and certified that it complies with the internationally-agreed FSC Principles.
FSC Chain of Custody (COC) Certification
COC certification applies to those who process, transform or trade forest products, providing a guarantee about the production and source of FSC-certified products and tracking the production and distribution of the products.

Organisation website details
FSC website:- https://nz.fsc.org/en-nz
FSC suppliers lists:- https://info.fsc.org/certificate.php#result

Performance - doorsets

1.6 PERFORMANCE REQUIREMENTS

Refer to 5241 FIRE AND ACOUSTIC INTERIOR DOORS AND WINDOWS for fire and acoustic performance details.

2 PRODUCTS

Materials - door and window frames general

2.1 CERTIFIED SUSTAINABLE TIMBER

Refer to SELECTIONS for details of amount, type, suppliers.
Certified Sustainable FSC- COC Certified (or similar pre-approved) timber from forest to installation. Contractor to obtain and track all timber FSC-COC certificates and receipts showing FSC-COC numbers, including signed FSC outsourcing agreements between parties (ie FSC timber broker and non-FSC door joiner).
FSC suppliers lists:- https://info.fsc.org/certificate.php#result

2.2 TIMBER DOORS AND WINDOWS

To NZS 3602. Moisture content 10-14%. To NZS 3610.

2.3 DOOR FRAMES, FIBREBOARD

To profile as detailed and dimensioned, including stops.

2.4 STEEL WINDOW, DOOR AND FRAME AND DOORSET SECTIONS

To BS 6510.

2.5 ALUMINIUM EXTRUSIONS

Alloy designation to comply with AS/NZS 1866. Branded and extruded for anodising or powder coating.

2.6 GLAZING

Refer to glazing section/s for glass type and thickness.

Materials - doors general

2.7 TIMBER

To NZS 3602. Moisture content 10-14%. To NZS 3610. Solid or hollow core.

2.8 STEEL

Doors as detailed and dimensioned.

2.9 ALUMINIUM

Alloy designation to comply with AS/NZS 1866. Branded and extruded for anodising or powder coating.

Materials - doorsets

2.10 STANDARD DOORSETS, SIDE HUNG DOOR

Frames to profile as detailed and dimensioned, fitted with solid or hollow core door.
Refer to SELECTIONS.

2.11 STANDARD DOORSETS, SLIDING

Frames to profile as detailed and dimensioned, fitted with solid or hollow core door.
Refer to SELECTIONS.

2.12 STANDARD DOORSETS, SLIDING-FOLDING

Frames to profile as detailed and dimensioned, fitted with solid or hollow core doors.
Refer to SELECTIONS.

Components

2.13 WINDOW AND DOOR FURNITURE

Refer to 5521 HARDWARE for type and finish.

2.14 SCREWS

Stainless steel or non-corrodible metal. Length sufficient to penetrate into the background support up to the shank. Screws for fixing hinges, hardware or furniture to match the item being attached.

2.15 NAILS

Length sufficient to penetrate into the background support at least half the nail length, except if into radiata pine then three-fifths their length.

2.16 DOOR HINGES

Size and gauge to carry door size and weight. 3 hinges per door.

Type:	Loose pin
Size:	89mm
Material:	Zinc-plated steel
Pin:	Loose-pin zinc-plated steel

2.17 INTERIOR SLIDING DOOR GEAR

To suit door size and weight and as detailed.

2.18 INTERIOR SLIDING-FOLDING DOOR GEAR

Bi-fold pattern to suit size and weight of doors and as detailed.

2.19 DOOR SKIN (FACINGS)

Doors skins as detailed and dimensioned.

Finish

2.20 TIMBER - PAINT FINISH

Factory applied coating system.

2.21 TIMBER - CLEAR FINISH

Factory applied coating system.

2.22 TIMBER - LACQUER FINISH

Factory applied coating system.

2.23 STEEL - THERMAL METAL SPRAY

85/15 Zinc/aluminium to ISO 2063 applied to achieve a minimum average thickness of 150 microns when measured to AS 3894.3 Refer to SELECTIONS for details.

2.24 STEEL - ZINC METAL SPRAY

Steel frame to be abrasive blasted prior to application of 75 - 100 microns minimum coating thickness when measured to AS 3894.3 Refer to SELECTIONS for details.

2.25 STEEL - POWDER COATING

Refer to 6746D DULUX POWDER AND INDUSTRIAL COATINGS
Refer to 6746IP INTERPON POWDER COATINGS
for powder coating products.

2.26 ALUMINIUM - POWDER COATED

Polyester powder organic coating in accordance with WGANZ PQAS and AS 3715.

2.27 ALUMINIUM - ANODISED

To WGANZ SFA 3503-03. Refer to SELECTIONS for thickness and colour.

3 EXECUTION

Conditions

3.1 GENERALLY

Execution to include those methods, practices and processes contained in the unit standards for the National Certificate in Carpentry and the National Certificate in Joinery (cabinetry, exterior joinery, stairs).

3.2 DO NOT DELIVER

Do not deliver any elements which cannot be unloaded immediately into suitable storage conditions.

3.3 HANDLE

Handle, unload and store elements without distortion and avoiding pre-finished surfaces rubbing together, and contact with mud, moisture and other damaging materials.

3.4 PROTECT

Protect all elements against damage to arrises and glazing beads. Store frames and doors flat and away from moisture or direct sunlight.

3.5 FABRICATE DOORSETS

Fabricate doorsets and windows in the factory with doors hung, provision for furniture made, finishes applied and fully operable.

3.6 FABRICATE DOORS

Fabricate doors in the factory, with provision for door furniture.

3.7 CHECK ALL OPENINGS

To NZS 3604.Check all openings on site for size and standard of execution before installing window or door frames. Installation tolerances of windows subject to earthquake design to comply with AS/NZS 1170.1.

Assembly

3.8 FABRICATION GENERALLY

Manufacture and fabricate frames and doors as detailed. Install hinges and running gear as scheduled. Provide temporary bracing and protection. Temporarily secure all opening elements for transportation.

Application - generally

3.9 FIXING FRAMES

Fix and assemble frames rigidly in place, plumb, level and true to line and face without distortion and with all opening sashes fully and easily operating. Fit architraves.

3.10 DISTORTION

Do not distort frames when wedging or other packing, or when tightening fixings. If necessary adjust packing and fixings to eliminate binding. Do not cut, plane or sand frames to remedy distortion.

3.11 FIXINGS

Fix frames so that nail heads are covered by applied stops and beads. Punch all nail heads below timber surfaces which will be visible in completed work. Ensure that at least one frame fixing is adjacent to each hanging point.

Application - doorsets

3.12 PROPRIETARY ELEMENTS

Fix in accordance with the door manufacturer's requirements.

3.13 INSTALLATION GENERALLY

Wedge frames into opening and fix through into the wall framing. Locate all wedges and fixing at hinge positions and opposite, with one fixing in the vicinity of the lock. Fixings concealed behind planted stops.
Hang doors on hinges, sliding or bi-fold gear as specified and to operate freely. Fit all hardware and door furniture.

3.14 CONCRETE MASONRY WALLS - STEEL AND ALUMINIUM FRAMES

Fix in place with 10mm expanding masonry anchors with countersunk heads. At hinge side fix direct to opening and pack on the other side to wedge in place. Fix at hinges and opposite, with one fixing in the vicinity of the lock.

3.15 CONCRETE MASONRY WALLS - TIMBER FRAMES

Fix in place with 10mm expanding masonry anchors with countersunk heads. At hinge side fix direct to opening and pack on the other side to wedge in place. Fix at hinges and opposite, with one fixing in the vicinity of the lock. Separate steel and timber by a damp-proof membrane.

3.16 STEEL STUD WALLS - STEEL AND ALUMINIUM FRAMES

Using a pilot hole in the frame, fix to steel studs with countersunk self-drilling corrosion proof screws. Fix at hinges and opposite, with one fixing in the vicinity of the lock.

3.17 STEEL STUD WALLS - TIMBER FRAMES

Drill the timber frame and fix to steel studs with countersunk self-drilling corrosion proof screws. At hinge side fix direct to opening and pack on the other side to wedge in place. Fix at hinges and opposite, with one fixing in the vicinity of the lock.

3.18 TIMBER STUD WALLS - STEEL AND ALUMINIUM FRAMES

Using a pilot hole in the frame, fix to timber studs with countersunk self-drilling corrosion proof screws. Fix at hinges and opposite, with one fixing in the vicinity of the lock.

3.19 TIMBER STUD WALLS - TIMBER FRAMES

Wedge into opening and nail through into the studs. All wedges and fixing to be at hinge positions and opposite, with one fixing in the vicinity of the lock.

3.20 BOTTOM CLEARANCE

Provide for specified floor coverings plus 5mm clearance at any point of swing. When floor covering is not specified, allow 25mm total.

For ventilated and/or air conditioned spaces allow 20mm clearance above finished floor coverings for supply/return air.

3.21 REMOVE DOORS

Remove doors from the frames if necessary to protect them, or for re-finishing, store safely and near completion refit them, all without any damage.

3.22 INSTALL PANELS

Prime rebates and beads, install sealant backing strips or silicone. Install dry beading to outside of panels as selected. Do not mitre corners of beads.

3.23 MANIFESTATIONS

To comply with NZS 4223.3, Manifestation (making glass visible).

3.24 INSTALL FURNITURE

Install latches, locks and door furniture as scheduled.

3.25 CHECK

Check and adjust operation of all doors, hardware and furniture.

Application - windows

3.26 CONFIRM PREPARATION OF WALL OPENINGS

Confirm that wall openings have been prepared ready for the installation of all window frames. Do not proceed with the window installation until required preparatory work has been completed.

3.27 INSTALLATION

Fix to comply with the installation details including bedding compounds and pointing sealants.

3.28 FIX HARDWARE

Fix all sash and door hardware and furniture as scheduled.

Completion

3.29 PROTECTION

Protect all finishes against damage from adjacent and following work.

3.30 REPLACE

Replace damaged, cracked or marked elements.

3.31 TRADE CLEAN

Clean off or remove safety indicators at completion of the building.

3.32 LEAVE

Leave work to the standard required for following procedures.

3.33 REMOVE

Remove safety indicators and protective coverings, and wipe down all doorsets thoroughly to leave them perfectly clean. Remove all debris, unused materials and elements from the site.

4 SELECTIONS

Frames

4.1 DOOR FRAMES - TIMBER

Location:	Reception, Meeting rooms and Toilets
Door reference:	~
Timber species:	Radiata Pine
Grade:	~
Treatment:	~
Finish:	Painted
Leaf size:	1980mm high x width varies
Thickness:	50mm

Doors

4.2 STANDARD DOORS

Manufacturer:	Existing
Door type:	Existing
Material:	Timber
Door leaf size:	1980mm high x width varies
Edge clashing:	~/~sides
Door finish:	Paint
Hinge type/finish:	~/~

Glazing

4.3 GLAZING

Refer to glazing section.

Finish

4.4 PAINT FINISH

Brand:	Resene
System name:	~
Finish/colours:	Refer Resene Painting Interior Section

4.5 POWDER COATING

Refer to 6746D DULUX POWDER AND INDUSTRIAL COATINGS for powder coating products.
Refer to 6746IP INTERPON POWDER COATINGS for powder coating products.

Door grille

4.6 HARDWARE

Refer to 5521 HARDWARE section.

5311AC AUTEX CARBON NEUTRAL ACOUSTIC CEILING SOLUTIONS

1 GENERAL

This section relates to the supply and installation of Autex acoustic ceilings, either in a proprietary suspended ceiling grid system, direct-fixed or suspended from the ceiling.
It includes:

- Grid suspension system.
- Carbon neutral polyester ceiling tiles, panels, fins and rafts.
- Perimeter trim profile.
- All necessary elements to complete the system.

1.1 RELATED WORK

Refer to ~ for ~

1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

AWCINZ	Association of Window and Ceiling Industries
CAC	Ceiling attenuation class
NRC	Noise reduction coefficient
PET	Polyethylene terephthalate ('polyester')
EPD	Environmental Product Declaration

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC B1/VM1	Structure
NZBC C/AS1-AS2	Protection from Fire
NZBC G6/AS1	Airborne and impact sound
AS/NZS 1170.0	Structural design actions - General principles
AS/NZS 1170.1	Structural design actions - Permanent, imposed and other actions
AS/NZS 1170.2: 2011	Structural design actions - Wind actions
NZS 1170.5	Structural design actions - Earthquake actions - New Zealand
AS 1530.4	Methods for fire test on building materials, components and structures - Methods of tests on building materials, components and structures - Fire-resistance test of elements of construction
AS/NZS 2107	Acoustics - Recommended design sound levels and reverberation times for building interiors
AS/NZS 2785	Suspended ceilings - Design and installation
NZS 4219	Seismic performance of engineering systems in buildings
NZS 4541	Automatic fire sprinkler systems
ISO 105-B02	Textiles - Tests for colour fastness - Part B02: Colour fastness to artificial light: Xenon arc fading lamp test
ISO 354	Acoustics - Measurement of sound absorption in a reverberation room
ASTM C423	Test method for sound absorption and sound absorption coefficients by the reverberation room method
ISO 9001	Quality management systems - requirements
ISO 9705	Fire tests - full scale room test for surface products
ISO 14001	Environmental management systems - requirements with guidance for use
ISO 45001	Occupational health and safety management systems - requirements with guidance for use
ASTM G21-15	Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi

ASTM D5116	Standard Guide for Small Scale Environmental Chamber Determinations of Organic Emissions from Indoor Materials/Products

1.4 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer and supplier documents relating to this part of the work:

Autex Accent Ceiling Tile™ Data Sheet
Autex Accent Ceiling Tile™ Install Instructions

Autex 3D Ceiling Tile Data Sheet
Autex 3D Ceiling Tile Install Instructions

Autex Frontier™ Acoustic Fins Data Sheet
Autex Frontier™ Install Instructions

Autex Frontier™ Acoustic Raft Data Sheet
Autex Frontier™ Install Instructions

Autex Lattice™ Data Sheet
Autex Lattice™ Install Instructions

Autex Cascade™ Data Sheet
Autex Cascade™ Install Instructions

Autex Horizon™ Data Sheet
Autex Horizon™ Install Instructions

Autex Cube™ Data Sheet
Autex Cube™ Install Instructions

Autex Quietspace® Panel Data Sheet
Autex Quietspace® Panel Install Instructions

EPD Licence No.: ATX-AP01-2022EP
Global GreenTag™ EPD EN 15804 Autex Acoustics® Panels and Tiles:
Cube™, Cascade™, Frontier™, Horizon™, Lattice™, Quietspace® Panel, Accent Ceiling Tile™ Ceiling Tiles, 3D Tiles

EPD Licence No.: ATX-AF01-2022EP
Global GreenTag™ EPD EN 15804 Autex Acoustics® Wallcovering:
Symphony®,Composition®, Vertiface® Visage®, Etch™, Felt, Acoustic Timber™

Buy NZ Made Campaign Ltd - Certificate of Licence No. 705337.

Declare ATX-0002 (LBC Red List Free) - Cube™, Quietspace®, Accent Tiles™, APA
Declare ATX-0006 (LBC Red List Free) - Workstation, 3D Tiles and 3D Ceiling Tiles™

Manufacturer/supplier contact details

Company:	**Autex Industries Ltd**
Web:	www.autex.co.nz
Email:	enquiries@autex.co.nz
Telephone:	0800 428 839

Warranties

1.5 WARRANTY

Provide warranty for:

10 years:	Grid suspension systems
10 years:	Autex Accent Ceiling Tile™, Autex 3D Ceiling Tiles, Autex 3D Tiles, Autex Horizon™, Autex Frontier™, Autex Lattice™, Aute Cascade™.

- Provide the warranty in the standard form in the general section 1237WA WARRANTY

AGREEMENT.
- Commence the warranty from the date of practical completion of the contract works.

Requirements

1.6 QUALIFICATIONS WORKERS – MANUFACTURER / SUPPLIER REQUIREMENTS

Workers to be Autex Industries Ltd. preferred installers. Refer to 1270 CONSTRUCTION for additional requirements relating to qualifications.

1.7 NO SUBSTITUTIONS

Substitutions are not permitted to any of the specified systems, components and associated products listed in this section.

1.8 SAMPLES

Refer to the general section 1270 CONSTRUCTION for details of how samples will be reviewed and how instructions to proceed will be given. Provide the following samples for review:

	Sample A	Sample B	Sample C
Sample description:	~	~	~
Sample type:	~	~	~
Number:	~	~	~
Location:	~	~	~
Supporting documentation:	~	~	~
Reviewer:	Contract administrator ~	Contract administrator ~	Contract administrator ~
Time for review:	10 working days ~	10 working days ~	10 working days ~
Review criteria:	~	~	~

1.9 SPECIFIC DESIGN

Refer to SELECTIONS for project specific design documentation by generally consisting of:
- Design calculations.
- Dimensioned plans/elevations of elements.
- Details of construction, connections and support systems.
- Dimensions of all typical elements.
- Jointing details and method of fixing between individual elements and between this installation and adjacent work.
- Provision for thermal and seismic movement.
- Bracing requirements, due to wind and seismic loads.
- A schedule of materials, finishes and componentry.

1.10 SHOP DRAWINGS

Refer to the general section 1235 SHOP DRAWINGS for the requirements for submission and review and the provision of final shop drawings.

Provide shop drawings to show the general arrangement including, but not be limited to:
- Design calculations.
- Fully dimensioned elevations of all elements.
- Complete details of construction, connections and all support systems.
- Dimensions of all typical elements.
- Jointing details and method of fixing between individual elements and between this installation and adjacent work.
- Provision for thermal movement.
- Provision for seismic movement and movement under prevailing wind loads.
- Bracing requirements, due to wind and seismic loads (indicate any design and construction work by others, to meet these requirements).
- Sequence of installation.
- Co-ordination requirements with other work.
- A full schedule of materials, finishes and componentry.

1.11 AS BUILT DOCUMENTS

Refer to the general section 1238 AS BUILT DOCUMENTATION for the requirements for submission and review of as built documents and records.

Provide the following as built documents and records:
~

- Provide draft as built information prior to practical completion.
- Provide final as built information prior to the end of the defect liability period.

1.12 INFORMATION FOR OPERATION AND MAINTENANCE

Refer to the general section 1239 OPERATION & MAINTENANCE for provision of the following general operation and maintenance information as electronic PDF format documents:

- Supply information on the materials and method of cleaning the ceiling system over its expected life.

Compliance information

1.13 INFORMATION REQUIRED FOR CODE COMPLIANCE

Provide the following compliance documentation:

- Manufacturer / supplier warranty.
- Producer Statement (PS1) - Design from supplier independent engineer.
- Producer Statement (PS3) - Construction from the applicator / installer.
- Producer Statement (PS4) - Construction Review from an acceptable suitably qualified person.
- Other information required by the BCA in the Building Consent Approval documents.

1.14 PRODUCER STATEMENT - DESIGN

Refer to SELECTIONS for an independent Producer Statement - Design (PS1).

Performance requirements

1.15 LOADING CODE REQUIREMENT

To AS/NZS 2785, comply with the requirements of; AS/NZS 1170.0, AS/NZS 1170.1, AS/NZS 1170.2, NZS 1170.5, NZBC B1/VM1, as appropriate.

1.16 CERTIFICATION

Provide:

- Certificates and other evidence that the system complies with the standards of performance specified.
- Producer Statements.

1.17 ENVIRONMENTAL REQUIREMENTS

Design the ceiling system for use over its expected life without deterioration in the specified temperature and humidity range.
Refer to SELECTIONS.

1.18 REFLECTANCE

Refer to SELECTIONS.

Performance - Acoustics

1.19 ACOUSTIC PERFORMANCE

Acoustic performance to comply with AS/NZS 2107 and NZBC G6/AS1 and owner requirements.
Autex wall coverings and panel products have been tested to ISO/CD 354 and achieve a NRC rating of 0.4 to 1.0. Submit results if requested.
Refer to SELECTIONS.

1.20 REVERBERATION REPORT (RT)

Comply with the project Autex Reverberation Time Report and report number, to ensure compliance with AS/NZS 2107.

Performance - Fire

1.21 FIRE HAZARD PROPERTIES

Autex ceiling tiles/fins/raft/baffles/panels achieve a maximum Group Number Classification of Group 1-S to NZBC C/AS2, Table 4.3 Surface Finishes, to comply with the required fire risk group for the location. Suspended ceiling grid (by others) selected to achieve the appropriate Group Number Classification to NZBC C/AS2, Table 4.3 Surface Finishes, to comply with the required fire risk group for the location.
Refer to SELECTIONS.

Performance - Wind (design by contractor)

1.22 DESIGN PARAMETERS WIND - DESIGN BY CONTRACTOR

Design the installation to the wind pressure parameters of AS/NZS 1170.2. Refer to General section 1220 PROJECT for general details.
Refer to SELECTIONS specific design performance requirements.

Performance - Seismic (design by contractor)

1.23 DESIGN PARAMETERS SEISMIC - DESIGN BY CONTRACTOR

Design the system and its anchorages/fixings to resist the earthquake loads of the seismic zone in accordance with NZS 1170.5.
Refer to General section 1220 PROJECT for general details.
Refer to SELECTIONS specific design performance requirements.

2 PRODUCTS

Suspension system - two-way exposed grid

2.1 GRID SUSPENSION SYSTEM - ALUMINIUM

Manufactured by a member of AWCINZ. Extruded aluminium elements to AS/NZS 2785 intermediate or heavy duty for carrying ceiling tiles/panels, light fixtures and air distribution elements and to NZS 1170.5, section 8, including perimeter trim, expansion joints and seismic joints etc. to AS/NZS 2785.
Refer to SELECTIONS for options.

2.2 GRID SUSPENSION SYSTEM - STEEL

Manufactured by a member of AWCINZ. Hot-dip galvanized steel elements to AS/NZS 2785 intermediate or heavy duty for carrying ceiling tiles/panels, light fixtures and air distribution elements and to NZS 1170.5, section 8, including perimeter trim, expansion joints and seismic joints etc. to AS/NZS 2785. Tested to NZS 4219.
Refer to SELECTIONS for options.

2.3 PERIMETER TRIM

Perimeter trim, not supplied by Autex Industries Limited. If this forms part of the seismic system, refer to seismic calculation sheet for details.
Refer to SELECTIONS.

2.4 GRID FINISH

All exposed surfaces of grid must be coated with a durable polyester finish. Finish shall have good paint adhesion and uniform surface hardness.
Refer to SELECTIONS.

2.5 SEISMIC RESTRAINT - GRID

To AS/NZS 2785, 4.3.3 Seismic Restraint Types and/or suitable proprietary back braces for ceiling systems.
Refer to SELECTIONS.

Acoustic ceiling products

2.6 AUTEX ACCENT CEILING TILE™

Autex Accent Ceiling Tile™ acoustic ceiling tiles are manufactured from non-woven, needle-punched 100% Polyester Fibre (PET), double-faced (white/colour).
Fire tested to ISO 9705, achieving Group Number 1-S and ISO 105-B02 6 rating for colourfastness. Unit weight is 3100gsm.
Manufactured under AS/NZS ISO 9001, AS/NZS ISO 14001 and ISO 45001, without chemical binders and using minimum 60% recycled polyester fibre (from PET plastic).
Refer to SELECTIONS for NRC and design options.

2.7 AUTEX 3D CEILING TILES

Autex 3D Ceiling Tiles are manufactured from 100% Polyester Fibre (PET), designed for integration with two-way grid systems (600mm x 600mm with 24mm tee).
Fire tested to ISO 9705, achieving Group Number 1-S and ISO 105-B02 6 rating for colourfastness. Unit weight is 1680gsm.
Manufactured under AS/NZS ISO 9001, AS/NZS ISO 14001 and ISO 45001, without chemical binders and using minimum 55% recycled polyester fibre (from PET plastic).
Refer to SELECTIONS for NRC and design options.

2.8 AUTEX FRONTIER™ ACOUSTIC FINS

Autex Frontier™ Acoustic Fins made from 12mm and 24mm Autex Cube™, constructed from 100% polyester fibre (PET) mounted into Frontier™ aluminium channels, and secured by connector clips. Fire tested to ISO 9705, achieving a Group Number classification of 1-S and ISO 105-B02 achieving a rating of 6 for colourfastness. Unit weight varies with each design.
Manufactured under AS/NZS ISO 9001, AS/NZS ISO 14001 and ISO 45001, without chemical binders and using minimum 60% recycled polyester fibre (from PET plastic).
Refer to SELECTIONS for NRC and design options.

2.9 AUTEX FRONTIER™ ACOUSTIC RAFT

Autex Frontier™ Acoustic Raft made from 12mm Autex Cube™, constructed from 100% polyeste fibre (PET) mounted into Frontier™ aluminium channels, and secured by connector clips. Fire tested to ISO 9705, achieving a Group Number classification of 1-S and ISO 105-B02 achieving a rating of 6 for colourfastness. Unit weight varies with each design.
Manufactured under AS/NZS ISO 9001, AS/NZS ISO 14001 and ISO 45001, without chemical binders and using minimum 60% recycled polyester fibre (from PET plastic).
Refer to SELECTIONS for NRC and design options.

2.10 AUTEX LATTICE™ - FLOATING ACOUSTIC BAFFLES

Autex Lattice™ is a system of acoustic baffles, manufactured from highly compressed, thermally bonded, 100% Polyester Fibre (PET) panels, 1200mm x 2400mm x 12mm thick. Unit weight varies with each design.
Fire tested to ISO 9705, achieving a Group Number of 1-S and ISO 105-B02 achieving a 6 rating for colourfastness. Unit weight is 2300gsm
Manufactured under AS/NZS ISO 9001, AS/NZS ISO 14001 and ISO 45001, without chemical binders and using minimum 60% recycled polyester fibre (from PET plastic).
Refer to SELECTIONS for NRC and design options.

2.11 AUTEX CASCADE™ - HANGING ACOUSTIC SCREENS

Autex Cascade™ hanging screens are manufactured from highly compressed thermally bonded 100% Polyester Fibre (PET) panels, 1200mm x 2400mm x 12mm thick. Unit weight is 2300gsm.
Fire tested to ISO 9705, achieving a Group Number of 1-S and ISO 105-B02 achieving a 6 rating for colourfastness. Unit weight is 2300gsm
Manufactured under AS/NZS ISO 9001, AS/NZS ISO 14001 and ISO 45001, without chemical binders and using minimum 60% recycled polyester fibre (from PET plastic).
Refer to SELECTIONS for NRC and design options.

2.12 AUTEX HORIZON™ - FLOATING ACOUSTIC PANELS

Autex Horizon™ acoustic panels are for ceiling and wall applications. A range of custom shapes are cut from 24mm thick sheets of 100% polyester fibre (PET).
Fire tested to ISO 9705, achieving Group Number 1-S and ISO 105-B02 6 rating for colourfastness. Unit weight varies with each design.
Manufactured under AS/NZS ISO 9001, AS/NZS ISO 14001 and ISO 45001, without chemical binders and using minimum 60% recycled polyester fibre (from PET plastic).
Refer to SELECTIONS for NRC and design options.

2.13 AUTEX CUBE™ - LIGHTWEIGHT DIRECT-FIXED ACOUSTIC PANELS

Autex Cube™, a semi-rigid lightweight panel constructed from 100% polyester fibres, high density needled and thermally bonded to form the structure of the panel, available in panel thicknesses 12mm and 24mm. Standard panel size is 1220mm x 2440mm.
Fire tested to ISO 9705, achieving Group Number 1-S and ISO 105-B02 6 rating for colourfastness. Unit weight is 2300gsm.
Manufactured under AS/NZS ISO 9001, AS/NZS ISO 14001 and ISO 45001, without chemical binders and using minimum 60% recycled polyester fibre (from PET plastic).
Refer to SELECTIONS for NRC and design options.

2.14 AUTEX QUIETSPACE® PANEL - DIRECT-FIXED ACOUSTIC PANELS

Autex Quietspace® Panel constructed from100% polyester fibres and thermally bonded to form the structure of the panel, available in panel thicknesses 25mm, 50mm, 75mm and 100mm. Standard panel size is 1220mm x 2440mm.
Fire tested to ISO 9705, achieving Group Number 1-S and ISO 105-B02 6 rating for colourfastness. Unit weight is 2300gsm.
Manufactured under AS/NZS ISO 9001, AS/NZS ISO 14001 and ISO 45001, without chemical binders and using minimum 45% recycled polyester fibre (from PET plastic).
Refer to SELECTIONS for NRC and design options.

Components

2.15 SEISMIC RESTRAINT - FLOATING ACOUSTIC ELEMENTS

To AS/NZS 2785, 4.3.3 Seismic Restraint Types and/or suitable proprietary back braces for acoustic floating ceiling elements.
Refer to SELECTIONS.

2.16 SCREWS

25mm x 6 gauge non-rusting Type S self-drilling and self-tapping bugle head screws to fix perimeter trim.

3 EXECUTION

Conditions

3.1 DELIVERY, STORAGE & HANDLING OF PRODUCTS

Refer to 1270 CONSTRUCTION for requirements relating to delivery, storage and handling of products.

3.2 ROUTINE MATTERS

Refer to 1250 TEMPORARY WORKS & SERVICES for protection requirements.
Refer to 1270 CONSTRUCTION for requirements relating to defective or damaged work, removal of protection and cleaning.

3.3 CO-ORDINATE SERVICES

Co-ordinate and co-operate with electrical and mechanical work to avoid conflict between suspension members and luminaires, diffusers, pipework and ducting. Confirm the provision of extra hangers and fixings.

Ensure co-operation with work in and above the ceiling, including the marking of specific ceiling tiles below major access points to above-ceiling services. Colour coded markings to follow the standards laid down by mechanical and electrical services.

Services and other attachments, attached to or supported by the ceiling grid system to AS/NZS 2785, ensure that:

- items over 7.5kg and items under 7.5kg but falling greater than 3m, require a tether to AS/NZS 2785, anchored to structure.
- items attached to the ceiling grid must be under 10kg mass, items over 10kg cannot be attached to the grid and must be independently supported.
- unless designed otherwise, the ceiling systems total load of services and other attachments must not exceed 3kg/m².
- light fittings installed to AS/NZS 2785 and NZS 4219.
- ceiling system clearances to structure and services etc. that are not attached to the ceiling system, to be to NZS 4219, and/or NZS 4541 for sprinklers.

3.4 SITE CONDITIONS

Do not begin installation until the building is closed in, fully glazed, the roof watertight, and mechanical and electrical duct work above the ceiling completed. To AS/NZS 2785, Appendix C, site Conditions, Installation and Inspections.

3.5 RESPONSIBILITY

Ensure that conditions are suitable for the ceiling installation. Arrange for the programming of the work to suit required practice.

Installation

3.6 STANDARDS AND TOLERANCES

Refer to the general section 1270 CONSTRUCTION for general requirements.

3.7 INSTALL SUSPENDED CEILING GRID AND CEILING TILES

Install the system to AS/NZS 2785 minimum standards, and Autex product specific installation instructions.

Allowance for support members:

- Space required by the loads on the system and the type of ceiling.
- For the installation of services and accessories, including ductwork, light fittings and diffusers.
- Additional back support or suspension members for the fixing of services and accessories to prevent distortion, overloading or excessive vertical deflection.
- For access for maintenance of services.

Allowance for a ceiling system where failure of any one suspension point does not cause a progressive failure of the ceiling.
Allowance for height adjustment with a length adjustment device at each suspension point, permitting length variation of at least 50 mm.

If required, allow for notch grid members at the junction with the perimeter trim to make sure the ceiling units lie flat on the perimeter trim.
Do not attach the suspension system to the lip or flange of purlins.

Fix, erect and fit to finish rigid, plumb, square and true to line and face. Where components required cutting on site, use metal snips, fine-toothed band or hack saws.

Install all movement joints required.

Services support to conform to the following:

- If the service has not been designed to accept the ceiling load, do not fix suspension members to services (e.g. ductwork).
- If services obstruct the ceiling supports, provide bridging and suspension on each side of the services.
- Do not support services terminals on ceiling tiles/units.

3.8 AUTEX FRONTIER™ ACOUSTIC FINS - FLOATING FIXING

Refer to Autex Frontier™ Acoustic Fins Install Instructions for floating fixing - mounting clips to edge extrusions, suspended by proprietary cable system from ceiling.

3.9 AUTEX FRONTIER™ ACOUSTIC FINS - DIRECT-FIXED TO CEILING BATTENS

Refer to Autex Frontier™ Acoustic Fins Install Instructions for direct fixing with mounting clips to edge extrusions or cross rails.

3.10 AUTEX FRONTIER™ ACOUSTIC RAFT - FLOATING FIXING

Refer to Autex Frontier™ Acoustic Raft Install Instructions for floating fixing - mounting clips to edge extrusions, suspended by proprietary cable system from ceiling.

3.11 AUTEX FRONTIER™ ACOUSTIC RAFT - DIRECT-FIXED TO CEILING BATTENS

Refer to Autex Frontier™ Acoustic Raft Install Instructions for direct fixing with mounting clips to edge extrusions or cross rails.

3.12 AUTEX LATTICE™ ACOUSTIC BAFFLE - FLOATING FIXING

Refer to Autex Lattice™ Acoustic Baffle Install Instructions for floating fixing, threaded proprietary cable through product to ceiling mounts.

3.13 AUTEX CASCADE™ - FLOATING TOP-FIXED TO CEILING

Refer to Autex Cascade™ Acoustic Baffle Install Instructions for floating fixing, screw-fix mounting into ceiling lining or batten, suspended by proprietary cables to support edge extrusion.

3.14 AUTEX CASCADE™ - DIRECT-FIXED TO CEILING LINING

Refer to Autex Cascade™ Acoustic Baffle Install Instructions for direct-fixing by screw-fixing through edge extrusion to ceiling lining.

3.15 AUTEX HORIZON™ - FLOATING FIXING

Refer to Autex Horizon™ Acoustic Panel Install Instructions for floating fixing by ceiling mounts and proprietary cables screw-fixed either directly into Horizon panel, into a batten attached to Horizon panel or to a cross nog attached to the batten.

3.16 AUTEX CUBE™ LIGHTWEIGHT ACOUSTIC PANELS - DIRECT-FIXED TO CEILING LINING

Refer to Autex Cube™ Acoustic Panel Install Instructions for direct-fixing to ceiling lining, with adhesive and mechanical fixings (typically screws)

3.17 AUTEX QUIETSPACE® ACOUSTIC PANELS - DIRECT-FIXED TO CEILING LINING

Refer to Autex Quietspace® Acoustic Panel Install Instructions for direct-fixing to ceiling lining, with construction adhesive and temporary mechanical fixings (typically screws)

3.18 INSTALL SEISMIC RESTRAINTS

Install ceiling system seismic restrains and bracing as required to prevent lateral movement and resist the imposed horizontal seismic force, to AS/NZS 2785.

3.19 ACCESSIBILITY

Provide access to the ceiling system and the in-ceiling and above-ceiling services so that maintenance and removal of any part can be carried out without damage to the ceiling system or panels.

3.20 PENETRATIONS

To AS/NZS 2785 and NZS 4219 generally, with sprinkler systems to NZS 4219 and/or NZS 4541. Accommodate recessed light fittings, air conditioning outlets and other electrical and/or mechanical services that are fixed to or pass through the ceiling system. Provide independent support and/or required clearances for these as necessary.

3.21 RETURN AIR PLENUM

Clip tile down to the grid to stop lifting if required.

3.22 PROTECT EXISTING WORK

Protect adjacent existing work from damage during the installation. Where selected provide service panels finished with a factory applied temporary protective film. Remove on completion of the ceiling installation.

Completion & commissioning

3.23 COMPLETION MATTERS

Refer to 1270 CONSTRUCTION for completion requirements and if required commissioning requirements.

3.24 AUTEX CARBON NEUTRAL CERTIFICATE

Subcontractor to obtain Autex Carbon Neutral Certificate at Practical Completion and submit to the Contract Administrator and Contractor.

4 SELECTIONS

For further details on selections go to www.autex.co.nz
Substitutions are not permitted to the following, unless stated otherwise.

Design documentation

Performance requirements

4.1 ENVIRONMENTAL REQUIREMENTS

Range:	0 - 40°C
Relative humidity:	95% maximum

4.2 REFLECTANCE

Light Reflectance Value (LRV):	80
For (colour):	Pavillion

4.3 ACOUSTIC REQUIREMENTS

Location:	iSite Customer Service
Noise Reduction Coefficient (NRC):	0.8 minimum
Ceiling Attenuation Class (CAC):	N/A

4.4 FIRE HAZARD PROPERTIES

Location:	Tile:	Group Number:
iSite Customer Service	Autex Frontier™ Fins	1-S

Performance - Wind (design by contractor)

Performance - Seismic (design by contractor)

Suspension system - two-way exposed grid

Acoustic ceiling products

4.5 AUTEX FRONTIER™ - ACOUSTIC FINS

Location:	Autex Frontier™ Fins
Manufacturer:	Autex Industries Ltd
Type:	Autex Frontier™ Acoustic Fins
Design option:	Talus
Thickness:	12mm
Fin length:	2400mm wide
Fin depth	300mm
Centres	100mm
Fixing method:	Direst Fix
Group number:	1-S
NRC:	0.8
Weight:	Varies
Fabric texture:	Solid blended colour
Colour:	Pavillion

Components

Spares & maintenance products

4.6 SPARES & MAINTENANCE PRODUCTS

Refer to the general section 1270 CONSTRUCTION for details of how spares and maintenance products will be handled. Provide the following spares and maintenance products:

Item:	Consult with Autex Industries Ltd
Quantity:	2% is a reasonable allowance for routine minor repairs.
Location:	Refer to 1270 CONSTRUCTION

5511LC LAMINEX™ CABINETRY

1 GENERAL

This section relates to the supply and installation of custom joinery fittings and cabinetwork, purpose made in a factory and fitted on site, incorporating **Laminex™ New Zealand** range of cabinetry panel products.
It includes:

- Decorative panels
- Benchtops
- Carcass boards
- Associated joinery components and accessories necessary to complete the cabinetry installation.

