# seratone

Technical Installation Manual







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# 1 Scope and Interpretation

### 1.1 Identification

Seratone® solutions consist of a range of pre-finished panels and jointing options.

Seratone® Aqua is a compact panel suitable for interior wet and dry applications like bathroom and shower recess panelling, kitchen splashbacks and laundry walls. Seratone® Aqua is a water resistant surface that is safe in all areas directly exposed to steam or moisture. Please refer to limitations after moisture.

Seratone® Classic and Specialty panels are pre-finished wall and ceiling panels manufactured on a lightweight, high density fibreboard. There are two separate Seratone® palettes, specifically designed to complement other contemporary materials such as timber, wood veneer, laminates, glass, granite, steel and paint, as well as each other.

Seratone® Aqua is a compact panel constructed with layers of kraft paper, dipped in resin and dried. These layers are then sandwiched between laminated top and bottom sheets, compressed and baked. A process called polymerisation melds them altogether creating a solid-core panel that is an extra tough durable laminate.

Seratone® Classic utilises a 140 micron multi-layered paint system which is fully cured using UV light. The paint contains no volatile organic compounds (VOC's) and is available in a choice of gloss or satin finish.

Seratone® Specialty utilises a 220 micron multi-layered paint system which is fully cured using UV light. The paint used contains no volatile organic compounds (VOC's) and these ultra-glossy panels have superior chemical and scratch resistance when compared to similar paint systems. Seratone® Specialty panels are available in a range of fashionable colours in gloss finish.

Seratone® Space is a painted pegboard ideal for retail spaces, kitchens and storage and is suitable for dry areas only. Colour matched jointers are available as well as single and double peg options.

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. These panels can be used in dry, wet or hygiene area applications.

There are a range of colour matched aluminium jointing options to complement all the panel colours. White and clear silicone sealants are also available from building supply merchants.

## 1.2 Compliance

### 1.2.1 Seratone® Aqua

HPL / Compact laminate is an acceptable solution in E3/AS1 3.1.2, clause g, for a wet area wall lining panel. (g) "Water resistant sheet linings finished with decorative high pressure laminate or factory applied polyurethane". When stored, handled, installed and maintained in accordance with the Seratone® Aqua technical information that is current at the time of installation, Seratone® Aqua will meet the durability requirements of the New Zealand Building Code (NZBC) B2/AS1 and has a serviceable life of at least 15 years in wet areas and 5 years in all other internal applications.

### 1.2.2 Seratone® Classic and Specialty

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.

Laminex New Zealand™ will not be liable to any persons if the conditions as to storage, handling, installation and maintenance of Seratone® as outlined within this document are not complied with. It is the obligation of the installer of the Seratone® to convey this information to the relevant owner/occupant.



The BRANZ Appraisals cover the use of both Seratone® Classic and Specialty product options within the scope of the New Zealand Building Code.

The valid appraisal certificates can be found on the BRANZ website – www.branz.co.nz

# 1.3 Make sure your information is up to date

When specifying or installing Laminex New Zealand<sup>™</sup> product, ensure you have the current technical manual. If you are not sure you do, or you need more information, visit <u>laminex.co.nz</u> or call Laminex New Zealand<sup>™</sup> on 0800 303 606.

# 2 General Product Description

## 2.1 Seratone® Aqua uses

- o Bathroom, laundry, shower wall and ceiling linings
- o Wall and ceiling linings in commercial, industrial and agricultural hygiene areas, and heavy wash down areas
- o Splashbacks
- o Wall and ceiling linings where health regulations require the use of water and chemical resistant lining materials for cleaning and maintenance of surfaces

### 2.2 All Seratone® panels uses

- o Wall and ceiling linings in commercial, industrial and agricultural hygiene areas
- o Bathroom, laundry, shower wall and ceiling linings
- o Pre-finished decorative wall or ceiling linings
- o Splashbacks
- o Retail fitouts
- o Sliding cupboard and wardrobe doors
- o Flush door facings
- o Cabinetry facings
- o Furniture
- o Feature panels
- o Display areas
- o For refurbishment work over existing linings
- o Service and food processing areas in hotels, motels and fast food outlets
- o Partitioning
- o Signage

## 2.3 Seratone® panels range

Seratone® is available as below in below various panel options with colour matched or powder coated aluminium jointers 2700mm in length.

Table 2.1

Seratone® panels range				
Sheet sizes	24x9	24x12	27x12	
Seratone® Aqua 2.7mm		O Polar White Gloss and Polar white square tile only		
Seratone® Aqua 4.5mm		0	O Polar White Gloss only	
Seratone® Classic	O Polar only	0	O Polar only	
Seratone® Specialty			0	
Seratone® Space	O Polar only	0	0	

# **3 Material Properties**

# 3.1 Seratone® Aqua 2.7mm product details

Table 3.1 Sheet details

Sheet details			
Nominal sheet size (mm)	Nominal thickness (mm)	Mean weight (kg/m2)	Mean weight (per panel kg)
2400 x 1200	2.7	4.4	8.5

**Table 3.2 Sheet tolerances** 

Sheet tolerances	
Length and width (mm)	-0/+3
Squareness	The difference between the measured diagonals is no greater than 1.5mm - mm/m
Thickness (mm)	+/-0.1

# 3.2 Seratone® Aqua 4.5mm product details

Table 3.3 Sheet details

Sheet details			
Sheet sizes	Nominal	Mean weight	Sheet weight per panel (kg)
(mm)	thickness (mm)	(kg/m2)	
2400 x 1200	4.5	6.64	20
2700 x 1200+	4.5	6.64	21.5

<sup>+</sup>Polar White only

**Table 3.4 Sheet tolerances** 

Sheet tolerances	
Length and width (mm)	+/-2mm
Squareness	The difference between the measured diagonals is no greater than 1.5mm - mm/m
Thickness (mm)	4.36mm - 4.5mm

Table 3.5 Seratone® Aqua details

Seratone® Aqua details			
Property	Unit	Measure	Standard
Application			VGS (Vertical General Purpose Standard)
Weight	kg/m2	4.4 - 4.7 kgs/m2	
Resistance to surface wear	Initial wear not less than 50 cycles. Average wear not less than 150 cycles^		AS/NZ 2924.1 1998
Resistance to immersion in boiling water	slight lo	erioration other than oss of gloss. Gain in of not more than	AS/NZ 2924.1 1998
Resistance to dry heat at 180°C	No deterioration other than slight loss of gloss and/or colour		AS/NZ 2924.1 1998
Resistance to steam	No deterioration other than slight change of gloss and/or colour		AS/NZ 2924.1 1998
Dimensional stability	Dimensional change of not more than 0.3% with grain and 0.65% across grain		AS/NZ 2924.1 1998
Resistance to staining	Reagents groups 1 & 2 = no visible change Reagents groups 3 & 4 = slight change of colour and/ or gloss		AS/NZ 2924.1 1998
Resistance to colour change in artificial light*	Not more than slight colour change in Xenon arc light (min. 6 on Blue Wool Scale)		AS/NZ 2924.1 1998
Resistance to cigarette burns	modera	erioration other than Ite change in gloss Iderate brown	AS/NZ 2924.1 1998

<sup>^</sup> Not applicable to Ripple – low duty wear use only, average wear point of 10 cycles.

