

INSTALL GUIDE

ACCUMEN SEI BOARDS

SLAB EDGE INSULATION



ACCUMEN[®]
SHAPES

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INTRODUCTION

The slab edge of a foundation can be responsible for approximately 80% of the slab's total heat loss, with further research showing that thermal resistance does not significantly improve by fully extending the insulation under the slab or by increasing the thickness of the insulation under the slab. The reason being that, with no insulation on the perimeter foundations, most of the heat is conducted along the slab and out through the exterior face of the footing. This suggests that insulating slab edges is far more effective for preventing heat loss than insulating the underside of the slab.

Extruded Polystyrene (XPS) is considered the best material for insulating the slab edge. XPS is resistant to moisture and has a higher compressive strength, making it a good option for foundations that may be subjected to high loads or in areas with high moisture levels.

Accumen Shapes are the New Zealand distributors for Foamex XPS. Foamex XPS is produced without the use of toxic, ozone depleting substances, making it an environmentally friendly solution for any project.

Accumen Shapes uses Foamex XPS to manufacture robust pre-plastered Slab Edge Insulation Boards (Accumen SEI Boards) for the ultimate Slab Edge Insulation solution. Accumen Shapes uses patented manufacturing technology to apply the KickIt® plaster to Foamex XPS boards.

Accumen SEI Boards meet the NZS 4859.1 standard testing requirements via ASTM C518.

Accumen Shapes have been manufacturing and supplying the New Zealand building industry with our robust KickIt® pre-plastered shapes and mouldings for over 30 years!

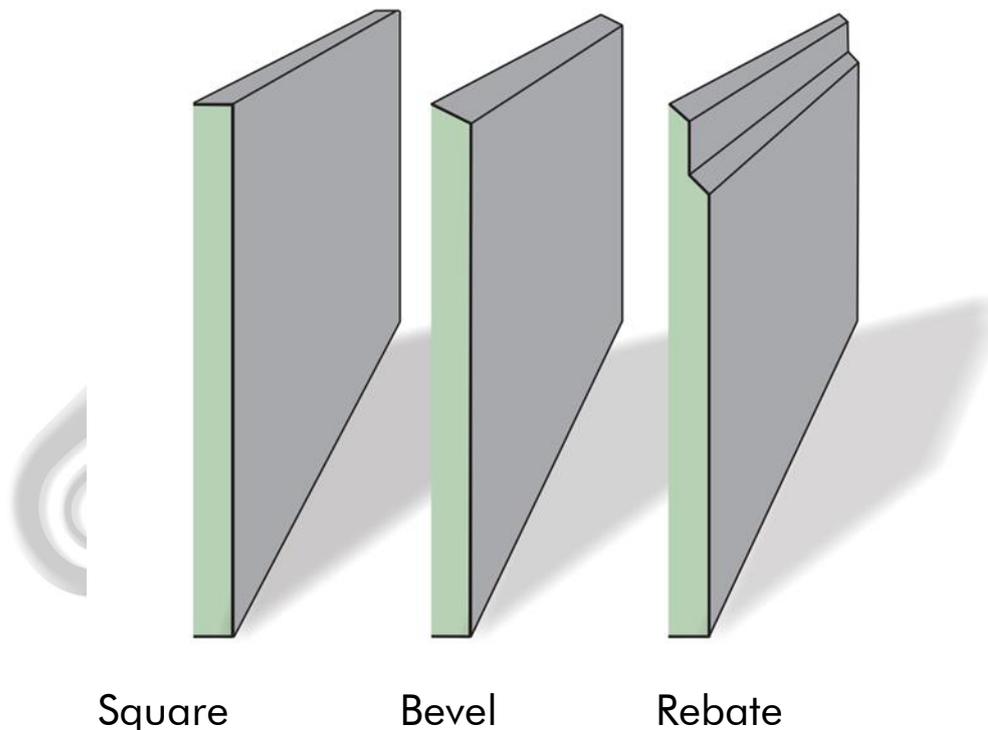
Designed to be installed onto an existing concrete foundation, Accumen Shapes can manufacture a wide range of SEI retrofit solutions to meet the requirements of your project, so contact us now to discuss your next project – info@accumen.co.nz or 09 270 9228.