1.1 RELATED WORKS

- Refer to 5517LB LAMINEX™ NEW ZEALAND BENCHTOPS for proprietary bench tops.
- Refer to 5517LH Hi-Macs by LAMINEX™ for proprietary bench tops.

1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

FSC®	Forest Stewardship Council®
COC	Chain of Custody

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC C/AS1, C/AS2	Protection from fire
NZBC C/VM2	Protection from fire
AS/NZS 1859.1	Reconstituted wood based panels - Specifications - Particleboard
AS/NZS 1859.2	Reconstituted wood based panels - Specifications - Dry processed fibreboard
AS/NZS 1859.3	Reconstituted wood based panels - Specifications - Decorative overlaid wood panels
AS/NZS 1859.4	Reconstituted wood based panels - Specifications - Wet-processed fibreboard
AS/NZS 2924.1	High-pressure decorative laminates - Sheets made from thermosetting resins
AS/NZS 4386.1	Domestic kitchen assemblies - Kitchen units
AS/NZS 4386.2	Domestic kitchen assemblies - Installation
ISO 5660.1	Reaction to Fire Tests - Heat Release Smoke Production and Mass Loss Rate Part 1: Heat Release Rate (Cone Calorimeter Method)

1.4 MANUFACTURER'S DOCUMENTS

Manufacturer's and supplier's documents relating to work in this section are:

- Laminex Melteca® - Brochures, Technical Data Sheets, Material Safety Data Sheets and Care & Maintenance Guide
- Laminex™ Acrylics - Brochures, Technical Data Sheets, Specification Guide, Material Safety Data Sheets and Care & Maintenance Guide
- Laminex™ Woodgrain® - Brochures, Technical Data Sheets, Specification Guide, Material Safety Data Sheets and Care & Maintenance Guide
- Laminex™ Natural and Reconstituted Veneer - Brochures, Technical Data Sheets, Specification Guide, Material Safety Data Sheets and Care & Maintenance Guide
- Laminex™ Multipurpose Compact Laminate - Brochures, Technical Data Sheets, Specification Guide, Material Safety Data Sheets and Care & Maintenance Guide
- Superfine® and Lakepine® - Brochures, Technical Data Sheets and Material Safety Data Sheets
- Melteca®, Laminex™, Superfine® and Lakefine® Fire Test Reports
- FSC Certificate No FSC-C102329 COC Code No SAI-COC-001586 expires 15 Jan 2022.FSC

certification available on request.

Manufacturer/supplier contact details

Company:	**Laminex™ New Zealand**, a division of Fletcher Building Ltd
Web:	www.laminex.co.nz
Email:	info@laminex.co.nz
Telephone:	0800 303 606

1.5 WARRANTY - MANUFACTURER/SUPPLIER

Provide a Laminex™ New Zealand material warranty:

10 years	For Laminex™ Melteca® panels Limited Warranty
10 years	For Laminex™ Acrylic panels Limited Warranty
10 years	For Laminex™ Multipurpose Compact Laminate Limited Warranty
7 years	For Laminex™ Woodgrain Collection Limited Warranty
7 years	For Laminex™ Natural / Reconstituted Veneer panels Limited Warranty
5 years	For Laminex™ Superfine® / Lakepine® (Whiteboard)

Refer to Laminex™ New Zealand for warranty details and conditions.

- Provide this warranty on Laminex™ New Zealand standard form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

1.6 WARRANTY - INSTALLER/APPLICATOR

Provide an installer warranty:

2 years	For installation

- Provide this warranty on the installer standard form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

Requirements

1.7 QUALIFICATIONS

Installers to be experienced, competent trades people familiar with the materials and techniques specified. If requested provide evidence of qualification / experience prior to commencing work.

1.8 NO SUBSTITUTIONS

Substitutions are not permitted to any of the specified Laminex™ New Zealand components and associated products listed in this section.

1.9 INFORMATION FOR OPERATION AND MAINTENANCE

Provide maintenance documentation in accordance with Laminex™ New Zealand Care & Maintenance Guides as necessary for the Principal to maintain the works. Provide documentation no later than the date of practical completion or the date on which the Principal takes occupation of the works.

1.10 FSC CERTIFIED RESPONSIBLY SOURCED TIMBER

Abbreviations and definitions:

FSC 100%

- FSC-certified material originating in FSC-certified forests or plantations that has not been mixed with material from another category throughout the supply chain.FSC 100% products can be used in FSC Mix product group.

FSC Mix % or FSC Mix Credit

- A mixture of the following - FSC 100%, FSC recycled timber, FSC Controlled Wood - and supplied with a percentage claim or Credit claim.

FSC Controlled Wood

- Forest of origin risk-assessed against FSC Controlled Wood standards and deemed low risk of being:illegally logged, violating traditional/civil/conservation rights, change of use or GM planting.All non-FSC certified timber plantations in NZ have been assessed and deemed low risk by FSC.

FSC Forest Management (FM) Certification
- A forest management unit independently FSC inspected and certified that it complies with the internationally-agreed FSC Principles.

FSC Chain of Custody (COC) Certification
- COC certification applies to those who process, transform or trade forest products, providing a guarantee about the production and source of FSC-certified products and tracking the production and distribution of the products.

Organisation website details:
Forest Stewardship Council website:-https://nz.fsc.org/en-nz
Laminex™ NZ Limited:FSC Certificate No FSC-C102329 COC Code No SAI-COC-001586

Performance

1.11 SURFACE FIRE PROPERTIES

Laminex™ New Zealand cabinetry materials tested to ISO 5660.1 achieve a Group Number Classification to NZBC C/AS2, Table 4.3, as determined in accordance with NZBC C/VM2 Appendix A, as per Laminex™ New Zealand Fire Classification reports are as follows:
- Laminex™ Melteca® panels
- Laminex™ Acrylic panels
- Laminex™ Woodgrain panels
- Laminex™ Natural Timber or Reconstituted Veneer panels
- Laminex™ Multipurpose Compact Laminate
- Superfine® moisture resistant Whiteboard (MR particleboard)
- Superfine® Whiteboard (particleboard)
- Lakepine® moisture resistant Whiteboard (MR MDF)
- Lakepine® Whiteboard (MDF)

Quality control and assurance

1.12 INSPECTIONS

Give sufficient notice so that inspection may be made of the following, before installation;
- Pre-assembled cabinetry fabricated and ready to be delivered to site.
- Site-assembled on site ready for installation.
- Areas of the building prepared to receive the cabinetry.

2 PRODUCTS

2.1 FSC CERTIFIED TIMBER

Refer to SELECTIONS for details of amount, type, suppliers.
Certified responsibly sourced FSC-COC Certified timber from forest to installation.Contractor to obtain timber supplier's FSC-COC certificate, delivery notes and/or invoices showing FSC-COC code and FSC Claim identified against product item(s).Also include signed FSC outsourcing agreements between parties (eg FSC timber broker and non-FSC door joiner) if applicable.
Laminex™ NZ Limited:FSC Certificate No FSC-C102329 COC Code No SAI-COC-001586.

Materials - decorative panels

2.2 LAMINEX™ MELTECA® QUALITY LAMINATED PANELS

Laminex™ Melteca® Quality Laminated Panels comprised of either a Superfine® particleboard or a Lakepine® MDF substrate with a double-faced melamine surface. Available in a selection of sheet sizes and thicknesses in a variety of decors and finishes, each with matching edgetape. Fire retardant options also available. Refer to Technical Data Sheet for further information. Refer to SELECTIONS.

2.3 LAMINEX™ WOODGRAIN COLLECTION

Laminex™ Woodgrain gives a timber veneer aesthetic and is made from a thin 3D embossed Olefin film, bonded to 18mm Lakepine MR E0 medium density fibreboard, and faced 2 sides.
Available in standard panel size 2800mm x 1220mm x 18mm thick, with 22mm x 1mm matching textured ABS edgetape and/or 22mm x 1.2mm laser edgetape. Available in a range of 6 decors. Refer to SELECTIONS.

2.4 LAMINEX™ NATURAL OR RECONSTITUTED TIMBER VENEER PANELS

Laminex™ Natural Timber or Reconstituted Veneer Panels comprised of Lakepine® MR E0 Medium Density Fibreboard, Lakepine® MDF, MDF Flameblock or Plywood panel; with timber veneer facing. Available in standard panel size 2440mm x 1220mm x 19mm thick, with 22mm unglued edging supplied to match species selection. Other sizes available on request. Available in a range of timber veneers and veneer cuts. Refer to SELECTIONS.

Materials - carcass panels (unseen structural cabinetry panels)

2.5 SUPERFINE® MOISTURE RESISTANT WHITEBOARD® (MR PARTICLEBOARD)

Trade Essentials® Superfine® Whiteboard® MR, a pre-finished wood panel, comprised of Superfine® MR moisture resistant particleboard with a melamine surface bonded to both sides. Low formaldehyde emitting (E0) medium density fibreboard. Used for interior cabinetry carcasses. Supplied in various panel sizes and thicknesses. Available in a range of finishes, with matching solid edgings and melamine tapes. Refer to SELECTIONS.

2.6 SUPERFINE® WHITEBOARD® (PARTICLEBOARD)

Trade Essentials® Superfine® Whiteboard®, a pre-finished wood panel, comprised of Superfine® particleboard with a melamine surface bonded to both sides. Used for interior cabinetry carcasses. Supplied in various panel sizes and thicknesses. Available in Gloss, Satin or Naturale finishes, with matching solid edgings and melamine tapes. Refer to SELECTIONS.

Components

2.7 BENCHTOPS

- Refer to 5517LB LAMINEX™ NEW ZEALAND BENCHTOPS section.
- Refer to 5517LH Hi-Macs by LAMINEX™ section for proprietary bench tops.

2.8 CARCASS CONNECTORS

One-piece steel, straight deep-cut thread, fibre board screws with press fit plastic trim cap.
Refer to component manufacturer's specifications, Technical Data and information.

2.9 CARCASS FASTENERS

Knock down type centric sphere zinc alloy connectors with connecting bolts, sleeves and dowels, to suit each particular fastening location.
Refer to component manufacturer's specifications, Technical Data and information.

2.10 CONCEALED HINGES

All-metal zinc alloy with automatic spring and screw-fixed. Door stops of plastic foam with self-adhesive backs, or plastic buttons clear or coloured to match unit.
Refer to component manufacturer's specifications, Technical Data and information.

2.11 FLAP HINGES

All-metal, flush-fitted and screw-fixed with no gap when the flap is down.
Refer to component manufacturer's specifications, Technical Data and information.

2.12 FLAP STAY

All-metal, slide/folding and screw fixed.
Refer to component manufacturer's specifications, Technical Data and information.

2.13 DRAWER RUNNERS

Under mounted type, precision running ball-mounted full extension, bright steel finish system.
Refer to component manufacturer's specifications, Technical Data and information.

Accessories

2.14 ADHESIVES

As approved by the manufacturer for the cabinetry product or pre-finished cabinetry product joint being used.
Refer to adhesive manufacturer's specifications, Technical Data and information.

Finishes - timber veneer panels

2.15 LIGHT DUTY COATING SYSTEM

Single pack, clear or pigmented nitro-cellulose or pre-catalysed lacquer.

2.16 MEDIUM DUTY COATING SYSTEM

Two pack, clear or pigmented acid catalysed coating.

2.17 HEAVY DUTY COATING SYSTEM

Two pack, clear or pigmented polyurethane coating.

3 EXECUTION

Conditions

3.1 JOINERY FIXTURES GENERALLY

Execution to include those methods, practices and processes contained in the current syllabus for the National Certificate in Carpentry and the National Certificate in Joinery (cabinetry, exterior joinery, stairs). Take responsibility for the completed joinery fixtures including fittings included within fixtures and the on-site installation.

3.2 DOMESTIC KITCHEN ASSEMBLIES

Unless otherwise specified / detailed, domestic kitchens to be constructed to AS/NZS 4386.1 and installed to AS/NZS 4386.2

3.3 SITE MEASURE

Site check and confirm dimensions after wall linings have been fixed. Verify positions of electric power outlets, wiring to light fittings included in joinery fixtures, water supplies and waste pipe locations.

3.4 SHRINKAGE

Arrange jointing and fixing so that shrinkage in any part and direction does not impair the strength or appearance of the finished work or damage the adjoining work.

3.5 TOLERANCES

Provide reasonable tolerances at connections between the joinery fittings and the building fabric so that any irregularities are adequately compensated for in the site fixing.

3.6 LAMINEX™ NATURAL AND RECONSTITUTED VENEER PANELS

Select timber for match or uniformity or symmetry of colour or grain of adjacent pieces. Finish to same standard on all faces.

3.7 LAMINEX™ PANEL PRODUCTS

Select and match all adjacent pieces. Clash exposed edges of panels with matching edge tapes and finishes.

Conditions - site

3.8 TRANSIT

Load, transport and unload fittings without distortion or damage and keep covered to protect from the weather.

3.9 DELIVERY

Deliver fittings to the site only when floor, wall and ceiling surfaces are in place and the fittings can be immediately placed in their final location.

Assembly

3.10 MACHINING

Carry out machining within the practices required for the particular Laminex™ New Zealand panel product being used. Machine drill holes, cut recesses and form joints ready for assembly to the componentry manufacturer's requirements. Ensure work is accurate, square and true to line.

3.11 MAKE CUT OUTS FOR APPLIANCES AND FITTINGS

Obtain fitting templates from the appliances and other fittings to be installed within cabinetry and bench tops. Ensure appliances and fittings can be installed with the required tolerances and clearances. Where bench tops are being provided under 5517LB LAMINEX™ NEW ZEALAND BENCHTOPS, provide templates and confirm dimensions to others.

3.12 ASSEMBLY

Carry out gluing, dowelling, and other operations necessary for the proper assembly of the fittings as detailed with fixings concealed unless detailed otherwise. Scribe fit adjustable shelves with 4 shelf pins to each and with force fit pin holes at 50mm maximum centres in solid cheeks. Construct drawers and using groove mounting runners, fit them with 3mm clearance into drawer space. Hang doors on concealed hinges with 115 degree openings except where detailed for 170 degrees.

3.13 GLUE JOINTS

Use glue joints where provision for shrinkage is not required. Cross-tongue or otherwise reinforce. Surfaces in contact to have an even sawn or planed finish and be free of contamination. Mix, apply and set to the glue manufacturer's requirements with adequate pressure applied to ensure intimate contact that will be maintained while the glue sets.

3.14 CONNECTOR JOINTS

Locate and drive connectors to Laminex™ New Zealand requirements. Fit plastic trim cap where detailed. Conceal or hide from sight other connector heads.

3.15 FASTENER JOINTS

Locate and drive connecting bolts to Laminex™ New Zealand requirements. Form joint and fit and rotate centric sphere connector to finish it rigid and tightly fitting over the whole length of the joint.

Application

3.16 FIXING ON SITE

- Scribe fit and conceal fix rigidly in place square, level, plumb and true to line and face as detailed and to the required standard.
- Assemble fittings on-site if brought in sections.
- Fit counter and bench tops and upstands.
- Complete with moveable parts in place and freely moving in their proper range.

Finishing - Natural or Reconstituted Timber Veneer panels

3.17 COATING SYSTEM - PREPARATION

- Coatings to be done in consultation with a coating specialist.
- Fill timber defects with proprietary wood filler (e.g. cracks, holes, etc).
- Sand timber to a smooth even finish using 180 grit paper.
- Remove all sanding dust using air guns and tack rags.
- Ensure substrate is free from dust, grease, dirt and other contaminants.
- Ensure moisture content of the timber is less than 15% immediately before commencing coating operations.

3.18 COATING SYSTEM - APPLICATION

To coating manufacturer's requirements.

3.19 PROTECT

Protect finished surfaces from damage, particularly bench tops.

Completion

3.20 ROUTINE CLEANING

Carry out routine trade cleaning of this part of the work including periodic removal all debris, unused materials and elements from the site.

3.21 DEFECTIVE OR DAMAGED WORK

Repair damaged or marked elements. Replace damaged or marked elements where repair is not possible or will not be acceptable. Leave work to the standard required for following procedures.

3.22 REPLACE

Replace damaged or marked elements.

3.23 LEAVE

Leave work complete, clean and without blemish and to the standard required by following procedures.

3.24 REMOVE

Remove debris, unused materials and elements from the site.

3.25 PROTECTION

Provide the following temporary protection of the finished work:
~

4 SELECTIONS

For further details on selections go to www.laminex.co.nz.
Substitutions are not permitted to the following, unless stated otherwise.

Materials - decorative panels

4.1 LAMINEX™ MELTECA PANELS

Location:	Kitchen and Customer Services
Supplier:	Laminex™ New Zealand
Grade/brand:	Melteca® Panels
Thickness:	18mm
Panel size:	Refer to drawings
Substrate:	Superfine® Particleboard
Finish:	Naturale
Colour:	Refer to drawings

4.2 LAMINEX™ NATURAL OR RECONSTITUTED TIMBER VENEER PANELS

Location:	Lunchroom and Customer Services
Supplier:	Laminex™ New Zealand
Grade/brand:	Laminex™ Natural Timber Veneered Panels
Thickness:	19mm, with 22mm unglued edging supplied to match species
Panel size:	~
Substrate:	Plywood panel
Backing:	~
Veneer cut	Refer to selection
Veneer range:	Refer to Laminex™ Natural Timber Veneered panels range
Finish:	Heavy duty (two pack polyurethane)

Materials - carcass panels

4.3 SUPERFINE® MOISTURE RESISTANT WHITEBOARD® (MR PARTICLEBOARD)

Location:	Cabinetry carcass
Supplier:	Laminex™ New Zealand
Grade/brand:	Trade Essentials® Superfine® MR
Thickness:	18mm
Sheet size:	Various, refer to Laminex™ New Zealand

4.4 SUPERFINE® WHITEBOARD® (PARTICLEBOARD)

Location:	Cabinetry carcass
Supplier:	Laminex™ New Zealand
Grade/brand:	Trade Essentials® Superfine®
Thickness:	18mm
Sheet size:	Various, refer to Laminex™ New Zealand

Components

4.5 BENCHTOPS

Refer to 5517LB LAMINEX™ NEW ZEALAND BENCHTOPS section.

Spares & maintenance products

5517LB LAMINEX BENCHTOPS

1 GENERAL

This section relates to the supply and installation of prefabricated bench tops incorporating the **Laminex New Zealand** range of surface finishes and materials.
It includes:

- Laminex™ Formica® HPL
- Laminex™ 180fx
- Laminex™ ARtouch™
- Laminex® Multipurpose Compact Laminate
- Laminex® Laboratory Grade Compact Laminate
- Laminex® Chemical Resistant HPL
- HI-MACS® Acrylic Solid Surface
- Caesarstone® Quartz Surfaces
- Laminam® 12+XL range

1.1 RELATED WORK

Refer to 5511LC LAMINEX NEW ZEALAND CABINETRY for cabinetry work.

1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

HPL	High Pressure Laminate
MDF	Medium Density Fibreboard
NSF International	National Sanitation Foundation
ESD	Education for Sustainable Development
ABS	Acrylonitrile Butadiene Styrene (a type of plastic, lower density than PVC)
CSIRO	Commonwealth Scientific & Industrial Research Organisation
~	~

The following definitions apply specifically to this section:

Greenguard®	Greenguard® Environmental Institute is an industry-independent organization that aims to protect human health and improve quality of life by enhancing indoor air quality and reducing exposure to chemicals and other pollutants
Laminate	Layers of thermo-setting resins under compression
Protec+™	Silver technology antimicrobial treatment protects against a wide range of bacteria, mould and fungi.
~	~

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC C/AS1, C/AS2	Protection from fire
NZBC C/VM2	Protection from fire
AS/NZS 2924.1	High pressure decorative laminates - Sheets made from thermosetting resins - Classification and specifications
EN 438.4	High-pressure decorative laminates (hpl) - sheets based on thermosetting resins (usually called laminates) - part 4: Classification and specifications for compact laminates of thickness 2mm and greater
ISO 5660.1	Reaction to Fire Tests - Heat Release Smoke Production and Mass Loss Rate Part 1: Heat Release Rate (Cone Calorimeter Method)
ISO 14001	Environmental management systems

1.4 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer and supplier documents relating to this part of the work:
Laminex™ Formica® Brochure, Technical Data Sheet, Specification Guide and Care & Maintenance Guide
HI-MACS®Brochure, Technical Data Sheet, Material Safety Data Sheet, Design Guide and Care & Maintenance Guide
Caesarstone® Brochures, Technical Data Sheets, Material Safety Data Sheets, Design Guide and Care & Maintenance Guides
Laminex Panels for Partitions Brochure, Technical Date Sheets, Material Safety date Sheets.
Laminex™ Formica®, HI-MACS® and Caesarstone® Fire Test Reports
Laminam® Design Guides

Manufacturer/supplier contact details

Company:	**Laminex New Zealand Ltd**, a division of Fletcher Building Ltd
Web:	www.laminex.co.nz
Email:	info@laminex.co.nz
Telephone:	0800 303 606

1.5 WARRANTY - MANUFACTURER/SUPPLIER

Provide a Laminex New Zealand material warranty:

7 years	For Laminex™ Formica® Laminates Limited Warranty
7 years	For Laminex™ Laminates
10 years	For Laminex™ Multipurpose Compact Laminates
15 years	For Hi-MACS® Acrylic Solid Surface Limited Warranty
10 years	For Caesarstone® Limited Warranty
10 years	for Laminam® 12+ XL Limited Warranty

Refer to **Laminex New Zealand** for warranty details and conditions.

- Provide material warranty in accordance with **Laminex New Zealand Ltd** requirements
- Commence the warranty from the date of Practical Completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

1.6 WARRANTY - INSTALLER/APPLICATOR

Provide an installer warranty:

2 years	For installation

- Provide this warranty on the installer standard form (if not available, use the standard form in 1237 WARRANTIES section)
- Commence the warranty from the date of Practical Completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

Requirements

1.7 ACCEPTABLE PRODUCT/MATERIAL SUPPLIERS

Where a product or material supplier is named in SELECTIONS, the product/material must be provided by the named supplier. Where more than one named supplier, any one of the named suppliers will be acceptable.

1.8 QUALIFICATIONS

Applicators / installers to be experienced in the application / installation of Laminex™ Formica®, Laminex®, HI-MACS®, Caesarstone® and Laminam® bench tops and techniques specified and approved / accredited / registered / licensed / certified by **Laminex New Zealand**. If requested provide evidence of qualification / experience prior to commencing work.

1.9 NO SUBSTITUTIONS

Substitutions are not permitted to any of the specified **Laminex New Zealand** components or associated products listed in this section.

1.10 SAMPLES

Refer to the general section 1270 CONSTRUCTION for details of how samples will be reviewed and how instructions to proceed will be given. Provide the following samples for review:

	Sample A	Sample B	Sample C
Sample description:	~	~	~
Sample type:	~	~	~
Number:		~	~
Location:		~	~
Supporting documentation:	~	~	~
Reviewer:	Contract administrator	Contract administrator	Contract administrator
Time for review:	10 working days	10 working days	10 working days
Review criteria:	~	~	~

1.11 INFORMATION FOR OPERATION AND MAINTENANCE

Provide maintenance documentation in accordance with **Laminex New Zealand** Care & Maintenance Guides as necessary for the Principal to maintain the works. Provide documentation no later than the date of Practical Completion or the date on which the Principal takes occupation of the works.

1.12 MAINTENANCE MATERIALS

Provide maintenance materials listed in SELECTIONS to the Principal for ongoing maintenance requirements.

Performance

1.13 SURFACE FIRE PROPERTIES

Laminex New Zealand bench top materials are tested to ISO 5660.1 and achieve a Group Number Classification of 3 except Laminam which achieves a Group Number Classification of 1 to NZBC C/AS2, Table 4.3, as determined in accordance with NZBC C/VM2 Appendix A. Refer to Laminex NZ products fire test classification for details.
Materials are as follows:

- Laminex™ Formica® HPL on Lakepine® MDF
- Laminex™ 180fx® on Lakepine® MDF
- Laminex™ ARtouch® HPL on Lakepine® MDF
- Laminex® Multipurpose Compact Laminate
- Laminex® Laboratory Grade Compact Laminate
- Laminex® Chemical Resistant Laminate on Lakepine® MDF
- HI-MACS® Acrylic Solid Surface
- Caesarstone® Quartz Surfaces
- Laminam® 12+XL range (Group Classification Number 1S)

Quality control and assurance

1.14 INSPECTIONS

Give sufficient notice so that inspection may be made of the following, before installation;

- Pre-assembled bench tops fabricated and ready to be delivered to site.
- Site-assembled on site ready for installation.
- Areas of the building prepared to receive the bench tops.

2 PRODUCTS

Materials

2.1 LAMINEX™ FORMICA® HPL BENCHTOP

Laminex™ Formica® HPL, a durable, post formable high pressure decorative laminate 0.7mm thick bonded to Lakepine® MDF substrate. Manufactured to AS/NZS 2924.1 and tested to ISO 5660.1. Internal or external curves formed to a minimum radius of 10mm for solid colours and 6mm for patterns and wood grains in the machine direction. Supplied in a range of sheet sizes, finishes and colours. Protec+ antimicrobal technology available on selected decors. Refer to SELECTIONS for options.

2.2 LAMINEX™ MULTIPURPOSE COMPACT BENCHTOP

Laminex™ Multipurpose Compact Laminate, a durable, moisture resistant 13mm thick double sided panel with antimicrobial properties. High impact resistance and Greenguard® certified. Manufactured to EN 438.4. Supplied in sizes 3660mm x 1830mm x 13mm thick. Available in a range of colours in Natural finish. Refer to SELECTIONS for options.

3 EXECUTION

Conditions

3.1 ROUTINE MATTERS

Refer to 1250 TEMPORARY WORKS & SERVICES for protection requirements. Refer to 1270 CONSTRUCTION for requirements relating to defective or damaged work, removal of temporary protection and cleaning.

3.2 DELIVERY

Refer to 1270 CONSTRUCTION for requirements relating to delivery, storage and handling of products. Keep products dry in transit. Take delivery of products dry and undamaged. Deliver all materials in original unopened packaging with labels intact. Store bench tops in a dry and securely locked area. Provide supervision when the secure area is unlocked and packages and cartons are being distributed. Sign off each package from the schedule as released

Pre-Installation

3.3 PRE-INSTALLATION REQUIREMENTS

Check work previously carried out and confirm it is of the required standard for this part of the work. Ensure all room/areas are completely decorated.
Moisture content: ~% maximum

3.4 SITE MEASURE

Site check and confirm dimensions after wall linings have been fixed. Verify positions of electric power outlets, wiring to light fittings included in joinery fixtures, water supplies and waste pipe locations.

3.5 SUBSTRATE

Ensure substrate and fixings will allow work of the specified standard. Ensure finishes are complete. Check work previously carried out and confirm it is of the required standard for specified finish. Carry out such additional preparatory work as required bringing the substrate to suitable condition.

3.6 SUPPORT

Confirm fixing points needed for each bench top and confirm that the appropriate continuous support frame /cabinetry, nogging or lining at each fixing point location are provided.

3.7 CO-ORDINATION

Do not proceed if support frame /cabinetry or services do not match the requirements of the bench top.

3.8 ASSEMBLY

Check all components are included. Assemble to **Laminex New Zealand** instructions and to achieve finished bench top.

Installation

3.9 LOCATE

Locate bench top at heights and/or locations shown on the drawings. Before proceeding, confirm any dimension not shown or known.

3.10 FABRICATION QUALITY

Carry out machining within the practices required for the bench top. Machine drill and cut holes and recesses and form joints to the componentry manufacturer requirements. Ensure work is accurate, square and true to line and face.

3.11 STANDARDS AND TOLERENCES

Refer to the general section 1270 CONSTRUCTION for general requirements.

3.12 MAKE CUT OUTS FOR APPLIANCES AND FITTINGS

Obtain fitting templates from the appliances and other fittings to be installed within the bench top. Ensure appliances and fittings can be installed with the required tolerances and clearances.

3.13 INSTALL

Install each bench top in accordance with **Laminex New Zealand** requirements using templates and tools supplied or recommended by the manufacturer. Set bench tops level, plumb and true to line and required location.

Completion

3.14 ROUTINE CLEANING

Carry out routine trade cleaning of this part of the work including periodic removal all debris, unused materials and elements from the site.

3.15 DEFECTIVE OR DAMAGED WORK

Repair damaged or marked elements. Replace damaged or marked elements where repair is not possible or will not be acceptable. Leave work to the standard required for following procedures.

3.16 LEAVE

Leave the whole of this work free of blemishes, undamaged and to the standard of finish required for following work.

3.17 REMOVE

Remove debris, unused materials and elements from the site.

3.18 PROTECTION

Provide the following temporary protection of the finished work:
~

3.19 COMPLETION MATTERS

Refer to 1270 CONSTRUCTION for completion requirements and, if required, commissioning requirements.

4 SELECTIONS

For further details on selections go to www.laminex.co.nz.
Substitutions are not permitted to the following **Laminex New Zealand** product, unless stated otherwise.

Materials

4.1 LAMINEX™ FORMICA® HPL BENCHTOP

Location:	Kitchen
Supplier:	Laminex New Zealand
Brand/type:	Laminex™ Formica® HPL
Sheet size:	~
Sheet thickness:	0.7mm
Benchtop size:	Refer to drawings
Benchtop profile:	Square edge
Solid colour:	Refer to Laminex™ Formica® Colour Range
Patterns/wood grains:	Refer to Laminex™ Formica® Colour Range
Finish:	Velour

Spares & maintenance products

4.2 SPARES & MAINTENANCE PRODUCTS

Refer to the general section 1270 CONSTRUCTION for details of how spares and maintenance products will be handled. Provide the following spares and maintenance products:

Item:	~
Quantity:	~
Location:	Refer to 1270 CONSTRUCTION

5521AH ALLEGION HARDWARE

1 GENERAL

This section covers the supply and installation of **Allegion NZ** door and window hardware and furniture.

1.1 RELATED WORK

Refer to 5511 JOINERY AND CABINETRY FIXTURES for handles and furniture for built in furniture, cabinet work and joinery items.
Refer to 7151 SANITARY FIXTURES, TAPWARE & ACCESSORIES for bathroom accessories and proprietary cabinets and units.

Documents

1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:
~

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

1.3 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and supplier's documents relating to this part of the work:
Allegion Security Technologies catalogue

Manufacturer/supplier contact details

Company:	**Allegion NZ**
Web:	www.allegion.co.nz
Email:	nzinfo@allegion.com
Telephone:	09 829 0550

Requirements

1.4 NO SUBSTITUTIONS

Substitutions are not permitted to any specified system, or associated components and products.

1.5 SUPPLIER

A specialist in the supply of hardware, employing an experienced architectural hardware representative available to assist during the course of the hardware installation.

1.6 SUBMIT A SUPPLIER'S SCHEDULE

Where an Allegion hardware schedule has not been prepared and appended to this section, submit a suppliers hardware schedule, based on the hardware selections specified in this section.

2 PRODUCTS

2.1 HARDWARE

Refer to SELECTIONS for type.

Components

2.2 FIXINGS

Provide matching fixings, including screws, clips, bolts and brackets for hardware supplied.

3 EXECUTION

Conditions

3.1 RETAIN

Retain hardware in the manufacturer's original packaging. Ensure that units are complete with fixings and installation instructions. Label each unit separately with its hardware number and door/window number to match the submitted and approved schedule.

3.2 PACKAGE

Package required hardware units and label each package with its hardware and door/window number and location to match the drawings and the submitted and approved schedule. Place packages in cartons selected for 'level', 'location', and/or 'sector' and label the packages and the cartons similarly.

3.3 HARDWARE FOR SUPPLY TO OTHERS

Package, label with their hardware and door/window number and location, and supply to the window/door manufacturers for installation, for:

- 4511 EXTERIOR TIMBER WINDOWS AND DOORS
- 4521 ALUMINIUM WINDOWS AND DOORS
- 4531 STEEL WINDOWS AND DOORS
- 4551 COMPOSITE WINDOWS AND DOORS

3.4 STORE

Store hardware packages in a shelved, dry and securely locked area. Provide supervision when the secure area is unlocked and packages and cartons are being distributed; signing off each package from the schedule as released.

Installation

3.5 INSPECTION

Before starting the hardware installation, check frames, doors, sashes and adjacent finishes are ready for the proper installation of the hardware.

3.6 LOCATE

Locate hardware units at heights and/or locations shown on the drawings, or as required to comply with relevant Codes and Standards. Before proceeding, confirm any dimension not shown or known.

3.7 CUTTING AND FITTING

Carry out cutting and fitting of the substrate necessary for installing any hardware unit before painting or finishing of that surface. Remove hardware when required for painting, placing it in the packaging or carton originally supplied and returning it to the secure store until ready for re-installation.

3.8 INSTALL HARDWARE

Install each hardware unit in accordance with the hardware manufacturer's requirements using templates and tools supplied or recommended by them. Set units level, plumb and true to line and required location, with all moving parts and actions freely and easily operating. Do not make any modifications to supplied units.

Completion

3.9 ADJUST

Adjust and check each operating hardware unit for correct and smooth functioning. Replace those units that cannot be adjusted if they do not function correctly. Clean units and adjoining surfaces upon completing their installation. Only use lubricant if and when recommended by the hardware manufacturer/supplier.

3.10 REPLACE

Replace damaged or marked elements.

3.11 LEAVE

Leave work with parts fully and freely working and to the standard required by following procedures.

3.12 REMOVE

Remove debris, unused materials and elements from the site.

3.13 PROTECT

Protect hardware units from damage or marking.

3.14 FINAL ADJUSTMENT

Where hardware is installed more than a month prior to project completion, return and make a final check and adjustment of hardware units to ensure they are operating correctly, fitted properly and are undamaged.

4 SELECTIONS

Commercial hardware

4.1 LEGGE HINGES - INTERIOR

Location:	Interior medium use doors
Brand:	Legge
Description:	100mm x 75mm, button tipped, loose pin
Finish:	Satin stainless steel (304 grade)

4.2 LEGGE MORTICE LOCKS & LATCHES - TIMBER DOORS

Brand:	Legge
Type/model:	990MF series
Description:	Multi-function mortice lock, function to suit opening/space
Backset:	60mm
Finish:	Satin chrome plate

4.3 MORTICE LOCKS & LATCHES - METAL DOORS

Brand:	Legge
Type/model:	995MF series
Description:	Multi-function mortice lock, function to suit opening/space
Backset:	23mm
Finish:	Satin chrome plate

Brand:	Schlage
Type/model:	950 series
Description:	Short backset mortice deadlock
Backset:	23mm
Finish:	Satin chrome plate

Brand:	Schlage
Type/model:	951 series
Description:	Short backset sliding door deadlock
Backset:	23mm
Finish:	Satin chrome plate

4.4 CYLINDRICAL LOCKSETS & LATCHSETS

Brand:	Legge
Type/model:	G2 series
Design:	Neptune
Description:	Cylindrical lever set, function to suit opening/space
Backset:	70mm
Finish:	Satin chrome plate

Brand:	Schlage
Type/model:	B500 series
Description:	Heavy duty deadbolt, function to suit opening/space
Backset:	Adjustable 60/70mm
Finish:	Satin chrome plate

Brand:	Schlage
Type/model:	BC250 series
Description:	Heavy duty deadlatch, function to suit opening/space
Backset:	70mm
Finish:	Satin chrome plate

4.5 LEGGE DOOR FURNITURE - TIMBER DOORS

Brand:	Legge
Type/model:	500 series
Design:	#29 Alpha
Description:	165mm x 45mm forged brass plate furniture, plate function to suit corresponding mortice lock function
Finish:	Satin chrome plate

4.6 LEGGE DOOR FURNITURE - METAL DOORS

Brand:	Legge
Type/model:	5400 series
Design:	#29 Alpha
Description:	185mm x 25mm forged brass plate furniture, plate function to suit corresponding mortice lock function
Finish:	Satin chrome plate

4.7 LEGGE PULL HANDLES AND PUSH PLATES

Brand:	Legge
Type/model:	600 series
Description:	200mm x 16mm pull handle on 300mm x 100mm back plate with 300mm x 100mm push plate, concealed through fixing to suit opening/space
Finish:	Satin stainless steel (304 grade)

4.8 LEGGE ENTRANCE PULL HANDLES

Brand:	Legge
Type/model:	~
Description:	~
Finish:	Satin stainless steel (304 grade)

4.9 BRITON FLOOR SPRINGS

Brand:	Briton
Type/model:	M5000/M8000 series
Description:	Double action floor spring, complete with accessories, strength to suit door weight
Finish:	Satin stainless steel

4.10 BRITON TRANSOM CLOSERS

Brand:	Briton
Type/model:	2800 series
Description:	Double action, adjustable strength 2-4, transom closer, complete with mounting kit and pivot set
Finish:	Silver grey cover for timber doors

4.11 DOOR CLOSERS

Location:	Interior, hollow core
Brand:	LCN
Type/model:	4030 series
Description:	4031 regular arm, strength 1-4
Finish:	Aluminium
Location:	Exterior, solid core & high use
Brand:	LCN
Type/model:	1460 series
Description:	1461 regular arm, strength 1-6
Finish:	Aluminium
Location:	Hold open fire rated doors
Brand:	LCN
Type/model:	4040SE series

Description:	24 V Electric hold open, track arm, strength 1-3
Finish:	Aluminium
Location:	Accessible automatic opening doors
Brand:	LCN
Type/model:	4600 series
Description:	4631 Electronic auto operator, pull side mount, complete with Schlage 956 satin stainless steel push pad
Finish:	Aluminium

4.12 LEGGE FLUSH BOLTS

Brand:	Legge
Type/model:	1912
Description:	150mm manual flush bolt (top & bottom) complete with Legge 1913 dust socket to floor
Finish:	Satin chrome plate
Brand:	Ives
Type/model:	FB40 series
Description:	FB41P top and bottom automatic flush bolt, complete with Ives DP2 dust socket to floor
Finish:	Satin chrome plate

4.13 VON DUPRIN EMERGENCY EXIT DEVICES

Location:	Single leaf doors
Brand:	Von Duprin
Type/model:	22 series
Description:	22EO rim exit device
Finish:	Powder coat aluminium
Location:	Double leaf doors with flush meeting stiles
Brand:	Von Duprin
Type/model:	22 series
Description:	2227EO vertical rod exit device (x2)
Finish:	Powder coat aluminium
Location:	Double leaf doors with rebated meeting stiles
Brand:	Von Duprin
Type/model:	22 series
Description:	22EO rim exit device and 2227EO vertical rod exit device with Von Duprin 1609 strike
Finish:	Powder coat aluminium

4.14 LEGGE DOOR STOPS - FLOOR MOUNTED

Location:	Floor mounted
Brand:	Legge
Description:	Floor mounted, 50mm diameter, 2 piece door stop
Finish:	Aluminium

4.15 LEGGE DOOR STOPS - WALL MOUNTED

Location:	Wall mounted
Brand:	Legge
Description:	Wall mounted, 75mm projection, concealed fix door stop
Finish:	Aluminium

4.16 KICK PLATES

Brand:	Schlage
Type/model:	KP
Description:	300mm height x door width (distance between stops), drilled and countersunk
Finish:	Satin stainless steel

4.17 SCHLAGE MASTER KEYING

Brand:	Schlage
Type/model:	Everest
Description:	Restricted profile master keying, complete with 2 keys per master keyed group

4.18 TOILET CUBICLE INDICATOR BOLTS

Location:	Toilet cubicle doors
Brand:	Legge
Type/model:	1461
Finish:	Satin stainless steel

4.19 LEGGE ROLLER CATCHES - FIRE RATED

Location:	~
Brand:	Legge
Type/model:	E1511
Description:	Heavy duty, fire rated roller latch
Finish:	Satin stainless steel

6411J JACOBSEN VINYL SURFACING

1 GENERAL

This section relates to the supply and installation of **Jacobsen** vinyl surfacing complete with skirtings, nosings, trims and edgings and including static control sheet to floors.
It includes:

- PVC sheet
- PVC tiles

Related work

1.1 RELATED SECTIONS

Refer to ~ for ~.