<sup>\*</sup> Seratone® Aqua has good colour retention in normal interior applications, however prolonged exposure to sunlight may cause some change in colour. Seratone® Aqua is therefore not recommended for exposed external applications and any prolonged exposure to direct sunlight should be avoided.

# 3.3 Seratone® Classic, Specialty and Space product details

Table 3.6 Sheet details

Sheet details				
Sheet sizes	Nominal	Mean weight	Mean weight	
(mm)	thickness (mm)	(kg/m2)	per panel (kg)	
2400 x 900*	4.5	4.7	10.2	
2400 x 1200*	4.5	4.7	13.5	
2700 x 1200+	4.5	4.7	15.2	

<sup>\*</sup>Polar only \*Specialty range and Polar only \*2400x1200 is Classic range only

**Table 3.7 Sheet tolerances** 

Sheet tolerances			
Length and width (mm)	± 2.0		
Squareness	The difference between the measured diagonals is no greater than 3.0mm		
Thickness (mm)	± 0.5mm from the nominal		

**Table 3.8 Substrate properties** 

Substrate properties		
Property	Performance figures	Units
Density	1050	kg/m3
Internal Bond	2.0	MPa
Modulus of rupture (Av.)	50	MPa
Modulus of elasticity (Av.)	5500	MPa
Impact Resistance*	>1.0	J
Curved Shapes minimum radius	1000	mm

<sup>\*</sup>Drop test with striker ball ø=12.7mm

# 4 Durability

### 4.1 Limitations

- o Seratone® panels must not be subjected to submersion or continuous permanent contact with water. Continuous intermittent contact is ok for Seratone® Aqua. Do not use in saunas or steam rooms
- o Some slight fading may be experienced over the course of time when exposed to direct sunlight
- o Seratone® is only suitable for use between -20°C and up to a maximum of 50°C for medium or long term exposure. For short term exposure maximum temperature should not exceed ambient temperature plus 65°C
- o Seratone® is not intended for use as a wall bracing panel
- o Use of Seratone® as whiteboards may leave ghosting from some inks, and is therefore not recommended
- o Seratone® panels are not intended for use in exposed exterior locations

## 4.2 Handling and storage

Seratone® Panels must be stored in dry conditions and handled in accordance with this document.

- o Keep sheets flat by stacking on evenly spaced bearers (gluts) which extend across the full sheet width (refer to Figure 1)
- o When stacking high, line gluts vertically one above the other
- o Care of the sheet face is essential to protect the decorative surface
- o To avoid damage to the surface, lift rather than drag the sheets off the stack
- o Leave protective film on panels intact, until ready for use (see page 14, 6.4.6)

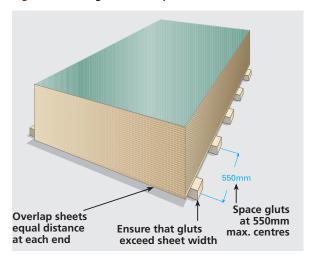


Figure 1. Storing Seratone® panels

## 4.3 Cleaning

Recommended cleaning products: Jif Powerspray®, Sunlight liquid®, Ajax spray 'n' wipe® – multi purpose, kitchen antibacterial, bathroom antibacterial, Handy Andy®, Shower Witch, domestic strength diluted bleach.

- o Adhere to cleaner manufacturer's instructions
- o A soft cloth is recommended
- o Do not use scouring pads or abrasive cloths (e.g. steel wool) or cream cleaners as these may damage the surface
- o The removal of dust from the surface can be easily achieved by the use of an electrostatic dusting cloth (e.g. Johnson's Pledge Grab-it)

## 4.4 Durability conditions

- o 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 in wet areas.
- o Seratone® will meet the durability requirements of the New Zealand Building Code (NZBC) B2/AS1 and has a serviceable life of at least 5 years in all other internal applications (excluding Seratone® Space).
- o Laminex New Zealand® will not be liable to any person if the conditions as to storage, handling, installation and maintenance of Seratone® panels as outlined within this document are not complied with. It is the obligation of the installer of the Seratone® panels to convey this information to the relevant owner/occupant.

### 4.5 Moisture content

- o The dimensions of Seratone® panels can be affected by changes in relative humidity. Therefore, conditioning in the environment in which the sheet will be installed is required. This is best achieved by flat stacking sheets with fillets between and leaving for a minimum of 48 hours prior to installation.
- o In some cases, it may be prudent to extend the conditioning time. e.g. where damp site conditions prevail or where large continuous runs of lining will be installed (over 6 lineal metres).

### 4.6 Permeability

- o Seratone® Classic and Specialty panels are resistant to moisture penetration through the coated front of the panel. Permeability: Less than 0.14g/day/m2 /mmHg.
- o Seratone® Aqua is resistant to moisture penetration and is totally impermeable.

### 4.7 Effects of heat

Seratone® panels are combustible and therefore must be separated from chimneys, fireplaces, heaters, flues
and fuel burning appliances. Part 7 of NZBC Acceptable Solutions C/AS1 – C/AS6 and NZBC Verification
Method C/VM1 provide methods for separation and protection of combustible material from heat sources.

## 4.8 Fire properties

o The Group Number Classifications are generated from tests carried out and data produced in accordance with the test procedure described in ISO 5660 2002 – Reaction to Fire test – Part 1: Heat Release and Part 2: Smoke Production Rate, and ISO 9705 Reaction to Fire test: Part 1. for the purposes of determination of the Group Classification in accordance with the New Zealand Building Code Verification Method C/VM2. Appendix A (refer table 4.1).

**Table 4.1 Fire Properties** 

Product	<b>Group Classification</b>	Test Method
Seratone® Aqua 2.7mm	3	ISO 5660
Seratone® Aqua 4.5mm	3	ISO 9705
Seratone® Classic	3	ISO 5660
Seratone® Specialty	3	ISO 5660

Seratone® sheets are combustible, and they must be separated from chimneys, fireplaces, heaters, flues and fuel burning appliances in accordance with the requirements of NZBC Acceptable Solution C/AS1 Part 9.

