

1 COMPONENT POLYMER CEMENTITIOUS MEMBRANE

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TECHNICAL DATA SHEET

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Description

Gripset C-1P is a high performance 1 component flexible polymer cementitious membrane designed for a range of positive and negative waterproofing applications over concrete and masonry surfaces. Suitable for podiums, terraces, water tanks, water storage areas, basements, wet areas, cellar walls, lift pits, immersed and subterranean areas.

Based on unique polymer technology, Gripset C-1P possesses outstanding waterproofing and adhesion properties, with excellent resistance to frost, ageing, and salt water. Suitable for use over a range of building substrates, Gripset C-1P provides a unique advantage over 1 component cement based membranes as it not only forms a durable waterproof membrane but provides enhanced flexibility and excellent crack bridging properties over concrete/masonry cracks.

Suitable for waterproofing the negative face of structures where access to the positive face is not possible, e.g. basements, underground walls etc, withstanding up to 15m head of pressure on the negative face.

Alternative to crystalline waterproofing products over surfaces with low alkalinity, where crystal growth is not possible.

Features & Benefits

- * Able to be used for both positive and negative waterproofing
- * Waterproof, withstanding continuously wet and immersed environments
- * Dries without cracking, low shrinkage
- * 1 component, mixed on site with water, ready to use.
- * Flexible and good crack bridging properties
- * Tested up to 6 bar water pressure (60m head of pressure); positive side; tested to 1.5 bar (15m head of pressure) on negative side.
- * Withstands UV light exposure
- * Can be applied by brush, roller and trowel on horizontal and vertical surfaces without sagging. Able to spray apply
- * Ability to apply over damp concrete
- * Potable water approved
- * Non-toxic

Application

- * Gripset C-1P is suitable for civil, commercial, and residential applications.

Waterproofing Uses

- * Basement walls, internal and external sides
- * Lift pits
- * Podiums, terraces, general external wet areas
- * Water features, swimming pools
- * Potable water storage facilities, retention and water tanks
- * Waterproofing system over concrete blocks, brick, masonry and mortars where crystal treatments are not suitable
- * Waterproofing under tiles and pavers in external areas
- * Sandwich sealing between existing and new concrete toppings
- * Planters, retaining walls, earth shelters

Substrates

Substrates suitable for bonding Gripset C-1P over include:

- * Concrete
- * Render, screeds and general masonry surfaces
- * Concrete blocks and clay brick
- * Plasters and general mineral surfaces
- * Aerated concrete panels and blocks

For further information on suitable surfaces and substrates contact technical department of Gripset Industries for correct advice on surface preparation and suitability.

Surface Preparation

Surfaces must be prepared thoroughly before commencing application. All substrates must be structurally sound, stable, dry, and clean, with substrate compressive strength a minimum 25MPa and cohesive strength a minimum 1.5MPa. Smooth shiny surfaces to be roughened or etched. Rough surfaces are to be evened or filled first (refer to Gripset 11Y). Building surfaces must be constructed to manufacturer's recommendations and relevant building standards in force at time of membrane application. All surfaces are to be free of sharp protruding surfaces, loose material, de-bonded coatings, curing membranes/agents, release agents, wax residues, foreign particles, laitance, algae and moss, grime, oils, animal fats or grease remains.

Structurally unsound layers and surface contaminants are to be mechanically removed by abrasive blasting, blast tracking, grinding or equivalent methods. For thorough surface preparation, refer to Gripset SC (algae and moss remover) and Gripset DG (water based oil degreaser) products.

Priming

Gripset C-1P must be applied onto a pre-dampened or primed surface: On porous concrete, masonry and mineral surfaces, if pre-wetting down, ensure there is no ponding or surface water before membrane application. Surfaces can be damp but must not have free water present when applying membrane.

Gripset GP primer – for positive side sealing applications over general porous vertical and horizontal building surfaces. Brush or roller apply primer to total surface area at a minimum coverage of 1 litre per 6m² and allow drying for 30 minutes or once wet film dries to a clear transparent coating.