Documents

1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC C/AS2	Protection from fire
NZBC D1/AS1	Access Routes
NZS/AS 1884	Floor coverings - Resilient sheet and tiles - Installation practices
IEC 61340.4.1	Electrostatics - Part 4.1: Standard test methods for specific applications - Electrical resistance of floor coverings and installed floors
EN 1081	Resilient Floor Coverings - Determination of the Electrical Resistance

1.3 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and Jacobsen documents relating to this part of the work:

- Technical datasheet
- Installation instructions
- Maintenance instructions

Manufacturer/supplier contact details

Company:	**Jacobsen**
Web:	www.jacobsen.co.nz
Telephone:	0800 800 460

Warranties

1.4 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:

5 years:	Materials

- Provide this warranty on the standard form in the general section 1237WA WARRANTY AGREEMENT.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

1.5 WARRANTY - INSTALLER/APPLICATOR

Provide an installer/applicator warranty:

1 year:	Execution

- Provide this warranty on the standard form in the general section 1237WA WARRANTY AGREEMENT.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

Requirements

1.6 NO SUBSTITUTIONS

Substitutions are not permitted to any specified system, or associated components and products.

1.7 QUALIFICATIONS

Layers to be experienced competent workers, familiar with the materials and the techniques specified.

Performance

1.8 TEST - STATIC CONTROL

Test static control flooring to IEC 61340.4.1 or EN 1081 and provide a certificate of compliance.

1.9 SURFACE FIRE PERFORMANCE

Flooring to meet the fire performance requirements of NZBC C/AS2, 4.17.3, by:
Either,
Flooring is tested and achieved the minimum Critical Radiant Flux requirements of NZBC C/AS2, Table 4.5. Provide certificates or other evidence that the flooring will comply.
or,
Critical Radiant Flux not required if area of non-conforming products have an aggregate surface area of not greater than 5m² within a firecell, to NZBC C/AS2, 4.17.6.a.

Performance - Slip resistance

1.10 SLIP RESISTANCE - SURFACES EXEMPT FROM TESTING

Walking surfaces comply with NZBC D1/AS1, Table 2 for slip resistance requirements and are exempt from testing.

1.11 SLIP RESISTANCE - PREVIOUSLY TESTED SURFACE

The following walking surfaces have previously been tested for slip resistance, and comply with NZBC D1/AS1 requirements.
~

1.12 TEST - SLIP RESISTANCE

Test walking surfaces for slip resistance, refer to SELECTIONS for test condition.

2 PRODUCTS

Materials

2.1 VINYL SHEET

Tarkett and Armstrong vinyl sheet, with factory applied PUR (polyurethane) to ensure a low maintenance system requiring no sealers or polish.

2.2 VINYL TILES

High vinyl content monolayer flexible PVC tiles.

2.3 COVINGS

Form commercial coving using pencil cove method, with butterfly mitres to external and internal corners. Form domestic coving using either pencil cove or fillet cove method.

2.4 VINYL SHEET, STATIC CONTROL

High vinyl content monolayer flexible PVC sheet static control flooring to IEC 61340.4.1 or EN 1081 complete with UZIN 10mm copper foil.

2.5 VINYL SHEET WALLCOVERING

Heterogeneous or homogeneous vinyl wall covering up to 2mm.

2.6 2MM VINYL SHEET WALLCOVERING

Tarkett and Armstrong wall vinyl sheet, with factory applied PUR (polyurethane) to ensure a low maintenance system requiring no sealers or polish.

2.7 VINYL SKIRTING

Cove based skirting. Refer to SELECTIONS for height and colour.

2.8 STAIR NOSINGS

Tredsafe stair nosing with Diamondtred Safety Insert.

2.9 FINISHING TRIM & TRANSITION BARS

Jacobsen Tredsafe's aluminium finishing trims, transition bars and reducer strips.

2.10 COVE CAPPING

Jacobsen PVC top cap to top of coved vinyl.

2.11 WALL AND FLOOR VINYL JOINING STRIP

Jacobsen white PVC floor to wall finishing strip.

Accessories

2.12 ADHESIVE

UZIN KE2000S acrylic floor and wall adhesive.

2.13 PRIMER AND SEALER

To the adhesive manufacturer's requirements for the particular substrate.

2.14 FLOOR LEVELLING COMPOUND

UZIN floor levelling compound.

2.15 THERMOWELDING

Manufacturer supplied colour matched weld rod using the Tarkett weld nozzle.

2.16 CHEMICAL WELDING

Chemical weld heterogeneous vinyl to manufacturer's instructions. Obtain a copy of instructions and follow specified procedures.

2.17 THINLINE MDF UNDERLAY

Customwood medium density fibreboard.

2.18 MASONITE UNDERLAY

CSR Masonite underlay, 5.5mm thick.

3 EXECUTION

Conditions

3.1 GENERALLY

To manufacturer's requirements and NZS/AS 1884.

3.2 STORAGE

Accept rolls of sheet, packages of tiles and accessories undamaged and dry. Store rolls upright with other material on level surfaces in non-traffic, non-work areas that are enclosed, clean and dry.

3.3 HANDLING

Avoid distortion, stretching, marking and damage to edges while shifting unrolling and handling sheet, tiles and accessories. Do not use damaged material.

3.4 PREPARATION

Check that each colour supplied is from the same batch. Follow the vinyl manufacturer's requirements for preparatory conditioning of rolls and working temperatures and conditions before, during and after laying the selected vinyl. Protect work from solar heat gain and switch off under-floor heating during and for 48 hours either side of the work period.

3.5 DO NOT START

Do not start work before the building is enclosed, wet work is complete, doors are hung and lockable, finishes and trim complete and good lighting is available.

3.6 INSPECT

Inspect the substrate to ensure it is a suitable finish

3.7 PROTECTION

Protect adjoining work surfaces and finishes during the vinyl installation.

3.8 LAYING GENERALLY

Carry out the whole of this work to NZS/AS 1884, and the flooring manufacturer's requirements.

3.9 TECHNIQUE

Before beginning the installation confirm the proposed layout of material, location of seams and other visual considerations of the finished work.

Application - substrate preparation

3.10 PREPARING NEW CONCRETE

Clear substrate of debris, clean off surface contamination and carry out surface repairs using UZIN levelling compound. Carefully feather out at perimeters of repaired areas. Grind level, then vacuum to remove dust. Check moisture content to NZS/AS 1884, Appendix A and do not commence laying vinyl until readings for the whole area show 75% relative humidity or less.

3.11 PREPARING NEW TIMBER BOARD OR PARTICLEBOARD

Clear substrate of debris, clean off surface contamination and carry out surface repairs using UZIN levelling compound. Carefully feather out at perimeters of repaired areas. Grind smooth, then vacuum to remove dust. Check for moisture content to NZS/AS 1884, Appendix A, and do not commence final sanding or laying until readings for the whole area show a moisture content of:
8-12% for air conditioned buildings
10-14% for intermittently heated buildings
12-16% for unheated buildings
Prime or seal if required.

3.12 PREPARING EXISTING CONCRETE

Strip off existing floor coverings, adhesive and surface contaminants. Ensure concrete is dry. Check moisture content to NZS/AS 1884, Appendix A and do not commence laying vinyl until readings for the whole area show 75% relative humidity or less. Carry out minor repairs using a cement-based levelling compound, carefully feathered out at perimeters of repaired areas. Grind level, then vacuum to remove dust.

Resurface concrete using UZIN levelling compound to required thickness to provide a sound and level base.

Prime or seal if required.

3.13 PREPARING EXISTING TIMBER BOARD OR PARTICLEBOARD

Strip off existing floor coverings, machine sand to remove adhesive and surface contaminants. Then vacuum to remove all dust prior to installing underlay sheets.

3.14 TIMBER BOARD OR PARTICLEBOARD, LAYING THINLINE MDF UNDERLAY

Lay underlay sheets with joints staggered, with a 0.5mm gap between sheets and 2mm gap at all perimeters. Use 18mm divergent staples at 100mm centres throughout the whole sheet and 30mm apart, 18mm in from the edges of the sheets. Punch staples below the surface and sand joins level.

3.15 TIMBER BOARD OR PARTICLEBOARD, LAYING MASONITE UNDERLAY

Underlay using 5.5mm Masonite with joints staggered and with a 0.4mm gap between sheets and 3mm gap at all perimeters. Use 22mm narrow crown staples at 150mm centres throughout the whole sheet and 75mm apart, 10mm in from the edges of the sheets. Punch staples 0.4mm below the surface and sand joins level.

3.16 WALL SURFACES

Clean off surface contamination, carry out minor repairs as possible by this trade and bring to a smooth even surface.

3.17 APPLYING PRIMER OR SEALER FOR VINYL SHEET

Prime and/or seal porous plaster, concrete and timber substrates to the adhesive manufacturer's requirements.

Application - laying floors

3.18 APPLICATION OF ADHESIVE

Apply UZIN KE2000S at the required spread rate, without leaving trowel marks after setting. Follow requirements for open time, taking note of the substrate porosity, ambient temperature and relative humidity. Remove excess adhesive as the work proceeds using required techniques.

3.19 LAYING FLOOR SHEET

Roll out, cut, leave to condition and install sheet vinyl to Tarkett or Armstrong's recommended installation procedure, ensuring there are no air bubbles or twisting, the seams are kept clear of adhesive and immediately the sheet is adhered it is rolled with a 68 kg roller.

3.20 THERMOWELDING

Machine groove and thermoweld seams in designated areas, using the Tarkett weld nozzle, heating the sheet and weld rod to a sufficient temperature to melt and fuse them together in a single mass. Trim the weld to leave a smooth, flush surface with the sheet.

3.21 CHEMICAL WELDING HETEROGENEOUS VINYL

Prepare join by overlapping vinyl sheets by 30mm. Tape join and cut along straightedge through both thicknesses simultaneously. Inject type A chemical weld ensuring the liquid penetrates total thickness of the joint in a single application. Remove tape.

3.22 CROSS JOINS

Plan and allow cuts to avoid cross joins. Obtain written approval before proceeding if cross joins are unavoidable. Cross joins are not acceptable in wet areas.

3.23 COVING VINYL

Pencil cove flooring to the specified height and finish off as detailed.

3.24 COMPLETE MITRES

Perform butterfly method to internal and external mitres, allowing to thermoweld mitres.

3.25 VINYL TO STAIRCASES

Fit selected nosing to each tread and at the top of each stair flight, in accordance with the nosing manufacturer's requirements. Lay pre-cut vinyl sheets to each tread and riser, pencil coved at the rear of each tread.

3.26 LAYING FLOOR TILES / STRIP

Check with Jacobsen for recommended adhesive to suit the particular installation.
Set out from the centre of the area in two experimental runs and modify to suit before laying tiles from the centre to manufacturer's required installation procedures, ensuring air is expelled. As each section is completed immediately roll with a 68 kg roller. Complete sections before scribing perimeter tiles.

3.27 FIT VINYL EDGING

Fit tapered vinyl edging to borders, except where abutting carpet.

3.28 LAYING STATIC CONTROL SHEET

Lay out and adhere to the substrate to Tarkett's required installation procedures. Roll out, cut, leave to condition and install static control sheet with approved adhesive, ensuring there are no air bubbles or twisting and the seams are kept clear of adhesives. Immediately the sheet is adhered, roll with a 68 kg roller. Tarkett Granit SD should give average resistance readings of 1 x 106 to 1 x 108 ohms.

Application - to walls

3.29 APPLYING PRIMER OR SEALER FOR VINYL SHEET

Prime and/or seal porous plaster, concrete and timber substrates using water based sealer to the adhesive manufacturer's requirements.

3.30 APPLYING WALL SHEET

Adhesive fix vinyl either vertical or T-method, using UZIN KE2000S , ensuring corners are wrapped and joins are no closer than 200mm from internal or external corners. Cut vinyl neatly to recess on the Floor/Wall Finishing Strip, and chemically weld this joint using Werner Mueller Type C Welding Compound.

3.31 THERMOWELDING WALL VINYL

Hand groove and thermo-weld seams, heating the sheet and weld rod using Tarkett Speed Tip Nozzle to a sufficient temperature to melt and fuse them together in a single mass. Trim the weld to leave a smooth, flush surface with the sheet.

3.32 FLOOR TO WALL FINISHING STRIP

Adhere to walls in a true, straight line using water based contact adhesive or permanent double sided tape. Roll immediately using a seam roller to ensure maximum bond strength is achieved.

Application - general

3.33 FIT VINYL SKIRTINGS

Fit skirtings in accordance with Tarkett or Armstrong's required installation procedures.

3.34 INSTALLING ACCESSORIES

Scribe fit, adhere or otherwise fix true to line and face to the sheet manufacturer's requirements for each particular location.

Completion

3.35 REPLACE

Replace damaged or marked elements.

3.36 CLEAN COMMERCIAL VINYL FLOORING

Obtain a copy of the Tarkett cleaning instructions and carry out initial clean to those instructions.

3.37 REMOVE

Remove debris, unused materials and elements from the site.

3.38 PROTECT

Protect completed work from damage for the period between completion of laying and completion of the contract works, or until acceptance/sign-off by ~.

3.39 LEAVE

Leave work to the standard required by following procedures.

4 SELECTIONS

For further details on selections go to www.jacobsen.co.nz.
Substitutions are not permitted to the following, unless stated otherwise.

4.1 VINYL SHEET - SMOOTH

Product:	Tarkett iQ Granit
Colour/number:	Medium Blue, 3040777
Thickness:	2mm
Seam welding:	Yes

4.2 VINYL SHEET - NON SLIP

Product:	Tarkett Granit Safe T
Colour/number:	Light Grey, 3052697
Thickness:	2.0mm
Seam welding:	Yes

4.3 COVINGS

Height:	100mm
Type:	Continuation of the floor sheet up the wall

4.4 JACOBSEN ADHESIVE

Adhesive:	UZIN KE2000S acrylic floor and wall adhesive.

4.5 COVE CAPPING

Type:	Jacobsen PVC top cap.

6700R RESENE PAINTING GENERAL

1 GENERAL

This section relates to the general matters related to **Resene** painting work.

1.1 RELATED WORK

Refer to 6721R RESENE PAINTING INTERIOR
Refer to 6711R RESENE PAINTING EXTERIOR
Refer to 6721RE RESENE ENVIRONMENTAL PAINTING INTERIOR
Refer to 6711RE RESENE ENVIRONMENTAL PAINTING EXTERIOR

1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

MPNZA	Master Painters New Zealand Association Inc.
SIPDS	Surface Information & Preparation Data Sheets

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:
Health and Safety at Work Act

AS/NZS 5131	Structural steelwork - Fabrication and erection
AS/NZS ISO 9001	Quality management systems - Requirements
MPNZA	Health and Safety Programme
AS/NZS 4361.2	Guide to hazardous paint management - Lead paint in residential, public and commercial buildings
WorkSafe	Guidelines for the management of lead-based paint

1.4 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and supplier's documents related to this section are:

Resene	Surface Information & Preparation Data Sheets (SIPDS) (hard copy or at www.resene.co.nz)
Resene	Product Data Sheets (hard copy or at www.resene.co.nz)
Resene	Putting your safety first

Copies of the above literature are available from **Resene**
Telephone: 0800 RESENE (0800 737 363)

Warranties

1.5 WARRANTY - MANUFACTURER/SUPPLIER

Warrant this work under normal conditions of use against failure referring to the **Resene** Promise of Quality in the **Resene** One-Line specifications and product data manual.

Requirements

This painting specification is written based on information available at the time of writing.

1.6 NO SUBSTITUTIONS

Substitutions are not permitted to any specified **Resene** coating system, or associated components and products. Do not combine paints from different manufacturers in a paint system.

If in the applicator's own expertise and judgement an amendment to this specification is required, or where a substrate preparation, or required painting system is not covered in this specification, this shall be brought to the attention of the contract administrator and any amendment agreed before work proceeds any further.

1.7 QUALIFICATIONS

Painters to be experienced competent workers, familiar with the materials and the techniques specified and with the **Resene** coating systems and be members of the Master Painters New Zealand Association Inc.

The applicator is to have the necessary skill, experience and equipment to undertake the work. The applicator remains responsible for ensuring proper completion of the work.

Painters to be selected from the **Resene** Eco Decorator programme. The **Resene** Eco Decorator programme is designed to recognise a nationwide network of environmentally responsible, quality focussed painting contractors.
Refer to www.resene.co.nz/ecodecorator.htm for a list of Eco Decorators in your area.

1.8 SAMPLES

Refer to the general section 1270 CONSTRUCTION for details of how samples will be reviewed and how instructions to proceed will be given. Provide the following samples for review:

	Sample A	Sample B	Sample C
Sample description:	~	~	~
Sample type:	~	~	~
Number:	~	~	~
Location:	~	~	~
Supporting documentation:	~	~	~
Reviewer:	Contract administrator ~	Contract administrator ~	Contract administrator ~
Time for review:	10 working days ~	10 working days ~	10 working days ~
Review criteria:	~	~	~

1.9 PRIOR TO WORK COMMENCING

Before any work commences painters should verify, with Architects or specifying authority, that their paint matches a previously supplied standard card or panel. Differently coloured paints will vary in price, opacity and durability. **Resene** normally only specify two coats of colour but with certain colours, such as yellows and oranges, three coats may be needed. Refer to SELECTIONS for location and type.

1.10 INFORMATION FOR OPERATION AND MAINTENANCE

Refer to the general section 1239 OPERATION & MAINTENANCE for provision of the following general operation and maintenance information as electronic PDF format documents:
Maintenance guide for **Resene** paint finishes www.resene.co.nz/comn/services/maintenance.htm.

Provide this information prior to practical completion.

1.11 HEALTH AND SAFETY

Refer to and comply with the requirements of the Health and Safety at Work Act 2015 including the obligation to:

- Eliminate hazards and if hazards cannot be eliminated or isolated, then minimise the hazards in this work by using the proper equipment and techniques as required by the MPNZA Health and Safety Programme.
- Supply protective clothing and equipment.
- Inform the contractor as well as the employees and others on site of those hazards and put in place procedures for dealing with emergencies.

1.12 SAFETY DATA SHEETS

Obtain from **Resene** (phone 0800 RESENE, or www.resene.co.nz) the safety data sheet for each product used and comply with the required safety procedures. Keep sheets on site.

Performance

1.13 RESENE INSPECTION

Permit representatives of **Resene** to inspect the work in progress and to take samples of their products from site if requested. **Resene** will take care when inspecting the work, but does not accept any responsibility for the proper completion of the work before or after such inspection.

1.14 INSPECTION OF THE WORK

Inspection of the whole of the work at each of the stages set out in SELECTIONS may be made. Agree on a programme that will facilitate such inspection, including notification when each part and stage of the work is ready for inspection.

2 PRODUCTS

Materials

2.1 MATERIALS GENERALLY

Do not combine paints from different manufacturers in a paint system.

Use only **Resene** products (which are guaranteed for consistency and performance under AS/NZS ISO 9001 and APAS) prepared, mixed and applied as directed in the **Resene** One-Line Specifications and Product Data Manual. This specification has been written using where practical and available both low/no VOC and Environmental Choice approved products.

2.2 DARK COLOURS

Darker colours in areas of high sun exposure place significant stress on the coating and substrate. **Resene** '**CoolColour**' technology reduces heat absorption of a wide range of colours. Contact your local **Resene** Representative or visit www.resene.co.nz for more information or visit www.resene.co.nz/coolcolour. View a list of **Resene** colours that can be made using **Resene CoolColour** technology at www.resene.co.nz/colourlibrary.

2.3 THINNERS/ADDITIVES

Use only if and when expressly directed by **Resene** for their particular product in a particular application. Always wear gloves when handling any solvents including turpentine as harmful chemicals may be absorbed into the body through the skin.

Accessories

2.4 ACCESSORIES

Contact your local **Resene ColorShop** for a full range of accessories and usage advice.

3 EXECUTION

Conditions

3.1 EXECUTION

To conform to required trade practice, which shall be deemed to include those methods, practices and techniques contained in the Master Painters New Zealand Association Inc. Specification manual.

3.2 TREATED SURFACES

Where surfaces have been treated with preservatives or fire retardants, check with the treatment manufacturer that coating materials are compatible with the treatment and do not inhibit its performance. If they are not compatible, obtain instructions before proceeding.

3.3 BACK PAINTING

Co-ordinate with cladding and/or lining installer as to who will do the work and timing.

Exterior
For exterior cladding and trim that require on site finishing, paint the back and exposed bottom edges at the base of the cladding (generally, bottom plate overhang and horizontal flashings) to the manufacturer's requirements, but at least to 150mm up from base. Coating to match front finish, generally apply 2 coats or 1 coat if pre-primed.
Refer to appropriate exterior paint sections SELECTION clauses for claddings to be back painted.

Interior
For lining and trim that require on site finishing and/or back painting (usually wet areas), paint the back and exposed bottom edges at the base of the lining, to the manufacturer's requirements, but at least to 150mm up from base. Coating to match front finish, generally apply 2 coats or 1 coat if pre-primed, or if no front finish, seal to manufacturer's requirements.
Refer to appropriate interior paint sections SELECTION clauses for linings to be back painted.

3.4 ANCILLARY SURFACES

The descriptions of areas in schedules and elsewhere are of necessity simplified. Coat ancillary exposed surfaces to match similar or adjacent materials or areas, except where a fair-faced natural finish is required or items are completely prefinished. In cases of doubt obtain written instructions before proceeding.

3.5 HARDWARE

Do not paint hinges or hardware that cannot be removed. Before commencing work carefully remove hardware, fixtures and fittings, set aside where they cannot be damaged or misplaced and replace on completion. Refer to SELECTIONS for hardware, fixtures and fittings for removal.

3.6 PROTECTION

Supply, lay and fix drop sheets, coverings and masking necessary to protect adjoining, fixtures, fittings and spaces from paint drops, spots, spray and damage.

Application - preparatory work

3.7 SURFACE PREPARATION

Refer to the **Resene** Surface Information & Preparation Data Sheets (SIPDS) and product data manual for surface preparation sheets (or obtain them by phoning 0800 RESENE, or at www.resene.co.nz) listed in the materials systems schedule clauses. Carry out the preparatory work required by them for each of the substrates.

3.8 LEAD-BASED PAINT, ASBESTOS

Handle cautiously lead-based paint and asbestos, if present, as outlined in the **Resene** SIPDS Surface Information & Preparation Data Sheets 3:4B/3 "Cement and Roofing Claddings Containing Asbestos" or SIPDS Surface Information & Preparation Data Sheet 2:1/3 Note V "Lead Containing Paints", and the "Putting Your Safety First" brochure.

3.9 SHARP EDGES, CRACKS AND HOLES

Remove and/or repair sharp edges, cracks and holes if present, as outlined in the preamble of the **Resene** One-Line specifications and product data manual.

Elastomeric sealants, if used, should not be painted. The paint film will not match the flexibility of the sealant and may severely limit its effectiveness.

3.10 REMEDIAL WORK

If any substrate or surface, that even with the preparation work called for in this section, cannot be brought up to a standard that will allow painting or clear finishing of the required standard then do not proceed until remedial work is carried out.

3.11 GAP FILLING

Make good cracks, holes, indented and damaged surfaces. Use suitable gap fillers to match the surface being prepared. Any special priming requirements of the fillers must be satisfied. Allow to dry or set before sanding back level with the surface. Prime or seal timber before using putty.

Exterior and wet areas: Use only Portland cement base or water-insoluble organic base gap fillers.

3.12 OFF-SITE WORK

Carry out this work under cover in a suitable environment with suitable lighting. Store items, both before and after coating, in a clean, dry area protected from the weather and mechanical damage, properly stacked and spaced to allow air circulation and to prevent sticking. Specific instructions for transport to site to avoid damage to the factory applied paint system may be required particularly for metallic top coat paints.

3.13 PRIMING JOINERY

Pre-treat any cut surfaces of preservative treated timber before priming. Ensure L.O.S.P treated joinery has dried sufficiently to lose solvent odour. Pre-treat bare timber with **Resene TimberLock** (see Data Sheet D48) to improve the durability of subsequent coats.

Liberally coat end grain, allow to soak in and then recoat.

3.14 CONCEALED JOINERY SURFACES

Where off-site coatings are specified they must be applied to surfaces including those concealed when incorporated into the building.

3.15 CONCEALED METAL SURFACES

Apply primer to suit the coating system to surfaces which will be concealed when incorporated into the building.

3.16 EXTERNAL DOORS

Prime or seal and paint bottom edges before hanging.

3.17 BEAD GLAZING

Stained, varnished, or painted joinery to have the first two coats of a suitable primer and one undercoat, applied to rebates and beads before glazing.

3.18 PUTTY FRONTING - LINSEED GLAZING PUTTIES

According to the putty manufacturer's instructions allow putty to set, then prime with **Resene Wood Primer** (see Data Sheet D40) or **Resene Enamel Undercoat** (see Data Sheet D44). Fully protect the putty by completing the **Resene** coating system as soon as it is sufficiently firm.
Glazing putties not based on linseed oil to be over coated according to the putty manufacturer's instruction.

Application - generally

3.19 PAINTING GENERALLY

Comply with the **Resene** SIPDS Surface Information & Preparation Data Sheets or **Resene** One-Line specifications and product data manual data sheets and the additional requirements of this work section.
Ensure large wall areas that require more than one container of paint per coat, have enough paint boxed (mixed) together to complete the final coat. This will not apply if a single factory batch of paint, rather than shop tinted paint, is applied.

3.20 MIXING

Although generally supplied ready to use, all paints must be thoroughly mixed to lift any settled pigment and ensure the paint is homogeneous.

3.21 ENVIRONMENT

Defer painting of exterior surfaces until weather conditions are favourable - warm dry days without frost or heavy dews. Avoid painting in direct sunlight any surfaces that absorb heat excessively. As far as possible apply paint in the temperature range 15°C to 25°C. If temperatures fall outside the range of 10°C and 35°C do not paint unless paints with the necessary temperature tolerance have been specified. **Resene Hot Weather Additive** can be added to most **Resene** waterborne top coats to extend open time when application is undertaken at elevated temperatures or conditions that will cause rapid loss of water from the applied wet film. Do not apply solvent borne paint if moisture is present on the surface.

3.22 SEQUENCE OF OPERATIONS

Painting work to generally follow the following sequences:

- Back painting and pre-installation painting, then post-installation exposed-face painting
- Complete surface preparation before commencing painting.
- Apply primers, sealers, stains, undercoats, paints and clear coatings in the sequences laid down by **Resene**.
- Allow the full drying time between coats laid down by **Resene**.
- Do not expose primers, undercoats and intermediate coats beyond **Resene** recommendations before applying the next coat.
- Finish broad areas before painting trim.
- Ensure batch numbers of tins are matched for whole areas.
- Internally, paint ceilings before walls and walls before joinery, trim and other items.

3.23 APPLICATION

Select brush, roller, or pad and apply coatings to the requirements of **Resene** to obtain a smooth, even coating of the specified thickness, uniform gloss and colour.

3.24 LIGHTLY SAND

Lightly sand primers, sealers, undercoats and intermediate coats to remove dust pick-up, protruding fibres and coarse particles. A more thorough sanding to provide a mechanical key for the new paint system may be required depending upon the condition or age of the existing paint system..

3.25 DEFECTIVE WORK

Correct defective work immediately and recoat as required, following precisely the **Resene** system being applied. The same applies to transportation damage to site of factory painted items.

3.26 EACH COAT

Each coat of paint and the completed paint system to have the following qualities and properties:

- Uniform finish, colour, texture, sheen and hiding power and the proper number of coats applied.
- No blemishes such as runs, sags, crinkling, fat edges, entrained paint skins, hairs, dust, bare or starved patches, cracks, significant brush marks, ladder marks and blistering.
- Proper covering of corners, crannies, thin edges, cracks, end grain and other difficult places of application.

Completion

3.27 CLEAN

Clean adjoining surfaces, glass and fittings of any paint contamination. Clean off glass indicators at the completion of the building works. Clean glass inside and out to a shining finish. Use the **Resene Washwise** on site 'paint equipment clean-up water' reclamation system to minimise the environmental impact of cleaning paint application tools.

3.28 LEAVE

Leave the whole of this work uniform in gloss and colour, of correct thickness, free from painting defects, clean and unmarked and to the standard required by following procedures.

3.29 REMOVE

Remove drop sheets, coverings and masking to leave surrounding surfaces and areas clean, tidy and undamaged. Remove debris, unused materials and elements from the site.

3.30 REPLACE

Replace hardware without damage to it or the adjoining surface and leave hardware properly fitted and in working order.

3.31 DISPOSAL OF PAINTS AND THINNERS

Note: The use and disposal of paint and thinners represents a significant environmental hazard. Ensure all paint and thinners are disposed of in the following manner:

- When requested hand over part used paint containers to client for maintenance touch ups.
- Recycle leftover paint at a **Resene ColorShop** as part of the **Resene "Paintwise programme**". Contact your local **Resene ColorShop** for details or view information online at www.resene.co.nz/paintwise.htm.
- Donate left over paint to local community groups.
- Solvent based paints, paint thinners, turpentine, mineral spirits and solvents require special disposal procedures. Do not pour down sewer or stormwater drains, sinks or into the ground. If they cannot be recycled they must be disposed of in a refuse dump licensed to take toxic waste.

3.32 MAINTENANCE

Good maintenance of coating systems involves a routine of regular cleaning as well as regular inspections. Regular inspections of the coating systems are recommended to identify breakdown, accidental damage to or undesirable deterioration of the paint.
Wash down of exterior coatings should be undertaken on an annual basis using **Resene Paint Prep** and **Housewash** (see Data Sheet D812).

Refer the **Resene** Caring for your paint finish brochure and the **Resene** website, www.resene.co.nz/comn/services/maintenance.htm.

4 SELECTIONS

4.1 SELECTIONS

Refer to 6711R RESENE PAINTING EXTERIOR and 6721R RESENE PAINTING INTERIOR for selections.
Refer to 6711RE RESENE ENVIRONMENTAL PAINTING EXTERIOR and 6721RE RESENE ENVIRONMENTAL PAINTING INTERIOR for selections.

6721R RESENE PAINTING INTERIOR

1 GENERAL

This section relates to the surface preparation, painting and clear finishing of new and existing interior substrates using **Resene** architectural and decorative coating systems.

Related work

1.1 RELATED WORK

Refer to 6700R RESENE PAINTING GENERAL for general matters related to painting work.
Refer to 6711R RESENE PAINTING EXTERIOR for exterior paint systems.
Refer to 6711RE RESENE ENVIRONMENTAL PAINTING EXTERIOR for exterior paint systems.

2 PRODUCTS

Materials

2.1 PAINT TYPES GENERALLY/ THINNERS AND ADDITIVES

Refer to 6700R RESENE PAINTING GENERAL for product clauses.

3 EXECUTION

Conditions

3.1 EXECUTION

Refer to 6700R RESENE PAINTING GENERAL for execution clauses.

4 SELECTIONS

Substitutions are not permitted to the following, unless stated otherwise.

4.1 HARDWARE

Hardware for removal:	~

Resene interior paint systems

Plasterboard - new

4.2 RESENE NEW INTERIOR PLASTERBOARD, WALLS - DRY AREAS

Surface Prep:	Resene SIPDS No1 and Spec Sheet 1: 1/1
Fire rating:	Group 1-S. Test Report FH4967
1st coat	Resene Broadwall D403, Waterborne Wallboard Sealer
2nd coat:	Resene Zylone Sheen D302, Waterborne Low Sheen
3rd coat:	Resene Zylone Sheen D302, Waterborne Low Sheen

4.3 RESENE NEW INTERIOR PLASTERBOARD, WALLS - WET AREAS

Surface Prep:	Resene SIPDS No1 and Spec Sheet 1A: 1/1
Fire rating:	Group 1-S. Test Report 7-593235-CO
1st coat:	Resene Sureseal D42, solvent-borne Pigmented Sealer (NEC)
2nd coat:	Resene SpaceCote Low Sheen Kitchen & Bathroom D311K Waterborne Enamel
3rd coat:	Resene SpaceCote Low Sheen Kitchen & Bathroom D311K Waterborne Enamel

Plasterboard - existing

4.4 RESENE EXISTING INTERIOR PLASTERBOARD, WALLS - DRY AREAS

Surface Prep:	Resene SIPDS No1 and Spec Sheet 1: 1/3
Spot Prime:	Resene Broadwall D403, Waterborne Wallboard Sealer

1st coat:	Resene Zylone Sheen D302, Waterborne Low Sheen
2nd coat:	Resene Zylone Sheen D302, Waterborne Low Sheen

4.5 RESENE EXISTING INTERIOR PLASTERBOARD, WALLS - WET AREAS

Surface Prep:	Resene SIPDS No1 and Spec Sheet 1A: 1/3
Spot Prime:	Resene Sureseal D42, solvent-borne Pigmented Sealer (NEC)
1st coat:	Resene SpaceCote Low Sheen Kitchen & Bathroom D311K, Waterborne Enamel
2nd coat:	Resene SpaceCote Low Sheen Kitchen & Bathroom D311K, Waterborne Enamel

Interior timber - new

4.6 RESENE NEW INTERIOR TIMBER DOORS, JOINERY, SKIRTING

Surface Prep:	Resene SIPDS No2 and Spec Sheet 2: 9/1
1st coat:	Resene Quick Dry D45, Waterborne Acrylic Primer Undercoat
2nd coat:	Resene Lustacryl D310, Waterborne Enamel
3rd coat:	Resene Lustacryl D310, Waterborne Enamel

4.7 RESENE NEW INTERIOR TIMBER DOORS, JOINERY, SKIRTING - CLEAR COAT

Surface Prep:	Resene SIPDS No2 and Spec Sheet 2: 10/1
1st coat:	Resene Aquaclear Satin D59, Waterborne Urethane Varnish
2nd coat:	Resene Aquaclear Satin D59, Waterborne Urethane Varnish
3rd coat:	Resene Aquaclear Satin D59, Waterborne Urethane Varnish

Interior timber - existing

4.8 RESENE EXISTING INTERIOR TIMBER DOORS, JOINERY, SKIRTING

Surface Prep:	Resene SIPDS No2 and Spec Sheet 2: 9/3
Spot Prime:	Resene Quick Dry D45, Waterborne Acrylic Primer Undercoat
1st coat:	Resene Lustacryl D310, Waterborne Enamel
2nd coat:	Resene Lustacryl D310, Waterborne Enamel

Note: This section assumes the existing coating is enamel (which must be thoroughly abraded)

6746D DULUX POWDER & INDUSTRIAL COATINGS

1 GENERAL

This section relates to the preparation of surfaces, and the application of **Dulux** decorative powder coatings.

1.1 RELATED WORK

Refer to ~ for ~.

1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

AAMA	American Architectural Manufacturers Association
DFT	Dry Film Thickness
WGANZ	Window & Glass Association NZ

Documents

1.3 DOCUMENTS REFERRED TO

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

AS/NZS 1580.108.1	Methods of test for paints and related materials - Determination of dry film thickness on metallic substrates - Non destructive methods
AS 1627.1	Metal finishing - Preparation and pretreatment of surfaces - Removal of oil, grease and related contamination
AS 1627.2	Metal finishing - Preparation and pretreatment of surfaces - Power tool cleaning
AS 1627.4	Metal finishing - Preparation and pretreatment of surfaces - Abrasive blast cleaning
AS 1627.5	Metal finishing - Preparation and pretreatment of surfaces - Pickling
AS 3715	Metal finishing - Thermoset powder coatings for architectural applications of aluminium and aluminium alloys.
AS 4506	Metal finishing - Thermoset powder coatings
AS/NZS ISO 9001	Quality management systems - Requirements
WorkSafe NZ	Working Safely with Hazardous Substances (hazardous substances toolbox) www.hazardoussubstances.govt.nz/

Window & Glass Association NZ (WGANZ) documents:

PQAS	Powder Coating Quality Assurance System

1.4 RELATED DOCUMENTS

Related documents not referred to in this section are:

AAMA 2603	Voluntary specification, performance requirements, and test procedures for pigmented organic coatings on aluminium extrusions and panels (with coil coating appendix)
AAMA 2604	Voluntary specification, performance requirements and test procedures for high performance organic coatings on aluminium extrusions and panels
AAMA 2605	Voluntary specification, performance requirements and test procedures for superior performing organic coatings on aluminium extrusions and panels

1.5 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and supplier's documents related to this section are:
Dulux specification sheets and product data sheets

Copies of relevant literature are available from **Dulux**

Web: www.duluxpowdercoatings.co.nz
Telephone: 0800 800 975

Warranties

1.6 WARRANTY

Warrant this work under normal environmental and use conditions against failure:

Warranty period - materials:	Applied in accordance with application and preparation procedures according to AS 3715 as specified in the Dulux specification sheets.
Warranty period - execution:	Powder coating range specified will reflect warranty period.