COMPOSITION

The make-up of Accumen SEI boards consists of CFC-free Foamex XPS, CNC cut to any shape or form and coated with fibreglass mesh and KickIt® base coats and topcoat plaster. The ultimate pre-plastered slab edge insulation solution!

The KickIt® plaster is applied using Accumen Shapes patented manufacturing technology. Accumen Shapes manufacturing technology has been developed over many years, making it a trusted product within the New Zealand building industry for over 30 years.

Below are examples of the three common shapes used for Accumen SEI, suitable for all types of building cladding designs.



Accumen Shapes can custom make any shape or size SEI board to suit your project.

INFORMATION YOU SHOULD CONSIDER

Decorative

Although Accumen SEI boards are extremely robust, they are not to be considered load bearing. Accumen SEI boards should only be considered as decorative details, with the added benefit of providing the required insulation properties and impact resistance needed for the slab edge.

Finishing Once Installed

Although Accumen SEI boards may be resistant to water, due to the diverse situations they may be used in, they are not to be used as a weathertight material and must be sealed and painted with a flexible paint system once installed. Recommended paint systems can be provided on request.

Foundation Movement

Engineered concrete foundations are designed to provide a stable and solid base for buildings, and as such, they should not move significantly under normal circumstances. However, like any building component, they may be subject to movement over time due to a variety of factors.

Accumen SEI boards may also be affected by the above factors and therefore **Control Joints may be required to avoid hairline cracking at the joints after installation.**

Disclaimer

Architects and competent tradespersons must follow professional trade specifications when specifying and using any building products of this nature. We strongly recommend that informed and competent installers fix the Accumen SEI boards.

Construction using Accumen Shapes Ltd products must be in accordance with good building practice, in accordance with the New Zealand Building Code and all statutory and relevant New Zealand standards.

INSTALLING

BASIC GUIDE TO INSTALLING ACCUMEN SEI

We recommend that informed and competent tradespersons install Accumen SEI boards. Accumen SEI boards are to be adhered to the foundation wall with Accumen Shapes TidyUP® plaster.

On Delivery and Pre-Install Checks

Check the product is removed from all wrapping. Dispose of wrapping in the appropriate recycling bins.

Check the product is the correct profile and is appropriate, as ordered.

Check that the correct quantity has been delivered (count the lengths and TidyUP®) as per the packing slip and job requirements.

- Accumen SEI must be stored undercover and out of direct sunlight prior to installation.
- When carrying Accumen SEI boards, avoid damage by supporting the product correctly. Carry the boards standing up, orientated on the vertical edge to avoid unnecessarily bending the boards.
- Accumen SEI boards come in 2.400m lengths, they can be easily cut and mitred as required.
- Check you have all the necessary tools and equipment for installation.
 - Safety gear as required – eye protection, gloves, ear protection etc.
 - Accumen SEI boards and TidyUP® adhesive plaster (coverage approx 7sqm per 10 litre bucket with 5mm notched trowel).
 - Empty container/bucket for mixing smaller amounts of TidyUP – board ends, mitre joins and fixing hole filler.
 - 3mm or 5mm notched trowel, and a standard plastering trowel

- Cutting equipment - Accumen SEI boards may be cut with a concrete hand saw, preferably used in conjunction with a mitre box, or use a standard electrical mitre saw with a masonry cutting blade.
- String line/Spirit Level/Tape Measure/Laser Level.
- Masonry nails or jigs to support the freshly installed Accumen SEI boards.
- Paint finishing materials and equipment.
- MS Flexible Sealant (non-solvent and paintable) with applicator gun/chalk gun
- Angle Grinder (with masonry disc)/Wire Brush – to tidy up any lumps and bumps on the foundation wall prior to installing Accumen SEI boards.
- Check that the foundation wall area where you are applying the Accumen Slab Edge Insulation boards is straight and has no lumps, bumps, or indents greater than +3mm or -3mm.
- When using TidyUp® adhesive plaster, check the concrete you are fixing Accumen Slab Edge Insulation boards to is clean and dry.