# 5 Design Considerations

## 5.1 Design considerations:

### 5.1.1 Choosing colours:

Dark, high gloss colours are more likely to highlight finger marking and wear and tear therefore careful consideration should be taken when selecting these colours for harshly lit or high use areas.

Due to the gloss finishes available for Seratone® panels, care should be taken in choosing colours suitable for the lighting situation. Lighter colours are more tolerant of harsh lighting environments.

#### 5.1.2 Curves and shapes:

Seratone® Classic and Seratone® Specialty are easy to work with and can be curved to a maximus radius of one metre. It can be CNC or laser cut, making it ideal for feature panels, corporate identification or signage.

Seratone® Aqua is a compact laminate and is non-postformable, curving is not recommended.

#### 5.1.3 Tile alignment:

To ensure perfect tile pattern alignment for Herringbone, Subway and Square Tiles, cutting of sheets will be required when continuous runs of sheets are installed. It is recommended this is allowed for when planning the installation of the sheets.

### 5.2 Seratone® in aluminium frames

Seratone® can be easily cut and shaped for use in sliding and conventional opening aluminium door systems. They can also be used in aluminium frames for office partitioning and furniture.

# 5.3 Frameless panels

You can create the thickness you require for standard concealed hinges or where a thicker or double-sided panel is required. Seratone® can be laminated to panel products such as MDF, using normal woodworking glues. Edges can be finished using contrasting edge-banding, timber clashing or the edges can be painted.

### 5.4 Seratone® accessories

Seratone® fixing system profiles have been developed by Laminex New Zealand® to stylishly integrate joins and minimise areas where mould and grime could gather in both wet and dry area applications. Jointers come in 2700mm lengths.

Seratone® aluminium jointers and PVC mouldings can be cut with a fine toothed tungsten tipped drop saw, or a fine toothed hack saw. Ensure all cutting blades are sharp prior to use.

Figure 2. Seratone® Jointers available in 2.7mm and 4.5mm thickness



# 6 Installation

## 6.1 Planning and installation

Seratone® sheets are relatively simple to install using construction adhesive and if desired double-sided tape. It can be fixed directly to a timber frame wall or it can be laid over a range of substrates, such as plasterboard, Strandboard®, MDF and Fiber cement. When planning an installation, it is important to select the most appropriate jointing and fixing method to achieve the desired result.

# 6.2 Splashback installation

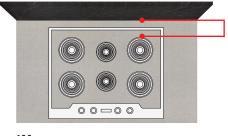
Seratone® can be used as a splashback (excluding Seratone® Space, which can be applied directly onto framework, or existing linings). Prior to installation of sheets into kitchens, refer to design considerations section. Due to heat and cleaning requirements where Seratone® is being used as a splashback, it is recommended that 'full sheets' are used wherever possible (avoid joins).

The following distances must be adhered to:

ELECTRIC COOKTOP: Seratone® panels (excluding Seratone® space) can be used as a splashback material behind an electric cooktop provided it is kept at a distance of at least 100mm from the periphery of the nearest heating element.

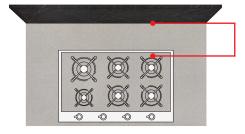
GAS COOKTOP: Seratone® panels (excluding Seratone® Space) can be used as a splashback material behind a gas cooktop provided it is kept at a distance of at least 200mm from the periphery of the nearest gas trivet.

Figure 3.



100mm From outer

Figure 4.

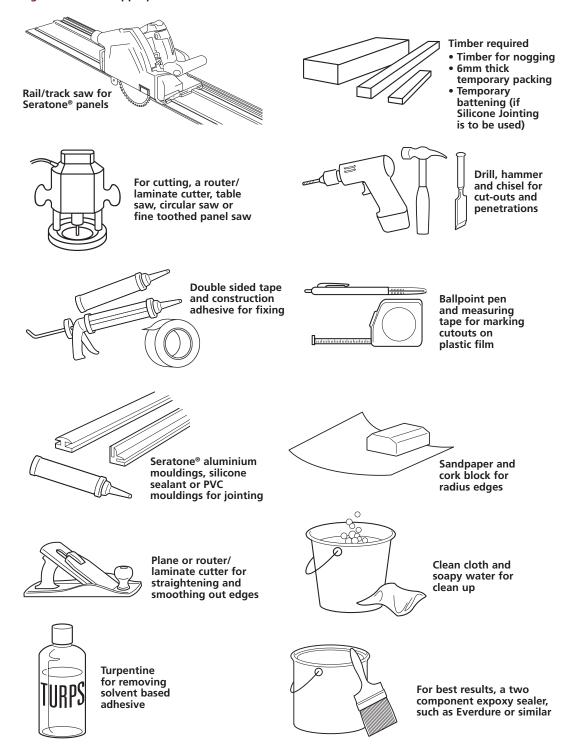


200mm From gas trivet.

## 6.3 Getting started

Tools and accessories (products not supplied by Laminex New Zealand™)

Figure 5 . Source appropriate tools and accessories



**Table 6.1 Recommend adhesives** 

Application / use	Product name / description			
	Sika 123 MS Sealant*			
	Sika NG Artic White			
	Sika Sikasil NG Translucent			
Sealant	Fuller Sanitary 770			
	Gorilla MS Sealant			
	Gorilla 240FC MS*			
	Gorilla Kitchen & Bathroom Sealant			
	Silaseal Forever white			
	Sika Nail Bond Fast			
	Sika Nail Bond Premium			
	Sika Showerbond			
	Sika 123 MS Sealant*			
Adhesive	HB Fuller Maxbond			
	Gorilla MS Sealant*			
	Gorilla 240FC MS*			
	Holdfast liquid bond shower grab			
	Holdfast SB Power Adhesive			
	Holdfast Nailpower Construction adhesive			
Double sided	Gator Double Sided Foam Tape 12mm x 2mm x 30mtr			
foam tape	Danco 6620			
*For use on non-porous subs	trates			

### Important note - Adhesives:

The recommended adhesives listed will adhere to timber and steel framing, clean plasterboard, Strandboard® and MDF surfaces. For any alternative linings or surfaces including applied finishes an adhesion test is recommended before full application.

Some solvent based adhesives can distort the painted face of the panel, Laminex New Zealand $^{\text{\tiny M}}$  do not recommend the use of high solvent adhesives.