Refer to the general section 1237 WARRANTIES for additional requirements.

Requirements

1.7 NO SUBSTITUTIONS

Substitutions are not permitted to any specified Dulux powder coating product or associated accessories.

1.8 QUALIFICATIONS

Current certification as an Dulux Powder coatings Registered Applicator.

To obtain warranties, applicators must be Dulux Registered Applicators.

1.9 INFORMATION FOR OPERATION AND MAINTENANCE

Provide Dulux powder coating manufacturer's maintenance instructions for the owner including frequency of cleaning.

Refer to Dulux DuSpec specification sheets and product data sheets for details or go to: www.duluxpowdercoatings.co.nz/information/care-maintenance/

Performance

1.10 QUALITY ASSURANCE

Maintain quality assurance programmes to AS/NZS ISO 9001 or other industry recognised quality procedures for powder coating and other specialist coatings as necessary to ensure that work is performed in accordance with this specification and the qualifying requirements of the contract documents.

1.11 HEALTH AND SAFETY

To accord with WorkSafe NZ, particularly the Hazardous Substances Toolbox www.hazardoussubstances.govt.nz/

1.12 MATERIAL SAFETY DATA SHEETS

Visit www.duluxpowdercoatings.co.nz or telephone **Dulux Powder & Industrial Coatings** (0800 800 975) for the material safety data sheets for every applicable product and comply with the safety procedures listed. Keep sheets on the site.

1.13 SAMPLES

Refer to the general section 1270 CONSTRUCTION for details of how samples will be reviewed and how instructions to proceed will be given. Provide the following samples for review:

	Sample A	Sample B	Sample C
Sample description:	~	~	~
Sample type:	~	~	~
Number:	~	~	~
Location:	~	~	~
Supporting documentation:	~	~	~
Reviewer:	Contract administrator ~	Contract administrator ~	Contract administrator ~

Time for review:	10 working days ~	10 working days ~	10 working days ~
Review criteria:	~	~	~

1.14 CERTIFY COATINGS

Certify on request, compliance with this specification and support with control and sampling records. Test for film thickness to AS/NZS 1580.108.1

1.15 DULUX INSPECTION

Permit representatives of Dulux to inspect the work in progress and take samples of their products from site if requested.

2 PRODUCTS

Materials

2.1 POWDER COATING

Single coat polyester based powder coating for use on interior or exterior architectural aluminium products. Refer to SELECTIONS for system and colour.

3 EXECUTION

Conditions

3.1 GENERALLY

Powder coat articles to AS 3715, AS 4506 and WGANZ PQAS for powder coatings on architectural aluminium products, and as specified.

3.2 SURFACE PREPARATION

Remove all foreign matter from metal surface to be powder coated. Remove scale, grease, cutting oil, welding splatter, grind off burrs, welding slag and sharp arrises and all other defects that could affect appearance.

3.3 SURFACE PRE-TREATMENT

Condition the surface to render it suitable for the selected coating to be applied. This pre-treatment should impart uniformity throughout all treated workpiece surfaces, irrespective of the source of the metal or the contaminants that might adhere.

3.4 CONDITIONS FOR PREPARING STEELWORK

Prepare steelwork in conditions suitable for the application of coatings. Carry out preparation and coating applications under cover, in a controlled environment and with adequate lighting.

Preparation - generally

3.5 ACID CLEANING

Remove rust, scale and zinc oxides using acid or alkali solution.

3.6 WIRE BRUSHING AND POWER TOOL CLEANING

Remove oil and grease by the use of solvents, detergent, emulsion cleaners and alkali cleaners. Scrape and power wire brush to minimum class St 2 finish to AS 1627.2. Clean to bright metal, avoid producing a polished surface. Check that no burrs or sharp arrises remain which may prevent the full coating thickness being attained. Alternative method includes abrasive blasting AS 1627.4, Class 1.

3.7 ABRASIVE BLASTING

Remove oil and grease by the use of solvents. Abrasive blast clean to a class 2.5 finish to AS 1627.4. Clean to bright metal, but avoid producing a polished surface. Select grit type and equipment such that the cleaned surface profile between peaks and valleys does not exceed one third of the dry film thickness. Check that no burrs or sharp arrises remain which may prevent the full coating thickness being attained.

Preparation - aluminium

3.8 CHEMICAL SURFACE PRE-TREATMENT

Ensure substrate is clean and pre-treated as required. Components must receive a full multi stage chromate or chrome phosphate conversion coating to clean and condition the substrate.

Preparation - iron/steel

3.9 CHEMICAL SURFACE PRE-TREATMENT

Either iron phosphate or zinc phosphate conversion coatings to provide corrosion resistance.

3.10 DEGASSING POROUS ZINC LAYERS

Fully de-gas the substrate by heating the object to a temperature 15°C above the peak metal temperature.

3.11 PREPARATION FOR CORROSION PROTECTION

Remove all slag. For welds exposed to view, remove splatter and grind to a neat, clean finish.

Sand blast or wire brush after completion of the fabrication. Preclean steelwork to AS 1627.1 followed by acid pickling to AS 1627.5. Apply the required coating to the coating manufacturers' requirements. Apply coating within 4 hours of preparation. Work off site wherever possible. Surfaces that are in contact or near contact to receive specified coating before assembly.

3.12 PREPARATION FOR GALVANIZED SURFACES

Remove grease, oil and other solvent-soluble contaminants by wiping with mineral turpentine or white spirit. Finally wipe with a clean solvent. Allow to dry and proceed with the next operation immediately. Abrade surfaces to a medium coarse type finish to provide an adhesion key.

Priming

3.13 PRIMING GENERALLY

Ensure substrate is clean and pre-treated to manufacturer's recommendations prior to priming commencing. Apply the relevant primer as a system with **Dulux** polyester topcoat. Carefully prepare the steel surface and apply **Dulux** primer to manufacturer's instructions:

- degrease and abrasive blast clean to class 2.5 or other selected pre-treatment process and apply **Dulux** primer as per manufacturer's recommendations.
- apply **Dulux** polyester topcoat 60 to 80 microns

Application - coating metals

3.14 APPLY DULUX POWDERCOATING

Apply **Dulux** powder coatings to the recommended average thickness specified for the selected powder coating on architectural aluminium products.

Completion

3.15 REPAIR WORK

In situ repair work of warranty polyester or fluoropolymer coated aluminium is only permitted after receiving written authority. All repair work to **Dulux** manufacturer's recommendations. Replace all damaged material.

3.16 PROTECTIVE COVERINGS DURING TRANSPORTATION AND INSTALLATION

Provide protective coverings and coatings where required to prevent marking of surfaces visible in the completed work and to protect aluminium joinery from following trades. Remove protection on completion.

3.17 ENSURE

Ensure all elements are free of marks or blemishes.

3.18 REPLACE

Replace damaged, cracked or marked elements.

3.19 LEAVE

Leave work to the standard required by following procedures.

4 SELECTIONS

Substitutions are not permitted to the following, unless stated otherwise.

Exterior and Interior Powdercoating - Metal

4.1 DULUX POWDERCOATING - DURALLOY

Coating type:	Low VOC Powdercoating
Preparation:	PMP055
System:	DULUX Duralloy (NZDP0967) DuSpec NZSP1308
Finish:	Mannex Appliance White Matt

6758AA AUTEX ACOUSTIC WALL COVERINGS, PANELS & TILES

1 GENERAL

This section relates to the supply and installation of Autex interior carbon neutral acoustic and decorative wall coverings and panels.
It includes:

- Acoustic fabric wall coverings either adhered, fixed or hung on interior walls
- Acoustic panels either adhered, fixed or hung on interior walls
- Acoustic wall tiles with mounting clip fixing to walls
- Acoustic baffles fixed to walls

1.1 RELATED WORK

Refer to ~ for ~.

1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.
The following abbreviations apply specifically to this section:

NRC	Noise reduction coefficient
PET	Polyethylene terephthalate ('polyester')
EPD	Environmental Product Declaration

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC C/AS2	Protection from fire
NZBC C/VM2	Protection from fire
NZBC G6/AS1	Airborne and impact sound
NZBC H1/AS1	Energy efficiency
ISO 105-B02	Textiles - Tests for colour fastness - Part B02: Colourfastness to artificial light: Xenon arc fading lamp test
ISO 354	Acoustics - Measurement of sound absorption in a reverberation room
AS/NZS 2107	Acoustics - Recommended design sound levels and reverberation times for building interiors
NZS 4218	Thermal insulation - Housing and small buildings
NZS 4220	Code of practice for energy conservation in non-residential buildings
NZS 4243.1	Energy efficiency - Large buildings - Building thermal envelope
NZS 4246	Energy efficiency - Installing bulk thermal insulation in residential buildings
AS/NZS ISO 9001	Quality management systems - requirements
ISO 9705	Fire tests - full scale room test for surface products
AS/NZS ISO 14001	Environmental management systems - requirements with guidance for use

1.4 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer and supplier documents relating to this part of the work:

Autex Vertiface® Data Sheet
Autex Vertiface® Install Instructions

Autex Etch™ Info Sheet
Autex Etch™ Install Instructions

Autex Composition® Data Sheet
Autex Composition® Install Instructions

Autex Symphony® Data Sheet

Autex Symphony® Install Instructions

Autex Visage® Data Sheet
Autex Visage® Install Instructions

Autex Wall Coverings Cleaning and Maintenance Guide
Autex Wall Coverings Material Safety Data Sheets

Autex Cube™ Data Sheet
Autex Cube™ Install Instructions

Autex Quietspace® Panel Data Sheet
Autex Quietspace® Panel Install Instructions

Autex 3D Tiles Data Sheet
Autex 3D Tiles Install Instructions

Autex Frontier™ Acoustic Fins Data Sheet
Autex Frontier™ Install Instructions

Autex Frontier™ Acoustic Raft Data Sheet
Autex Frontier™ Install Instructions

EPD Licence No.:ATX-AP01-2022EP with third party verified CERs to be carbon neutral. Global GreenTag™ EPD EN 15804 Autex Acoustics® Panels and Tiles: Cube™, Cascade™ Frontier™, Horizon™, Lattice™, Quietspace® Panel, Accent Ceiling Tiles™, 3D Ceiling Tiles, Tiles

EPD Licence No.:ATX-AF01-2022EP with third party verified CERs to be carbon neutral. Global GreenTag™ EPD EN 15804 Autex Acoustics® Wallcoverings: Symphony®,Composition®, Vertiface® Visage®, Etch™, Felt, Acoustic Timber™

Buy NZ Made Campaign Ltd - Certificate of Licence No. 705337

Declare ATX-0002 (LBC Red List Free) - Cube™, Quietspace®, Accent, APA
Declare ATX-0005 (LBC Red List Free) - Composition®, Symphony®, Visage™
Declare ATX-0006 (LBC Red List Free) - Workstation, 3D Tiles and 3D Ceiling Tiles
Declare ATX-0007 (LBC Red List Free) - Vertiface®, Felt
Declare ATX-0009 (LBC Red List Free) - Print

Manufacturer/supplier contact details

Company:	**Autex Industries Ltd**
Web:	www.autex.co.nz
Email:	enquiries@autex.co.nz
Telephone:	0800 428 839

Warranties

1.5 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:
10 years For materials

- Provide this warranty on the Autex Industries Ltd standard form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

1.6 WARRANTY - INSTALLER/APPLICATOR

Provide an installer warranty:
2 years For installation

- Provide this warranty on the installer standard form.
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

Requirements

1.7 QUALIFICATIONS OF WORKERS – MANUFACTURER / SUPPLIER REQUIREMENTS

Workers to be Autex Industries Ltd. preferred installers. Refer to 1270 CONSTRUCTION for additional requirements relating to qualifications.

1.8 NO SUBSTITUTIONS

Substitutions are not permitted to any of the specified systems, components and associated products listed in this section.

1.9 INFORMATION FOR OPERATION AND MAINTENANCE

Refer to the general section 1239 OPERATION & MAINTENANCE for provision of the following general operation and maintenance information: Clean excess adhesive and adjoining surfaces in accordance with Autex Cleaning and Maintenance Guide instructions.

Performance - Acoustics

1.10 ACOUSTIC PERFORMANCE

Acoustic performance to comply with AS/NZS 2107 and NZBC G6/AS1 and owner requirements. Autex wall coverings and panel products have been tested to ISO/CD 354 and achieve an NRC rating of 0.4 to 1.0. Submit results if requested.
Refer to SELECTIONS.

1.11 REVERBERATION REPORT (RT)

Provide Autex Reverberation Time Report and report number as required to comply with AS/NZS 2107.

Performance - Fire

1.12 FIRE GROUP NUMBERS

Autex wall covering, panels, fins and tile products achieve a Group Number Classification of Group 1-S to NZBC C/AS2, 4.17.1 table 4.3, as determined in accordance with NZBC C/VM2 Appendix A, following testing and data reduction to ISO 9705.

2 PRODUCTS

Acoustic wall fabric

2.1 AUTEX COMPOSITION® - ACOUSTIC WALLCOVERING -LOOP PILE

Autex Composition® is a 100% polyester, thermally bonded wallcovering in a non-woven matrix, made from polyethylene terephthalate (PET), and laminated to a high density non-woven polyester acoustic backing. 1220mm wide x 25m rolls, 10-12mm thickness.
Fire tested to ISO 9705, achieving Group Number 1-S and ISO 105-B02 6 rating for colourfastness.
Unit weight is 1680gsm.
Manufactured under AS/NZS ISO 9001, AS/NZS ISO 14001 and ISO 45001, without chemical binders and using minimum 60% recycled polyester fibre (from PET plastic).
Refer to SELECTIONS for NRC and design options.

2.2 AUTEX FRONTIER™ ACOUSTIC FINS

Autex Frontier™ Acoustic Fins made from 12mm and 24mm Autex Cube™, constructed from 100% polyester fibre (PET) mounted into Frontier™ aluminium channels, and secured by connector clips.
Fire tested to ISO 9705, achieving Group Number 1-S and ISO 105-B02 6 rating for colourfastness.
Unit weight is 2300gsm
Manufactured under AS/NZS ISO 9001, AS/NZS ISO 14001 and ISO 45001, without chemical binders and using minimum 60% recycled polyester fibre (from PET plastic).
Refer to SELECTIONS for NRC and design options.

Acoustic baffles

Components

2.3 SEALER

Alkaline resistant pigmented sealer.

2.4 ADHESIVE - GENERAL PURPOSE

Contact adhesive, suitable for substrates such as new and existing plasterboard, concrete masonry, MDF and particleboard, to be applied to both surfaces.

Accessories

2.5 EDGE PROFILES - ALUMINIUM

Aluminium edge profiles available from Ullrich Aluminium Ltd.
Refer to SELECTIONS for options.

3 EXECUTION

Conditions

3.1 DELIVERY, STORAGE & HANDLING OF PRODUCTS

Refer to 1270 CONSTRUCTION for requirements relating to delivery, storage and handling of products.

3.2 ROUTINE MATTERS

Refer to 1250 TEMPORARY WORKS & SERVICES for protection requirements.
Refer to 1270 CONSTRUCTION for requirements relating to defective or damaged work, removal of protection and cleaning

3.3 INSPECTION

Before starting installation of Autex acoustic wall coverings, panels, fins and tiles. Check that materials have been supplied as ordered and free from damage or faults. Check again that fabric colour and product label to ensure product has been supplied correctly. Any variations must be reported to Autex prior to commencing the installation.

3.4 COMMENCEMENT

Do not start this work until the building is enclosed, doors are hung and lockable, wet work is complete and a well lit, dust free environment is available.

3.5 FIXTURES

Remove cover plates, light fittings and other fixtures as the work proceeds. Replace plumb, square and true to line and face as the work is completed.

Installation - Substrate preparation, general

3.6 SUBSTRATE PREPARATION FOR ADHESION AND SCREW-FIX INSTALLATION

Before commencing installation carry out the following:

- check that substrate, background and adjoining surfaces will allow work to the required standard
- clean all walls and surfaces of dust and check surface is void of any defects or imperfections
- fill and seal any dents and cracks with suitable interior grade materials
- tape all joins in the substrate with proprietary sealing tape to stop ingress of dust and foreign particles travelling from the wall cavity to the wallcovering / panel over time
- to achieve smooth surface and good adhesive bond, stop all wall linings to a minimum Level 3 finish and apply a coat of wall board sealer
- seal surfaces prior to applying the adhesive
- lightly sand gloss and semi-gloss finishes and remove dust from substrate prior to applying adhesive.

Installation - General

3.7 APPLY ADHESIVE

Lay a drop cloth onto the floor before applying adhesive.
Apply adhesive to Autex Industries Ltd requirements for location, method and timing before commencing installation. Keep surfaces free of adhesive and remove any surplus immediately as the work proceeds, to avoid surface damage.
Apply adhesive in accordance with adhesive manufacturer's instructions.

3.8 JOINTS

Butt join wallcoverings and Autex Cube™ panels to Autex Industries Ltd requirements and in accordance with the details shown on the drawings. Use a negative detail when installing Quietspace® Panel - the same thickness as the panel e.g. 25mm Quietspace® Panels to have a 25mm gap between.

3.9 TRIM EDGES

Trim neatly to a true line and edge where edges meet other material or surfaces.

Inspection and Installation - Wall fabric to acoustic backing

3.10 INSPECTION - WALL FABRIC

Carry out a thorough inspection of Autex Vertiface® and Etch™ wall fabric prior to cutting the material and installation. Check product for:

- Identification, by way of colour, product label and cross reference with the specified item on the finishes schedule
- Damage or faults - do not proceed if damage or faults are present - contact an Autex Industries Ltd representative for advice.

3.11 PILE DIRECTION - WALL FABRIC

Check pile direction prior to installing Autex Vertiface® and Etch™ wall fabric.

- Install drop or panel with the fabric pile running in the same direction. Failure to do this will result in the appearance of colour variation from one panel or drop to another.
- Autex Industries Ltd recommend completing the entire installation using fabric from the same production batch to avoid colour variations.

3.12 INSPECTION - ACOUSTIC WALLCOVERINGS

Carry out a thorough inspection of Autex Composition®, Symphony® or Visage™ acoustic wallcoverings prior to cutting the material and installation. Check product for:

- Identification, by way of colour, product label and cross reference with the specified item on the finishes schedule
- Damage or faults - do not proceed if damage or faults are present - contact an Autex Industries Ltd representative for advice.

Inspection and Installation - Acoustic wall baffles

3.13 INSPECTION - ACOUSTIC WALL FINS AND RAFTS

Autex Industries Ltd recommends completing the entire installation using product from the same production batch to avoid colour variations.
Carry out a thorough inspection of Autex® Frontier™ acoustic wall fins and raft prior to cutting the material and installation. Check product for:

- Product identification, by way of colour, product label and cross reference with the specified item on the finishes schedule
- Damage or faults - do not proceed if damage or faults are present - contact an Autex Industries Ltd representative for advice.

3.14 INSTALL ACOUSTIC FINS

Install acoustic wall fins in accordance with Autex Frontier™ Fins wall install instructions.

Completion

3.15 COMPLETION MATTERS

Refer to 1270 CONSTRUCTION for completion requirements and if required commissioning requirements.

4 SELECTIONS

For further details on selections go to www.autex.co.nz.
Substitutions are not permitted to the following, unless stated otherwise.

4.1 AUTEX CARBON NEUTRAL CERTIFICATE

Subcontractor to obtain Autex Carbon Neutral Certificate at Practical Completion and submit to the Contract Administrator and Contractor.

Acoustic wallcovering - roll form

4.2 AUTEX COMPOSITION® INTERIOR ACOUSTIC WALL FABRIC - TEXTURED PILE

Location:	iSITE/RWB1 Customer Service
Manufacturer:	Autex Industries Ltd
Type/brand:	Autex Composition® Peel 'n Stick
Thickness:	10-12mm
Roll size:	Standard 1220mm wide x 25m long
Group number:	1-S
NRC:	0.40
Thermal performance:	R0.22
Fabric texture:	Fine velour Vertiface®
Colour:	Civic
NZ Made™:	Autex Licence no. 705337

Acoustic baffles

4.3 AUTEX FRONTIER™ ACOUSTIC FINS

Location:	~
Manufacturer:	Autex Industries Ltd
Type:	Autex Frontier™ Acoustic Fins
Design option:	Talus
Thickness:	24mm
Fin length:	2400mm wide
Fin depth	300mm
Centres	100mm
Group number:	1-S
NRC:	1.05
Fabric texture:	Solid blended colour panel
Colour:	Pavillion

Accessories

4.4 EDGE PROFILES - ALUMINIUM

Location:	Refer to Drawings
Manufacturer:	Ullrich Aluminium Ltd
Die No Extrusion:	UA1090 Equal angle

GHD Limited

SUPPORTING MANUFACTURER DOCUMENTATION
For information only. Specification and contract documentation takes precedence.
This version includes documents related to:
Performance | Installation | Maintenance | Warranty | Environmental

WDC & I-Site/RWB1 Works

Project Specification

15 Queen Street, Te Kuiti, New Zealand
Project Ref: 12545999

Printed: 09 November 2022

masterspec

Specification built using Masterspec software
Project ID: 232682 - 281686

Manufacturer Documents Index

5133BL Bestwood Wall Linings

NZ Panels Group Ltd
+64 9 2713526
marketing@nzpanels.co.nz
www/.nzpanels.co.nz

SUPPORTING DOCUMENTS

Bestwood Veneer Specification Guide

Ref 47934. Uploaded 27 Oct 2022

Purpose: Installation

Bestwood Veneer Technical Data Sheet June 2022

Ref 47741. Uploaded 27 Oct 2022

Purpose: Performance

Bestwood Veneer Warranty

Ref 47932. Uploaded 27 Oct 2022

Purpose: Warranty

Specification Guide
Bestwood Veneer

OCTOBER 2019

Sustainably Sourced

BESTWOOD®

Strong, striking and totally unique. When Mother Nature gave us trees, she certainly knew what she was doing.

Bring the natural richness of real wood to your interior project by combining the warmth and beauty of real timber with the flexibility and practicality of a Bestwood Veneer. It's a naturally better choice for residential, or commercial interiors, retail and hospitality furniture.

With the natural variations in colour, grain and markings, each sheet of Bestwood Natural Veneer is different with its own unique characteristics – just like a human fingerprint. Our Recon Veneer range is a reconstituted wood veneer with a more consistent colour and grain that makes matching panels easier.

Bestwood Veneer sheets are hand-selected with great care and pressed onto panels here in New Zealand from sustainably sourced timber. Bestwood Veneers carry Environmental Choice NZ accreditation when used on MDF substrates of 9mm or above, giving you assurance that this New Zealand-made product leaves a minimal environmental footprint.

Better still we offer a wide range of stocked species, an international indent service and choice of cuts, joins and lay up options.

SELECTION GUIDE

There are so many factors to consider when you are choosing Bestwood Veneer. Our 7-step process guides you through the decisions you'll need to make to ensure you create the right effect with the right panel construction that is appropriate to the end use. If you're choosing reconstituted veneer, you can skip steps 2 and 3!

1. **Type and Species:** Select the type of veneer you want – natural wood or reconstituted, and which species.
2. **The Cut:** If you are choosing natural wood, you'll also need to choose which type of cut.
3. **Lay-up:** How the sheets are laid up – that dramatically affects the look!
4. **Grade:** What grade of veneer you need – it will vary depending on use and how it is viewed
5. **Grain:** The grain direction of the veneer is a key decision in the final look
6. **Substrate Type:** What type and thickness of panel do you want the veneer pressed onto?
7. **Finishing & Edging:** What coating needs to be applied? What about edging?

New Zealand Panels GROUP

1. TYPE & SPECIES

If you've opted for Bestwood Veneer, it's likely you'll have a pretty good idea of the design effect you want to create. Choose Bestwood Natural Veneer for an authentic timber effect with all the variations and inconsistencies you'd expect from a natural product. For a more even colour, grain and consistent finish, Bestwood Recon Veneer may be a better choice and makes a striking visual impact.

The species selection ranges from light to dark but your choice will depend on the type of grain you prefer and what type of finish you are likely to apply. If you are planning on using a stain rather than a clear coat, then a lighter colour may be a better option to use as a base.

Bestwood Recon Veneer

Bestwood Natural Veneer

NATURAL VENEER

The intricate grain, rich colours, warmth, beauty and individuality of Bestwood Natural Veneer, is unsurpassed by any other natural material.

There are more than 35 species to choose from in our collection of Natural Veneer. With a huge range of customisable layup options available, our skilled team will assemble a series of sheets that are naturally striking and which achieve a specific visual effect or design. Make sure you refer to our 'Selection Guide' to understand the myriad of options available to you.

All the samples presented here are representative of the various species of timber we offer. As a natural product, colour and grain variation will always occur. It is recommended that you order a physical sample to make your final section. .

RECON VENEER

Bestwood reconstituted wood veneer is a fabulous option when you want a more consistent wood grain, making it easier to achieve matching panels with a unique design effect.

Made from controlled-origin Poplar or Obeche logs from sustainable sources, our reconstituted veneer is also kinder to the environment.

2. THE CUT

How the timber is sliced has a huge impact on the grain as it appears on a sheet of veneer. There are four options to choose from:

Crown Cut

Flat sliced or crown cut through the heart of the log.

Quarter Cut

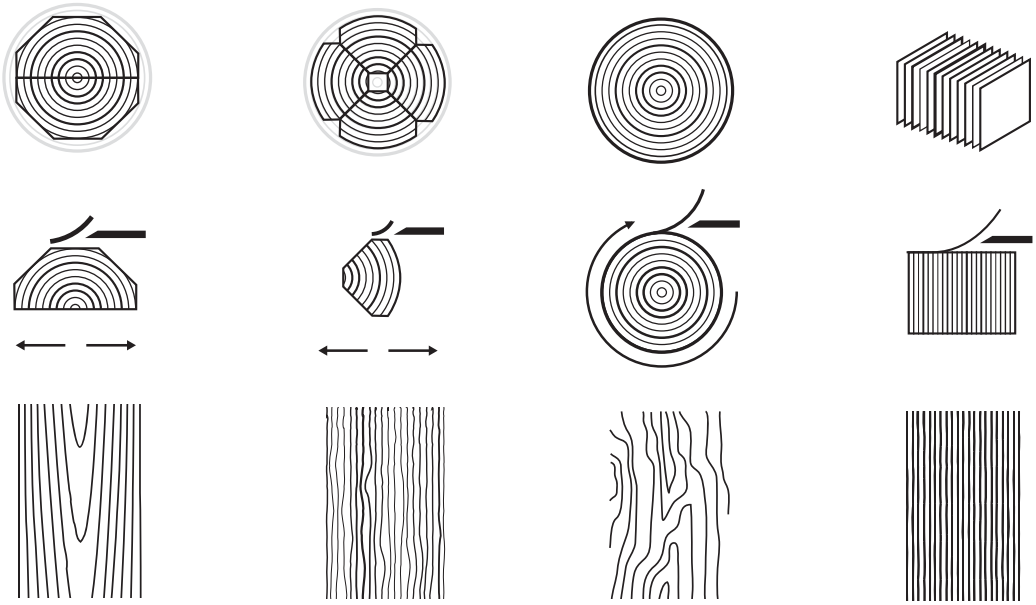
Straight-grained, cut at right angles to the growth rings.

Rotary Cut

The log is rotated around its axis and peeled off like a carpet roll.

Recut

Pre-sliced veneer leaves are laminated together into an engineered log and sliced again.



3. LAY-UP OPTIONS

Bestwood Natural Veneer leaves can be joined to create different effects.

Book Matched

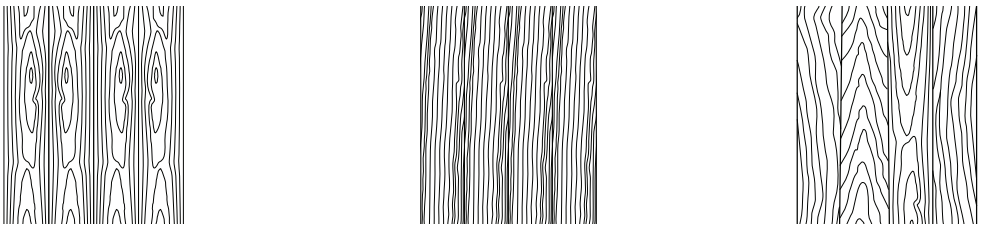
This is the standard method. The veneer leaves are joined together in mirror-image pairs. This means that each strip is the reflection of the previous one. This technique is common for both Crown and Quarter Cut veneer.

Slip Matched

This technique is often chosen if the veneer will be stained. Slip matching reduces colour variation between the adjacent veneer leaves on the panel. This method is predominately used for Quarter Cut veneer.

Planked

Also known as Random Matched or Mismatched, Planked veneer leaves are joined together randomly using unmatched veneer to give the panel an appearance which emulates the look of solid timber.



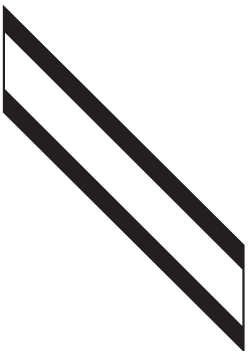
New Zealand Panels GROUP

January 2019

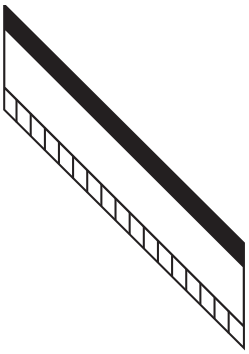
4. GRADE

Your choice of veneer grade will be determined by how much of the veneer panel will be seen. The options are Face Grade 2-sides or, Face Grade 1 side and Back Grade on the reverse. You can select Face Grade on the front and any face on the back, where the back of the panel is unlikely to be seen such as wall linings.

Panel Grade



Face 2 sides or
1 Face 1 Back

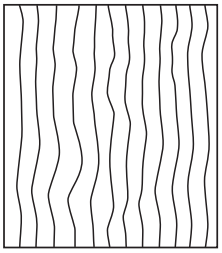


1 Face any Back

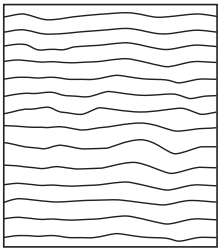
5. GRAIN

A simple choice to make here – do you want the grain to run across the panel or down the panel?

Grain direction



Long grain



Cross grain

BESTWOOD®

New Zealand Panels GROUP

6. SUBSTRATE TYPE

Bestwood Veneer leaves can be pressed onto a range of substrate options and thicknesses.

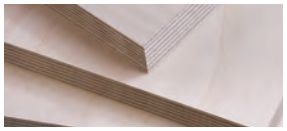
It's a decision where the function and environment very much determine the choice of substrate and its thickness. Standard substrates include:

MDF: This substrate is the most commonly used as it's suitable for most applications. Available in standard MDF and MR (moisture-resistant options. Both are low formaldehyde and rated E0).

MDF FR: This fire-resistant MDF panel has been developed specifically for commercial applications and meets NZ Building Code standards.

MDF FR Black: This black substrate looks stunning when the edge is exposed. Perforations or a pattern machined into the surface will reveal a negative detail, providing an instant shadow line.

Gaboon Plywood: This is a tough, durable and super E0 certified plywood. With marine bonding and a covered exterior grade, it is perfect for high moisture areas such as kitchens, bathrooms and laundries.



Birch Plywood: This is an attractive and strong plywood, popular for its stunning multi-ply edge, making it a great choice when an exposed edge is required.

Feather Plywood: An economical and extremely lightweight plywood that is around half the weight of MDF. Ideal where you need portability for items such as mobile units, operable walls, caravans, ceiling linings, or when cost is an issue.

7. FINISHING & EDGING

Bestwood Natural Veneer will need to be polished and coated after manufacture. Use of a non-yellowing coating system is recommended, and in high natural light situations the use of UV inhibitors within the coating system is strongly advised.

Bestwood Recon Veneer may change in tone with UV exposure. We recommend the use of a non-yellowing 2-Pac polyurethane with a suitable UV inhibitor added to every coat, including the sealer.

All Bestwood veneers should be finished and polished by an experienced tradesperson using a reputable coating system.

Bestwood Edging is available for the top selling veneer species. These are supplied either glued or unglued - in a 1.9mm thick option where a solid look and panel protection is required vs 0.6mm for aesthetics only.

Limitations

Just as any natural product can change colour due to ultra violet light, Bestwood Natural Veneer and Bestwood Recon Veneer can also be affected. A change in colour or tone is therefore considered a natural characteristic, not a defect.

January 2019

We recommend Bestwood Natural Veneer and Bestwood Recon Veneer for interior use only. In environments with exposure to direct or reflected sunlight, we strongly advise the use of sun blinds and protective UV film or glazing. Please discuss suitability of veneer in projects you're unsure about with a Bestwood representative.

With the variations in colour and grain found in timber, each sheet is different thus your sample should be treated as indicative of that species. If your veneer project requires control, the team at Bestwood will match to a control sample as close as nature will allow.

Consideration should be given to sun blinds and protective UV films or glazing in high sunlight situations.

CARE & WARRANTY

Bestwood is unable to provide care recommendations for veneer due to the product requiring additional finishing that is added after its production. Please seek the advice of your joiner or coating supplier.

Warranty

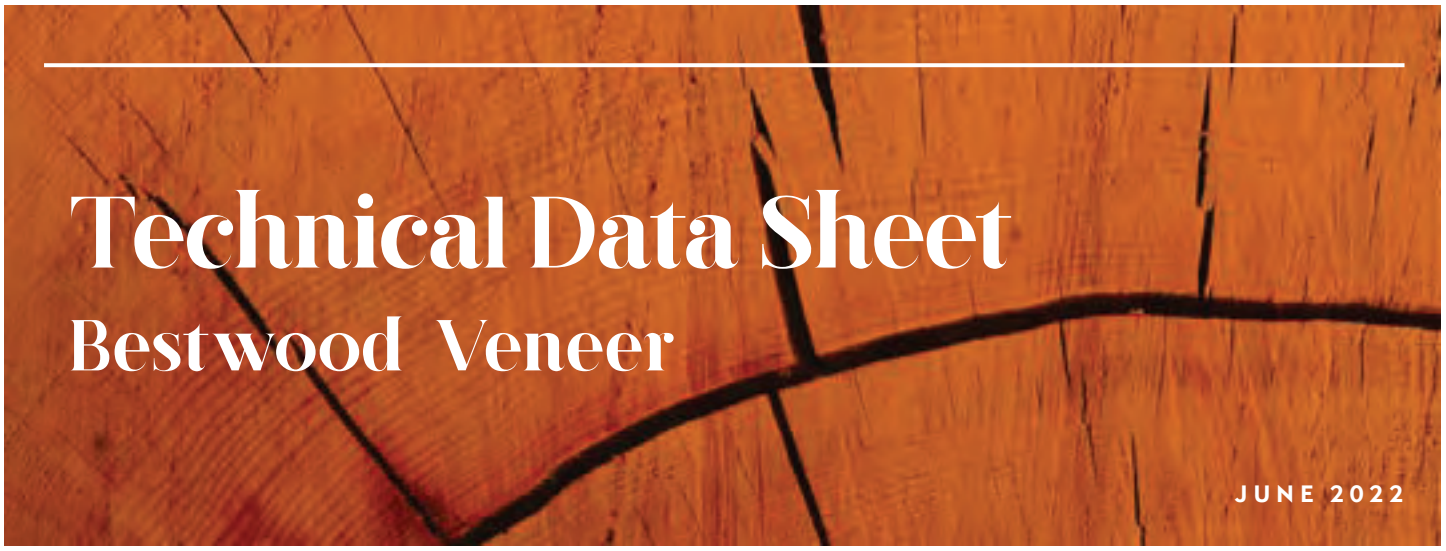
Bestwood Veneer panels are made in New Zealand with back-up for any issues close at hand. We offer a seven year warranty on our veneer – subject to normal use conditions. To view a copy of the warranty, please download from our website at www.bestwood.co.nz.

CONTACT US

Bestwood Customer Service
NZ Panels Group
P O Box 258035, Botany
Auckland 2163
Email: sales@bestwood.co.nz
Phone 0800 866 678

BESTWOOD®

New Zealand Panels GROUP



Technical Data Sheet

Bestwood Veneer

JUNE 2022

7 Year Warranty

Made with Real Wood

Sustainably Sourced

Furniture, Fittings and Flooring Licence No. 3210078

BESTWOOD®

Bring the richness and warmth of natural wood to your interior project with Bestwood Veneer's high quality range of timber veneer.

Bestwood Veneer is made by pressing a thin sheet of timber veneer to a substrate of your choice. Our experienced veneer team custom-makes every panel to be sure it meets your project specifications.

1. INTENDED USE

Bestwood Veneer is suitable for residential, commercial, office, retail and hospitality fitouts and furniture. Bestwood offers a wide range of veneer species, ideal for any project.

2. LIMITATIONS

Bestwood Veneer is not suitable for exterior or interior applications where ambient environmental moisture content is likely to be elevated for extended periods such as interior swimming pools, sauna or industrial wet areas.

Bestwood Veneer is made from real wood and just as any natural product can change colour due to ultra-violet light, Bestwood Veneer can also be affected. A change in colour or tone is therefore considered a natural characteristic, not a defect.

In environments with exposure to direct or reflected sunlight, we strongly advise the use of sun blinds and protective UV film or glazing. Please discuss suitability of veneer in projects you're unsure about with a New Zealand Panels Group representative.