Application of Accumen SEI using TidyUp® Adhesive Plaster

Accumen SEI boards are to be attached to the foundation walls using Accumen Shapes TidyUP® adhesive plaster. Use levels and stringlines to keep everything square and straight during the install.

- Spread on an even 3mm to 5mm thick coat of TidyUp® Adhesive Plaster with a notched trowel, on the entire back face of the Accumen Slab Edge Insulation board. (See next section for joining the Accumen SEI boards)
- Apply Accumen SEI boards to appropriate area of the foundation wall and bed in with firm pressure, moving the Accumen SEI board slightly a couple of times from left to right or up and down to ensure even spread of adhesive plaster. This eliminates any air trapped under the Accumen

SEI board and creates a small vacuum between the two surfaces helping the adhesion process.

- Keep the required amount of even pressure against the installed Accumen SEI boards while the TidyUp® Adhesive Plaster sets.
- Basic jigs can be set up to assist with holding the Accumen SEI boards in place. Alternatively, masonry nails can be used to temporarily hold the Accumen SEI boards in place the TidyUp® Adhesive Plaster sets (leave head of nails out to make removing easy).
- Care must be taken removing the masonry nails when the TidyUp® adhesive plaster has set. Fill in nail holes with TidyUP® Adhesive Plaster once removed.
- Depending on weather conditions it may take approximately 6-8 hours for the TidyUp® adhesive plaster to hold the boards unsupported, and up to 24 hours to cure.