#### Non-porous substrates:

When bonding Seratone® Classic, Specialty and Space to non-porous substrates: such as existing Seratone®, vitreous tiles and glass, high solvent and water-based adhesives can distort the painted face of the panel, Laminex New Zealand™ recommend the use of MS polymer adhesives such as Sika MS 123 or Soudal Gorilla 240FC for bonding to non-porous surfaces.

Always refer to the adhesive manufacture's technical data sheets for further information on curing times and possible surface preparation requirements.

## 6.4 Planning

In planning, remember not all wall/ceiling/floor intersections are square. It is usually advisable to begin in the centre of the wall or ceiling with a full Seratone® panels sheet.

- o Plan for part sheets to be placed at the corners of the room
- o Ensure sheet joints (and jointers where appropriate) coincide with the centre of studs or supports when installing directly to timber framing
- o Complete plan for joint sequence layout

#### Note:

- 1. Sheets are usually installed vertically on walls, they can also be fixed with long edge laid horizontally for contrast or to create a feature in a dry area. If sheets are to be laid horizontally, ensure continuous support is provided behind all joints. Ensure all sheets are installed in the same direction.
- 2. Laminex New Zealand™ do not recommend installing sheets in a horizontal orientation in shower enclosures or wet area rooms. If the sheet is to be installed horizontally (along the wall) in wet areas where water runs over the sheet face, silicone must be used to form the join between the two sheets (do not use an aluminium jointer).

#### 6.4.1 Timber framing

- o Ensure the timber support (nog/dwang/batten/stud) faces are straight, in alignment and flush.
- o Studs and nogs need to be at 600mm maximum centres for 1200mm wide sheets and 450mm for 900 wide sheets. For ceilings, suitable sized battens should be spaced at 400mm maximum centres.
- o Ensure all support surfaces to be bonded are clean and dry (maximum moisture content: 18%).

#### 6.4.2 Lined wall and ceilings

o Walls and ceilings lined with plasterboard, or similar are suitable for direct fixing providing the surface is flat, sound and properly fixed.

### 6.4.3 Concrete and masonry walls and all ceilings

- o Do not fix directly to concrete and masonry walls.
- o Ensure concrete/masonry wall is dry and will continue to remain so. Application of a waterproof membrane may be required to prevent ongoing moisture issues. Do not fix directly to masonry walls.
- New and old concrete / masonry walls shall be dry before installing Seratone® panels. The only true method is to measure the relative humidity of the concrete surface, using a hygrometer.
   \*The reading shall be below 70% before the laying of Seratone® can be considered.
- o Strapping and battens must have a damp-proof course between timber and concrete.
- o For ceilings, suitable sized battens should be spaced at 400mm maximum centres.
- o Fix strapping with nails or screws.

### 6.4.4 Renovations

- o When using Seratone® panels to reline over existing walls or ceilings, previously painted surfaces should be cleaned, then scuffed with coarse abrasive paper to form a key for adhesion.
- o Old shower linings must be removed before installation of new sheets. Existing framing and plumbing should be inspected to ensure no degradation has occurred.
- o Check the adhesive does not soften old paint work.

#### 6.4.5 Check sheets & precondition

- o Always check for colour match when sheets are on the same wall plane or where colour/shade matching is critical. For areas where colour matched sheets are desired order as "batch matched" to minimise colour variation.
- o Precondition panels. Fillet stack pairs of panels and leave for at least 48 hours in the room where they will be installed

#### 6.4.6 Removing the packaging and protective film

- o A sheet of protective film protects the face of each Seratone® sheet. The film is designed to keep the sheet clean and to protect against scratches. The film should be removed in two stages:
  - 1. Initially 50mm should be removed from all edges to allow for jointing/sealing
  - 2. Only when the sheet is completely installed should the remainder of the film be removed

#### 6.4.7 Cutting sheets

o When cutting Seratone® Aqua for best results a track saw (Festool or similar) or a high speeed laminate cutter (30,000 + rpm) with a 6mm blade should be used. Please refer following for Cutting Seratone® Classic and Specialty. Specific instructions for each are as follows:

#### Laminate cutter or router

- o Horizontally measure the top and bottom of the wall to determine the sheet width required, as not all walls are square
- o Use a ballpoint pen to gently mark these measurements onto the protective film
- o Always support the Seratone® panels, using a table or sheet material. The use of a felt blanket, or the like, reduces scratching or indentation
- o Always ensure that all cutting blades are sharpened prior to use
- o Can be used to size the sheet or alternatively to finish an edge after cutting with alternative equipment (such as fibro cement shears)
- o Allow the sheet to pass through the saw with even pressure do not force the sheet

#### Circular saw

- o Normally the blade rotation of a circular saw is up. If this is the case, cut sheets with decorative surface down. If blade rotation is down, cut sheet with decorative surface face up (therefore the blade is cutting into the decorative surface, avoiding 'chip out')
- o Clamp a straight edge to the sheet as a guide for the tool. Place a piece of timber material under the line you will be cutting. This supporting material is important as it helps reduce the chipping of the decorative surface
- o Reduce the depth of cut to allow the blade to cut approximately 7mm through the sheet
- o Cut the sheet using the circular saw, cutting slowly with a sharp, high quality tooth blade

Handsaw (not recommended for Seratone® Aqua)

- o A fine-tooth hand saw may be used to cut Seratone® Classic and Specialty, with the decorative surface face up
- o Mark the sheet for the cut
- o Hold the blade of the hand saw at a very low angle, so that it is almost flat to the face of the board. Cut slowly and carefully with even strokes
- o Once cut with a hand saw, clean the cut edges with a plane or very fine sandpaper (e.g. 320 grit)

### Finishing the edge after cutting

- o Use a laminate cutter, router or electric plane to finish the edge
- o When using an electric plane, ensure it is held square to the edge of the sheet. The sheet should be well supported and secured
- o Lightly chamfer any cut made to Seratone® Aqua with a block and 320 grit paper, to remove the arras and any ragged edges

#### **Cutting for penetrations**

- o Measure and mark cut outs for light boxes, pipe fittings, etc, ensuring sufficient clearance is allowed
- o Ensure that cover plate/tap flanges cover the penetrations
- o In wet areas, run a bead of silicone around fittings/cut outs on the face of the board before fitting face plates and tap flanges etc. (see Figure 6)
- o For best results with Seratone® Aqua use drill hole and use router with laminate cutter bit for holes and penetrations

Flexible silicone sealant over and below aperture Seratone Classic and Specialty Apply 75mm band of polyurethane on rear of panel, around cut and on all cut edges

Figure 6. Penetrating panels for wet area installations

### 6.4.8 Cutting jointers

o Seratone® aluminium jointers and PVC mouldings can be cut with a fine toothed tungsten tipped drop saw, or a fine toothed hack saw. Ensure all cutting blades are sharp prior to use.