Bestwood Veneer must be finished and coated by an experienced professional and using a reputable coating. Please seek advice from a coating supplier for their finishing recommendations. Additional sanding is required before coating is applied.

Bestwood Veneer is not suitable for high wear applications such as benchtops in kitchens and bathrooms, counters or table tops.

New Zealand Panels GROUP

Where Bestwood Veneer is required to meet the requirements of the New Zealand Building Code, or forms part of a building system, the application and supporting structures must be designed by suitably qualified design professionals.

This data sheet should be read in conjunction with the limitations outlined in the relevant Bestwood substrate Technical Data Sheet

3. MANUFACTURE

Bestwood Veneer is sourced from a network of international suppliers who hold FSC or PEFC accreditation. Local veneer comes from sustainable sources with forestry permits from MBIE. For NZ Native species there is full visibility from the tree to our own production plant using our Track my Tree process.

With the variations in colour and grain found in timber, each sheet is different therefore your sample should be treated as indicative of that species. If your veneer project requires control, the team at New Zealand Panels Group will match to a control sample as close as nature will allow.

4. SURFACE PREPARATION AND FINISHING

Surface preparation: Bestwood Veneer is skim-sanded with coarse abrasive as part of our production process. Further sanding is required before staining and finishing to remove imperfections, surface contaminates and raised fibres.

For consistency, all panels or components must be sanded with the same grade of abrasive.

Remove all sanding dust. Do not solvent wipe or use tack cloths.

The veneer leaves within a book-matched layon consist of an alternating tight side and a loose side. Without proper preparation, the tight side will absorb less stain than the loose side resulting in a pronounced striped effect. All book-matched veneer panels must be thoroughly sanded with coarse i.e. 120g abrasive, before sanding with finer finishing grades. This will open the pores of the tight side resulting in a more consistent stain colour across the panel.

Staining: Bestwood Natural Veneer and Evoake engineered oak veneer panels can be stained with most solvent or water-based dye and pigment stains. Always test the stain on an off-cut, which has been sanded to the same abrasive grade as used on the actual job, to ensure the colour meets expectations.

Finishing: Select a coating system that is compatible with the stain (if applied) and is suitable for the end use and situation of the finished panels. Generally a two-pack acrylic polyurethane coating will provide the best overall performance and low yellowing properties. Additional UV absorbers are recommended for clear finishing pale and unstained veneers.

Always consult your finisher or coating supplier for the most appropriate stain and coating system for your project.

5. PHYSICAL PROPERTIES

As the manufacture of Bestwood Veneer doesn't result in a finished product, physical properties are not possible. Surface properties should be sourced from the coating manufacturer. Additional sanding is required before coating is applied.

6. SUBSTRATE OPTIONS

Bestwood Veneer can be pressed onto a range of substrate options. Please refer to the substrate chart in the Bestwood Veneer section of our website. For specific tolerances and details, refer to the dedicated Technical Data Sheet for each of the substrate options also available on the Bestwood website **www.bestwood.co.nz**

7. ENVIRONMENTAL CHOICE

Bestwood Natural Veneer carries an Environmental Choice certification when pressed on 9mm MDF or thicker. The Environmental Choice certificate (licence No. 3210078) for EC-32-17 Furniture, Fittings & Floorings is available to download on the Bestwood website **www.bestwood.co.nz**

To view all of the Environmental Choice certified products from New Zealand Panels Group, view our profile on the Environmental Choice **website**.

8. COMPLIANCE

New Zealand Building Code Clause B2 Durability: Bestwood MDF meets the durability requirements for interior linings of 5 years in accordance with B2 3.1(c).

New Zealand Building Code Clause C3 Protection from Fire: Bestwood Veneer coated with 2k polyurethane and pressed on Bestwood MDF FR Black has been tested by Applus LGAI in accordance with UNE-EN 13501-1:2019 and has been classified as B-s1,d0. According to NZBC Acceptable Solutions C/AS2 Appendix C Table C1.1 European Classification B-s1,d0 is the equivalent to Group Number 1-s.

Bestwood Veneer coated with 2k polyurethane and pressed on Bestwood MDF FR MR has been tested by Applus LGAI in accordance with UNE-EN 13501-1:2019 and has been classified as B-s1,d0. According to NZBC Acceptable Solutions C/AS2 Appendix C Table C1.1 European Classification B-s1,d0 is the equivalent to Group Number 1-s.

Bestwood Veneer pressed on Bestwood MDF (std) has been tested by BRANZ to determine Group Number Classification and Average Specific Extinction Area in accordance with ISO 5660 Parts 1 and 2. According to NZBC Verification Method C/VM2 Appendix A Bestwood Veneer on Bestwood MDF has a Group Number Classification of 3.

Substrate	Decor	Coating	Group Number	Euroclass
Bestwood MDF FR Black	Bestwood Veneer	2k polyurethane	1-s	B-s1, d0
Bestwood MDF FR MR (green)	Bestwood Veneer	2k polyurethane	1-s	B-s1, d0
Bestwood MDF Standard	Bestwood Veneer		3	

Certificates and test reports available on request.

9. SUSTAINABILITY

As a leader in the panel industry, New Zealand Panels Group adopts and promotes sustainable business practices designed to minimise our environmental impact.

The company continues to search out alternative products to meet the growing needs of our environmentally conscious customers, while creating processes in our manufacturing plant that are mindful of the environment for future generations.

Some of the sustainable principles include:

- The use of sustainably sourced veneers, melamine and boards.
- Supplying low formaldehyde board. Both MDF Standard and MDF MR are rated E0.
- Reducing our manufacturing waste.
- Developing new processes to minimise energy consumption.
- Our purpose-built plant in East Tamaki features a number of initiatives that have significantly improved our environmental footprint, including a GreenStar 4-star rating for the building.

10. CARE AND MAINTENANCE

Bestwood is unable to provide care recommendations for veneer due to the product requiring additional finishing that is added after production. Please seek the advice of your local joiner or coating supplier.

11. HEALTH AND SAFETY

Bestwood Veneer should be handled in accordance with the Bestwood Melamine & Veneer Materials Safety Data Sheet (MSDS) which is available online at **www.bestwood.co.nz**

Dust from wood and resins used in the manufacture of Bestwood Veneer are known health hazards. When machining Bestwood Veneer sheets, including sanding, drilling, planing, routing and sawing, a suitable class P1 or P2 respirator should be worn along with non-fogging safety glasses.

To avoid cuts from sharp edges suitable protective gloves should be worn.

Where Bestwood MDF Standard or MDF MR substrate is selected for Bestwood Veneer, formaldehyde emission class E0 = less than 0.5mg/litre.

12. HANDLING AND STORAGE

Store only in dry interior conditions on a minimum of three bearers across the full width of the panels keeping the panels flat at all times.

- Avoid leaning panels against walls.
- Do not store or transport panels in direct sunlight.
- Store panels where construction traffic and construction activity will not damage panels.
- Treat panels as a finished product and avoid dragging panels on the outer surface or across other surfaces.

13. WARRANTY

New Zealand Panels Group offers a seven year warranty for Bestwood Veneer provided it is used for its intended purpose and stored and installed in accordance with best industry practice, in a tradesman like manner and in accordance with relevant Standards and New Zealand Building Code requirements. To view a copy of the full warranty, please download from our website at **www.bestwood.co.nz**

14. TECHNICAL SUPPORT

Further information and technical support is available by contacting Bestwood on 0800 866 678. This publication was updated in June 2022. Please ensure that you are using the latest publication by contacting Bestwood or downloading the latest Technical Data Sheet from **www.bestwood.co.nz**. Bestwood, a business unit of New Zealand Panels Group, reserves the right to make changes to information in this publication without notice.

15. HANDY LINKS AND REFERENCES

Bestwood Veneer Warranty Document
www.bestwood.co.nz

Bestwood Melamine and Veneer MSDS
www.bestwood.co.nz

16. CONTACT US

Bestwood Customer Service
NZ Panels Group
P O Box 258035, Botany
Auckland 2163
Email: technical@nzpanels.co.nz
Phone 0800 866 678

Product Warranty

Bestwood Veneer

OCTOBER 2018

Subject to the conditions of this warranty set out below, Bestwood, a business unit of New Zealand Panels Group Limited, (the "Company") warrants to the initial purchaser only (the "customer") that for a period of seven years from the date of purchase that the veneer products sold by the Company (each a "Product"), will be free from defects in manufacture.

The Company further warrants that for a period of seven years from the date of purchase any accessories supplied by the Company in relation to the Product will be free from defects in manufacture. This warranty does not apply to any other product.

This warranty is provided in addition to any statutory guarantees that apply under the Consumer Guarantees Act 1993 and does not limit or exclude any rights that you have under that Act or any other applicable law that cannot be excluded.

CONDITIONS OF WARRANTY

This warranty is strictly subject to the following conditions. The customer acknowledges that failure to adhere to these conditions shall void this warranty.

(a) In order to claim under this warranty, the customer must provide proof of purchase of the Product alleged to be defective and submit a written claim to The Company within 30 days after the defect would have become apparent to a reasonably diligent person (or, if the defect was apparent, or would have been apparent to a reasonably diligent person prior to installation, the claim must be made prior to installation). The customer must allow the Company to promptly inspect the Product to verify the defect;

(b) This warranty is for the sole benefit of the customer (being the original purchaser of the product) and is not transferable;

(c) The Product must be installed and maintained strictly in accordance with the relevant Company technical literature current at the time of installation (the "Literature") and must be installed using the components or products specified in the Literature. All other products, including coating and jointing systems, applied to or used in conjunction with the Product must be applied or installed and maintained strictly in accordance with the relevant manufacturer's instructions and by qualified tradespeople using good trade practice;

(d) The project must be designed and constructed in strict compliance with the current New Zealand Building Code and all other relevant laws, regulations and standards;

(e) The customer's sole remedy for breach of this warranty shall be that the Company will either (at the Company's discretion): (i) supply a replacement for the affected Product; (ii) repair or rectify the defective Product; or (iii) pay the cost of replacing, repairing or rectifying the affected Product. For the avoidance of doubt, this warranty covers the cost of all reasonable delivery and labour charges that are necessary for the repair or replacement of the affected Product;

(f) The Company will not have any other liability for breach of this warranty (regardless of whether liability would arise in contract, tort including negligence, or otherwise).

New Zealand Panels GROUP

Without limiting the previous sentence and for the avoidance of doubt, the Company will not be liable under this warranty for any economic loss, loss of profits, income business or revenue, or any indirect or consequential loss;

(g) Without limiting paragraph (f) above, the customer agrees that the Company will not be liable for any claims, damages or defects arising from or in any way attributable to:

(i) Poor workmanship (by any person other than the Company);

(ii) Poor design or detailing;

(iii) Settlement or structural movement and/or movement of materials to which the Product is attached;

(iv) Physical abuse, misuse, accidents, exposure to excessive heat, exposure to excessive moisture, the use of solvents or inappropriate cleaning products/materials, improper maintenance, scratches, scuffs, burns, stains, wipe marks on darker colour surfaces, exposure to chemical products or normal wear and tear;

(v) General fading and discolouration or damage due to direct and indirect light (exposure to sunlight should be avoided);

(vi) Variation in colour, pattern, shade of the material against the sample material, displays and/or printed illustrations;

(vii) Efflorescence or performance of paint/coatings applied to the Product;

(viii) Growth of mould, mildew, fungi, bacteria, or any organism on any Product surface or Product (whether on the exposed or unexposed surfaces);

(ix) Any act of God, including earthquakes, cyclones, floods or inclement weather, or acts of war (whether declared or not), insurrection, civil disobedience or terrorism, or any other matter which is beyond the Company's reasonable control;

(h) This warranty also does not cover:

(i) Defects that are trivial and/or insubstantial; and do not meet the criteria for visual defects as outlined in the New Zealand Panels Group Quality Standards document;

(ii) Anything that has been disclosed as a feature or limitation of the Product in any literature published by the Company; and

(iii) Products that are sold as seconds, or end-of-line Products.

(i) This warranty only applies where the Product has remained installed at the same location at which it was first installed after its sale by the Company.

(j) All warranties, conditions, liabilities and obligations other than those specified in this warranty are excluded to the fullest extent allowed by law;

(k) In the event that the Company accepts a claim under this warranty, and that acceptance involves the re-coating of any Product(s) either by the Company or any third party, then the customer accepts that there may be slight colour differences between the original and replacement Products due to the effects of weathering and variations in materials over time.

(l) A replacement product may not reasonably be available from the Company in the same shape, type, design or colour as the original Product covered by this warranty. If a replacement Product of the same shape, type, design or colour is not reasonably available, then the Company may satisfy its obligations under this warranty by providing a replacement Product of a shape, type, design or colour as close to the original Product as is reasonably practicable, from the Company's then-current stock at the time of replacement.

All enquiries in relation to this veneer warranty, and any claims to be made hereunder, should be addressed in writing to:

Bestwood Customer Service
NZ Panels Group
P O Box 258035, Botany
Auckland 2163
Email: sales@bestwood.co.nz
Phone 0800 866 678

New Zealand Panels GROUP

5133S Seratone Panels By Laminex

Laminex New Zealand
+64 09 5714444
info@laminex.co.nz
www.laminex.co.nz

SUPPORTING DOCUMENTS

Seratone Wet Area Panels 102931

Ref 10267. Uploaded 26 Jun 2020

Purpose: Performance, Installation, Maintenance, Environmental

Seratone Wet Area Panels

Product Technical Statement: 102931

miproducts
THE NATIONAL PRODUCT DATABASE

A lightweight high density oil-tempered fibreboard panel for dry, wet and hygiene areas.
View miproducts listing

Level of assurance needed to demonstrate NZ Building Code Compliance

M
MEDIUM

Supporting documentation should include technical information by manufacturer and either an independent assessment or reference to an industry-based scheme

Seratone confirms that this minimum level of assurance has been met or exceeded by the following:
BRANZ Appraisal
790
Laminex New Zealand
Technical Information

masterspec partner

Company Contact Details

seratone

Brand:	Seratone
Company:	Laminex New Zealand
Physical Address:	1 O'Rorke Road Penrose AUCKLAND
Postal Address:	PO Box 12270 Penrose AUCKLAND
Telephone:	64 09 5714444
Email:	info@laminex.co.nz
Website:	www.laminexnewzealand.co.nz

Product Description

Seratone is ideal for areas where hygiene is of particular importance, where easy to clean or low maintenance wall and ceiling surfaces are required and for performance in wet areas. Seratone carries a BRANZ appraisal for specific use as a wet area panel. A "wet" area is any room supplied with water. Seratone Life and Seratone Escape are water resistant surfaces that are safe in all areas directly exposed to steam or moisture. Seratone Life and Seratone Escape surfaces are easy to clean, impervious to moisture and will not support mould growth.

Design Guidelines

Seratone is ideal for use in any rooms supplied with water such bathrooms, ensuites, toilets, kitchens, shower rooms, laundries, and changing rooms. Seratone's anti-microbial properties make it an ideal material for hospitals, restaurants, research facilities and all areas where hygiene is critical.

Environmental

Laminex New Zealand has established GREENfirst® to encompass numerous programmes of environmental management. This strategy reflects our belief that action must follow good intentions and ambitious goals. Through our GREENfirst® programme we employ a range of strategies to support our sustainability goals, including the use of sustainable and recycled materials as raw material or fuels, the use of renewable energy—particularly biomass—and the introduction of new technologies to improve energy efficiency.

TDS View Technical Data Sheet

MSDS View Material Safety Data Sheet

Quality Assurance

Member of New Zealand Green Building Council

Technical Statement

Scope

Seratone is a pre-finished wall and ceiling panel manufactured on a lightweight, high density fibreboard. Seratone panels have a smooth, glass-like finish, providing a tough, durable, non-porous surface that easily resists marks, stains, steam or moisture. Panels are easy to clean, impervious to moisture and will not support mould growth.
Seratone panels can be used in dry, wet or hygiene area applications such as bathrooms, laundries, shower wall and ceiling linings, retail fitouts, partitioning, service and food processing areas, kitchen splashbacks and other applications. Please consult the Seratone Technical Information Brochure for more information.

New Zealand Building Code (NZBC)

The product will, if employed in accordance with the supplier's installation and maintenance requirements, assist with meeting the following provisions of the building code:

- **Clause B1 Structure:** Performance B1.3.1, B1.3.2, B1.3.3
- **Clause B2 Durability:** Performance B2.3.1(b)
- **Clause E3 Internal moisture:** Performance E3.3.4, E3.3.5
- **Clause F2 Hazardous building materials:** Performance F2.3.1
- **Clause G3 Food preparation and prevention of contamination:** Performance G3.3.2

Seratone Wet Area Panels

Product Technical Statement: 102931

miproducts
THE NATIONAL PRODUCT DATABASE

Notes

Evidence

The product meets the requirements set out in the following documents, or relevant parts of cited standards within the documents:

Supporting Evidence

The product has and can make available the following additional evidence to support the above statements:

BRANZ Appraisal
790
Laminex New Zealand
Technical Information

Special Conditions

Installation requirements

Please consult the Seratone Technical Information Brochure for Handling, Storage and Installation instructions.

Maintenance requirements

Please consult the Seratone Technical Information Brochure for Handling, Storage, Installation and maintenance instructions. When stored, handled, installed and maintained in accordance with this document, Seratone will meet the durability requirements of the New Zealand Building Code (NZBC) B2/AS1 and has a serviceable life of at least 15 years.

Date last validated: **14 November 2014**

Date last updated: **14 November 2014**

5214R Resco Compact Laminate Toilet & Shower Partitions

Resco Ltd
+64 7 8501025
info@resco.co.nz
www.resco.co.nz

SUPPORTING DOCUMENTS

Resco Series 5000 Toilet Partitions 104817

Ref 10241. Uploaded 26 Jun 2020

Purpose: Performance, Installation, Environmental, Warranty

Resco Series 5000 Toilet Partitions

Product Technical Statement: 104817

miproducts
THE NATIONAL PRODUCT DATABASE

Series 5000 toilet partition system is a simple, clean looking design, perfect for schools & offices
View miproducts listing

Level of assurance needed to demonstrate NZ Building Code Compliance
LOW
Supporting documentation should include self-assessment and technical information by manufacturer

Resco confirms that this minimum level of assurance has been met or exceeded by the following:
Maica Laminates Sdn Bhd
Greenguard Certification - 25454-420

masterspec partner

Technical Statement

Product Description

The Series 5000 is our most popular toilet partition system. With uncluttered lines and rebated doors this is a functional, practical, economical solution that easily blends with any room or design style.

Resco's most cost effective toilet partitions, the Series 5000 is a robust solid core Compact Laminate product. The Series 5000's minimal dirt traps ensure cubicles are easily cleaned, with the option of self-opening and self-closing doors.

All Resco Compact Laminate products are extremely low maintenance, water, impact and graffiti resistant, and contain Antibac, an innovative new bacteria-repelling compound.

Our panels come in New Zealand's largest choice of colours and are backed by lengthy guarantees.

Series 5000 recommended for:

- Offices
- Public areas
- Schools
- Sport and recreational areas
- Shopping centres
- Community clubs
- Camping and caravan sites
- Campgrounds
- Hotels

Scope of use

Internal dividing walls in commercial restrooms

Applicable for toilet and shower cubicles

Suitable for:

- Offices
- Public areas
- Schools
- Sport and recreational areas
- Shopping centres
- Community clubs
- Camping and caravan sites
- Campgrounds
- Hotels

New Zealand Building Code (NZBC)

The product will, if employed in accordance with the supplier's installation and maintenance requirements, assist with meeting the following provisions of the building code:

- **Clause B2 Durability:** Performance B2.3.1(c)
- **Clause E3 Internal moisture:** Performance E3.3.4, E3.3.6
- **Clause G1 Personal hygiene:** Performance G1.3.1, G1.3.2, G1.3.2(a), G1.3.3, G1.3.4

Supporting Evidence

The product has and can make available the following additional evidence to support the above statements:

Maica Laminates Sdn Bhd
Greenguard Certification - 25454-420

Company Contact Details

Series 5000

Brand:	Resco
Company:	Resco Ltd
Physical Address:	12 Kahu Cres Te Rapa Park Hamilton
Postal Address:	12 Kahu Cres Te Rapa Park Hamilton
Telephone:	64 7 8501025
Fax:	64 7 8501026
Email:	info@resco.co.nz
Website:	http://resco.co.nz/product/series-5000/

Resco Series 5000 Toilet Partitions

Product Technical Statement: 104817

miproducts
THE NATIONAL PRODUCT DATABASE

Product Criteria

Design requirements

Standard materials and manufacture:
13mm Compact Laminate panels

- Resco Antibac Compact Laminate panels
- Laminex Compact Laminate panels

- Height adjustable pedestals.
- Optimising privacy with flush in-line doors and rebated edges.
- Standard cubicles are recommended in an open-in door option
- Aluminium standard leaf hinges
- Brushed silver satin Indicator bolt
- Chrome plated coat hook and door-stop

Installation requirements

Resco approved installers are available nationwide but any competent or qualified builder or shop fitter can install as long as the current installation instructions are followed.

Warrantees

Resco offers a 10 year warranty on Compact Laminate panel integrity and 2 years on Hardware and Workmanship

Company Product Information

Environmental

Compact Laminate panels have very low levels of VOC and Formaldehyde emissions which makes them suitable for buildings targeting Greenstar ratings.

Quality Assurance

ISO 9001 (Quality Management)

Relationships

Environmental Choice New Zealand

Videos

Ant-Graffiti video

Date last validated: **17 May 2019**

Date last updated: **17 May 2019**

5511LC Laminex™ Cabinetry

Laminex New Zealand
+64 09 5714444
info@laminex.co.nz
www.laminex.co.nz

SUPPORTING DOCUMENTS

Melteca® Quality Laminated Panels 102247

Ref 10213. Uploaded 26 Jun 2020

Purpose: Installation, Environmental

Melteca® Quality Laminated Panels

Product Technical Statement: 102247

miproducts
THE NATIONAL PRODUCT DATABASE

Versatile pre-decorated MDF panel with a durable melamine surface on both sides.
View miproducts listing

Level of assurance needed to demonstrate NZ Building Code Compliance

LOW

Supporting documentation should include self-assessment and technical information by manufacturer

Melteca® confirms that this minimum level of assurance has been met or exceeded by the following:
BRANZ
Fire Test Report - FH5030

masterspec partner

Technical Statement

Product Description

Melteca® Low Pressure Laminate is a tough melamine surface laminated to Superfine™ particleboard or Lakepine™ MDF to provide a double faced, pre-finished decorative panel. Melteca offers an extensive range of colours for both residential and commercial projects.

Melteca is available in six different finishes to suit any project including Puregrain which looks and feels like natural wood, and Hi-Gloss which offers a touch of luxury to cabinetry and drawers.

Each colour has matching PVC or ABS edging which protects the edges and gives good impact resistance.

Please refer to the Melteca Colour Brochure for available decors.

Scope of use

Melteca decorated board is intended for use in kitchen cabinetry, cupboards,drawers, shelving and furniture in the home. It can also be used for wall linings, furniture, shop fittings and other vertical surfaces in a commercial environment. Melteca Fire Retardant is suitable for all wall linings where maximum fire resistance is important.

New Zealand Building Code (NZBC)

The product will, if employed in accordance with the supplier's installation and maintenance requirements, assist with meeting the following provisions of the building code:

- **Clause B2 Durability:** Performance B2.3.1
- **Clause C3 Fire affecting areas beyond the fire source:** Performance C3.4
- **Clause F2 Hazardous building materials:** Performance F2.3.1

Evidence

The product meets the requirements set out in the following documents, or relevant parts of cited standards within the documents:

When stored, handled, used and maintained in accordance with the Melteca Technical Data Sheet, Melteca will meet the durability requirements of NZBC B2.3.1(c) for 5 years.

Melteca complies with the requirements of AS/NZS 1859.3 2005.

Fire Performance
The Group Number Classifications below were generated from tests carried out and data recorded in accordance with the test procedure described in ISO 5660 2002 - Reaction-to-Fire - Part 1: Heat Release & Part 2: Smoke Production Rate, for the purposes of determination of the Group Classification in accordance with the New Zealand Building Code Verification Method C/VM2 Appendix A.
Melteca bonded to Lakepine Medium Density Fibreboard (MDF) substrate - Group Number Classification 3.
Melteca Fire Retardant Panels - Group Number Classification 1-S.
Please note: Indicative testing has indicated a change in substrate to Lakepine MRZero or Superfine particleboard (Standard or MR) will not alter the Group Number Classification.

Supporting Evidence

The product has and can make available the following additional evidence to support the above statements:

BRANZ
Fire Test Report - FH5030

Product Criteria

Company Contact Details

MELTECA®

Brand:	Melteca®
Company:	Laminex New Zealand
Physical Address:	1 O'Rorke Road Penrose AUCKLAND
Postal Address:	PO Box 12270 Penrose AUCKLAND
Telephone:	64 09 5714444
Email:	info@laminex.co.nz
Website:	http://www.melteca.co.nz

Melteca® Quality Laminated Panels

Product Technical Statement: 102247

miproducts
THE NATIONAL PRODUCT DATABASE

Design requirements

The high durabilty and easy clean nature of the melamine surface makes Melteca ideal for kitchen cabinetry, cupboards, drawers, shelving and furniture in the home. It can also be used for wall linings, furniture, shop fittings and other vertical surfaces in a commercial environment.

Installation requirements

Please refer to your fabricator or joiner for special requirements for your project.

Company Product Information

Environmental

Recognising the benefits that low emission products present in sustainable building projects, we offer Melteca MDF (decorated board) and raw MDF at the low formaldehyde E0 rating. Not only does this range of low emission products improve indoor air quality but the use of products can help accrue Indoor Environmental Quality (IEQ) points in the Green Star Materials Calculator.

All Melteca on MDF and Particleboard, as well as Whiteboard, raw MDF and raw Particleboard is independently certified by Environmental Choice NZ and meets the criteria for the Forest Stewardship Council (FSC) certified timber set in the ECNZ Furniture and Fittings standard. Our products also have third party certification for ISO 14001 management systems.

Relationships

Environmental Choice New Zealand

New Zealand Made

Date last validated: **11 September 2015**

Date last updated: **11 September 2015**

5517LB Laminex Benchtops

Laminex New Zealand
+64 09 5714444
info@laminex.co.nz
www.laminex.co.nz

SUPPORTING DOCUMENTS

Formica® High Pressure Laminate 102119

Ref 10129. Uploaded 26 Jun 2020

Purpose: Performance, Installation, Environmental

Formica® High Pressure Laminate

Product Technical Statement: 102119

miproducts
THE NATIONAL PRODUCT DATABASE

Perfect for high use horizontal surfaces in both commercial and residential spaces.
View miproducts listing

masterspec partner

Level of assurance needed to demonstrate NZ Building Code Compliance

LOW

Supporting documentation should include self-assessment and technical information by manufacturer

Formica® confirms that this minimum level of assurance has been met or exceeded by the following:
Laminex New Zealand
HPL on MDF Fire Test - 7-598418-CV

Technical Statement

Product Description

Formica® High Pressure Laminate is a post-forming grade of decorative laminate. Internal or external curves can be formed down to a standard recommended minimum radius of 10mm. The Product is suitable for most horizontal or vertical surfaces, including counters, bench and table tops, store fixtures, office furniture, vanity units, display work, reception areas, wall paneling, toilet partitions, and door and drawer fronts.

With over 140 colours to choose from and 6 textures, including AR+ Hi-Gloss finish, Formica HPL is available in sheets sizes 3600x1500 or 3595x1395 dependent on the décor selected. Please refer to the Formica Colour Chart and Availability Guide for particular decors.

Formica HPL should be bonded to a suitable substrate such as standard or moisture resistant particleboard, standard or moisture resistant medium density fibreboard (MDF) or marine grade plywood.

With features such as Abrasion Resistance, Moisture Resistance, stain resistance and water resistance, Formica HPL is perfect for high use situations.

Formica 180fx

Formica 180fx offers inspiration on a grand scale. Achieving an unprecedented large scale design, this laminate has all the benefits of HPL with the beauty and magnitude of natural stone. Offering an unmatched realism, its striking colour variations and intricate veining deliver a unique, luxurious look. Please refer to theFormica 180fx brochure for available decors.

Formica Magnetic Writeable Surfaces

Formica now offer Magnetic Whiteboard and Magnetic Chalkboard surfaces for fully functional, interactive interiors for offices, learning environments and retail spaces.

Formica Metallic Laminates

Formica offer a range of metallic laminates including the Red Dot award-winning Plex finish.

Scope of use

Formica HPL is suitable for most interior horizontal or vertical surfaces, including counters, bench and table tops, store fixtures, office furniture, vanity units, display work, reception areas, wall paneling, toilet partitions, and door and drawer fronts.

New Zealand Building Code (NZBC)

The product will, if employed in accordance with the supplier's installation and maintenance requirements, assist with meeting the following provisions of the building code:

- **Clause B2 Durability:** Performance B2.3.1(c)
- **Clause C3 Fire affecting areas beyond the fire source:** Performance C3.4(a)
- **Clause E3 Internal moisture:** Performance E3.3.4
- **Clause F2 Hazardous building materials:** Performance F2.3.1

Evidence

The product meets the requirements set out in the following documents, or relevant parts of cited standards within the documents:

Fire Group Classification The Group Number Classification below was generated from tests carried out and data recorded in accordance with the test procedure described in ISO 5660 2002 – Reaction to Fire test – Part 1: Heat Release & Part 2: Smoke Production Rate, for the purposes of determination of the Group Classification in accordance with the New Zealand Building Code Verification Method C/VM2 Appendix A

Formica High Pressure Laminate bonded to Lakepine MDF substrate: Group Number Classification 3

Company Contact Details

Brand:	Formica®
Company:	Laminex New Zealand
Physical Address:	1 O'Rorke Road Penrose AUCKLAND
Postal Address:	PO Box 12270 Penrose AUCKLAND
Telephone:	64 09 5714444
Email:	info@laminex.co.nz
Website:	http://www.formica.co.nz

Supporting Evidence

The product has and can make available the following additional evidence to support the above statements:

Laminex New Zealand
HPL on MDF Fire Test - 7-598418-CV

Product Criteria

Design requirements

Formica HPL is suitable for most horizontal or vertical surfaces, including counters, bench and table tops, store fixtures, office furniture, vanity units, display work, reception areas, wall panelling, toilet partitions, and door and drawer fronts. Formica HPL should be bonded to a suitable substrate such as standard or moisture resistant particleboard, standard or moisture resistant medium density fibreboard (MDF) or marine grade plywood.

Installation requirements

Please refer to your Fabricator or Joiner for specific requirements for your project.

Company Product Information

Environmental

Laminex New Zealand has established GREENfirst® to encompass numerous programmes of environmental management. This reflects our belief that action must follow good intentions and ambitious goals. We are taking action to:

- reduce energy use throughout the life of our products through finding and implementing economical energy-efficient solutions for our businesses;
- ensure active water stewardship;
- reduce carbon emissions by optimising energy usage in the production of our products;
- work with suppliers to increase recycled and eco-friendly content in our raw materials, making mandatory the use of fibres from sustainable forests;
- ensure that our products and services meet or exceed requirements of ISO14001
- Eliminate or minimise waste from products, services and workplaces.
- Participation in clusters which provide education and advocacy in sustainability including New Zealand Green Building Council; Sustainable Business Network and EnviroSpec.

Relationships

Member of New Zealand Green Building Council

Date last validated: **09 March 2015**

Date last updated: **09 March 2015**

6411J Jacobsen Vinyl Surfacing

Jacobsen
+64 09 5740640
support@jacobsen.co.nz
www.jacobsen.co.nz

SUPPORTING DOCUMENTS

Tarkett Granit SafeT Data Sheet

Ref 32352. Uploaded 6 Sep 2021

Purpose: Performance

Tarkett Granit SafeT Fire Test

Ref 32356. Uploaded 6 Sep 2021

Purpose: Performance

Tarkett Granit SafeT Installation Guide

Ref 32355. Uploaded 6 Sep 2021

Purpose: Installation

Tarkett Granit SafeT Maintenance Guide

Ref 32354. Uploaded 6 Sep 2021

Purpose: Maintenance

Tarkett Granit SafeT Slip Test

Ref 32357. Uploaded 6 Sep 2021

Purpose: Performance

Tarkett iQ Granit Fire Test

Ref 32359. Uploaded 6 Sep 2021

Purpose: Performance

Tarkett iQ Granit Installation Guide

Ref 32358. Uploaded 6 Sep 2021

Purpose: Installation

Traket iQ Granit Slip Test

Ref 32360. Uploaded 6 Sep 2021

Purpose: Performance

iQ GRANIT
TECHNICAL DATA

CERTIFICATION & CLASSIFICATION	STANDARDS	iQ Granit	iQ Granit Acoustic	iQ Toro SC	iQ Granit SD	Granit Safe.T	Granit Multisafe
Type of floor covering	ISO 10581	Homogeneous single layered vinyl flooring	-	Static conductive homogeneous vinyl flooring	Static dissipative homogeneous vinyl flooring	-	Homogeneous vinyl flooring with studded surface
	ISO 11638	-	Homogeneous vinyl flooring with foam interlayer	-	-	-	-
	EN 13845	-	-	-	-	Slip resistant homogeneous vinyl flooring	-
Binder content	ISO 10581	Type I	-	Type I	Type I	-	Type I
	ISO 11638	-	Type II	-	-	-	-
Classification	ISO 10874	Commercial: 34 Industrial: 43	Commercial: 34 Industrial: 43	Commercial: 34 Industrial: 43	Commercial: 34 Industrial: 43	Commercial: 34 Industrial: 43	Commercial: 31 Industrial: -

TECHNICAL CHARACTERISTICS	STANDARDS	iQ Granit	iQ Granit Acoustic	iQ Toro SC	iQ Granit SD	Granit Safe.T	Granit Multisafe
Surface treatment		iQ PUR	iQ PUR	iQ PUR	iQ PUR	Safe.T Clean XP™	-
Total thickness	ISO 24346	2.0 mm	3.5 mm	2.0 mm	2.0 mm	2.0 mm	2.5 mm
Wear layer thickness	ISO 24340	2.0 mm	2 mm	2.0 mm	2.0 mm	2.0 mm	2.0 mm
Total weight/m²	ISO 23997	2800 g	3810	2950 g	2950 g	2950 g	3010 g
Form of delivery	ISO 24341 Sheet (rolls)	Approx. 25 lm x 200 cm Art. no. 3040___ 3 digit colour colour number	Approx. 23 lm x 200 cm Art. no. 3221___ 3 digit colour colour number	Approx. 23 lm x 200 cm Art. no. 3093___ 3 digit colour colour number	Approx. 23 lm x 200 cm Art. no. 3096___ 3 digit colour colour number	Approx. 25 lm x 200 cm Art. no. 3052___ 3 digit colour colour number	Approx. 25 lm x 200 cm Art. no. 3476___ 3 digit colour colour number
		Art. no. 3218_ _ _(Multicolour) 3 digit colour colour number	-	-	-	-	-
		Art. no. 21050___(iQ Granit Micro) 3 digit colour colour number	-	-	-	-	-

TECHNICAL PERFORMANCES	STANDARDS	iQ Granit	iQ Granit Acoustic	iQ Toro SC	iQ Granit SD	Granit Safe.T	Granit Multisafe
Reaction to fire	AS/ISO 9239.1	Critical radiant flux 9.6kW/m² Smoke 79%.min	Critical radiant flux 8.8 kW/m² Smoke 254%.min	Critical radiant flux 11.0kW/m² Smoke 55%.min	Critical radiant flux 9.4 kW/m² Smoke 90%.min	Critical radiant flux 10.8 kW/m² Smoke 36%.min	Critical radiant flux 10.8kW/m² Smoke 14%.min
	AS/NZ 3837 (wall)	Group 3	-	-	-	Group 3	-
Marine equipment	IMO FTPS Part 5 and 2 IMO Res. A653	0575					0575
Total VOC emissions	ISO 16000-6 AgBB/DIBt Indoor air quality FloorScore	≤ 10 µg/m³ (after 28 days) Confirm Platinum SCS certified	≤ 10 µg/m³ (after 28 days) Confirm Platinum SCS certified	≤ 10 µg/m³ (after 28 days) Confirm Platinum SCS certified	≤ 10 µg/m³ (after 28 days) Confirm Platinum SCS certified	≤ 10 µg/m³ (after 28 days) Confirm Platinum SCS certified	≤ 10 µg/m³ (after 28 days) Confirm Platinum SCS certified
Clean room	ISO 14644-1	ISO class 4	-	ISO class 4	ISO class 4	-	-
Ease of decontamination	ISO 8690 – DIN 25415	Excellent	Excellent	Excellent	Excellent	-	-
Chemical resistance	ISO 26987	Excellent	Excellent	Excellent	Excellent	Good	Good
Slip resistance	DIN 51130 DIN 51097 AS 4586 96 Slider** 55 Slider**	R10 - P4 -	R9 - P3 -	R9 - P4 -	R10 - P4 -	R11 Class B P4 P5	Class B -***
Wet room approval	EN 13553 Annex A	Watertight	-	-	-	Watertight	Watertight
Residual indentation	ISO 24343-1	Required value: ≤ 0.10 mm Best measured value: 0.02 mm	Required value: ≤ 0.20 mm Best measured value: 0.13 mm	Required value: ≤ 0.10 mm Best measured value: 0.02 mm	Required value: ≤ 0.10 mm Best measured value: 0.02 mm	Required value: ≤ 0.10 mm Best measured value: 0.02 mm	Required value: ≤ 0.10 mm Best measured value: 0.02 mm
Castor chair test	ISO 4918	Suitable	Suitable	Suitable	Suitable	Suitable	-
Impact sound reduction	EN ISO 717/2	-	Approx. + 15 dB	-	-	-	-
Static electrical discharge	EN 1815 On any surface with resistance ≤ $10^9\Omega$	< 2 kV	-	< 2 kV	< 2 kV	< 2 kV	< 2 kV
Electrical insulation	VDE 0100, Part 600	-	-	$R_i \leq 5x10^4$ Ohms	$R_i \leq 5x10^4$ Ohms	-	-
Electrical resistance	ESD-approval SP method 2472 EN 1081	-	-	$R \leq 10^9$ Ohms R_i $5x10^4 \leq R \leq 10^6$ Ohms R_2 $5x10^4 \leq R \leq 10^6$ Ohms	$R \leq 10^9$ Ohms $R1 \leq 10^8$ Ohms $R2 \leq 10^8$ Ohms	-	-
	EN/IEC 61340-4- / 100 V EN/IEC 61340-4-5			R $5x10^4 \leq R \leq 10^6$ Ohms $\leq 3,5x10^7$ Ohms	$R \leq 10^8$ Ohms		
Underfloor heating		Suitable – max 27°C	Suitable – max 27°C	Suitable – max 27°C	Suitable – max 27°C	Suitable – max 27°C	Suitable – max 27°C
Light fastness	EN ISO 105-B02	Level 7	Level 7	Level 7	Level 7	Level 7	Level 7
Bacteria resistance	EN ISO 846:Part C	Does not favour growth	Does not favour growth	Does not favour growth	Does not favour growth	Does not favour growth	Does not favour growth
Colours		49 + 1 Multicolour* + 12 iQ Granit Micro	20	14	14	16	16

The above information is subject to modification for the benefit of further improvement. (01/17). * iQ Granit Multicolour is not approved for use under the IMO directive.