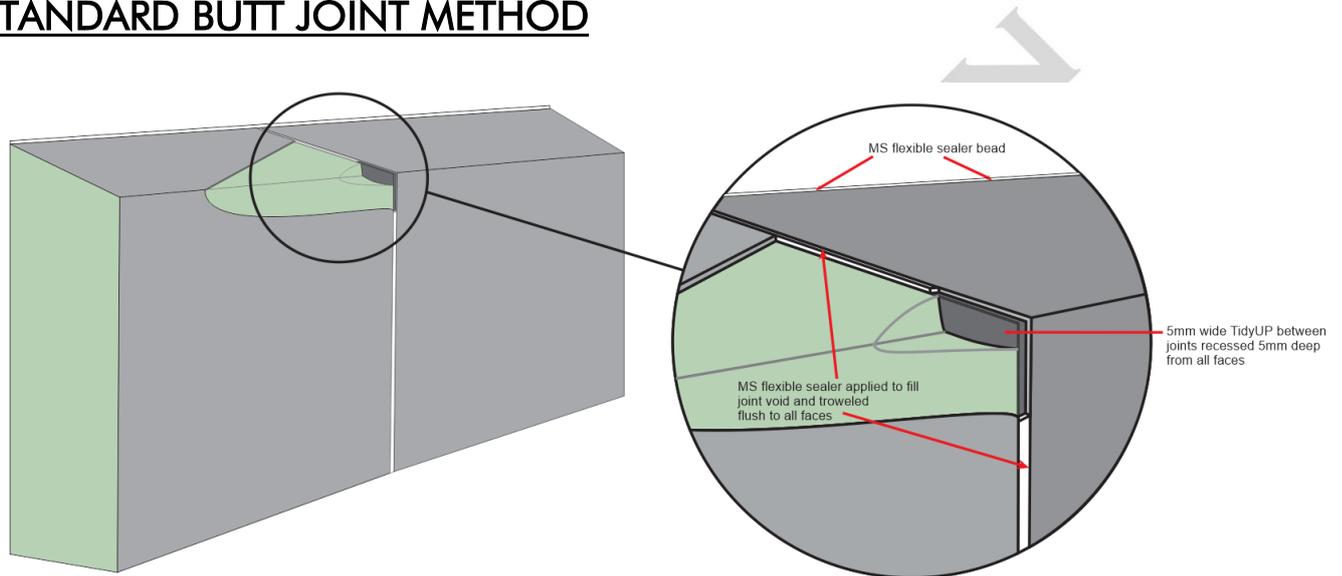


JOINING

A GUIDE TO JOINING ACCUMEN SEI BOARDS – END TO END

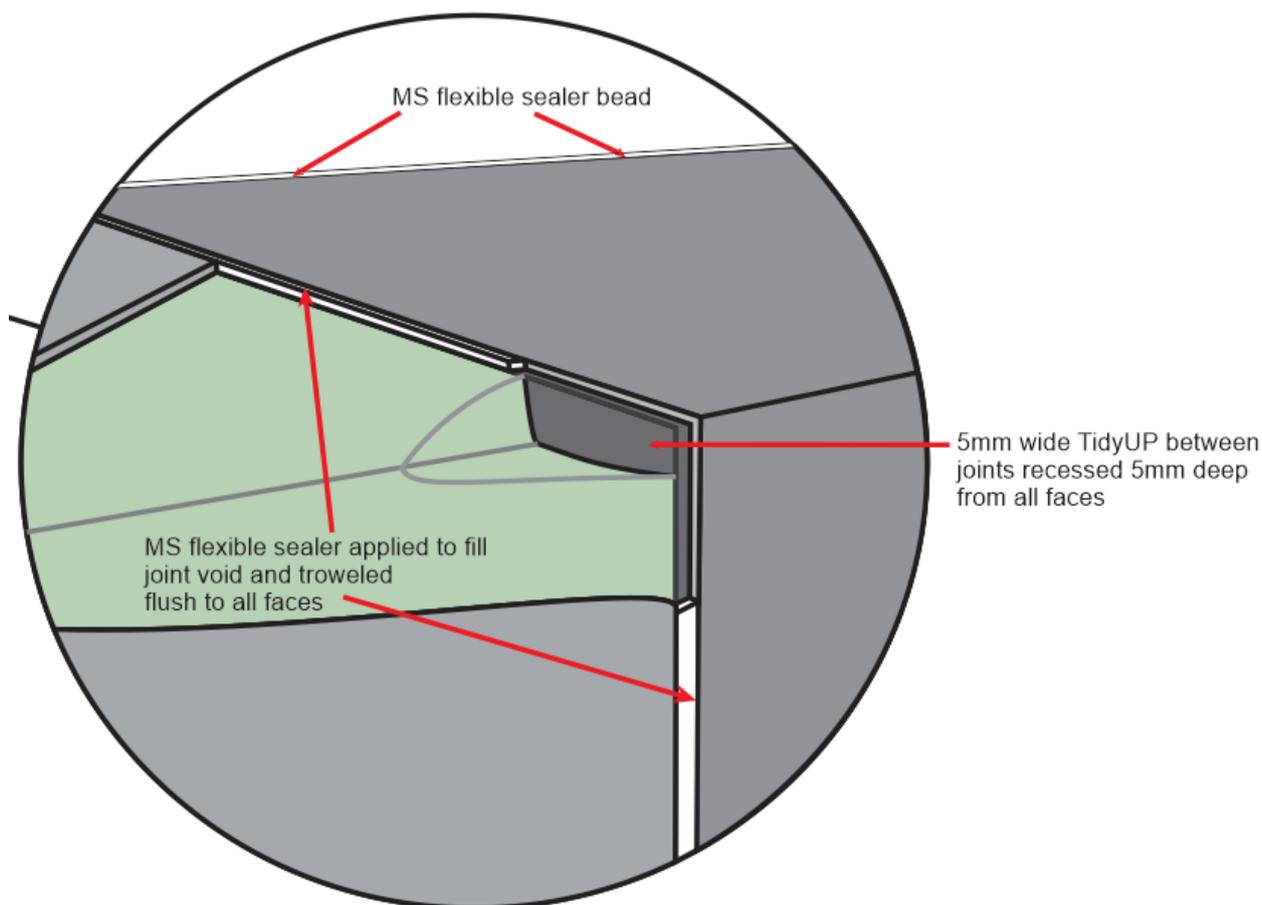
- It is recommended that TidyUp® adhesive plaster be used on the joins, in conjunction with MS Flexible Sealant (non-solvent and paintable).