# 6.5 Fixing

Refer to Table 6.2 for jointing and fixing methods and Table 6.4 for sheet fixing instructions.

### Jointing and fixing methods

Table 6.2 Jointing and fixing methods - Preferred jointing method

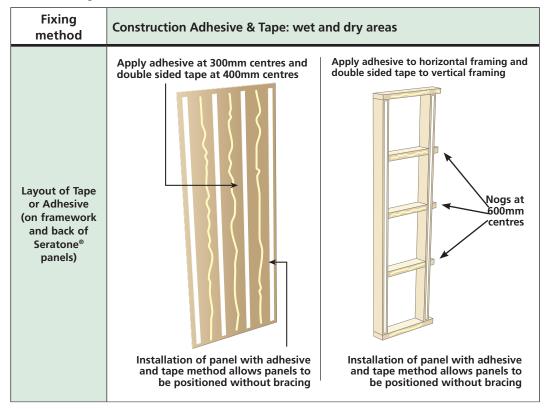
Application type	Aluminium mouldings	PVC mouldings	Silicone sealant			
Dry area						
Wet area						
Hygiene area						
1 1						
Substrate (The surface you are fixing Seratone® to)	Framing or plasterboard/lining					
Recommended fixing method	Construction adhesive or tape and construction adhesive					

<sup>\*</sup> Yellow lines are silicone sealant \*\* An appropriate sanitary sealant for hygiene areas, such as Fuller Sanitary 770 or Gorilla Kitchen & bathroom sealant

Table 6.3 Installation using Aluminium Jointers (wet or dry areas)

Profile	Installation details		
H-Jointer Substrate surface Tape Seratone	Joining two sheets:  METHOD 1: Secure panel against the existing surface, then simply slide the H Jointer onto the end of the panel. Push next panel into jointer  METHOD 2: Fix jointer by way of screws, construction adhesive or double sided tape then slide panel into it. Screws should be counter sunk at 300mm centres		
Substrate surface  Tape  Seratone	First secure the jointer, then position the panel in place. Jointer can be attached using screws, construction adhesive or double sided tape. When screw fixing, the screws should be countersunk and spaced 300mm apart		
Substrate surface Tape Seratone	First secure the jointer, then position the panel in place. Jointer can be attached using screws, construction adhesive or double sided tape. When screw fixing, the screws should be countersunk and spaced 300mm apart		
Internal Corner Substrate surface Seratone Tape	Engage jointer onto edge of first panel and attach panel to framing. Attach second sheet, locating the edge into jointer. Jointer can be attached using screws, construction adhesive or double sided tape if necessary. Screws should be spaced 300mm apart		

**Table 6.4 Fixing instructions** 



Double sided tape is used in conjunction with adhesives to provide temporary support during adhesive cure. This removes necessity of bracing the panels. When installing Seratone® as a ceiling lining, it's recommended to provide some bracing.

Installation without double sided tape to both plasterboard, other substrates types, and direct to timber and metal framing requires the positioning of timber supports to hold panels against wall while adhesive cures.

# 6.6 Fixing onto plasterboard/lining

- o Ensure all bond surfaces are clean, dry and free from dirt, dust, oils or any other surface contaminants
- o Apply continuous full panel length of double-sided tape to the back of the panel at 400mm centres
- o Apply continuous full panel length beads of adhesive no less than 10mm in diameter to the back of the panel at 300mm centres between the strips of adhesive tape
- o Remove tape backing, place the panel into desired position and apply pressure to ensure full contact over entire surface area of the panel

## 6.7 Fixing directly onto timber studs

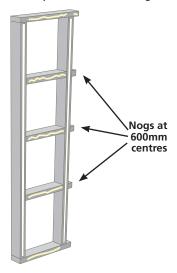
- o Nogs shall be at 600mm centres (three rows of nogs when direct fixing to framing)
- Ensure all bond surfaces are clean and dry and free from dirt, dust, oils or any other surface contaminates
- o Apply continuous full panel length beads of double-sided tape to the right or left of centre of each vertical stud where two panels will be joined (edge stud). Allow sufficient room between the two strips of double-sided tape for the jointer to be located (no adhesive will be applied to these studs)
- o Apply continuous panel length strips of doubled-sided tape to the right of centre of each vertical stud that is not supporting the edge of a sheet (centre stud)
- o Apply continuous panel length beads of adhesive no less than 10mm in width next to the strips of double-sided tape on each centre stud. (each stud supporting the sheet edge should now have a strip of double-sided tape and each stud supporting the centre of the sheet should have both a strip of tape and adhesive)
- o Apply a continuous bead of adhesive over the length of the horizontal timber frame components (nogs).
- o Remove tape backing. Place the panel into desired position and apply pressure to ensure full contact between the framing and the panel

### 6.8 Fixing directly onto galvanised steel studs

- o Ensure all bond surfaces are clean, dry and free from dirt, dust, oils or any other surface contaminants
- o Scuff surface of galvanised framing with Scotch-Brite™ (or the like)
- Apply a degreaser (e.g. Sika Cleaner 205 or similar) with a clean dry rag and wipe off with a separate clean dry rag
- o Allow the degreaser to fully flash off the bond surface before applying adhesive
- o Apply continuous full panel length beads of adhesive no less than 10mm in width to each stud
- o Apply a continuous bead of adhesive over the length of the horizontal steel frame components
- o Place the panel into desired position and apply pressure to ensure full contact between the steel framing and the panel
- o Position timber supports to ensure pressure is provided while the adhesive cures

Figure 7.

Apply adhesive to horizontal framing and double sided tape to vertical framing



Installation of panel with adhesive and tape method allows panels to be positioned without bracing

# 6.9 Installation using aluminium or PVC jointers

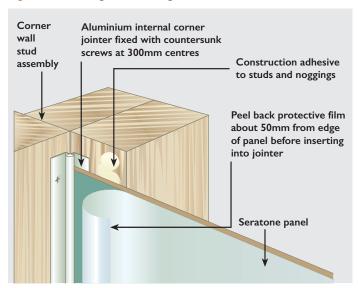
The aluminium and PVC jointing systems are designed for use in both wet and dry areas (refer to Table 6.3).

The system is suitable for installation on fully lined walls/ceilings (plasterboard) or direct to timber studs.