** When comparing P values for slip ratings a 96 slider replicates footwear, a 55 slider replicates barefoot. The 55 slider results should be used for barefoot applications such as showers.

*** Profiled surfaces such as Granit Multisafe are not appropriate to test using a pendulum method and should utilise the barefoot inclining platform test.

Tarkett's instructions regarding installation, cleaning and maintenance should be observed.
Please contact Tarkett at the address shown for these instructions.

For Global Green Tag certificates please see the Tarkett Australia page at globalgreentag.com

IFF : 4820500000000F

100 % 25.5 % Recyclable Recycled content

PHTHALATE FREE

<10 µg/m³ Optimal Indoor Air Quality *TVOC AT 28 DAYS

iQ NEW FOR LIFE™

Fraunhofer IPA TESTED DEVICE

Contact person
Johan Post
Fire Research
+46 10 516 58 45
Johan.Post@sp.se

Tarkett AB
SE-372 81 RONNEBY

Reaction to fire classification report

1 Introduction

This classification report defines the classification assigned to the product "Granit Safe.T" in accordance with the procedure given in EN 13501-1:2007+A1:2009.

2 Details of classified product

2.1 General

The product "Granit Safe.T" is defined as a floor covering. Its classification is valid for the end use application as floor covering for indoor use.

According to the owner of this classification report, this product complies with the European product specification EN 14041.

2.2 Product description

According to client:

The product is a decorative homogeneous floor covering called "Granit Safe.T", consisting of filled plasticized PVC. The total product has a nominal thickness of 2.0 mm and a nominal area weight of 2950 g/m^2.

3 Test reports & test results in support of classification

3.1 Test reports

This classification is based on the test report listed below:

Name of laboratory	Name of sponsor	Test report ref no	Accredited test method
SP	Tarkett AB	5P00543-2	EN ISO 9239-1 EN ISO 11925-2

3.2 Test results

Test method	Parameter	Number of tests	Results	
			Continuous parameter mean (m)	Compliance parameter
EN ISO 11925-2		6		
15 s exposure	$Fs \leq 150$ mm		(-)	Compliant
EN ISO 9239-1		3		
	Critical flux (kW/m^2)		10.3	Compliant
	Smoke (%.min)		177	Compliant

(-) : not applicable

4 Classification and field of application

4.1 Reference and direct field of application

This classification has been carried out in accordance with clause 12 and 15 of EN 13501-1:2007+A1:2009.

4.2 Classification

The product called "Granit Safe.T" in relation to its reaction to fire behaviour is classified:

B_{fl}

The additional classification in relation to smoke production is:

s1

The format of the reaction to fire classification for floorings is:

Fire Behaviour		Smoke Production	
B_{fl}	**-**	**s**	**1**

Reaction to fire classification: *B_{fl}-s1*

4.3 Field of application:

This classification is valid for the following product parameters:

Nominal thickness : 2.0 mm.

Area weight : 2950 g/m^2.

This classification is valid for the following end use applications:

Substrates

- Wood based substrates at least 18 mm thick or substrates of Euroclass A1$_{fl}$ or A2$_{fl}$ at least 6 mm thick, having a density ≥ 510 kg/m^3.

The sample was delivered by the client. SP Fire Research was not involved in the sampling procedure.

5 Limitations

This classification document does not represent type approval or certification of the product.

"The classification assigned to the product in this report is appropriate to a declaration of performance by the manufacturer within the context of system 3 of assessment and verification of constancy of performance and CE marking under the Construction Products Regulation.

The manufacturer has made a declaration, which is held on file. This confirms that the product's design requires no specific processes, procedures or stages (e.g. no addition of flame-retardants, limitation of organic content, or addition of fillers) that are aimed at enhancing the fire performance in order to obtain the classification achieved. As a consequence the manufacturer has concluded that system 3 attestation is appropriate.

The test laboratory has, therefore, played no part in sampling the product for the test, although it holds appropriate references, supplied by the manufacturer, to provide for traceability of the samples tested."

SP Technical Research Institute of Sweden
Fire Research - Fire Dynamics

Performed by

Johan Post

Examined by

Per Thureson

INSTALLATION Instructions Homogenous Vinyl

iQ Granit Multisafe, iQ Optima Multisafe, iQ Granit Safe.T, Primo Safe.T

03/2018

CONDITIONS AND REQUIREMENTS

- The subfloor must be clean, dry and free from cracks. Dust and contaminants that could prevent adhesion, such as patches of paint, oil, etc., must be removed. Note that asphalt, oil spillage, impregnation agents, pen marks, etc., can cause discoloration. Damp proofing to be carried out according to local building standards. Where required an effective damp proof membrane must be incorporated in the subfloor. Check for dampness in ground supported floors, floors above boiler rooms, floors with underfloor heating or containing high temperature pipework etc.

- Where underfloor heating units are installed in the concrete slab the heating units shall be;
  Turned on prior to laying of the floor covering for 3-4 weeks to ensure that the moisture condition of the heated subfloor will permit successful laying of the floor covering. Be turned off 48 h prior to the commencement of installation to allow the subfloor to return to the temperature range recommended by the manufacturer of the floor covering. The heating units shall remain turned off during the laying operations and shall not be turned on again until 6-7 days after the laying is completed in order to allow the adhesive to set.

- **When installing this product on concrete subfloors that do not include damp-proofing, the moisture content measured in terms of relative humidity must not be higher than 85% (in UK and Ireland 75% according to BS 8203). Or less than 2% with CM (Carbide Method)**

- Where pipes are laid in the floor they should be arranged so that the flooring material is not continuously subjected to a temperature above 27°C, otherwise there may be discoloration and/or other alterations of the material

- Extra special care must be taken regarding installations on surfaces where significant temperature changes can be expected, for example, floors exposed to strong sunlight, as adhesion strength and subfloor treatment may be heavily stressed.

- Floor boards and similar substrates should have a moisture content of max 8% (equivalent to 40% RH at +20°C), so that any subsequent movements cannot cause damage.

PREPARATION

- Dust and loose particles must be thoroughly removed. Highly absorbent or variably absorbent substrates should be sealed with suitable primer. The primed surface must be completely dry before laying commences.

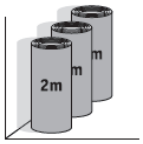
- When applying smoothing compounds, use compounds that meet the minimum requirements in the building standards. NOTE: Discolouration can occur when using two-parts polyester compounds if they are mixed incorrectly and/or insufficiently. Do not mix directly on the substrate.

- Use only a lead pencil for marking. Note that any marks made with felt-tipped pens, permanent and non permanent ink markers, ball point pens etc. can cause discoloration due to migration.

- If material from several rolls is used, they should have the same manufacturing serial numbers and be used in consecutive order.

- Prior to laying, allow the material, adhesive and subfloor to reach room temperature, i.e. a temperature of at least 18°C. The relative air humidity should be 30-60%. Rolls must be stored indoors at least 24 hours before installation, preferable 48 hours.

- The rolls should be stored on an even surface. Any faults in the material must be reported immediately to your nearest sales office. Always quote the colour and roll numbers, which are stated on the label.



Store 2m rolls upright with distance between the rolls.

If any doubts or clarifications should be needed, please contact your local Tarkett representative for further information.

Tarkett

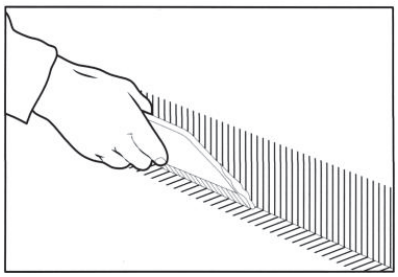
INSTALLATION

- Installation should be carried out at room temperature between 18°C to 26°C. Subfloor temperature must be at least 15°C. The relative air humidity in the premises should be 35-65%. Maintain same temperature and humidity for at least 72 hours after installation.
- Cut the sheets to length and lay them out to acclimatise and relax prior to installation. This is particularly important for longer lengths.
- The sheets are fully adhered with an adhesive approved for Tarkett's homogeneous vinyl sheet, spatula A1/A2. **See the adhesive manufacturer´s instruction regarding coverage, open time etc.** Example of suitable adhesives can be found at professionals.tarkett.com
- The assembly time depends on the type of substrate, its absorbency, the temperature and air humidity in the premises.
- **Sheets must be installed so that colour differences are avoided. Reverse sheets whenever possible, overlap and cut edges.** Factory edges must be overlapped and cut. Prior to overlapping the vinyl sheet, trim off the factory edge on the bottom sheet. This is best done by striking a chalk line, then – using a utility knife and straight edge – cut through and remove the scrap piece. Overlap the top sheet and then trace the bottom edge onto the top sheet with a correctly set under scriber.
- Rub the face surface down thoroughly to ensure that the floor covering makes good contact with the adhesive and that all air is expelled. Make sure that the tool used for rubbing down the floor covering does not scratch the surface. A broom is not suitable for this purpose. Use a floor roller (approx. 65 kg) and roll crosswise over the floor.

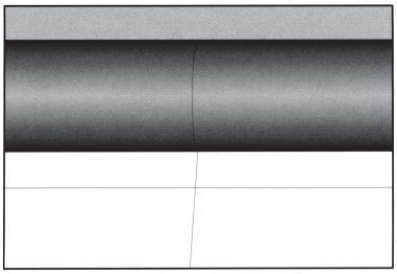
FITTING, COVING AND CORNERS

The flooring is coved approximately 100 mm (4 in) up the wall. If wall covering is to be installed, then it should overlap the wall base by at least 30 mm (approx. 1 in). **For Granit Multisafe and Optima Multisafe; the upper rows of embossed pattern are removed to form a smooth juncture with the wall.** For the best result, the thickness of the wall base is levelled out before installation of the wall covering so that a smooth juncture is obtained, use a water-resistant levelling compound.

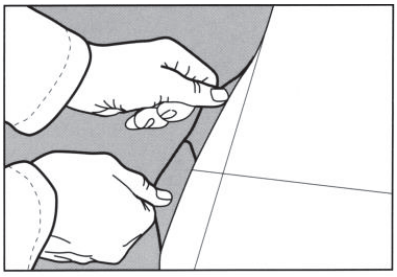
- Within 0,5 m radius from floor drains etc. seams are not recommended.
- Granit Multisafe and Optima Multisafe shall not be installed over flush-drains with diameter ≤ 150 mm.



Using a straight edge and pencil, mark at a height of about 10 cm (approx. 4 in.) all walls where the flooring will be coved. Apply the adhesive on the walls up to the marked line, using a fine-notched trowel.
Spread some of the adhesive out onto the floor, as shown in the picture.

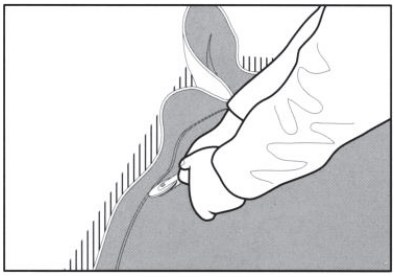


While the adhesive becomes tacky, the sheets are cut. The sheets should be cut longer than the room length to allow sufficient material for coving. When a sheet fits the width of the room, mark a cross mark on the bottom of the material and the subfloor to indicate the center. This will help you to place the sheet in its exact position. The cross marks are to coincide at installation.

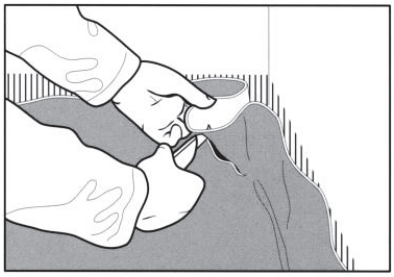


When the width of the room exceeds the sheet width (more than one piece has to be installed to cover the area), mark a line on the floor parallel to the longitudinal wall at a distance equivalent to 12 cm (about 41/2 in.) less than the sheet width.
Mark the room's center on this line.
On the bottom of each sheet, mark their center. The cross marks on the subfloor and sheets shall coincide at installation.

Fold back and loosen the sheets covering half of the floor area.
Apply the adhesive on the subfloor with a fine-notched trowel. Use a soft brush around drains and hard-to-reach areas. Around and inside drains, please see drain manufacturers recommendation.



Avoid sharp creasing tools. When coving we highly recommend to use a Tarkett Hockey Stick or a Tarkett Corner Roller to press the material firmly into the juncture between the floor and wall. In areas where one sheet is sufficient to cover the subfloor, the adhesive can be applied over the entire surface area before installing the sheet. Although this requires experience, it is the fastest installation method.



When fitting in-corners, make a cut in the excess material starting about 5 mm (about ¼ in.) above the floor in the corner. If the material has to be heated before folding, heat the area between the sheet and the wall. This provides better contact between the sheet and adhesive.

If any doubts or clarifications should be needed, please contact your local Tarkett representative for further information.

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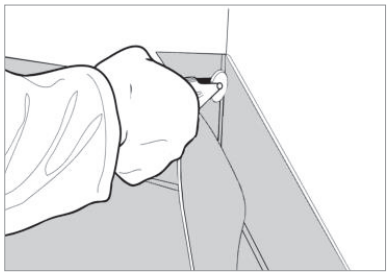
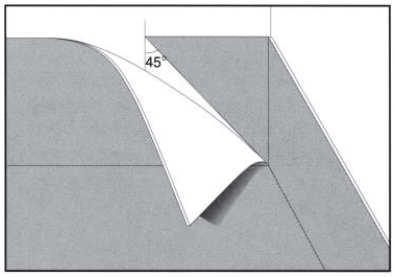
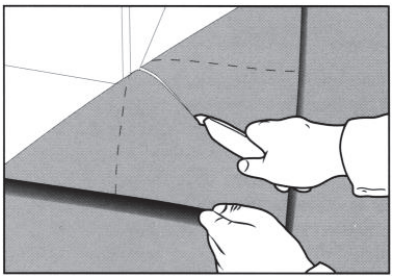


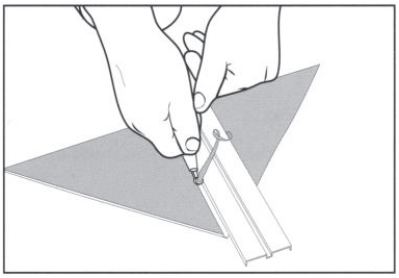
Press the material firmly into the corner with a Tarkett Corner Roller or Tarkett Hockey Stick.



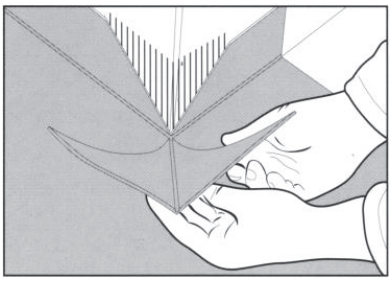
The corner seam shall be placed on one of the walls at a 45-degree angle.



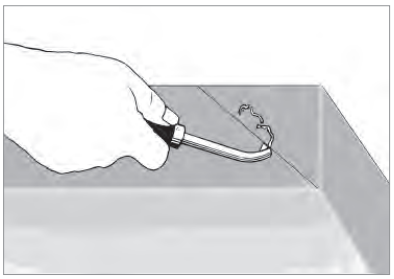
When fitting an out-corner, the sheet is folded against the corner and cut about 5 mm(¼ in.) from the floor. The guidelines in the picture show the corner on the sheet and the position of the cut at about a 45-degree angle. Then a diagonal cut is made as shown.



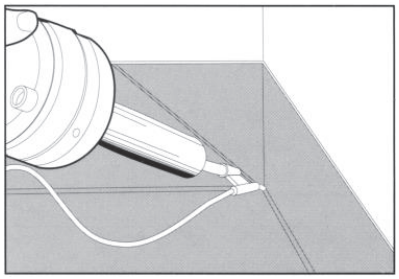
To glue the triangle-shaped piece more simply and securely, cut a groove on the back of the triangle with Tarkett Corner Knife. The depth of the groove shall be no deeper than half of the sheet thickness.



The triangle can now be folded and placed on the corner. It will overlap the coved floor. Cut through the overlapping material to make a tight fit.

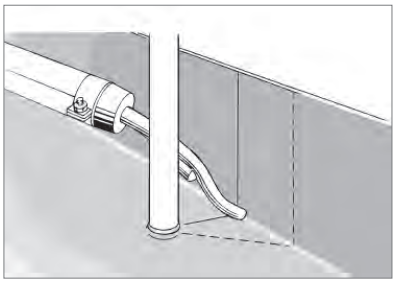


All seams on floor and coving must be grooved before welding.

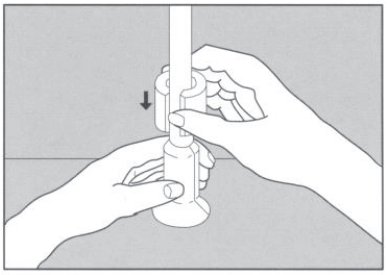


Use a hot-air gun for welding with thread at in-corners and out-corners. Tarkett Speed Welding Nozzle is specially designed for welding vinyl floors. For a perfect job, the Tarkett Swan Neck is required to effectively seal all seams nearest to the floor.
N.B. Prior to sealing in the corner, make sure that the PUR reinforcement is completely removed from the surface.

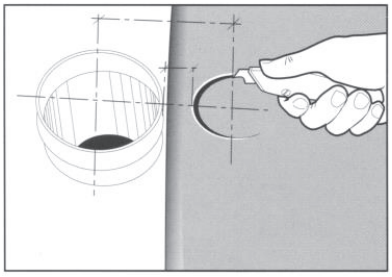
FITTING AROUND PIPES AND FLOOR DRAINS



Around pipes by walls, cut the sheet and press it against the pipe to form a collar. In tight or cramped areas between pipes and walls, cut as shown by the dotted line. If a cover is required, do the following:
1) If you make a cover out of floor material, fit it against the pipe with adhesive. Weld the seams together using the Tarkett Swan Neck.



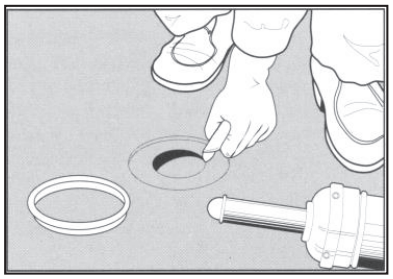
2) Prefabricated covers are applied according to the manufacturer's instructions. Seam sealer or sealing compound approved for this purpose, can be used for an extra tight fit around pipes.



Around drain pipes, fold the sheet against the pipe and mark a line on the material where the center if the pipe is. Cut a hole about 25 mm (about 1 in.) smaller than the diameter of the pipe. As shown, cut the hole at the start of the fold. Heat the sheet vinyl and press it over the pipe. trim off excess material with o hook knife so that the break in the pipe wall is cleared.

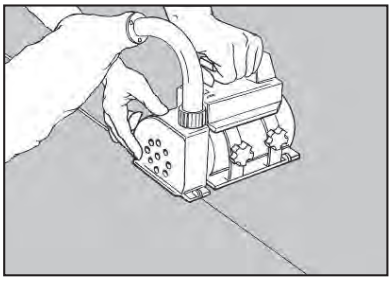
If any doubts or clarifications should be needed, please contact your local Tarkett representative for further information.

Tarkett

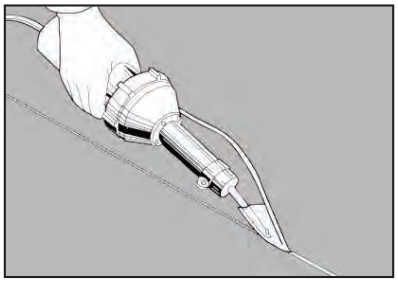


Around flush drain openings, heat the sheet and mark the location of the drain using a clamp ring. Then cut a small hole in the centre of the drain within the mark. Heat the flooring and press the clamp ring down into the edge of the drain. When using an adjustable clamp ring, make sure it fits tightly. Trim the material around the perimeter of the ring.
Alternatively; use cutting tool as per recommendation from the drain manufacturer.
Always ask for complete instructions from the drain manufacturer!

WELDING

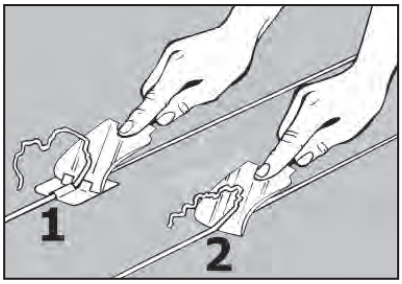


The sheets are hot welded. Do not weld until the adhesive has bonded completely, wait 24-48h. The joints are chamfered or grooved to about 3/4 of the thickness using a hand grooving tool or machine prior to welding.



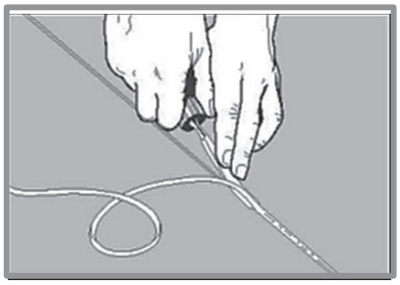
Weld with hot-air and Tarkett Speed Welding Nozzle.
Carry out a test welding on a left-over piece before commencing work, to adjust speed and temperature.

TRIMMING Safe.T



CAUTION: Welded seams must cool to room temperature before trimming. Start trimming where you began welding. All trimming of welding thread is recommended in two steps: rough and fine trimming.

TRIMMING Granit- Optima Multisafe



Trim with the chamfering-knife for Granit Multisafe/Optima Multisafe or equivalent. If the raised studs of the embossed pattern are too close to the seam area, cut them off before trimming of the welding thread.

INSPECTION

- The work must be completed with an inspection. Ensure that the newly laid flooring is free from adhesive residues and that the bond is consistent with no bubbles.

AFTER INSTALLATION

- Always protect the floor with thick paper, hard board or similar during the construction period. If using tape, this must not be applied directly to the floor surface.
- IMPORTANT! Restrict foot traffic for 24 hours after installation. No heavy traffic, rolling loads or furniture placement for 72 hours after installation. Most suppliers of floor adhesives specify 72 hours before the final strength is achieved."

FOR THE BEST RESULTS

- Use only adhesives recommended by adhesive manufacturer.
- Use a matting system at entrences to protect from dirt and dust. Rubber can cause discoloration to the floor.

GENERAL

- Contact you Tarkett representative if unsure about any part of the installation.
- This information is subject to change continuous improvement

EXCLUSION OF LIABILITY

- Although Tarkett may list a selection of adhesive, levelling compound and surface damp-proof membrane manufacturers and types, we do not guarantee the products listed. The list of products and manufacturers is not guaranteed complete or current. Tarkett will accept no liability for any of these products failing to perform in conjunction with any of its products.

If any doubts or clarifications should be needed, please contact your local Tarkett representative for further information.

Tarkett

Granit Safe.T , Primo Safe.T, Granit Multisafe, Optima Multisafe

HOMOGENEOUS VINYL

Cleaning & maintenance instructions

2018

Tarkett safety floorings are reinforced with Safety Clean⋆ which makes them easier to clean, remove scuff marks, stains and similar. The floor covering should be cleaned regularly as this will prove to be more cost effective and hygienic than occasional heavy duty cleaning.
⋆Except Granit Multisafe and Optima Multisafe due to it's embossed surface structure. Below instructions can still be followed.

INITIAL SITE CLEANING

- Always protect the floor with thick paper, hard board or similar during the construction period. An initial site clean is always to be recommended before commissioning the new floorcovering:
  Lightly soiled floors: Vacuum, sweep or damp mop the area to remove loose dirt and building dust. A combined scrubber/dryer with cylindrical brushes is very effective to clean large areas. Use a detergent with low ph, 3-5, to be able to pick up dust from construction work.

PREVENTIVE CARE FOR A CLEANER ENVIRONMENTE

- Use correctly dimensioned entrance matting to remove dirt in the entrance area. About 80% of all the dirt on the floor that has to be cleaned off is brought in from outside. And 90% of that can be avoided by effective and correctly dimensioned entrance matting.
- The less dirt that comes in through the entrance, the lower the maintenance requirements.

GENERAL ADVICE

- Resilient floors are damaged by solvents.
- Wipe up any spilt oil immediately because it may damage the surface.
- Black rubber wheels and rubber feet can discolour.
- Chairs and stools should be fitted with quality plastic protective feet to avoid damage
- Remember that light colours need more frequent cleaning.

DAILY CLEANING

- **Daily Cleaning:** Damp or wet mopping.
  If necessary on heavily soiled areas, scrub manually with a deck scrubber.

- **Machine cleaning:** In order to achieve good and effective results, scrub the floor using a cylindrical machine or a rotary scrubber with medium hard brushes.
- **Cleaning chemicals:** Preferably use a neutral floor cleaner. If very dirty, a heavy duty cleaning solution, pH 10-11, shall be used. Never use joint cleaner - maintainers. Wet-rooms may necessitate occasional cleaning with acidic cleaning solution, pH 3 to 5, in order to remove residual lime and soap.
- **Warning!** Always follow dilution instructions carefully! Never use abrasive pads when machine cleaning!

PERIODICAL CLEANING

- **General:** Never apply any type of polish, wax or maintainer as they will affect the anti-slip properties of the flooring.
- **Heavy wear and soiling:** Apply the cleaning solution (a fairly strong cleaning solution, pH 10-11, after dilution) to the flooring and allow it to soften the soiling for 5-10 minutes. Scrub the floor using a cylindrical scrub machine or rotary scrubber with medium hard brushes. Vacuum away the dirty water immediately. Rinse with clear water. Smaller areas where it is not practical to use a machine, scrub manually with a deck scrubber.

REMOVING MARKS

- Treat marks immediately. Use white/red nylon pads moistened with methylated spirits, cleaning spirit or neutral detergent. Rinse again with clean water.

If any doubts or clarifications should be needed, please contact your local Tarkett representative for further information.

ATTAR TEST REPORT NUMBER: 14/8106.21

12 August 2014 **Total Pages: 2**

WET PENDULUM SLIP RESISTANCE

Job No: M14/8106

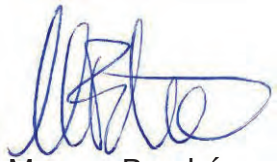
Prepared for:	Tarkett Australia Pty Ltd 16 Anella Avenue CASTLE HILL NSW 2154
Attention:	Maria Barreto-Tilman
Test Site:	Test Slip Australia Pty Ltd, Beaumont Hills, NSW.
Test Date:	12 August 2014
Test Specimens, Size & Quantity:	Granit Safe.T sheet vinyl, 300mm x 300mm, 5 off.
Sampling & Direction of Testing:	Sampling conducted by client. Tested parallel with the direction of manufacture. Refer to Figure 1.
Test Personnel:	Clark Ahearn
Preparation:	Washed with water and pH neutral detergent, rinsed with water, then dried.
Fixed/Unfixed:	Fixed.
Air Temperature:	20°C
Test Equipment:	Wessex Skid Resistance Tester (Pendulum) Serial Number SK 1818, Calibrated 29/07/2014.
Test Standard:	AS 4586: 2013 Slip resistance classification of new pedestrian surface materials – Appendix A.
Slider Rubber:	Slider 96 Batch No. #53 prepared on P400 & 3µm lapping film.
Classification Criteria:	Refer to Classification Criteria, attached as Appendix 1.

British Pendulum Number	**Specimen Number**					**SRV**
	1	**2**	**3**	**4**	**5**	
	48	52	53	53	53	52
Classification:	**P4**					

These results apply only to the specimens tested and it is recommended that before selection of flooring or paving materials the effect of service conditions, including maintenance procedures and wear on their slip-resistance be checked.

NOTE: Any specimens supplied will be disposed of in two (2) months time, unless otherwise instructed.

ATTAR



Marcus Braché
Senior Engineering Technician
Approved Signatory

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ATTAR TEST REPORT NUMBER: 14/8106.21

12 August 2014 **Total Pages: 2**

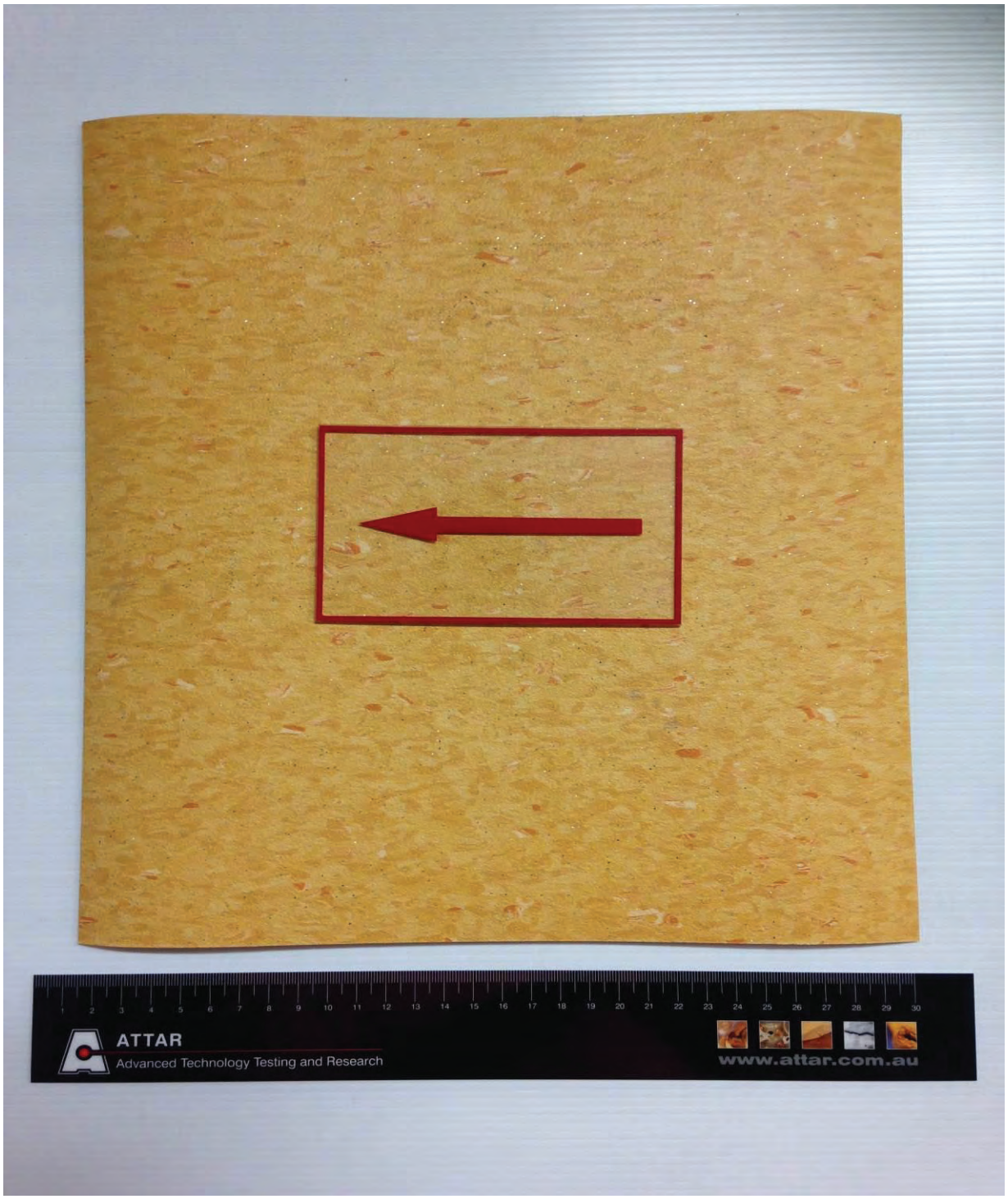

Figure 1: Granit Safe.T – Highlighted area indicates area tested and direction of test.

REPORT

issued by an Accredited Testing Laboratory

Contact person RISE
Kristian Törnqvist
Safety
+46 10 516 53 66
kristian.tornqvist@ri.se

Date
2018-12-17

Reference
8P08578-3

Tarkett AB
372 81 RONNEBY

Reaction to fire classification report

1 Introduction

This classification report defines the classification assigned to the product IQ Granit in accordance with the procedure given in EN 13501-1:2007+A1:2009.

2 Details of classified product

2.1 General

The product IQ Granit is defined as a floor covering. Its classification is valid for the following end use application: Floor covering.

2.2 Product description

The product, IQ Granit, is fully described in the test reports provided in support of classification listed in Clause 3.1.

3 Test report

3.1 Test reports

This classification is based on the test report listed below:

Name of laboratory	Name of sponsor	Test report ref no	Accredited test method
RISE	Tarkett AB	8P08578-1	EN ISO 9239-1 EN ISO 11925-2

Accred. No. 1002
Testing
ISO/IEC 17025

3.2 Test results

Test method	Parameter	Number of tests	Results	
			Continuous parameter mean (m)	Compliance parameter
EN ISO 11925-2		6		
15 s exposure	*Fs* ≤ 150 mm		(-)	Compliant
EN ISO 9239-1		4		
	Critical flux (kW/m^2)		11	Compliant
	Smoke (%.min)		185	Compliant

(-) : not applicable

4 Classification and field of application

4.1 Reference and direct field of application

This classification has been carried out in accordance with clause 12 and 15 of EN 13501-1:2007+A1:2009.

4.2 Classification

The product called “IQ Granit” in relation to its reaction to fire behaviour is classified:

B_{fl}

The additional classification in relation to smoke production is:

s1

The format of the reaction to fire classification for floorings is:

Fire Behaviour		Smoke Production	
B_{fl}	**-**	**s**	**1**

Reaction to fire classification: *B_{fl}-s1*

4.3 Field of application:

This classification is valid for the following product parameters:

Nominal thickness: 2.0 mm.

Nominal area weight: 2.8 kg/m^2.

This classification is valid for the following end use applications:

Substrates

- Wood based substrates at least 18 mm thick or substrates of Euroclass A1$_{fl}$ or A2$_{fl}$ at least 6 mm thick, having a density ≥ 510 kg/m^3.

The sample was delivered by the client. RISE Safety was not involved in the sampling procedure.

5 Limitations

This classification document does not represent type approval or certification of the product.

RISE Research Institutes of Sweden AB
Safety - Fire Research Materials

Performed by

Signed by: Kristian Törnqvist
Reason: I am the author of this document
Date & Time: 2018-12-17 14:52:42 +01:00

Kristian Törnqvist

Examined by

Signed by: Per Thureson
Reason: I have reviewed this document
Date & Time: 2018-12-17 16:19:50 +01:00

Per Thureson

VINYL FLOORINGS

iQ and Premium ranges

Rolls and Tiles

Installation instructions

iQ Granit, iQ Megalit, iQ Eminent, iQ Optima, iQ Gemstone
iQ Natural
Micra Premium, Primo Premium, Eclipse Premium

Jan 2011

IMPORTANT!

- Make sure all specifications and instructions are followed carefully.
- Contact your Tarkett representative if you are unsure about any part of the installation.
- This information is subject to change due to continuous improvement.
- Use the same batch number for each continuous surface (if material from several boxes is used, they should have the same manufacturing serial number and be used in consecutive order).
- Store the boxes in small neat piles (max. 5 boxes high).
- Let the flooring acclimatise for a while before laying.
- The subfloor must be flat, level, clean, without marks (no felt pen, marker, etc.), sound, dry, solid, hard, smooth and not exposed to moisture. Absorbency must be checked.
- Use only adhesives recommended by Tarkett. Always follow the adhesive manufacturer's instructions.
- The work must be completed with an inspection: ensure that the newly laid floor is free from adhesive residues.

SUBFLOOR

The subfloor must be level, flat, clean, free from marks (no felt pen, marker of any type, ballpoint pens, paint, etc., that could cause discoloration due to migration) sound, dry, solid, hard, smooth (the absorbency must be checked) and not exposed to moisture.

The preparation/dryness of the subfloor and installation procedures should all be in accordance with the current relevant Standard within the country of use. The dryness of a solid subfloor should be below the maximum moisture level permitted when tested in accordance with that Standard.

E.g. in the UK, the relative humidity of concrete surfaces must be below 75%, and less than 2% with the CCM method.
In North America, ASTM F-170 recommends a water-to-cement ratio of 0.40 to 0.45.

Before selecting a smoothing compound, check what type of traffic the floorcovering will be subjected to once installed. Latex smoothing compounds are not suitable for areas that will receive heavy traffic, especially heavy, narrow wheeled traffic (see EN 12529, Castors and wheels). Check levelling compound compatibility, and follow the instructions of the levelling compound manufacturer.

Note: exclusion of liability (adhesives, levelling compounds, etc.)
Although Tarkett may list a selection of adhesive, levelling compound and surface damp-proof membrane manufacturers and types, we do not guarantee the products listed. The list of products and manufacturers is not guaranteed complete or current.

Tarkett will accept no liability for any of these products failing to perform in conjunction with any of its products. It is the responsibility of the adhesive, levelling compound and surface damp-proof membrane manufacturer and flooring contractor to ensure the products being used are appropriate for use and applied in accordance with the manufacturers' recommendations.