STANDARD BUTT JOINT METHOD



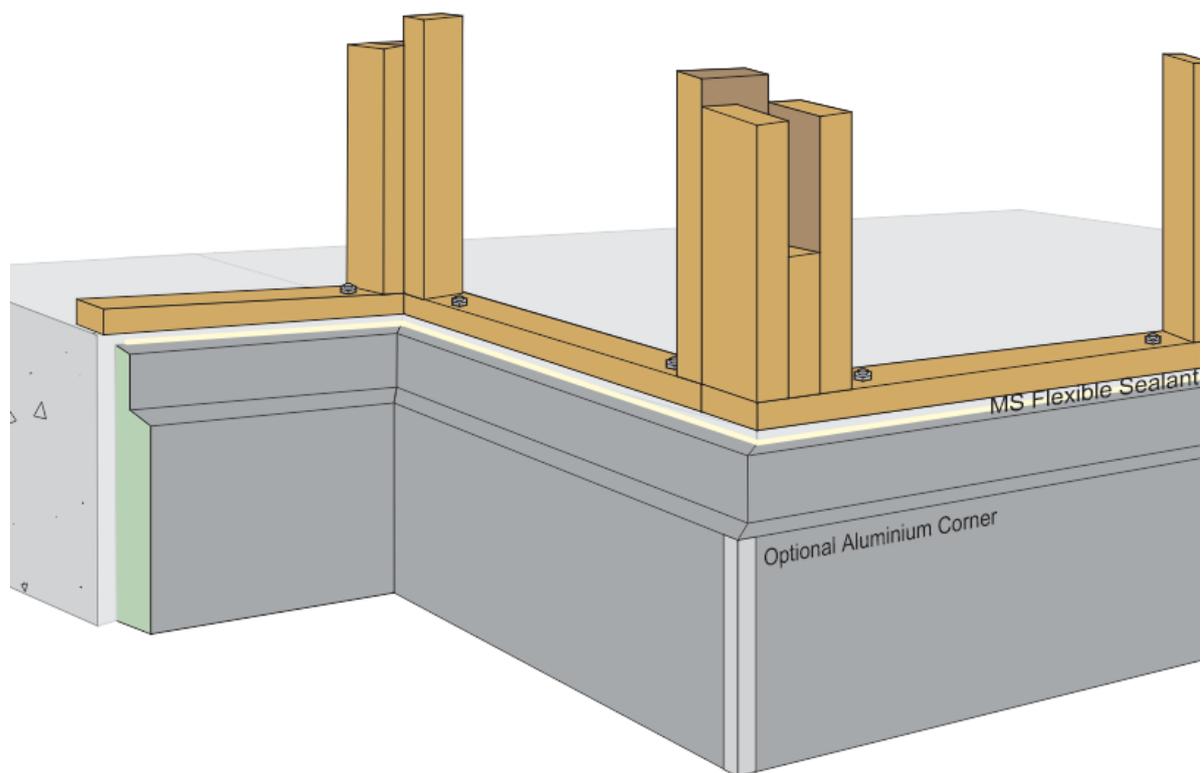
1. Butter both ends of the new joint with TidyUp® Adhesive Plaster.
2. When installing the moulding, close the join up leaving a 5mm gap between each board end, position, and fix in place. TidyUP® adhesive should squeeze out of the join as it's closed to create the 5mm gap. Alternatively, the 5mm gap can be set without buttering the ends, then TidyUP adhesive plaster is chalk gunned into the join until it squeezes out across the entire joint area.
3. Skim the joint and excess TidyUP® adhesive plaster until all surfaces are flush.
4. Take a small slot tool or tile spacer and remove the TidyUP® adhesive plaster in the joint making a 5mm deep slot, creating a sealed groove for the MS Flexible Sealant to be applied into once the TidyUP® adhesive plaster has dried.
5. Once dry, sand the joint and ensure the groove created for the MS Flexible Sealant is across the entire butt joint.