#### 6.9.1 At the installation starting point:

- o For cutting Seratone® Jointers, refer to Page 16
- o Mark out areas for penetrations on protective film and cut
- o Take the first Seratone® panel and peel the protective film approximately 50mm from the edge refer to Figure 8

Figure 8. "Starting Point" using Internal Corner Jointers



- o For PVC jointers, nail jointer in place using galvanised flat head nails, at 300mm centres
- o For aluminium jointers screw fix, glue or tape in place (countersink screws at 300mm centres)
- o For all wet areas, apply a continuous bead of silicone into the jointer recess before inserting the panel
- o If you have difficulties inserting panels into the jointers, lightly sand the back of the panel then reseal
- o Apply construction adhesive and/or double sided tape to the framing or substrate (refer to Page 17) as per manufacturers' recommendations and fixing instructions
- o Insert panel into fixed jointer
- o Press the panel firmly onto the centre stud/substrate, add jointer to trailing edge, then screw or glue fix trailing jointer into place (refer to Figure 9)
- o Continue installation by inserting each new panel into the jointer of the previous panel. Screw, glue or tape jointers to studs/substrates as installation progresses
- o Check for adhesive and silicone spillage, and clean off if necessary

Jointer (eg Internal Corner min 5mm clearance from ceiling Adhesive applied to studs and noggings (or plasterboard) Seratone panel Slide next jointer behind Seratone panel and fix, ready for next panel Bottom plate Slide panel into Support panel on \_ Floor installed jointer min 6mm packer

Figure 9. Installing first panel

# 6.10 Installation using silicone joints for Seratone®

The silicone jointing system is designed for use in all areas.

The system is suitable for installation on fully lined walls/ceilings (eg. plasterboard) or direct to timber framing.

For installation using Silicone Sealant, follow the following guidelines. (Note: It is recommended that a gap based on a 1:1 ratio is created when silicone is the jointing method).

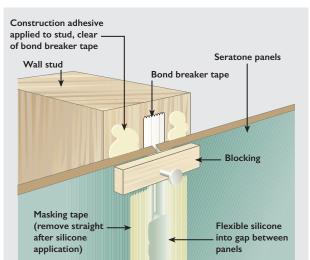


Figure 10. Installing Seratone® with silicone jointing

### 6.10.1 At the installation starting point

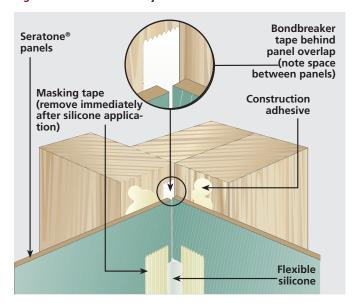
- o Determine where the joints will be and fix polyethylene tape to the framing/substrate to act as the bond breaker tape
- Apply construction adhesive and/or double sided tape to the framing or substrate (refer to Table
   6.1) as per manufacturer's recommendations and fixing instructions. Avoid applying adhesive to the bond breaker tape
- o If fixing using construction adhesive, follow the manufacturer's recommendations
- o Fix stop nails against the trailing edge of the panel to provide the required gap between sheets
- o If fixing using construction adhesive only, temporarily brace the panel edges against the stud while the adhesive cures using blocks fixed to framing with small diameter nails. If fixing using a combination of adhesive and tape, this step is not necessary as the tape will hold the panel in place while the adhesive cures
- o Continue the process until panel installation is complete
- o Carefully remove stop nails as installation progresses
- o Clean out any adhesive showing between the panels
- o Once adhesive cures, remove blocking
- Peel approximately 50mm of the protective film from panel edges (leave balance on the panel until installation completed)
- o Carefully apply 20mm low tack masking tape to either side of the join
- o Cut nozzle of the silicone tube to create an aperture slightly larger than the gap
- o Apply a consistent bead of silicone in gap so that it is flush with panel surface
- o Once the gap is filled, remove excess silicone with a clean tool (eg. plastic spoon), or a clean gloved finger Do not use unprotected finger
- o For internal corner joints refer to Figures 11 & 12
- o Clean any excess silicone off panel front by using a clean cloth and a cleaning agent specified by silicone manufacturer (before commencing, check the suitability of the cleaning agent on Seratone® panel surface)

#### 6.10.2 Penetration silicone and sealant application

- Clean any excess silicone off sheet front by using a clean cloth and a cleaning agent specified by silicone manufacturer (before commencing, check the suitability of the cleaning agent on the Seratone® sheet surface)
- o Immediately after silicone is applied, carefully remove masking tape in one continuous movement (if the silicone is allowed to cure first, removing the masking tape will result in a 'ragged' edge)
- o After tape is removed, do not touch the silicone join until it is completely cured
- o Refer to the manufacturer's instructions for the appropriate silicone sealant drying time
- o Once silicone has cured, remove remaining protective film and clean sheet surfaces

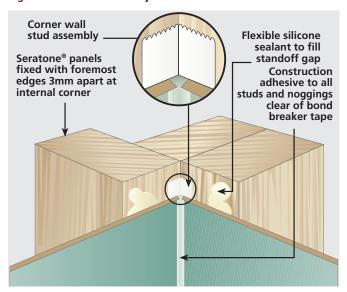
### **Option 1: Overlapped panels**

Figure 11. Internal corner joint



**Option 2: Standoff panel** 

Figure 12. Internal corner joint



### 6.10.3 Maintaining a silicone joint

- o Never wipe sealant with an UNGLOVED finger
- o The tool used to finish the sealant surface must be free of saliva
- o Mould can grow in wet or steamy areas if attention is not paid to adequate ventilation

### 6.10.4 Silicone usage

The amount of silicone required depends on the application, gap width and type.

As a "rule of thumb",  $5 \times 2.4 \text{m}$  long joints can be achieved from one 300ml tube of silicone sealant (approximately 12m/tube).

## 6.11 Specific wet area installation

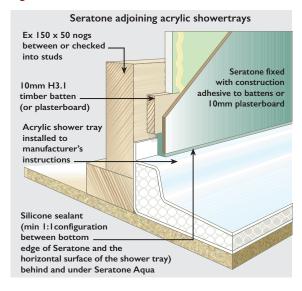
#### **6.11.1 Shower installation options**

There are numerous methods used to install a shower. Figures 13, 14 and 15 are three of the most common methods, however the principles described here must be adjusted to suit the shower tray or tile manufacturer's specific instructions. No matter which methodology you use, it is essential that:

- a) Any silicone sealant masking should be promptly removed
- b) For Seratone® Classic and Specialty Reseal all factory and site cut edges with exterior polyurethane or primer. Also apply a 75mm band on back of panel around edges and holes cut for penetrations. For best results use two component epoxy primer such as Everdure
- c) On completion of any installation, remove the protective film and clean the surfaces

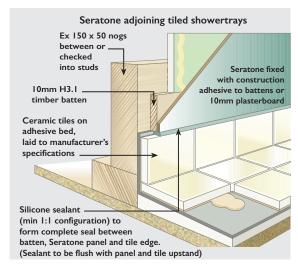
### 6.11.2 Method 1: Acrylic shower tray detail

Figure 13.