LAYING DIRECTION

ROLLS

Plan the sheet direction for the area to be installed to ensure whenever possible that joins do not coincide with doorways, main traffic lanes, sinks or urinals.
If the room is reasonably square, the sheets should run parallel to the incoming light.
In long, narrow rooms it is best to install the sheets along the length of the room.

Cut the sheets to length. If coving is necessary, the sheets should be cut longer than the room.

All consecutive sheets should be installed in the opposite direction to the previous sheet installed, **except for Gemstone, which is laid in the same direction**.

Butt join when edges are straight, or overlap the edges by 3 cm and trim the two sheets simultaneously.

TILES

Before starting tile installation, determine the method of laying taking into account the shape of the room and the design to be laid. See the various methods on the separate sheet.

Install the tiles edge to edge and flatten by hand as they are placed.

iQ Granit, iQ Optima: install in the same direction or in a checkerboard pattern.
iQ Megalit, iQ Gemstone: install in the same direction.

GLUING

Glue with an acrylic adhesive emulsion recommended by Tarkett.

Apply 250 to 300 g/m^2 using a finely serrated trowel.

COVING

In some areas, it is recommended to cove the flooring up the wall.

WELDING

Hot welding with a welding rod is recommended for rolls and for tiles.
Important! Do not weld until the adhesive has bonded completely (wait 24 to 48 hours).
Groove the joints using a hand grooving tool or a machine before welding.
Weld with hot air and a Tarkett Speed Welding Nozzle or equivalent.

ATTAR TEST REPORT NUMBER: 14/8106.9

11 August 2014 **Total Pages: 2**

WET PENDULUM SLIP RESISTANCE

Job No: M14/8106

Prepared for:	Tarkett Australia Pty Ltd 16 Anella Avenue CASTLE HILL NSW 2154
Attention:	Maria Barreto-Tilman
Test Site:	Test Slip Australia Pty Ltd, Beaumont Hills, NSW.
Test Date:	5 August 2014
Test Specimens, Size & Quantity:	iQ Granit sheet vinyl, 300mm x 300mm, 5 off.
Sampling & Direction of Testing:	Sampling conducted by client. Tested parallel with the direction of manufacture. Refer to Figure 1.
Test Personnel:	Clark Ahearn
Preparation:	Washed with water and pH neutral detergent, rinsed with water, then dried.
Fixed/Unfixed:	Fixed.
Air Temperature:	21°C
Test Equipment:	Wessex Skid Resistance Tester (Pendulum) Serial Number SK 1818, Calibrated 29/07/2014.
Test Standard:	AS 4586: 2013 Slip resistance classification of new pedestrian surface materials – Appendix A.
Slider Rubber:	Slider 96 Batch No. #53 prepared on P400 & 3µm lapping film.
Classification Criteria:	Refer to Classification Criteria, attached as Appendix 1.

British Pendulum Number	**Specimen Number**					**SRV**
	1	**2**	**3**	**4**	**5**	
	48	50	49	50	53	50
Classification:	**P4**					

These results apply only to the specimens tested and it is recommended that before selection of flooring or paving materials the effect of service conditions, including maintenance procedures and wear on their slip-resistance be checked.

NOTE: Any specimens supplied will be disposed of in two (2) months time, unless otherwise instructed.

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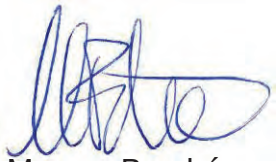

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ATTAR TEST REPORT NUMBER: 14/8106.9

11 August 2014 **Total Pages: 2**

Figure 1: iQ Granit – Highlighted area indicates area tested and direction of test.

6721R Resene Painting Interior

Resene Paints Ltd
+64 04 5770500
advice@resene.co.nz
www.resene.co.nz

SUPPORTING DOCUMENTS

Fire Group Ratings - Wall & Ceiling linings

Ref 30504. Uploaded 12 Jul 2022

Purpose: Performance

Resene Product Data Sheet D302 - Resene Zylone Sheen, Resene Zylone Sheen Zero waterborne low sheen

Ref 13554. Uploaded 31 Oct 2022

Purpose: Performance, Installation

Resene Product Data Sheet D310 - Resene Lustacryl semi-gloss waterborne enamel

Ref 13456. Uploaded 31 Oct 2022

Purpose: Performance, Installation

Resene Product Data Sheet D311K - Resene SpaceCote Low Sheen Kitchen & Bathroom waterborne enamel

Ref 13497. Uploaded 31 Oct 2022

Purpose: Performance, Installation

Resene Product Data Sheet D314 - Resene SpaceCote Flat waterborne enamel, Resene SpaceCote Flat Fly Deterrent

Ref 13491. Uploaded 31 Oct 2022

Purpose: Performance, Installation

Resene Product Data Sheet D403 - Resene Broadwall Waterborne Wallboard Sealer

Ref 13398. Uploaded 31 Oct 2022

Purpose: Performance, Installation

Resene Product Data Sheet D42 - Resene Sureseal pigmented sealer

Ref 13508. Uploaded 31 Oct 2022

Purpose: Performance, Installation

Resene Product Data Sheet D45 - Resene Quick Dry waterborne primer undercoat

Ref 13473. Uploaded 31 Oct 2022

Purpose: Performance, Installation

Resene Product Data Sheet D52 - Resene Qristal Clear Polyurethane Poly-Flat, Poly-Satin, Poly-Gloss

Ref 13470. Uploaded 31 Oct 2022

Purpose: Performance, Installation

Table C1.1	Alternative test or classification standards for Group Numbers

Requirements according to C/VM2 Appendix A using ISO 9705 or ISO 5660	Australian requirements according to NCC Specification C1.10 Clause 4 using AS ISO 9705	European Classification using EN 13501-1
Group Number 1-S	Group Number 1, and a smoke growth rate index not more than 100	Class A1, A2 or Class B and smoke production rating s1 or s2
Group Number 1	Group Number 1	Class A1, A2 or B
Group Number 2-S	Group Number 2, and a smoke growth rate index not more than 100	Class C and smoke production rating s1 or s2
Group Number 2	Group Number 2	Class C
Group Number 3	Group Number 3	Class D
Group Number 4	Group Number 4	Class E and F

Table C1.2	Specified performances for some substrate and coating combinations

Coating (coating in good condition and well adhered to substrate)	Substrate	Group Number
Waterborne or solvent borne paint coatings ≤ 0.4 mm thick Polymeric films ≤ 0.2 mm thick	Concrete and masonry ≥ 15 mm thick Sheet metal ≥ 0.4 mm thick Fibre-cement board ≥ 6.0 mm thick Porcelain, ceramic, glass, solid stone or similar tiles	1-S
Waterborne or solvent borne paint coatings ≤ 0.4 mm thick	Gypsum plasterboard with or without paper facing ≥ 9.5 mm thick	2-S
Waterborne or solvent borne paint coatings, varnish or stain ≤ 0.4 mm thick ≤ 100 g/m^2	Solid wood or wood product ≥ 9.0 mm thick ≥ 600 kg/m^3 for particle boards, or ≥ 400 kg/m^3 for all other wood and wood products	3
Note: The requirements of this table do not apply to metal faced panels with polymeric substrate.		

Resene Zylone Sheen

waterborne low sheen

Resene Zylone Sheen is the result of advanced technology that produces a smooth yet ultra tough surface. Drying to an attractive low sheen finish, its ease of application, washability and durability make it an ideal choice for interior use. A very low odour product.

Available in Resene Zylone Sheen and Resene Zylone Sheen Zero (no added VOCs) variants.

interior

Typical uses

- Block and brickwork
- Concrete and plaster
- Fibre and particle board
- Fibre cement
- Fibrous plaster
- Paperfaced plasterboard
- Timber
- Wallpaper
- Wallboards
- Woven wallcoverings

Physical properties

Vehicle type	Novel high polymer combination
Pigmentation	Titanium dioxide/extenders
Solvent	Water
Finish	Low sheen
Colour	Selected Resene Total Colour System, including BS5252, Multi-Finish, Whites & Neutrals and The Range
Dry time (minimum)	45 minutes at 18°C
Recoat time (minimum)	2 hours
Primer required	Yes, dependent on surface
Theoretical coverage	14-16 sq. metres per litre
Dry film thickness	27 microns at 14 sq. metres per litre
Usual no. of coats	2; some colours may require an additional coat
Abrasion resistance	Very good
Chemical resistance	Good
Heat resistance	Thermoplastic
Solvent resistance	Fair
Durability	Excellent
Thinning	In hot conditions may be thinned with up to 5% Resene Hot Weather Additive to slow drying. Additions of Resene Hot Weather Additive will introduce low levels of VOCs to the product.
Clean up	Water
VOC	Resene Zylone Sheen c. 26 grams per litre Resene Zylone Sheen Zero – nil. (see Resene VOC Summary)

Performance and limitations

Performance

1. Excellent flow properties drying to a luxurious low sheen finish.
2. Easy to clean.
3. Burnish resistant.
4. Clean, spatter free application.
5. Controlled low-angle sheen to minimise substrate imperfections.
6. An Environmental Choice approved product.

Limitations

1. Do not apply at temperatures below 10°C or when it is liable to drop below 10°C during the drying period.
2. Not recommended for use in bathrooms, kitchens or laundries (use Resene SpaceCote Low Sheen Kitchen & Bathroom- see Data Sheet D311K).
3. Washability improves over several days as the paint hardens.
4. Will not penetrate chalky and powdery surfaces.
5. Not normally used on opening sashes and doors (use Resene SpaceCote Low Sheen - see Data Sheet D311).

Please ensure the current Data Sheet and Safety Data Sheet are consulted prior to specification or application of Resene products. View Data Sheets online at www.resene.com/datasheets. If in doubt contact Resene.

Zylone Sheen waterborne low sheen

Surface preparation

Clean down thoroughly to remove all dirt, dust and loose material. Ensure surface is free from oil, grease and mould.

If moss and mould are present, treat with Resene Moss & Mould Killer (see Data Sheet D80). Sand to smooth finish and dust off. Old enamels require fine sanding to a uniform dull finish.

Prime as per the following:

Fibrous plaster, paperfaced plasterboard

Resene Broadwall Waterborne Wallboard Sealer (see Data Sheet D403). Ensure new paperfaced plasterboard is prepared to a level of finish suitable for the specified paint finish. Resene Broadwall Surface Prep & Seal (see Data Sheet D807) or Resene Broadwall 3 in 1 (see Data Sheet D810) can be used to achieve a level 5 finish.

Laminated or varnished surfaces

Resene Waterborne Smooth Surface Sealer (see Data Sheet D47a).

Particle board, timber

Resene Quick Dry (see Data Sheet D45). (Where a staining type of timber exists an application of Resene Wood Primer (see Data Sheet D40) or Resene Enamel Undercoat (see Data Sheet D44) will be required).

Soft or absorbent surfaces

Where the surface to be painted is considered too soft to form a stable substrate, a saturation coat of a fully penetrating sealer such as Resene Sureseal (see Data Sheet D42) may be required.

Sanding dust from old lead or chromate based paints or old building materials containing asbestos may be injurious to the health if inhaled or ingested. Seek expert advice if the presence of these materials is suspected.

Application

Apply by brush, speed brush, synthetic fibre roller (Resene roller sleeve No.1) or spray. Thin with up to 5% Resene Hot Weather Additive in hot, dry conditions to slow drying.

New

1. Prepare and prime as above.
2. Apply two coats of Resene Zylone Sheen in required colour allowing at least two hours between coats.

Repaint

1. Prepare surface and spot prime as above.
2. Apply two coats of Resene Zylone Sheen in required colour allowing at least two hours between coats.

Maintain good ventilation throughout the drying and post application curing period to ensure the paint is properly cured. This may require use of an extraction system when painting in marginal painting conditions. Do not use gas or diesel burners to heat coated area as these produce water that will inhibit drying and curing. Poor ventilation may affect appearance and performance.

Precautions

1. Ensure correct primer and/or sealer is used.
2. Stop all nailholes and cracked timber after priming.
3. Some ‘soft’ paperfaced plasterboard preparatory products and undercured gypsum based jointing compounds may not be suitable basecoats for painting under stressed conditions. Reinforcement with a saturation coat of a fully penetrating primer (such as Resene Sureseal - see Data Sheet D42) may be required. Use Resene Sureseal or Resene StainLock (see Data Sheet D408) if the surface is water stained or has yellowed due to prolonged exposure to sunlight.

Zylone Sheen SDS

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Resene Lustacryl

semi-gloss waterborne enamel

Resene Lustacryl is the result of long, careful, intensive research. This breakthrough product may be used in all those areas traditionally reserved for solventborne enamels. Non-yellowing and fast drying with easy water clean up.

exterior/interior

Typical uses

- Architraves
- Bathrooms
- Furniture
- Kitchens
- Laundries
- Plywood
- Skirtings
- Timber doors
- Wallboards
- Window frames

Physical properties

Vehicle type	New generation acrylic
Pigmentation	Titanium dioxide
Solvent	Water
Finish	Semi-gloss
Colour	Selected Resene Total Colour System, including BS5252, Multi-Finish, Whites & Neutrals and The Range
Dry time (minimum)	45 minutes at 18°C
Recoat time (minimum)	2 hours
Serviceable within ‘	12-48 hours depending on film thickness, tinter levels and drying conditions
Primer required	Yes
Theoretical coverage	12 sq. metres per litre
Dry film thickness	34 microns at 12 sq. metres per litre
Usual no. of coats	2; some colours may require an additional coat
Abrasion resistance	Very good
Chemical resistance	Fair
Heat resistance	Good
Solvent resistance	Good
Durability	Excellent
Thinning and clean up	Water; in hot dry conditions may be thinned with up to 5% Resene Hot Weather Additive
VOC	c. 63 grams per litre (see Resene VOC Summary)

Performance and limitations

Performance

1. May be used wherever solventborne enamels have traditionally been used.
2. Non-yellowing.
3. Resene Lustacryl may be applied over Resene Quick Dry waterborne primer undercoat (see Data Sheet D45) or directly over sound, clean old enamel surfaces.
4. Clean, spatter free application.
5. An Environmental Choice approved product.

Limitations

1. Do not apply at temperatures below 10°C or when it is liable to drop below 10°C during the drying period.
2. Ensure the correct primers and/or sealers are used.
3. Due to waxes used in fibre and particle board it is essential that Resene Quick Dry (see Data Sheet D45) is used as the first coat.

Please ensure the current Data Sheet and Safety Data Sheet are consulted prior to specification or application of Resene products. View Data Sheets online at www.resene.com/datasheets. If in doubt contact Resene.

Lustacryl semi-gloss waterborne enamel

Surface preparation

Clean down thoroughly to remove all dirt, dust and loose material. Ensure surface is free from oil, grease and mould.

If moss and mould are present, treat with Resene Moss & Mould Killer (see Data Sheet D80). Sand to smooth finish and dust off. Old enamels require fine sanding to a uniform dull finish.

Prime as per the following:

Cedar, weathered timber

Treat with Resene TimberLock (see Data Sheet D48). Prime with Resene Quick Dry (see Data Sheet D45). (Where a staining type of timber exists an application of Resene Wood Primer (see Data Sheet D40) may be required).

Fibrous plaster, paperfaced plasterboard

Resene Broadwall Waterborne Wallboard Sealer (see Data Sheet D403). Ensure new paperfaced plasterboard is prepared to a level of finish suitable for the specified paint finish. Resene Broadwall Surface Prep & Seal (see Data Sheet D807) or Resene Broadwall 3 in 1 (see Data Sheet D810) will be required to achieve a level 5 finish.

Particle board, timber

Resene Quick Dry (see Data Sheet D45). (Where a staining type of timber exists an application of Resene Wood Primer (see Data Sheet D40) may be required).

Laminated surfaces, varnished surfaces

Resene Waterborne Smooth Surface Sealer (see Data Sheet D47a).

Soft or absorbent surfaces

Where the surface to be painted is considered too soft to form a stable substrate, a saturation coat of a fully penetrating sealer, such as Resene Sureseal (see Data Sheet D42), may be required.

Sanding dust from old lead or chromate based paints or old building materials containing asbestos may be injurious to the health if inhaled or ingested. Seek expert advice if the presence of these materials is suspected.

Application

Apply by brush, speed brush, synthetic fibre roller or spray. In hot dry conditions thin with up to 5% Resene Hot Weather Additive.

New

1. Prepare and prime as above.
2. Apply two coats of Resene Lustacryl in required colour allowing at least two hours between coats.

Repaint

1. Prepare surface and spot prime as above.
2. Apply two coats of Resene Lustacryl in required colour allowing at least two hours between coats.

Precautions

1. Ensure the correct primer and/or sealer is used.
2. Stop all nailholes and cracked timber after priming.
3. Allow putty to thoroughly harden before painting.
4. Allow Resene Lustacryl sufficient drying before putting into full service.
5. Serviceable within 12-48 hours depending on film thickness, tinter level and drying conditions.

Lustacryl SDS

D311K

Resene SpaceCote Low Sheen Kitchen & Bathroom

waterborne enamel

Resene SpaceCote Low Sheen Kitchen & Bathroom combines the benefits of a waterborne enamel with added anti-bacterial silver protection and MoulDefender.

This breakthrough product may be used to bring enamel style toughness to broadwall areas, allowing you to get a low sheen finish with added protection.

So adaptable that it may also be used on joinery and trim.

interior

Typical uses

- Bathrooms
- Kitchens
- Laundries
- Timber doors
- Trim and joinery
- Window frames

Physical properties

Vehicle type	New generation acrylic
Pigmentation	Titanium dioxide
Solvent	Water
Finish	Low sheen
Colour	White and colours off-white
Dry time (minimum)	45 minutes at 18°C
Recoat time (minimum)	2 hours
Serviceable within	12-48 hours depending on film thickness, tinter levels and drying conditions
Primer required	Yes
Theoretical coverage	11 sq. metres per litre
Dry film thickness	37 microns at 11 sq. metres per litre
Usual no. of coats	2
Abrasion resistance	Very good
Chemical resistance	Fair
Heat resistance	Good
Solvent resistance	Good
Durability	Excellent
Thinning	In hot dry conditions may be thinned with up to 5% Resene Hot Weather Additive to slow drying
Clean up	Water
VOC	c. 50 grams per litre (see Resene VOC summary)

Performance and limitations

Performance

1. Reduced side sheen minimises the appearance of minor surface defects.
2. Very durable, abrasion resistant finish that may be easily cleaned. Ideal for GIB® ToughZone® areas.
3. Protects against bacteria with silver and against mould with MoulDefender.
4. Non-yellowing.
5. May be used wherever solventborne enamels have traditionally been used.
6. Clean, spatter free application.
7. An Environmental Choice approved product.

Limitations

1. Do not apply at temperatures below 10°C or when it is liable to drop below 10°C during the drying period.
2. Ensure the correct primers and/or sealers are used.
3. Due to waxes used in particle and fibreboard it is essential that Resene Quick Dry (see Data Sheet D45) is used as the first coat on these substrates.
4. Although serviceable within 12-48 hours, full print and solvent resistance takes seven days to develop.

Please ensure the current Data Sheet and Safety Data Sheet are consulted prior to specification or application of Resene products. View Data Sheets online at www.resene.com/datasheets. If in doubt contact Resene.

SpaceCote Low Sheen Kitchen & Bathroom

Surface preparation

Clean down thoroughly to remove all dirt, dust and loose material. Ensure surface is free from oil, grease and mould.

If moss and mould are present, treat with Resene Moss & Mould Killer (see Data Sheet D80). Sand to smooth finish and dust off. Old enamels require fine sanding to a uniform dull finish.

Prime as per the following:

Fibrous plaster, paperfaced plasterboard

Resene Sureseal (see Data Sheet D42) must be used in wet areas, such as bathrooms, kitchens or laundries, on powdery surfaces, fibrous plaster or where plasterboard has yellowed due to prolonged exposure to sunlight. For other areas, use Resene Broadwall Waterborne Wallboard Sealer (see Data Sheet D403). Ensure new paperfaced plasterboard is prepared to a level of finish suitable for the specified paint finish. Resene Broadwall Surface Prep & Seal (see Data Sheet D807) or Resene Broadwall 3 in 1 (see Data Sheet D810) will be required to achieve a level 5 finish.

Particle board, timber

Resene Quick Dry (see Data Sheet D45). (Where a staining type of timber exists an application of Resene Wood Primer (see Data Sheet D40) may be required).

Soft or absorbent surfaces

Where the surface to be painted is considered too soft to form a stable substrate, a saturation coat of a fully penetrating sealer, such as Resene Sureseal (see Data Sheet D42), may be required.

Varnished surfaces, laminated surfaces

Resene Waterborne Smooth Surface Sealer (see Data Sheet D47a).

Sanding dust from old lead or chromate based paints or old building materials containing asbestos may be injurious to the health if inhaled or ingested. Seek expert advice if the presence of these materials is suspected.

Application

Apply by brush, speed brush, synthetic fibre roller (Resene No.1) or spray. Thin with up to 5% Resene Hot Weather Additive in hot, dry conditions to slow drying.

New

1. Prepare and prime as above.
2. Apply two coats of Resene SpaceCote Low Sheen Kitchen & Bathroom in required colour allowing at least two hours between coats.

Repaint

1. Prepare surface and spot prime as above.
2. Apply two coats of Resene SpaceCote Low Sheen Kitchen & Bathroom in required colour allowing at least two hours between coats.

Precautions

1. Ensure the correct primer and/or sealer is used.
2. Stop all nailholes and cracked timber after priming.
3. Allow putty to thoroughly harden before painting.
4. Allow Resene SpaceCote Low Sheen Kitchen & Bathroom sufficient drying before putting into full service.
5. Serviceable within 12-48 hours depending on film thickness, tinter level and drying conditions.
6. Resene Sureseal (see Data Sheet D42) must be used where paperfaced plasterboard has yellowed due to prolonged exposure to sunlight, and in wet areas such as bathrooms, kitchens and laundries.

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Resene SpaceCote Flat

waterborne enamel

Resene SpaceCote Flat is designed to bring enamel style toughness to broadwall areas, allowing you to get a desirable flat finish without sacrificing durability. Very adaptable, it can also be used on interior wet areas and joinery and trim.

Also available in fly deterrent formulation to minimise the appearance of unwanted fly spots. Fly deterrent version designed for interior use only.

exterior/interior

Typical uses

- Architraves
- Bathrooms
- Furniture
- Kitchens
- Laundries
- Plywood
- Skirtings
- Timber doors
- Wallboards
- Window frames

Physical properties

Vehicle type	New generation acrylic
Pigmentation	Titanium dioxide
Solvent	Water
Finish	Flat
Colour	Selected Resene Total Colour System, including BS5252, Multi-Finish, Whites & Neutrals and The Range
Dry time (minimum)	45 minutes at 18°C
Recoat time (minimum)	2 hours
Serviceable within	12-48 hours depending on film thickness, tinter levels and drying conditions
Primer required	Yes
Theoretical coverage	11 sq. metres per litre
Dry film thickness	37 microns at 11 sq. metres per litre
Usual no. of coats	2
Abrasion resistance	Very good
Chemical resistance	Fair
Heat resistance	Good
Solvent resistance	Good
Durability	Excellent
Thinning and clean up	Water, in hot dry conditions may be thinned with up to 5% Resene Hot Weather Additive
VOC	c. 55 grams per litre (see Resene VOC Summary)

Performance and limitations

Performance

1. Flat finish minimises the appearance of minor surface defects.
2. Very durable, abrasion resistant finish that can be easily cleaned. Ideal for GIB® ToughZone areas.
3. Non-yellowing.
4. May be used wherever solventborne enamels have traditionally been used.
5. Resene SpaceCote Flat may be applied over Resene Quick Dry (see Data Sheet D45) or directly over sound, clean old enamel surfaces.
6. Clean, spatter free application.
7. Fly deterrent variant will discourage flies from landing and resting on painted surfaces minimising the appearance of fly spots.
8. An Environmental Choice approved product.

Limitations

1. Do not apply at temperatures below 10°C or when it is liable to drop below 10°C during the drying period.
2. Ensure the correct primers and/or sealers are used.
3. Due to waxes used in fibre and particle board it is essential that Resene Quick Dry (see Data Sheet D45) is used as the first coat on these substrates.
4. Although serviceable within 12-48 hours, full print and solvent resistance takes 30 days to develop.

Please ensure the current Data Sheet and Safety Data Sheet are consulted prior to specification or application of product. If in doubt contact Resene.

SpaceCote Flat waterborne enamel

Surface preparation

Clean down thoroughly to remove all dirt, dust and loose material. Ensure surface is free from oil, grease and mould.

If moss and mould are present, treat with Resene Moss & Mould Killer (see Data Sheet D80). Sand to smooth finish and dust off. Old enamels require fine sanding to a uniform dull finish.

Prime as per the following:

Fibrous plaster, paperfaced plasterboard

Resene Broadwall Waterborne Wallboard Sealer (see Data Sheet D403). Ensure new paperfaced plasterboard is prepared to a level of finish suitable for the specified paint finish. Resene Broadwall Surface Prep & Seal (see Data Sheet D807) or Resene Broadwall 3 in 1 (see Data Sheet D810) will be required to achieve a level 5 finish.

Laminated surfaces, varnished surfaces

Resene Waterborne Smooth Surface Sealer (see Data Sheet D47a).

Particle board, timber

Resene Quick Dry (see Data Sheet D45). (Where a staining type of timber exists an application of Resene Wood Primer (see Data Sheet D40) may be required).

Soft or absorbent surfaces

Where the surface to be painted is considered too soft to form a stable substrate, a saturation coat of a fully penetrating sealer, such as Resene Sureseal (see Data Sheet D42) may be required.

Sanding dust from old lead or chromate based paints or old building materials containing asbestos may be injurious to the health if inhaled or ingested. Seek expert advice if the presence of these materials is suspected.

Application

Apply by brush, speed brush, synthetic fibre roller (Resene No.1 roller) or spray. Thin with up to 5% Resene Hot Weather Additive in hot, dry conditions to slow drying.

New

1. Prepare and prime as above.
2. Apply two coats of Resene SpaceCote Flat in required colour allowing at least two hours between coats. Some colours may require a third coat.

Repaint

1. Prepare surface and spot prime as above.
2. Apply two coats of Resene SpaceCote Flat in required colour allowing at least two hours between coats. Some colours may require a third coat.

Precautions

1. Ensure the correct primer and/or sealer is used.
2. Stop all nailholes and cracked timber after priming.
3. Allow putty to thoroughly harden before painting.
4. Allow Resene SpaceCote Flat sufficient drying before putting into full service.
5. Serviceable within 12-48 hours depending on film thickness, tinter level and drying conditions.
6. The fly deterrent effect of Resene SpaceCote Flat Fly Deterrent will reduce with cleaning and over time.
7. Resene Sureseal (see Data Sheet D42) must be used where paperfaced plasterboard has yellowed due to prolonged exposure to sunlight and in areas, such as kitchens, bathrooms and laundries where water staining exists. Resene Sureseal may be substituted by Resene Waterborne Smooth Surface Sealer (see Data Sheet D47a) on new paperfaced plasterboard in wet areas.

Please ensure the current Data Sheet is consulted prior to specification or application of Resene products.
If the surface you propose to coat is not referred to by this Data Sheet, please contact Resene for clarification.

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Resene Broadwall Waterborne Wallboard Sealer

Resene Broadwall Waterborne Wallboard Sealer is a water reducible first coat for plasterboard walls and air-dry stoppings. Designed to minimise porosity and textural differences.

interior

Typical uses

- Air-dry (polymer based) stoppings and finishing compounds
- Paperfaced plasterboard

Physical properties

Vehicle type	Acrylic
Pigmentation	Titanium dioxide/extenders
Solvent	Water
Finish	Low sheen
Dry time (minimum)	2 hours at 18°C
Recoat time (minimum)	2 hours at 18°C
Theoretical coverage	12 sq. metres per litre
Dry film thickness	36 microns at 12 sq. metres per litre
Usual no. of coats	1
Abrasion resistance	Fair/good
Chemical resistance	Good
Heat resistance	Good
Solvent resistance	Fair
Thinning and clean up	Water
VOC	0 grams per litre (see Resene VOC Summary)

Performance and limitations

Performance

1. Good adhesion and binding of air-dried stoppings.
2. Minimum fibre raising of paper.
3. Excellent hold-out of topcoats.
4. Very good opacity.
5. An Environmental Choice approved product.

Limitations

1. Not as good as Resene Sureseal (see Data Sheet D42) in the areas of stain resistance or wet adhesion.

Please ensure the current Data Sheet and Safety Data Sheet are consulted prior to specification or application of Resene products. View Data Sheets online at www.resene.com/datasheets. If in doubt contact Resene.

Broadwall Waterborne Wallboard Sealer

Surface preparation

Paperfaced plasterboard

Ensure surface is clean and dry, free from dirt, dust and loose material, oil, grease and mould. Ensure also that the surface is sound and free from weak, powdery, or undercured stoppings. Remove excess stopping compounds preferably by wet smoothing with a synthetic sponge. Avoid sanding the paper surface as this will cause 'furring' and unacceptable textural differences in the finish. Where the paper surface has yellowed due to prolonged exposure to sunlight, Resene Sureseal (see Data Sheet D42) must be used.

Ensure new paperfaced plasterboard is prepared to a level of finish suitable for the specified paint finish. Resene Broadwall Surface Prep & Seal (see Data Sheet D807) or Resene Broadwall 3 in 1 (see Data Sheet D810) is required to achieve a level 5 finish.

Sanding dust from old lead or chromate based paints or old building materials containing asbestos may be injurious to the health if inhaled or ingested. Seek expert advice if the presence of these materials is suspected.

Application

Apply by brush, speed brush, synthetic pile roller or spray.

Coverage may vary with application method, technique and conditions. If necessary, thin with up to 10% water to maintain recommended coverage.

Broadwall Waterborne Wallboard Sealer SDS

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Resene Sureseal

pigmented sealer

Resene Sureseal is a pigmented, solventborne, alkali-resistant, penetrating sealer with the ability to penetrate and bond old decaying surfaces and make them suitable for painting. This lower odour formulation acts as a surface conditioner that also reduces bleeding of water stains and dries without the unwanted and strong solvent odours associated with traditional solventborne products.

exterior/interior

Typical uses

- Brickwork
- Chalky and powdery surfaces
- Concrete tiles
- Fibre cement
- Fibrous plaster
- Paperfaced plasterboard
- Plaster - gypsum and solid
- Plaster glass
- Stucco
- Timber

Physical properties

Vehicle type	Highly modified oils
Pigmentation	Titanium dioxide/alkali resistant pigments
Solvent	Low odour hydrocarbon, less than 1% aromatic hydrocarbon content
Finish	Low sheen
Colour	Off-white
Dry time (minimum)	Touch dry 45 minutes at 20°C, drying will be slower at lower temperatures
Recoat time (minimum)	3 hours at 20°C
Theoretical coverage	Up to 16 sq. metres per litre depending on porosity
Dry film thickness	23 microns at 16 sq. metres per litre
Usual no. of coats	1
Abrasion resistance	Very good
Chemical resistance	Very good
Heat resistance	Good
Solvent resistance	Good
Thinning	Resene Thinner No.2 (lower odour) or Mineral turps
Clean up	Resene Thinner No.2 (lower odour), Mineral turps or Resene Brush Cleaner
VOC	c. 498 grams per litre (see Resene VOC Summary)

Performance and limitations

Performance

1. Lower odour formulation, less than 1% aromatic hydrocarbon content.
2. Excellent adhesion to all substrates.
3. Resene Sureseal is the recommended treatment for conditioning surfaces previously painted with cement-based paints in order to make them suitable to take a waterborne system, such as Resene Sonyx 101 (see Data Sheet D30).
4. Upgrades the performance of paperfaced plasterboard finishing compounds in wet areas.
5. Any painting system may be applied over Resene Sureseal.
6. Excellent flow over the most porous of surfaces.

Limitations

1. Resene Sureseal is a penetrating sealer and should not be regarded as forming part of the film build of the subsequent coating.
2. One coat of Resene Sureseal cannot be expected to hold back gross staining. The source of the stain must be removed, and more than one coat of Resene Sureseal must be used.

Sureseal pigmented sealer

Surface preparation

New work

Sand and brush down to remove all dirt and loose material. Ensure surface is free from oil, grease and signs of form oil.

New work in wet areas – paperfaced plasterboard

Ensure new paperfaced plasterboard is prepared to a level of finish suitable for the specified paint finish. Resene Broadwall Surface Prep & Seal (see Data Sheet D807) or Resene Broadwall 3 in 1 (see Data Sheet D810) is required to achieve a level 5 finish. Reinforcement of Resene Broadwall Surface Prep & Seal or Resene Broadwall 3 in 1 with a full coat of Resene Sureseal (see Data Sheet D42) is recommended for service areas, such as bathrooms, kitchens and wet areas.

Old work

Waterblasting of exterior weathered cementitious substrates is the best surface preparation method prior to painting. If this is not possible, thoroughly wire brush and follow above, as for new work.

Thoroughly remove mould, moss and lichen. Treat with Resene Moss & Mould Killer (see Data Sheet D80).

Sanding dust from old lead or chromate based paints or old building materials containing asbestos may be injurious to the health if inhaled or ingested. Seek expert advice if the presence of these materials is suspected.

Application

1. Best applied by brush ensuring full surface wetting is achieved.
2. Resene Sureseal can be rolled using a Resene No.5 roller sleeve or sprayed providing the surface is in good condition, firm and not crumbling away.

Precautions

1. **While this product is formulated using low odour solvents, you must ensure there is good ventilation during application and curing. Avoid breathing vapour.**
2. Must not be applied to wet or damp surfaces.
3. Where maximum barrier protection is required, two coats are recommended to ensure all surface pores are sealed.
4. FLAMMABLE - Keep away from heat and open flame. Keep closed when not in use.

Sureseal SDS

Resene Quick Dry

waterborne primer undercoat

Resene Quick Dry waterborne primer undercoat provides long-term flexibility over unstable substrates coupled with exceptional durability even when left uncoated for prolonged periods. The latest formulation has enhanced flow and sanding characteristics for maximum benefit under waterborne enamels, such as Resene Enamacryl (see Data Sheet D309) and Resene Lustacryl (see Data Sheet D310).

exterior/interior

Typical uses

- Architraves
- Block and brickwork
- Cement plaster
- Cloth and woven wallcoverings
- Particle board
- Repaint old work
- Timber (including Matai, Spotted Gum and Totara)
- Wallboards
- Wallpaper

Physical properties

Vehicle type	100% acrylic
Pigmentation	Titanium dioxide/fillers
Solvent	Water
Finish	Low sheen
Colour	White
Dry time (minimum)	20 minutes at 18°C
Recoat time (minimum)	2 hours
Sealer required	See precautions
Theoretical coverage	12.5 sq. metres per litre
Dry film thickness	35 microns at 12.5 sq. metres per litre
Usual no. of coats	1-2
Chemical resistance	Good
Heat resistance	Thermoplastic
Solvent resistance	Good
Sanding properties	Good
Durability	Excellent
Thinning and clean up	Water
VOC	c. 34 grams per litre (see Resene VOC Summary)

Performance and limitations

Performance

1. Excellent adhesion to substrates including old paint.
2. Outstanding durability maintaining flexibility for the life of the system.
3. Excellent flow and sanding properties.
4. Successful primer/undercoat for HDF and MDF. Resene Quick Dry seals waxes used in the board and makes ready for any subsequent paint system.
5. Designed with a low sheen that allows exceptional enamel hold-out.
6. An ideal primer for Matai, Spotted Gum and Totara.
7. An Environmental Choice approved product.

Limitations

1. Do not apply at temperatures below 10°C or when it is liable to drop below 10°C during the drying period.
2. Not designed as a first coat over metal surfaces or weak powdery surfaces.

Exposed bare or cracked timber usually accumulates windblown salt. Before using a totally waterborne system, this salt must be removed by prolonged washing with freshwater. Alternatively, use a solventborne undercoat.

Please ensure the current Data Sheet and Safety Data Sheet are consulted prior to specification or application of Resene products. View Data Sheets online at www.resene.com/datasheets. If in doubt contact Resene.

Quick Dry waterborne primer undercoat

Surface preparation

Sand timber surfaces smooth. Clean down thoroughly to remove all dirt, dust and loose material. Any timber that has been exposed to weather for more than one week requires thorough sanding of the surface or treatment with Resene TimberLock (see Data Sheet D48). Resene TimberLock is strongly recommended for pre-treating new Cedar. Consult Resene for technical advice for coating severely weathered timber.

If moss and mould are present, treat with Resene Moss & Mould Killer (see Data Sheet D80). Waterblasting at 21,000 kps (3000 psi) is the best surface preparation method prior to painting of weathered cementitious surfaces or galvanised steel.

Efflorescence on masonry must be treated (see Data Sheet D83).

Existing gloss enamel painted surfaces must be thoroughly sanded to provide a mechanical key for subsequent coats.

Sanding dust from old lead or chromate based paints or old building materials containing asbestos may be injurious to the health if inhaled or ingested. Seek expert advice if the presence of these materials is suspected.

Application

Apply by brush, speed brush, synthetic fibre roller or spray. Spray application is generally not preferred for the first coat.

Apply one to two coats of Resene Quick Dry allowing two to four hours between coats. Lightly sand between coats. For porous surfaces, it may be desirable to thin the first coat with up to 10% clean water.

New paperfaced plasterboard, solid and fibrous plaster and old powdery cementitious surfaces may be sealed with either Resene Sureseal (see Data Sheet D42) or Resene Broadwall Waterborne Wallboard Sealer (see Data Sheet D403). Consult Resene.

Precautions

1. Fill all nailholes and cracked timber after priming.
2. Not recommended for use where severe water staining exists.
3. Resene Wood Primer (see Data Sheet D40) is recommended for Cedar to hold back staining when light colours are used.

Quick Dry SDS

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Resene Qristal Clear Polyurethane

Resene Qristal Clear is a range of hardwearing single pack polyurethanes. Designed using the most modern urethane resin for ease of application and maximum flow.