6. Seal the butt joint with MS Flexible Sealant, use a silicon tool to make flush or slightly recessed.
7. Seal the top horizontal edge of the installed Accumen SEI boards with MS Flexible Sealant.
8. Once dry the Accumen SEI boards are ready for sealing and painting.



CORNER MITRES

1. Corner mitres should be cut as accurately as possible.
2. Butter both ends of the new mitre joint with TidyUP® Adhesive Plaster.
3. When installing the Accumen SEI boards, close the joint up tight once in the correct position and secure in place.
4. Skim the joint until all surfaces are flush.
5. Once dry, sand.
6. Re-skim the joint, once dry sand again to make good.
7. Seal the top horizontal edge of the installed Accumen SEI boards with MS Flexible Sealant.
8. Once dry the Accumen SEI boards are ready for sealing and painting.



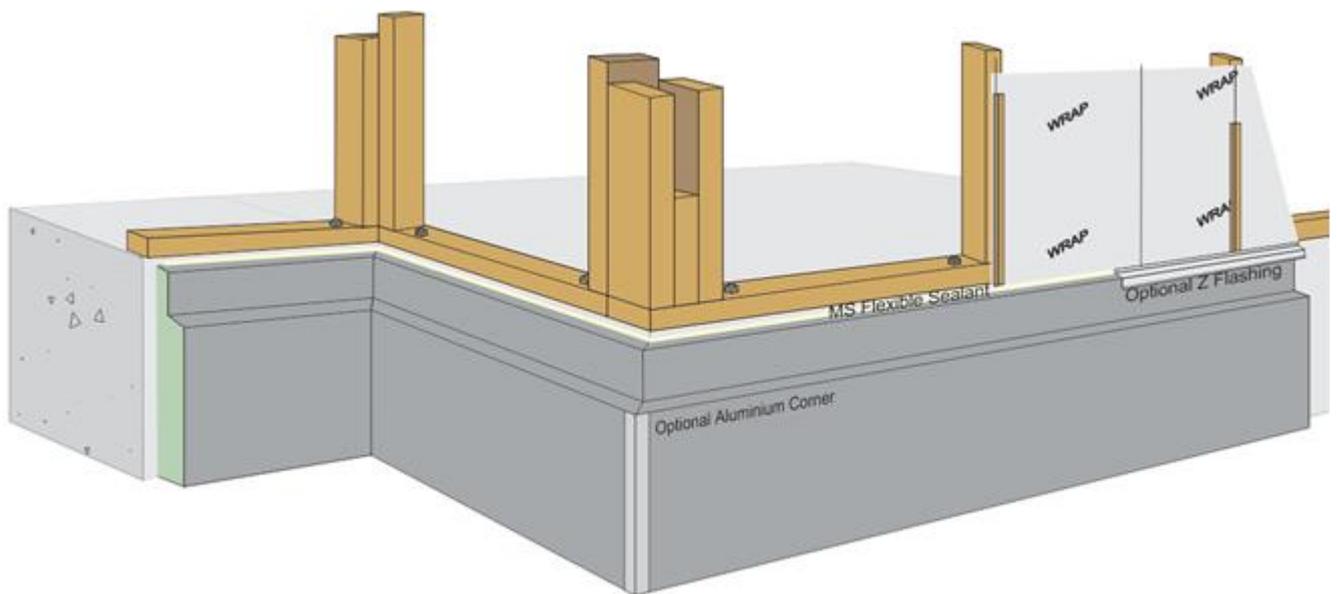
Aluminum extrusion angles cut to length can be glued to external corners once sealed and painted for added protection (available from most hardware stores).

FLASHINGS

Designed to be installed onto existing concrete foundations, Accumen SEI boards can be installed onto both new builds and existing builds.

In the case of new builds, Accumen SEI boards can be installed before the cladding is installed. This allows for the architect/designer to add flashing over the top of Accumen SEI boards if they consider it necessary.