Gripset OP primer – for non porous, smooth and dense surfaces. Brush or roller apply primer to total surface area at a minimum coverage of 1 litre per 12m² and allow to dry for 1 hour

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Gripset 11Y slurry – for positive side sealing in immersed, and subterranean applications, over asphalt/bitumen surfaces and existing coatings. Mix Gripset 11Y in equal volumes to the following ratios: 1 part Gripset 11Y + 1 part Portland cement + 1 part fine wash sand, mix to form homogenous slurry. Brush apply to substrate at coverage of 1 litre per 3m². Membrane is to be applied over primer slurry while primer is in a damp/wet state, i.e. "wet on wet" application

Gripset P10 primer – for surfaces with residual or rising damp. Apply by brush or roller in 2 coats at a minimum coverage of 1 litre per 3m²; ensuring subsequent coat is applied in opposite direction to the first coat. Allow to dry for a minimum 24 hours before applying membrane. Primer must be tack free before applying membrane.

Note: Refer to data sheets for above primers before using

Detailing

All critical areas such as joints, junctions, movement zones, penetrations and drainage points are to be correctly sealed and detailed prior to membrane application.

Vooids, gaps and undulating surfaces:	Filled and evened with Gripset 11Y repair mortar compound.
Cracks up to 1mm:	Filled with Gripset SB, followed by Gripset RF reinforcement
Cracks >1mm:	Elastoproof Joint Band
Bond Breaker:	Elastoproof Joint Band to wall/floor junctions and wall/wall junctions.
Movement or Expansion Joints:	Elastoproof Joint Band
Penetrations, Pipes, Drain outlets:	Elastoproof Collars

Membrane Application

Mixing

- Gripset C-1P consists of a 15kg bag dry powder. Membrane is formed by mixing 2.7-3.3 litres of water to 15kg of powder.
- Add 2/3 of the required water into a clean pail/drum. Slowly add the dry powder component to the water and mix using an electric stirrer with paddle attachment, ensuring the mixing of components is continuous while the powder is added. Continue mixing to form a lump free consistency. Then slowly add the 1/3 balance of water to the mixture until it is evenly dispersed and a homogenous consistency is formed.
- Allow the mix to settle for 2-3 minutes then lightly re-stir before use. Pot life once mixed is 45-60 minutes; however this may be reduced in warmer weather.

General

The application of Gripset C-1P is at a minimum of 2 coats. Product can be applied by trowel, roller (low texture or medium-high nap), brush (slurry masonry brush) or spray unit.

- * For general waterproofing applications – a minimum 1.5mm dried film thickness is required, 1litre/1.5kg/m² per mm layer thickness
- * For immersed applications - a minimum 2mm dried film thickness is required, 1litre/1.5kg/m² per mm layer thickness
- * For preventing ingress of water under pressure - a minimum 2.5mm dried film thickness is required, 1litre/1.5kg/m² per mm layer thickness

Apply subsequent coats at different directions to the previous coat. Coverage is dependent upon surface condition and will vary accordingly as uneven and porous surfaces will require greater coverage to achieve the specified film thickness

Installing Elastoproof Bond breaker Joint Band

Measure and cut Elastoproof Joint Band for all wall/floor junction areas. Apply first coat of Gripset C-1P membrane to approximately 150mm extending up walls and on to floors, and embed Elastoproof Joint Band into wet bed of liquid membrane, ensuring fabric edges are fully wet out and no air bubbles exist behind the fabric. Rear rubber section of Elastoproof Joint Band is not bonded to substrates. At sections where Joint Band is to be joined, a minimum 50mm overlap is required. Elastoproof Prefabricated Corners are available for both internal (90°) and external (270°) junctions, enabling Joint Band to overlap and avoid joint at critical areas. If Prefabricated corners are not used, Elastoproof Joint Band is to have bottom leg cut and folded; ensuring fabric is completely bonded with Gripset C-1P membrane.