- **Resene Poly-Flat** produces a low sheen wax-like finish with excellent grain filling and sanding properties.
- **Resene Poly-Satin** produces a rich hardwearing semi-gloss finish with excellent sanding properties.
- **Resene Poly-Gloss** dries to an extremely hard high gloss finish (the wet look). Best applied over Resene Poly-Flat or Resene Poly-Satin.

Where a harder wearing surface is required, substitute Resene HD Poly-Satin for Resene Poly-Satin, or the full gloss Resene Polythane (see Data Sheet D53) for Resene Poly-Gloss.

interior

Physical properties

Vehicle type	Polyurethane
Pigmentation	Flatting agents (flat and satin only)
Solvent	Mineral turps
Finish	Flat, semi-gloss and gloss
Colour	Amber/clear
Dry time (minimum)	4 hours at 18°C
Recoat time (minimum)	12 hours
Sealer required	Yes, on fibre and particleboard only
Theoretical coverage	16 sq. metres per litre
Dry film thickness	Resene Poly-Flat and Resene Poly-Satin: 21 microns at 16 sq. metres per litre Resene Poly-Gloss: 34 microns at 16 sq. metres per litre
Usual no. of coats	3
Abrasion resistance	Very good
Chemical resistance	Good
Heat resistance	100°C (boiling water)
Solvent resistance	Good, resistant to alcohol
Durability	Excellent
Thinning and clean up	Mineral turps
VOC	Resene Poly-Gloss: 409 grams per litre Resene Poly-Satin: 520 grams per litre Resene Poly-Flat: 522 grams per litre Resene HD Poly-Satin: 505 grams per litre (see Resene VOC Summary)

Typical uses

- Architraves
- Desks
- Doors
- Fibre and particle board
- Furniture
- Panelling
- Plywood
- Skirtings
- Timber
- Veneers

Performance and limitations

Performance

1. Excellent intercoat adhesion both initially and long-term.
2. May be used for nursery furniture.
3. Resistant to alcohol, vinegar and most food.
4. Suitable for use over Resene Waterborne Colorwood natural wood stain (see Data Sheet D50a).

Limitations

1. May be used for low traffic flooring. For high traffic flooring use Resene Polythane (see Data Sheet D53).
2. Not recommended for exterior use.
3. Fibre and particle board must be sealed with Resene Aquaclear (see Data Sheet D59) prior to application of Resene Qristal Clear Polyurethanes.

Please ensure the current Data Sheet and Safety Data Sheet are consulted prior to specification or application of product. If in doubt contact Resene.

Qristal Clear Polyurethane

Surface preparation

New wood

Thoroughly sand surface. Ensure surface is clean and dry, free from dirt, dust and loose material, oil, grease and mould.

Stop all nailholes and cracked timber with Linseed Oil Putty or other suitable filler matched to the appropriate colour.

Old wood

Prepare as for new wood. Ensure surface is clean and dry, free from dirt, dust and loose material, oil, grease and mould. Thoroughly sand surface to a uniform dull finish with fine sandpaper and remove sanding dust.

Caution

Sanding dusts from some hardwoods are considered carcinogenic and all old timber sanding dusts should be considered potentially harmful. Always wear an efficient dust mask.

Sanding dust from old lead or chromate based paints or old building materials containing asbestos may be injurious to the health if inhaled or ingested. Seek expert advice if the presence of these materials is suspected.

Application

Apply by brush, roller or spray. Apply generously and lay-off in the direction of grain.

New fibre and particle board

1. Apply one coat of Resene Aquaclear (see Data Sheet D59). Allow 16 hours to dry.
2. Apply two coats of Resene Qristal Clear Poly-Flat, Poly-Satin or Poly-Gloss allowing 12 hours between coats. Lightly sand with fine sandpaper between coats.

Timber - new

1. Apply one coat of Resene Qristal Clear Poly-Flat or Poly-Satin and allow to dry for 12 hours. Use Resene Aquaclear (see Data Sheet D59) as the first coat on Matai, Spotted Gum and Totara.
2. Apply two coats of Resene Qristal Clear Poly-Flat, Poly-Satin or Poly-Gloss allowing 12 hours between coats. Lightly sand with fine sandpaper between coats.

Timber – recoat

After preparing surface, apply one to two coats of desired Resene Qristal Clear Polyurethane, as for timber - new.

Precautions

1. FLAMMABLE - Keep away from heat and open flame. Keep closed when not in use.
2. Avoid breathing vapour - use with adequate ventilation.

Please ensure the current Data Sheet is consulted prior to specification or application of Resene products.
If the surface you propose to coat is not referred to by this Data Sheet, please contact Resene for clarification.

In Australia
PO Box 924, Beenleigh, Qld 4207
Call 1800 738 383, visit www.resene.com.au
or email advice@resene.com.au

Resene
the paint the professionals use

In New Zealand
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6746D Dulux Powder & Industrial Coatings

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SUPPORTING DOCUMENTS

Dulux Data Sheet

Ref 32369. Uploaded 6 Sep 2021

Purpose: Performance

Dulux DuSpec Datasheet

Dulux POWDER COATINGS

Dulux Powder Coatings Duralloy® Mannex Textured Range NZ_DP02753

Product Code	915-Line Textured Range
Approval	Architectural Aluminium Standards: Meets AS3715 and AAMA2603 | Classification of fire performance for the Duralloy® Mannex textured range has a Group Number Classification of 1 according to the National Construction Code (NCC) Volume One Specifications C1.10 of the Building Code of Australia (BCA) and a Group Number Classification of 1-S according to the NZ Building Code (NZBC) Verification Method C/VM2 Appendix A: Establishing Group Numbers for lining materials.

Description

The Duralloy® Mannex textured range is a collection of popular textured finishes including Colorsteel® colours, delivered with warranty grade advanced durable polyester thermosetting powder.

Ideal for warranty grade applications over;
• Architectural aluminium including perforated and expanded aluminium,
• Steel (mild), bright/semi bright steel, black steel and blue steel.

The Duralloy® Mannex Textured Range can also be used on the following metals but these are not warranted;
• Galvanised steel, stainless steel and Zincalume®.

The Duralloy® Mannex Textured Range is supported by Alumi Shield™ and Steel Shield™ warranties* when applied by Dulux Accredited and Dulux Prime Accredited Powder Coaters to the warranty specification on recommended project types and conditions.
*Subject to the terms and conditions of the relevant product warranty. Please contact your local Dulux representative for further details.

IMPORTANT INFORMATION - CARE & MAINTENANCE POST INSTALLATION
A SIMPLE AND REGULAR MAINTENANCE PROGRAM MUST BE IMPLEMENTED AND RECORDED IN LINE WITH THE DULUX POWDERS CARE AND MAINTENANCE SCHEDULE TO;
1. Comply with Dulux Warranty Requirements,
2. Ensure the life of your asset is maximised.
It is important that architects, specifiers, powder coaters, fabricators, manufacturers and builders ensure they reinforce this message to the end asset owner.
For more information refer to the Dulux Care and Maintenance brochure available at duluxpowders.co.nz/tech-advice or call 0800 800 975.

Zincalume is a registered trade mark of Bluescope Steel Limited.

Features And Benefits

- Durable Polyester Thermosetting Powder.
- Alumi Shield™ Warranty 10 Year Aluminium Durability and 10 Year Aluminium Colour Warranty.
- Steel Shield™ Warranty - Up to 10 Year Steel Corrosion Warranty and 10 Year Steel Colour Warranty.
- Extensive range of textured colours
- No solvents or solvent emissions & TGIC free.
- Formulated to meet: AS 3715 and AAMA 2603.
- Guaranteed performance on appropriately pre-treated aluminium and steel.
- Good colour retention.
- Durable hard wearing finish.
- Ideal for use on environments greater than 100m from the high tide mark.
- Recycle via appropriate application reclaim processes.

Uses

The Duralloy® Mannex textured range has been developed primarily for use on extruded aluminium, including window and door joinery and extruded aluminium on the exterior of residential buildings less than 4 levels and on interiors of many commercial and residential projects. The Duralloy® Mannex textured range can also be used for a variety of purposes over varied substrates, from steel to aluminium.

The Duralloy® Mannex textured range is suitable for coastal environments >100m from the high tide and is NOT suitable in strongly acidic or caustic environments so the pH must be between 5 and 9.

It is ideal for:
Exterior projects (NZBC Classifications 2 and 3)
• Residential buildings < 4 levels

Interior projects (All NZBC Classifications):
• Commercial buildings
• Residential buildings

*Subject to the terms and conditions of the relevant product warranty.

Precautions And Limitations

The Duralloy® Mannex textured range is a range of popular colours which meet Dulux Powder Coatings pigmentation criteria. Strong, bold colours may not necessarily meet these criteria and should be referred to Dulux Powder Coatings before specifying.

Powder coatings containing pearlescent/mica and metallic pigments scatter and reflect light in a random way, therefore, exact colour uniformity should not be expected. Some subtle colour and appearance changes should also be expected when viewing in different light, at different angles and from varying distances.
It is recommended that each project is coated with the same batch of powder, by the same applicator and if possible at the same time. This is especially important when large visible areas of a project are powder coated, for example, sheets.

As a result of possible wide application variations and stoving conditions, some products and colours may show variation between Dulux Powder Coatings prepared samples and production applied material. Therefore, it is the applicator and/or their customer's responsibility to ensure the product conforms to their requirements.

The Duralloy® Mannex textured range is suitable for coastal environments >100m from the high tide and is NOT suitable in strongly acidic or caustic environments so the pH must be between 5 and 9.

Not recommended for components which are exposed to constant temperatures exceeding 120°C. Powder coated surfaces are not designed to be touched or mechanically abraded above 50°C.

Not recommended for post fabrication processes such as post-forming, zipping for double or triple glazing or punching. Many post fabrication processes can impede achievement of a continuous layer of pre-treatment and the minimum film build of powder coating. Consult the relevant guideline or regulation such as the building code or window association for information on mitigating any potential damage that could be caused by post fabrication processes.

Cutting and drilling must be done with very sharp saws, drills, etc as blunt tools will likely result in chipping. Cutting lubricants must be cleaned off as per the Dulux Care & Maintenance instructions. For more information refer to the Dulux Care and Maintenance brochure available at duluxpowders.co.nz/tech-advice or call 0800 800 975.

IMPORTANT DESIGN CONSIDERATIONS;
It is recommended that any item that is coated should be designed and fabricated using AS 2312.1 and the relevant building code as guides.

The following design elements should be avoided - narrow crevices, poor air circulation, depressions, sharp edges and corners, large flat ledges (not window ledges), intermittent welding, undrained flat surfaces, unsealed hollow sections, flat surfaces in loose contact where moisture may be drawn in between them by capillary action and contact between dissimilar metals, e.g., with screws, rivets, etc.

Take care if non-metallic substrates are required to be or cannot avoid being powder coated, e.g., thermal break strips in double or triple glazing. On these non-metallic surfaces powder coatings may not adequately adhere and the final visual appearance may not be acceptable.

When aluminium and steel items are exposed to interior and exterior environments it is essential that should only one side of a section of metal be coated, it must be in a sealed environment, i.e. not exposed to moisture, air and excessive heat. Should the seal fail, and a claim is made for an Alumi Shield™ or Steel Shield™ warranty project this will be void as the integrity of the seal is not the responsibility of Dulux.

Performance Guide

Exterior Durability	Good resistance to weathering, providing extended protection for aluminium.	**Salt**	Very good salt spray corrosion resistance over pre-treated aluminium (1,500 hours according to ASTM B117) and on suitably prepared mild steel (1,500 hours according to ASTM B117) with a Dulux approved 3-coat system.
Heat Resistance	Excellent resistance to 120°C continuous service conditions. Surfaces are not designed to be touched or mechanically abraded above approximately 50°C.	**Water**	Very good resistance to blistering at 38°C/100% humidity for 1,500 hours on pre-treated aluminium and suitably prepared mild steel with a Dulux approved 3-coat system.
Solvent	Resistant to methylated spirits and isopropyl alcohol.	**Acid**	Resistant to the 15 minute spot test for Muriatic Acid as per AAMA 2603.
Alkali	Resistant to spills of dilute alkali at room temperature. Avoid contact.		

Typical Properties

Gloss Level	Matt approximately 9-20 at 60°	**Coverage**	8 - 10m²/kg corresponds to 80µm cured film thickness when fully reclaiming over sprayed powder in accordance with Dulux recommendations.
Shelf Life	2 years from date of manufacture if stored at < 25 °C in dry conditions.	**V.O.C Level**	Not formulated with Volatile Organic Compound (VOCs).
Colour	A range of stock textured colours. If you cannot find the colour you require Dulux offer a Custom Colour Service. Call 0800 800 975 for more information.	**Film Build (microns)**	Recommended 80µm, range 60-120µm. NOTE: For optimum coverage and colour consistency white & light colours require a tighter film build range of 70-100µm.
Clean Up	Dust or vacuum loose powder. Avoid use of compressed air	**Application Method**	Electrostatic Spray.
Specific Gravity	1.3 - 1.7 depending on colour.	**Flexibility**	< 9 Nm (< 80 in/lb) by direct impact with a 3mm substrate deformation.
Pencil Hardness	Min H - no rupture of film per ASTM D3363.	**Cross Hatch Adhesion**	No removal (ref AAMA 2603 test method).

Chemical Resistance

Mortar	PASS (24 hours Pat test ref. EN 12206-1).
Methylated Spirits	Good resistance.
Isoppropyl Alcohol	Good resistance.
Acid	Resistant to dilute acid at ambient temperatures. Avoid contact.
Alkali	Resistant to dilute alkali at ambient temperatures. Avoid contact.
Stronger Solvents	Avoid contact with, for example white spirits, mineral turpentine and kerosene etc.

Cure Schedule

Metal Temperature (°C)	Time (minutes)	Comments
210	4 mins minimum	Metal temperature (Gloss and Satin products).
200	5 mins minimum	Metal temperature (Gloss and Satin products).
180	8 mins minimum	Metal temperature (Gloss and Satin products).

Application Guide

Surface Preparation

- PREPARATION FOR ALUMINIUM SUBSTRATES:

Etch;
• The etch process is an important stage of pre-treatment and close consultation with your pre-treatment supplier is strongly recommended to ensure optimum adhesion & corrosion resistance is obtained.
• Etch rates must be a minimum of 1gm/m².

Chrome Conversion Coatings;
• Chrome conversion weights must be a minimum of 431mg/m².
Chrome-free conversion coatings;
•Chrome-free - refer to your pre-treatment supplier as currently no standards address chrome-free

Final Deionised Water Rinse;
• The conductivity of the final rinse water draining from the aluminium articles must be less than 80 micro Siemens/cm² at 20°C.

Post rinse dry off temperature - consult your pre-treatment supplier but generally;
• < 75° C for chrome pre-treatment,
• < 120° C for chrome-free pre-treatment.

Pre-treated aluminium must be handled very carefully with clean lint-free gloves and powder coated within the time specified by the pre-treatment supplier - this is generally within 16 to 48 hours.

Dulux Accredited and Dulux Prime Accredited Powder Coaters must comply with the metal pre-treatment guidelines set out in the Accredited Alumi Shield™ Manual.

- PREPARATION FOR STEEL SUBSTRATES

1. Wash and degrease all surfaces to be coated in accordance with AS1627.1 with a free-rinsing, neutral/alkaline detergent, in strict accordance with the manufacturer's written instructions and all safety warnings.
2. Wash with fresh potable water and ensure that all soluble salts are removed. Testing if required can be done in accordance with AS 3894.6 for the determination of residual contaminants.
3. Grind all sharp edges with a power tool to a minimum radius of 2mm.
4. Hand or power tool clean welds to AS1627.2 to remove roughness. Remove filings, preferably by vacuum.
5. Abrasive blast clean all steel surfaces to be powder coated in accordance with AS 1627.4 to the visual cleanliness standard of SA 2.5. Use a medium that will generate a surface profile of 35 to 65 microns. In situations where it is not possible to prepare your item on all surfaces as described above, for long term protection against corrosion it is strongly recommended whenever possible, that an alternative substrate such as aluminium be considered. Failure to suitably prepare your steel substrate may void your Steel Shield™ Warranty.
6. The steel must be coated within 4 hours of blasting and stored in an area which is clean and dry.

	Dulux Accredited and Dulux Prime Accredited Powder Coaters must comply with the metal pre-treatment guidelines set out in the Accredited Steel Shield™ Manual.
Application Procedure And Equipment	• APPLICATION Powder must be < 2 years from date of manufacture and stored at < 25 °C in dry conditions. Application is generally by electrostatic spray. Light colours may require a higher minimum film build for optimum coverage and colour consistency. Theoretical Coverage rate at recommended film thickness; A coverage rate of 8-10m²/kg corresponds to 80µm cured film thickness assuming minimal loss i.e., over sprayed powder is reclaimed or recycled, sieved and mixed with virgin (fresh) powder under controlled conditions – a general rule of thumb is < 20% of reclaim powder continuously added to the fresh (virgin) powder to maintain a consistent finish. Extra care should be taken with reclaiming blended products. Practical coverage rates will vary due to such factors as method of application, surface profile and texture. Apply with equipment and control systems to enable correct metal pre-treatment and control of the application and stoving. Dulux Accredited and Dulux Prime Accredited Powder Coaters must comply with recommendations as set out in the Accredited Applicator Manuals. 1a) For fluidised bed, ensure uniform fluidisation of powder. Powder found to be compacted may require fluidising for a few minutes prior to coating. Powder should resemble a rolling motion. 1b) Box feeders can be used when spraying bonded pearls and metallic powders, though it is not best practice. Box feeders are not recommended for spraying blended pearls and metallic powders. 2 Apply by electrostatic spray. 3 Cure as per recommendations outlined above. Air temperatures exceeding 220°C may result in irreversible colour & gloss variation in light and bold colours and excessive temperatures may result in irreversible damage to the powder coating film. 4 Test for cure of the coating by contact with a drop of PGMEA for 30 seconds. Surface should be wiped dry and left for 60 seconds and then checked for softening. Only slight softening and minimal colour transfer to test cloth should occur. • SPECIFICATIONS Specifications for all approved substrates are available that detail full coatings systems required including where primers are required. These include; On Aluminium; Powder Primers may be necessary on appropriately pre-treated perforated and expanded aluminium for a Alumi Shield™ Warranty as detailed below; a. Interior: General Interior conditions (E-Prime™/Grey Primer base coat not mandatory), b. Exterior: Mild (E-Prime™/Grey Primer base coat not mandatory). On Mild Steel; Powder Primers are required for all Steel Shield™ Warranties on appropriately prepared mild steel substrates as detailed below; a. In Mild (Medium) exterior environments a 5 year corrosion warranty is available with a Zincshield® and the specified topcoat system. b. In General Interior (Very low to low) interior environments a 10 year corrosion warranty is available with a Zincshield® and the specified topcoat system. c. In Mild (Medium) exterior environments a 10 year corrosion warranty is available with a Zincshield®, E-Prime™/Grey Primer and the specified topcoat system. For more information about all specifications for aluminium and mild steel substrates call 0800 800 975 or visit duluxpowders.co.nz

Care And Maintenance

PACKAGING PRE INSTALLATION
Attention to packing is essential for powder coaters and fabricators to ensure that all powder coated sections are received in good condition.
When packing powder coated assets, it is recommended that;
• Sections must be adequately cooled prior to packing - the metal temperature must not exceed 40°C on packing.
• Appropriate protective wrapping is recommended prior to packing to avoid damage during transport. It is recommended these are tested prior to use to confirm they are suitable.
• If protective tapes are used, ensure that the tape will remain removable following transport, fabrication and installation and not irreversibly mark or damage the coating. Tapes should be used in accordance with the manufacturer's instructions and only remain in contact for the minimum amount of time. It is recommended these are tested prior to use to confirm they are suitable.
• Packed metal should be kept away from direct sunlight and moisture to avoid coating defects.

CARE & MAINTENANCE POST INSTALLATION
When applying sealants take care to ensure the sealant doesn't come into contact with the powder coating film. If it does it must be immediately cleaned off in accordance with the Dulux Care and Maintenance procedure.

A SIMPLE AND REGULAR MAINTENANCE PROGRAM MUST BE IMPLEMENTED AND RECORDED IN LINE WITH THE DULUX POWDERS CARE AND MAINTENANCE SCHEDULE TO;
1. Comply with Dulux Warranty Requirements,
2. Ensure the life of your asset is maximised.
It is important that architects, specifiers, powder coaters, fabricators, manufacturers and builders ensure they reinforce this message to the end asset owner.
For more information refer to the Dulux Care and Maintenance brochure available at duluxpowders.co.nz/tech-advice or call 0800 800 975.

Health And Safety

MSDS Number	DLXNZLEN002561 (hazardous) DLXNZLEN001354 (non-hazardous)	**Safety Precautions**	The SDS is an integral part of using this product as it contains information on the potential health effect of exposure, personal protective equipment needed and other relevant SH&E information. For detailed information, refer to product label and the current Safety Data Sheet available at duluxpowders.co.nz or call 0800 800 975.

In the case of emergency, please call 0800 734 607

Transport And Storage

Package Weight	20 Kg.	**Shipment Name**	Not classified as dangerous goods in Australia or NZ according to the SDS.

Images

For more information visit duluxpowders.co.nz/accredited

6758AA Autex Acoustic Wall Coverings, Panels & Tiles

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https://www.autexglobal.com/nz/

SUPPORTING DOCUMENTS

Autex Acoustics Composition Install Instructions

Ref 56670. Uploaded 19 Oct 2022

Purpose: Installation

Autex Acoustics Composition Manufacturers Guarantee

Ref 56669. Uploaded 19 Oct 2022

Purpose: Warranty

Autex Composition® Acoustic Wall Coverings 101388

Ref 10073. Uploaded 26 Jun 2020

Purpose: Performance, Installation, Environmental

Autex Acoustics® Composition® Install Instructions

These installation instructions are of a general nature and designed to assist suitably experienced tradesmen to install Autex Composition® to a high standard.

For installation support, contact your Autex Account Manager before you start.

Composition has a pile and must be installed with the fabric pile running in the same direction to avoid the appearance of colour variation.

The pile direction is marked by arrows on the back of the product. Autex recommends that the pile runs down.

Manufacturer's Documents

Autex recommends that all persons engaged in the installation have full knowledge of the product and installation procedure as set out in the most recent edition of the manufacturer's instructions and related documents.

Manufacturer's documents relating to work in this section are:

- Autex Composition® Datasheet
- Autex Composition® Manufacturer's Guarantee
- Autex Composition® Install Instructions
- Autex Interior Acoustics Care & Maintenance Guide
- Autex Interior Acoustics Adhesive Guide

Copies of the above literature are available on request or from the Autex website.

Inspection

Before starting installation of Autex Composition, check again that the materials have been supplied as ordered and are free from damage or faults. Check fabric colour and product labels to ensure product has been supplied correctly.

Where multiple rolls of Composition are required, it is important to check that all products are supplied from one batch and that the roll numbers are sequential.

We do not recommend joining different batch lots as this could result in colour variation.

Any variations must be reported to Autex prior to commencing the installation. No claims will be accepted where the job continues with obvious faults and no consultation with Autex has taken place.

Transportation, Storage & Handling

Composition must be transported, stored and handled with care. Avoid delamination or distortion and protect edges from being crushed.

Do not accept damaged rolls. If product arrives damaged note the condition on the freight documents and contact Autex immediately. Goods signed as receipted in 'good condition' will not be the responsibility of Autex.

Always transport and store Composition rolls standing up on a flat, clean, dry surface. Do not lay the rolls on their sides or crush as this can cause creases in the fabric finish.

Clean cloth gloves are ideal when handing Composition to avoid soiling.

Recommended Adhesive

Autex recommends a contact-type adhesive for applying Composition® to most common substrates. Prior to commencing work we recommend contacting your local adhesive supplier with samples of the Autex products you are installing and the specification of the substrates you are installing to.

It is the installer's responsibility to ensure any adhesive is fit for intended purpose. It is also the installer's responsibility to ensure that the substrate is fit for the application of adhesives and Autex wallcoverings. For information regarding adhesive suppliers please contact your Autex account manager.

Substrate

Before work commences all joins, gaps and cracks in the substrate must be taped with propriety sealing tape to eliminate the ingress of dust and foreign particles travelling from the cavity into the installed product over time.

Ensure that the substrates, backgrounds and adjoining surfaces will allow work to reach the required standard. Autex recommends that the wall surfaces be prepared to a minimum Level 3 finish.

Very porous surfaces may need to be sealed prior to applying the adhesive. Gloss and semi-gloss finishes should be lightly sanded and dusted clean prior to application of the adhesive.

All surfaces must be clean, dust-free and dry as dust and moisture will adversely affect the adhesive and may result in lack of adhesion.

Install Composition

Autex Composition should always be installed in accordance with these Install Instructions and as per the specification detail and customer requirements. If there is conflicting information, you must seek clarification from all appropriate parties before proceeding with the work. It is imperative that the installation is planned before cutting any product.

Autex Composition® is supplied as 1.22m (+5mm) x 25m (+10mm) rolls. We recommend you "measure twice and cut once".

Composition has a pile and must be installed with the fabric pile running in the same direction to avoid the appearance of colour variations. A sticker marks the pile direction with an arrow at the start of each roll. We recommend that the pile runs down. It is the responsibility of the installer to note pile direction and ensure drops are installed correctly.

In addition to referencing the arrow sticker, the pile direction can also be checked by lightly running your hand up, then down the fabric. One way will feel smooth and the other rough.

Adhesives should be applied strictly in accordance with the adhesive manufacturer's instructions.

Refer to the product label or the technical datasheet for spread rates, tack-off times, application methods and equipment required.

Composition is designed to be butt-joined. If using Rigid Profiles, these should be installed before adhering the Composition® to the wall. A width of Composition can be used to accurately measure where the H-Section/joiner profiles are to be fixed. When applying the adhesive, ensure there is a 70mm adhesive free gap to each side of the profiles to allow for tucking in.

Composition should be hung from the top down, smoothing outwards whilst maintaining pressure towards any joins. Immediately after the drop is hung and in the correct position, roll with a hand roller to ensure adequate transfer of adhesive and a strong bond is formed. Roll drops towards the butt-joins first, then roll the entire drop. Small wallpaper and vinyl rollers must not be used. A wide roller approximately 100-150mm is ideal.

Joins should ideally be vertical, clean and flat with no gaps or visible compression marks.

Adhesive spills or fabric surface contamination should be cleaned immediately ensuring the Autex Interior Acoustics Care & Maintenance Guide instructions are followed.

Cutting Autex Composition

Always cut Composition using a sharp utility knife and a straight edge to ensure a straight and smooth cut.

Fixtures

Remove cover plates, light fittings and other fixtures as the work proceeds. Replace plumb, square and true to line as the work is completed.

Replace

Replace damaged or marked elements.

Clean Up

Clean up as the work proceeds.

On Completion

Leave work to the standard required by following procedures. Leave work secure, smooth and free of air bubbles, wrinkles, gaps, stains and blemishes and to the standard required by following procedures. Clean adjoining surfaces of any adhesive. Remove debris, unused materials and waste from site.

Service

For more information, contact your Autex Account Manager or visit our website.

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  United States of America
  Phone +1 424 203 1813

autexglobal.com

Autex Acoustics® Cube™ Manufacturer's Guarantee

Cube™ is manufactured by Autex Industries Ltd and Autex Australia Pty Ltd under an ISO 9001 and ISO 14001 certified Quality and Environmental Management Systems. The product is guaranteed to be free from manufacturing defects and carries a Manufacturer's Guarantee for a period of no less than ten years to meet all of the performance properties stated within this guarantee.

Specification

Product name Cube™

Description 100% polyester lightweight semi-rigid panel

	Metric	
Panel dimensions	1220 mm x 2440 mm	
Tolerance	*(+5 mm) (+10 mm)*	
Thickness	12 mm	24 mm
Tolerance	*(+/- 6%)*	*(+/- 6%)*

Physical description/ properties

Boiling point:	N/A
Melting point:	250°C
Vapour pressure:	N/A
Specific gravity:	Polyester 1.38
Flash point:	N/A
Explosive limits:	N/A
Solubility in water:	Not soluble
Alkalinity:	pH 7.8
Relative vapour density:	N/A

Acoustic performance

Cube is specifically designed to reduce and control reverberated noise and echo in building interiors.

Minimum Noise Reduction Coefficient 0.45

Frequency (Hz)	125	250	500	1000	2000	4000	NRC
12 mm Cube	0.05	0.10	0.30	0.65	0.90	0.95	0.45
12 mm Cube (with 25 mm air gap)	0.05	0.30	0.60	0.95	0.95	0.85	0.70
24 mm Cube	0.05	0.20	0.60	0.90	1.00	1.00	0.70
24 mm Cube (with 25 mm air gap)	0.15	0.40	0.85	0.95	0.95	0.95	0.80

Service

For further information about Cube or any other Autex Acoustics® product, please contact your account manager or visit our website.

Care and maintenance

Maintain in accordance with the Care and Maintenance Guide available for this product.

Product specifications

Composition
100% polyester fibre from polyethylene terephthalate (PET). Cube contains a minimum of 60% previously recycled polyester fibre.

Suitable applications
Pinboards, partitions, wallcovering with acoustic properties. Accepts pins and staples.

Fire ratings
Cube has been evaluated using the following test methods.

ISO 9705: 1993
Classification: Group 1-S
Smoke production rate: <5.0m2/s
As required by NZBC C/VM2

AS ISO 9705 - 2003
Classification: Group 1 (SMOGRArc): <100m2/s2
Assessed using methodology AS ISO 9705 - 2003 in accordance with AS 5637.1:2015, as required by BCA Specification C1.10-4
FI 4974
FAR 4055

BS EN 13501-1:2018
Wall applications
Classification: B-s2,d0 (Cube 12 mm)
Tested using BS EN ISO 11925-2:2020 and BS EN 13823:2020 and classified in accordance with BS EN 13501-1:2018, as required by BS EN 15102:2007 + A1:2011.
EUI-20-000268-A
Ceiling applications
Classification: B-s2,d0 (Cube 12 mm)
Tested using BS EN ISO 11925-2:2020 and BS EN 13823:2020 and classified in accordance with BS EN 13501-1:2018, as required by BS EN 13964:2014
EUI-20-000268-B

Wall applications
Classification: B-s2,d2 (Cube 24 mm)
Tested using BS EN ISO 11925-2:2020 and BS EN 13823:2020 and classified in accordance with BS EN 13501-1:2018, as required by BS EN 15102:2007 + A1:2011.
EUI-21-000135-G-A
Ceiling applications
Classification: B-s2,d2 (Cube 24 mm)
Tested using BS EN ISO 11925-2:2020 and BS EN 13823:2020 and classified in accordance with BS EN 13501-1:2018, as required by BS EN 13964:2014.
EUI-21-000135-G-B

ASTM E-84-15a
Class A, FS:0 - SD:45 (Cube 1/2")
RJ4479-2
Class A, FS:0 - SD:65 (Cube 1")
RJ4479-1

Thermal performance
Cube 12 mm R0.41 (@15°C)
Cube 24 mm R0.82 (@15°C)

VOC emissions
Autex Acoustics polyester has been tested for chemical emissions in accordance with ASTM D5116 and is considered a low VOC product.
VOC concentration: 0.009 mg/m3 (7 days)

Water vapour sorption
ASTM C1104 / C1104M-13a
Test conditions: 49°C, 95%RH
Water vapour absorbed and adsorped after 4 days: 0.4% by weight

Impact resistance
ISO 7892:1988

Hard body impact
There is no surface damage or penetration to Cube when subjected to hard body impacts. When adhered to 10 mm plasterboard, the system can resist a 9 joule impact.

This is equivalent to the impact of a 0.5 kg object dropped from a 2 m height. A small indentation might be observed when subjected to an impact equivalent to the impact of a 0.5 kg object dropped from a 0.5 m height.

Soft body impact
There is no surface damage or penetration to Cube when subjected to soft body impacts. When adhered to 10 mm plasterboard, the system can resist a 70 joule impact. This is equivalent to the impact of a 50 kg object dropped from a 150 mm height.

Microbial resistance
ASTM G21-15
Growth rating: 0 (No growth)
Cube does not promote the growth of moulds and mildew.

Colour fastness to light
Cube is suitable for indoor use only. Light fastness is dependent on use and exposure. Cube has been evaluated to the following standard: ISO 105-B02:2014
Rating: 6 (Highest = 7)

Colour fastness to rubbing
ISO 105-X12:2016
Dry rating: 4-5 (Highest = 5)
Wet rating: 4-5 (Highest = 5)

Pattern repeat
Non-woven. No pattern repeat but product has directional grain. Product may vary from samples and batch to batch due to fibre blending and lay-up, which is an inherent feature of this product.

Fabric care
Blot spills from fabric quickly. Wipe with a damp cloth. Avoid rubbing and excessive amounts of water as this will affect the finish. Use carpet or upholstery shampoo as directed.
Blot with a clean dry cloth after each application of solution.

Custom printed Cube requires the services of a specialist cleaning company. Refer to the Cube Care and Maintenance Guide for more information.

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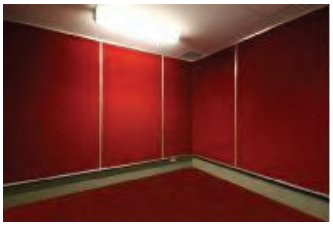
Autex Composition® Acoustic Wall Coverings

Product Technical Statement: 101388

miproducts
THE NATIONAL PRODUCT DATABASE

Acoustic fabric designed to reduce reverberated noise
View miproducts listing



masterspec partner

Level of assurance needed to demonstrate NZ Building Code Compliance
LOW
Supporting documentation should include self-assessment and technical information by manufacturer

Autex confirms that this minimum level of assurance has been met or exceeded by the following:
Autex Industries Limited
New Zealand Made Certificate - 705337

Technical Statement

Product Description

Composition® is an acoustic wall covering developed specifically to reduce reverberated noise. Composition® is a high performance decorative and acoustic interior wall fabric, designed to manage reverberated noise and create stunning interiors.

Composition® is ideal for use on vertical surfaces and as Composition® provides a pin, staple and 'hook and loop' receptive surface, it can effectively transform your walls into acoustic notice boards. Available in 40 stylish colours to mix, match, create logos and cut-ins - Composition® offers unlimited design options.

Composition® is made from Vertiface® fabric laminated to an acoustic, needle-punched and thermally bonded polyester backing. Composition® can be directly adhered to the wall substrate, eliminating the need for extensive wall preparation and painting.

Education, commercial offices, theatres, libraries, retail, restaurants, and residential applications such as kid's bedrooms - anywhere reverberated noise is a problem, Composition® is ideal.

Composition® is fully recyclable and follows an ecological production process, manufactured under Autex's zero waste policy and containing recycled fibres.

Key Features

- Made from 100% polyester fibre
- Available in 40 fashionable colours
- Recyclable and environmentally friendly
- UV stabilised and resistant to fading
- Safe, non-toxic and non-irritant Polyester fibre is approved by the Australian Asthma Association
- Will not absorb moisture and will not rot or breakdown over time providing long term stability and performance
- Pin, staple and 'hook and loop' receptive allowing Composition® to be used as a display board
- Non-zip and non-fray for use with cut-ins and creating logos
- Easy to install in new or existing interiors
- Also available in 600mm x 600mm 'Peel n Stick' tiles

Scope of use

Composition® is an acoustic wall covering developed specifically to reduce reverberated noise.

New Zealand Building Code (NZBC)

The product will, if employed in accordance with the supplier's installation and maintenance requirements, assist with meeting the following provisions of the building code:

- **Clause C3 Fire affecting areas beyond the fire source:** Performance C3.4(a)

Notes

FIRE RATINGS

ISO 9705: 1993
Classification: Group 1-S
Smoke Production Rate: <5.0m2/s
As required by NZBC C/VM2

AS ISO 9705 - 2003
Classification: Group 1 (SMOGRArc): <100m2/s2
Assessed using methodology AS ISO 9705:2003 in accordance with AS 5637.1:2015, as required by

Company Contact Details

AUTEX

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Autex Composition® Acoustic Wall Coverings

Product Technical Statement: 101388

miproducts
THE NATIONAL PRODUCT DATABASE

BCA Specification C1.10-4
FI 4894 dated 6th June, 2012 and FAR 4055-2 dated 8th October, 2013

EN13501-1:2007
B - s1, d0
Report 189053 dated 7th December, 2009

Supporting Evidence

The product has and can make available the following additional evidence to support the above statements:

Autex Industries Limited
New Zealand Made Certificate - 705337

Product Criteria

Design requirements

Performance

Composition® has been tested to a Noise Reduction Coefficient (NRC) of 0.4 and will typically reduce reverberated noise by approximately 40%

Fire Ratings

ISO 9705: 1993 Classification: Group 1-S Smoke Production Rate: <5.0m2/s As required by NZBC C/VM2

AS ISO 9705 - 2003 Classification: Group 1 (SMOGRArc): <100m2/s2 Assessed using methodology AS ISO 9705:2003 in accordance with AS 5637.1:2015, as required by BCA Specification C1.10-4 FI 4894 dated 6th June, 2012 and FAR 4055-2 dated 8th October, 2013

EN13501-1:2007 B - s1, d0 Report 189053 dated 7th December, 2009

Installation requirements

Please refer to our website for Installation Instructions:
http://www.autexindustries.com/acoustics/composition/

Company Product Information

Environmental

ENVIRONMENTAL

Autex is committed to best practice through our ISO 9001 and ISO 14001 certified Quality and Environmental Management Systems.

Composition products contains a minimum of 45% recycled polyester fibre (from PET bottle-flake). Off-cuts and manufacturing waste is re-used or recycled wherever possible.

Uncontaminated Composition can be recycled. For further information, please call Autex on 0800 428 839.

Composition is manufactured from 100% polyester fibres and does not contain formaldehyde binders. Autex polyester fibres support safer indoor air quality and will not become a potential airborne pollutant.

Quality Assurance

ISO 9001 (Quality Management)

Relationships

New Zealand Made

Date last validated: **25 May 2020**

Date last updated: **25 May 2020**