If flashing is specified then the installer still needs to seal and paint the Accumen SEI boards, including sealing all joints with MS flexible sealer before painting (as described earlier in this document) prior to installing the flashing detail.



Z Flashing available from most hardware stores

EXTERNAL COATINGS ON INSTALLED MOULDINGS

Accumen SEI boards must be sealed and painted once installed.

PAINTING

Any small gaps that may have appeared between the Accumen SEI boards and the wall should be filled by applying a MS Flexible Sealant (non-solvent and paintable)

The same preparation and application of any paint going on to the Accumen SEI boards once installed should be the same instructions that a paint system provider would give for applying any paint on to a plastered wall. It is important to follow these instructions with care.

Although there are many other suitable paint systems available, Accumen Shapes recommends painting Accumen SEI boards with Mapei Mapelastic Smart, a two-component, high flexibility cementitious mortar, applied by brush or roller for waterproofing.

<https://www.mapei.com/nz/en/products-and-solutions/products/detail/mapelastic-smart>

Installers must follow the manufacturer's instructions for the application of this product. Please ensure you check with the paint system provider if you decide to use another paint system.

PAINT COLOUR

LRV (Light Reflectance Value) is a measurement that tells you how much light a colour reflects, and conversely how much it absorbs.

LRV runs on a scale from 0% to 100%. Zero being absolute black and 100% being a perfectly reflective white. Dark colours with low LRV tend to reflect little light while absorbing lots of heat energy, whereas light colours with high LRV reflect a lot of light and absorb less heat energy.

The LRV of the paint colour that is to be applied over Accumen SEI boards must not be less than 40%.

DURABILITY

The durability of Accumen SEI boards is expected to be at least 15 - 20 years provided they are installed and used in accordance with the limitations and instructions of the manufacturer and standard regular maintenance is applied.

Please refer to the following section on Maintenance.



MAINTENANCE

Any accumulation of dirt or similar that may occur should be regularly removed from the external surface by cleaning with warm water and detergent and a soft broom. Solvent-based cleaners should not be used.

Like any plaster render system, Accumen SEI boards should be checked annually for damage and possible water entry. Any damage which may have occurred must be repaired in accordance with the manufacturer's instructions.

Any paint film damage must be repaired as soon as possible.

It may be necessary to repaint Accumen SEI boards in accordance with the paint manufacturer's instructions at certain intervals. The paint manufacturing company should be contacted to confirm the life expectancy of the paint system.



USING TIDYUP® ADHESIVE

PLEASE READ BEFORE INSTALLING ANY MOULDINGS

TidyUp® adhesive

TidyUp® adhesive is a modified cement based adhesive plaster that is to be used by tradespersons for installing decorative details manufactured by Accumen Shapes Ltd.



TidyUp® adhesive is designed for fixing architectural mouldings to a weathertight surface using a notched trowel; buttering the end of a length of architectural moulding when creating a joint end to end or a control joint; using with mesh embedded to create a surface joint; repairing imperfections due to mechanical fixings being installed; or repairing any damage to the surface that may inadvertently occur whilst installing architectural mouldings.