For floor pipes protruding floors, Elastoproof Collars are to be fitted over the neck of the pipe, embedding fabric edges into wet bed of Gripset C-1P membrane. For floor wastes that are finished level with the floor, Elastoproof Inverted Collars are to be fitted or alternatively the Gripset C-1P membrane with Gripset RF Fabric embedded is to be dressed down into the waste outlet at a minimum 50mm.

Once Elastoproof Joint Band is in place, apply Gripset C-1P membrane to floor and wall areas as required. A continuous seamless membrane should be the final finish to the total area upon completion of the waterproofing membrane application.

Tiling & Surface Toppings

It is recommended when tiling directly over Gripset C-1P in internal and external floor areas, that Gripset C-Flex, Gripset C-Bond or Gripset C-Set tile adhesives be used.

In immersed areas tile directly over Gripset C-1P with Gripset C-Set tile adhesive.

If applying a screed, render or concrete topping over Gripset C-1P it is recommended to incorporate Gripset 11Y as a proprietary bonding agent and water resistant additive.

For use of other adhesives over Gripset C-1P contact the technical department of Gripset Industries for detail of compatibility.

Pre mixed tile adhesives are not recommended to be used over Gripset C-1P.

Drying time before tiling is 24 hours.

Note: All tiling is to be carried out to AS3958.1 – 2007 "A Guide To The Installation of Ceramic Tiles"

Storage conditions

- * Best stored at room temperature in dry conditions.
- * Avoid humidity, cold freezing conditions and off concrete floors
- * Do not store in direct sunlight
- * Shelf life: 9 months in original unopened packaging

Packaging

- * Dry Powder Component – 15kg bag

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Precautions

- * Not to be used as a trafficable surface
- * Do not apply to areas when rain is imminent
- * Do not apply when surface temperature is below 5°C or above 30°C
- * Not to be applied over glass or glazed surfaces
- * Not to be used in areas where solvent or petroleum based products may be spilled
- * All finish coatings over this membrane must be water based and solvent free
- * Allow 21 days drying after final application for immersed conditions
- * Exposure to water pressure, allow 7 days curing
- * Material Safety Data sheet (**MSDS**) available
- * For further information contact technical department of Gripset Industries

Clean up

- * In water while wet.
- * Once dried product needs to be removed mechanically

Technical Data

Appearance	Grey powder
Form	When mixed – grey viscous slurry When dried – grey film
Yield	12.5litres/18.5kg (when mixed with water)
Drying	Tack Free: 15-20 minutes Re-coat: 90-120 minutes Dry film – 4-5 hours Tiling or toppings over: 24 hours Exposure to water pressure: 7 days curing Immersion: 21 days
Mixing ratio	2.7-3.3 litres water to 15kg of powder
Specific gravity of mixed product	1.5kg/litre

Based on normal ambient temperatures of 20°C
*Temperature, humidity and porosity will vary dry times

Elongation	85%
Adhesion to concrete	1.08MPa
Tensile Strength	1.1MPa
after 28 days immersion	0.89MPa
after freeze thaw cycle	0.74MPa
after exposure at 70°C	0.9MPa
after caustic potash immersion (3% solution, 40°C)	1.09MPa
Crack Bridging (24 hour cycle)	0.5mm

Water Pressure	1.5 bar, negative pressure 6 bar, positive pressure
Water vapour diffusion - SD Value	1.5

Notes

It is recommended before commencing the application; that adhesion of products to be used (e.g. primers, membranes, coatings adhesives etc) is tested over a typical area of the prepared surface to ensure satisfactory adhesion. It is the responsibility of the applicator to carry this out and accept the substrate suitability before any application starts. Gripset Industries offers a service for pre testing adhesion to surfaces for large commercial areas or unusual substrates. For further details contact Gripset Industries.

Details contained in product data sheets are general. For any situation or items not covered in this data sheet, it is the responsibility of the applicator to check with Gripset Technical Services before commencing the application. A written confirmation will then be issued by Gripset Technical Services.

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Product Disclaimer

This Product Data Sheet (PDS) summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time. You should read this PDS carefully and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. Our responsibility for products sold is subject to our standard terms and conditions of sale. Gripset Industries does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.