### 6.11.3 Method 2: Wall to tiled shower floor detail

Figure 14.

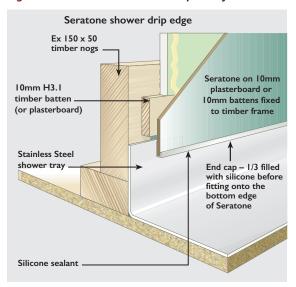


#### 6.11.4 Method 3: Stainless steel shower tray detail

- o Gap between face of stainless and back of Seratone® sheet should be no less than 8mm
- o Seratone® to hang below the 10mm timber batten a minimum of 10mm and no more than 35mm
- o Although not mandatory, for an aesthetic appearance an End Cap (Standard Aluminium or PVC), can to be fixed to the bottom edge of the sheet. Prior to positioning the edge of the sheet into the end cap, silicone shall be applied into the jointer channel so the channel is at least 1/3 full. When the sheet is located into the channel it is likely that silicone will be forced out of the channel up the front and back of the sheet. This action should eliminate water tracking down into the channel at a later date

#### Stainless steel shower tray detail

Figure 15. Seratone® Classic and Specialty



### Direct fix to framing method

Figure 15b. Seratone® Aqua Stainless shower tray



### Note: When using direct fix method 3 please ensure the following:

- a) The bottom edge of the Seratone® sheet hangs below the timber batten a minimum of 10mm and a maximum of 30mm
- b) There is a gap of at least 8mm between the stainless steel upstand and the back of the Seratone® sheet
- c) A bead of sealant is applied immediately below the timber batten before the Seratone® sheet is installed

#### 6.11.5 Bath wall installation options

There are numerous baths available from many different manufacturers. The principles shown in Figures 16 & 17 should be adjusted to suit the manufacturer's specific instructions.

o Refer to bath manufacturer's installation guidelines and typical details.

#### 6.11.6 Maintaining a silicone joint

- o Never wipe sealant with an UNGLOVED finger
- o The tool used to finish the sealant surface must be free of saliva
- o Mould can grow in wet or steamy areas if attention is not paid to adequate ventilation

#### 6.11.7 Silicone usage

The amount of silicone required depends on the application, gap width and type. As a "rule of thumb", 5 x 2.4m long joints can be achieved from one 300ml tube of silicone sealant (approximately 12m/tube).

Figure 16. Typical bath edge installation Seratone®

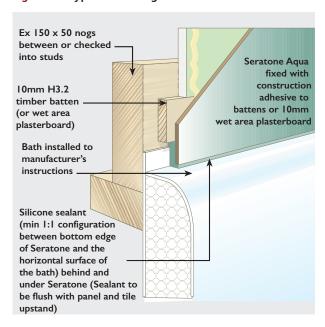
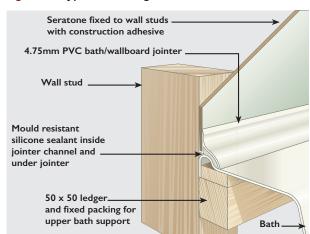


Figure 17. Typical bath edge installations for Seratone®



#### 6.11.8 Finishing Seratone® against vinyl flooring

- o Use battens to create a gap behind the Seratone® panel. It is recommended to step the back of the Seratone® Aqua out 10mm minimum from the face of the vinyl and hang the bottom of the Seratone® Aqua sheet 10-30mm down from the batten, where water runs over the face of the sheet (see figure 18)
- o An alternative in dry areas (outside shower cubicle) a standard H jointer can be used (refer figure 19)



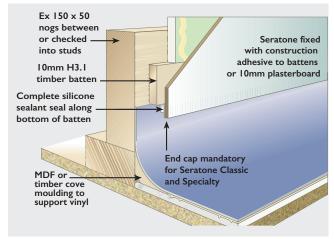
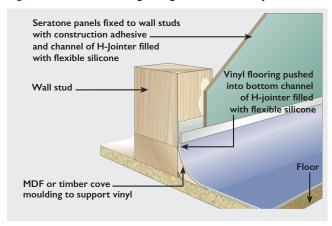


Figure 19. Coved flooring using an divisional H jointer (for use outside the shower cubicle)



### Seratone®

Note: Horizontal channelled jointers should not be used in situations where water runs over the sheet face. Contact Laminex New Zealand™ for further advice.

# 7 Health and Safety

Health and safety precautions must be taken when working with Seratone® panel products.

Storage areas containing large quantities of Seratone® panels sheets must be adequately ventilated.

Work areas must be well ventilated and kept clean. Sawing and machining equipment must be fitted with dust extractors to ensure that dust levels are kept within standards laid down by Occupational Health and Safety New Zealand. If not, a dust mask conforming to AS/NZS 1715 and AS/NZS 1716 and eye protection conforming to AS/NZS 1337.1 must be worn.

Offcuts, shavings and dust must be disposed of in a manner that avoids the generation of dust and in accordance with the requirements of local waste authorities.

For further information and Material Safety Data Sheets, please contact Laminex New Zealand™.