MIXING INSTRUCTIONS

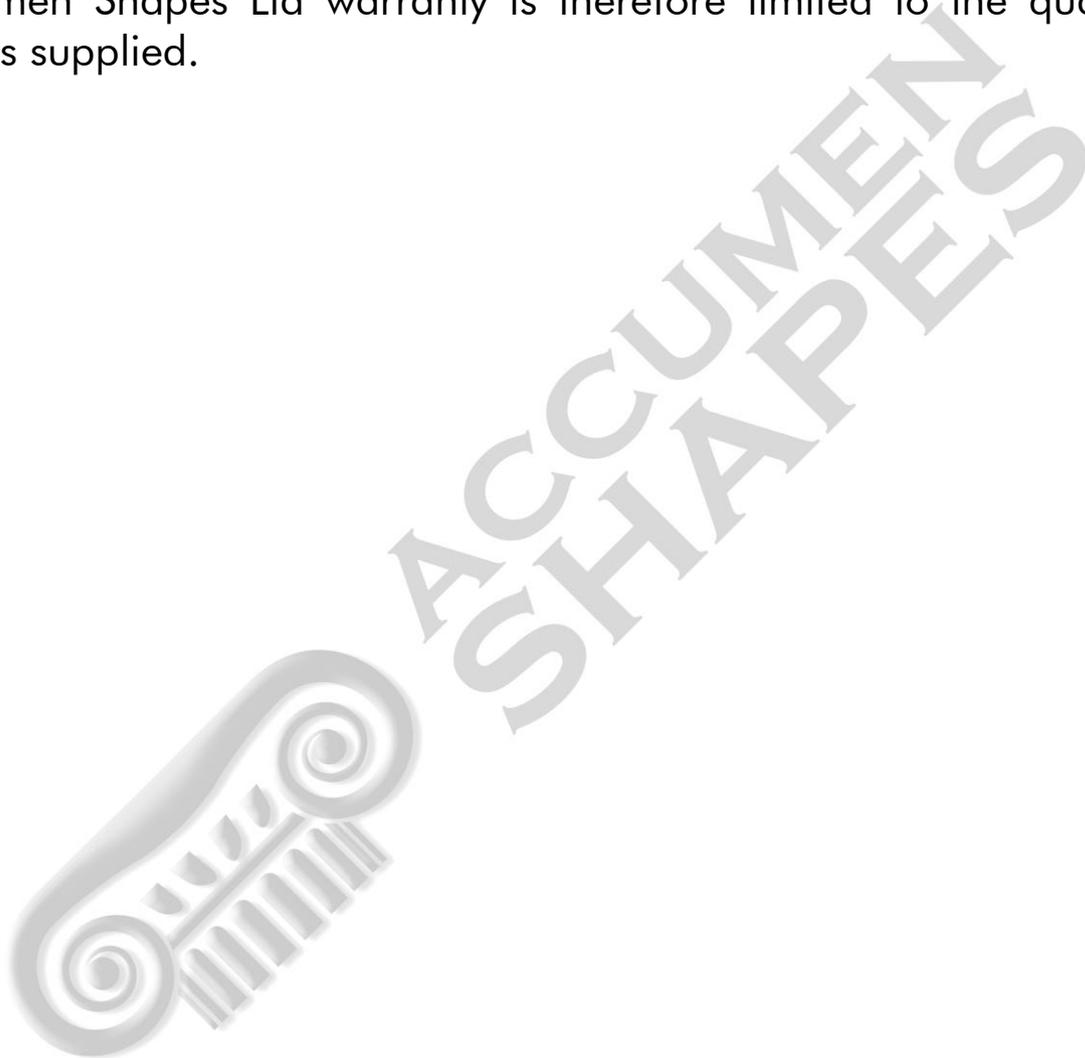
- Prior to application, surface must be cleaned from any contaminants that may affect the adhesion.
- The estimated required amount should be placed in a suitably sized bucket (5,10 or 20 litre).
- After making a hollow in the powder, pour in a small amount of water.
- Using a mechanical mixer, proceed to mix slowly adding more water until an even well mixed trowelable consistency is achieved.

Health, Safety and Handling

TidyUp® adhesive can be cleaned off any equipment with water provided the product hasn't dried out (dabbing dried plaster on tools with diesel and left overnight will assist removal). **DO NOT PERMIT** waste-water to run off into the sewer, storm water, or open bodies of water. The powder is an irritant. Observe normal precautions for handling alkaline products. Wear an approved dust protection mask and gloves. Avoid skin contact.

DISCLAIMER

The information contained in this booklet is true and accurate to the best of Accumen Shapes Ltd's knowledge. However, the performance data quoted herein is subject to variation depending upon the quality of workmanship and other conditions of use, which may be entirely beyond Accumen Shapes Ltd.'s control at time of installation. Any Accumen Shapes Ltd warranty is therefore limited to the quality of goods supplied.



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