### 7.1 Dos and Don'ts

#### Do

- o Do ensure all Seratone® Classic and Specialty site cut edges are sealed and factory edges are re-sealed with an oil based sealer / primer. (Seratone® Aqua edges do not require sealing)
- o Do, at design stage, take care that the chosen colour is suitable for the lighting situation. Lighter colours are more tolerant of harsh lighting environments
- o Do transport and store sheets flat and clear of ground
- o Do pre-condition sheets (separate the individual sheets and flat stack for at least 48 hours in the room to be installed. (see moisture content page 9)
- o Do measure rooms and plan the joint positions
- o Do check timber framing is dry, clean and dust free
- o Do provide a minimum 5mm gap at the floor and ceiling line to accommodate movement
- o Do test cut, for chipping
- o Do follow adhesive and silicone manufacturer's instructions
- o Do use silicone sealant in internal corners in wet areas
- o Do use silicone joints when forming horizontal joins where water will run down the face of the sheet
- o Do check panels have the same batch number
- o Do provide a minimum 6mm gap at the floor line to accommodate movement
- o Do check panel direction factory sealed edge to bottom edge
- o Do use continuous beads of adhesive on framing or existing linings. This reduces internal panel tension, that may lead to distortion on the front of the panel
- o Do use a continuous bead of silicone in all jointers and behind all fittings in wet areas. Fill the jointer 1/3 with silicone when installing Seratone® in showers

#### Don't

- o Don't store sheets in areas prone to damage or exposed to weather or direct sunlight
- o Don't store the Seratone® panels sheets upright
- o Don't install in saunas or steam rooms (see content limitations, page 8)
- o Don't directly bond to masonry or concrete (use dry timber battens)
- o Don't fix sheets over wet or poorly prepared frames
- o Don't force sheets into position always allow edge clearance
- o Don't nail Seratone® panels sheets this destroys the surface
- o Don't use blobs of adhesive to adhere sheet to walls
- o Don't use an ungloved finger to apply silicone, as bacteria will encourage mould growth
- o Don't use abrasive cleaners or solvents on the Seratone® panels surface
- o Don't mix batch numbers where colour matching sheets is desired
- o Don't use Seratone® to form horizontal surfaces (flat) especially where water will be present
- o Don't apply hightack masking tapes to surface. Use only low tack products

# 8 Technical Support

# 8.1 Technical support

Not all use options and technical information can be described herein. Additional end use and specifying information is available as a complimentary service.

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For further information and to check the currency of the information contained in this brochure please contact Laminex New Zealand™ or visit laminex.co.nz.

# **9 Product Warranty**

## 9.1 Seratone® warranty information

Laminex New Zealand™ (a division of Fletcher Building Products Limited) ("Distributor") confirms the terms and conditions of the Seratone® 15 Year Limited Warranty as set out in this document (the "Warranty") in respect of the Seratone® supplied by the Distributor to you.

Subject to the conditions and limitations set out in this warranty below, when stored, handled, installed and maintained in accordance with the Seratone® Technical Information that is current at the time of installation, 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 in wet areas and 5 years in all other internal applications.

If you have any questions, or in the unlikely event of a problem with Seratone®, please contact Laminex New Zealand™ Customer Services. Details are available at the bottom of this document.

Seratone® Technical Information is available online at Laminex.co.nz or by contacting Laminex New Zealand™ on 0800 303 606.

#### **Terms and conditions**

- This warranty applies to the full range of Seratone® products supplied by Laminex New Zealand™
  (subject to any exceptions noted in Laminex New Zealand™ literature) and used in interior
  applications subject to the terms and conditions of this warranty.
- 2. This warranty does not cover damage caused by:
- a) Any act of God, any natural occurrence or any other circumstance beyond Laminex New Zealand's control; or
- b) Application design or installation in any respect, or the failure to follow any procedures or guidance (if any) that may be issued in Seratone® Technical Information made available by Laminex New Zealand™, or best industry practices for the fabrication and installation of products in the nature of the Seratone® products (including, but not limited to, incorrect substrate preparation, or use of incorrect adhesives, or incorrect application of adhesives); or
- c) Failure to follow the maintenance and cleaning guide for Seratone®, as set out in Seratone® Technical Information made available by Laminex New Zealand™; or
- d) Physical abuse, misuse, accidents, impacts, incorrect handling, wear and tear, improper maintenance; or
- e) Failure of any adhesive, grout, caulk, sealant or other accessory, or failure of any caulked or filled joint or seams; or
- f) Events directly or indirectly attributable to the underlying substrate or structure, including building framing, building substructure or anchoring systems, or failure of any substrate or application design flaws, overloading of substrate, building movement, or any consequential or indirect loss or damage caused or contributed to by any defect; or
- g) The product being used in applications not expressly recommended in Seratone® Technical Information made available by Laminex New Zealand™; or
- h) Any Seratone® product that is not installed by an appropriately trained and skilled person; or
- i) Variation in colour, pattern, shade of the material against the sample material, displays and/or printed illustrations; or
- j) Any exterior use or application;
- k) Where the defect is trivial or insubstantial; or
- I) Where, as at the date of notification of the defect to Laminex New Zealand™, the type or colour of the alleged defective product no longer forms part of Laminex New Zealand's standard stock range and the person complaining of the defect does not agree to the supply of a replacement which is as close a type or colour match as is possible from Laminex New Zealand's then prevailing stock range.

- 3. Subject to the terms of this warranty, this warranty applies only to Seratone® products:
- a) Which have not been moved from their original place of installation;
- b) Which have been used in an internal application;
- c) Which have been fabricated or installed by a business which has been supplied with such Seratone® products by Laminex New Zealand™ directly, or indirectly through Laminex New Zealand's re-seller network.
- d) Which have been fabricated, installed, maintained, cleaned, used and protected in the manner set out in Seratone® Technical Information made available by Laminex New Zealand™ concerning those products; and
- e) Where Laminex New Zealand™ has been notified of the defect within seven days of the first person to become aware of it, or within seven days of such time as the defect ought reasonably to have been identified (whichever is earlier).
- 4. Subject to the terms of this warranty, Laminex New Zealand™ will, at its option, repair or replace the product free of charge. A replacement product from Laminex New Zealand™ may not be available in the same colour or shape as the original Seratone® product covered by this warranty. If a replacement product from Laminex New Zealand™ of the same colour or shape is not reasonably available, Laminex New Zealand™ reserves the right to provide a replacement product of as close a shape and colour match as is reasonably possible from Laminex New Zealand's then prevailing stock range in satisfaction of its obligations under this warranty.
- 5. This warranty does not cover costs or losses relating to:
- a) Removal of products or system
- b) Installation of new substitute products or system
- c) Restoration work
- d) Any other direct or indirect, or consequential costs, losses, expenses or loss of earnings
- 6. Other than as provided in these terms, Laminex New Zealand™ will have no liability to a claimant (whether in statute, contract, tort, or otherwise at law or in equity) in respect of any defects in the product or for any loss, damage, costs or expenses caused by the product or defects in the product, provided that nothing in this paragraph 6 or otherwise in these terms excludes or modifies any legal rights you may have, including rights under the Consumer Guarantees Act 1993 (as applicable). This warranty should therefore not be read as exhaustive statement of the rights of the original end user or any other person.
- 7. This warranty is not transferable or assignable.

Laminex New Zealand™
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Laminex.co.nz

# **Notes**

VISIT US

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