

## WATERPROOF AND VAPOUR BARRIER MEMBRANE

[www.gripset.com](http://www.gripset.com)

TECHNICAL DATA SHEET

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### Description

Gripset GC1 is an innovative sheet membrane system that provides high performance waterproof and vapour barrier protection in the built environment. Consisting of an impermeable tear resistant core layer with a fleece facing on each side of the sheet, the unique properties of the GC1 membrane enable it to form a fast and reliable waterproof tanking system in numerous applications, enabling surface finishes such as tiles, screeds and toppings to be applied immediately after the membrane system has been installed.

The GC1 membrane surface enhances the adhesion for a range of finishes applied directly over the membrane while providing an outstanding anti-fracture system over floors by isolating surface finishes from cracks or shrinkage in the substrate.

Further details are available in the Gripset GC1 manual for a range of specifications and fixing details for waterproofing applications where this system can be used.

### Features & Benefits

- \* Provides an immediate waterproof finish upon completion, avoids delayed drying times
- \* Fast and reliable sealing method. Reduces labour and application time of waterproofing by >50% over traditional sheet and liquid systems
- \* Enables the direct application of toppings, tiles, screeds, self-levellers and other finishes same day as waterproofing application
- \* Resists surface cracks and provides an anti-fracture system on floor substrates
- \* Provides a uniform waterproof surface finish
- \* Suitable for internal, external, subterranean and immersed applications
- \* Suitable on horizontal and vertical surfaces
- \* Durable, tear resistant and able to resist perforation
- \* Alkali resistant
- \* Able to be finished over with a range of surface finishes

### Application

- \* Gripset GC1 is suitable for commercial and residential applications.

### Uses

- \* Internal wet areas, wet floors, showers, laundries
- \* External wet areas, podiums, terraces, balconies and decks
- \* Roofs, suspended external floors and box gutters
- \* Roof gardens, earth shelters, planter boxes and retaining walls
- \* Sandwich sealing between existing and new slabs
- \* Suspended pool floors, spas, water features and fish ponds
- \* Potable water storage facilities, retention and water tanks
- \* Anti-fracture flooring system for tiles over concrete
- \* Vapour sealing for wall and floor substrates
- \* Sandwich sealing between existing and new concrete toppings

### Substrates

Substrates suitable for the GC1 system include:

- \* Concrete
- \* Render, screeds and general masonry surfaces
- \* Concrete blocks and clay brick
- \* CFC, cement sheet, Hardies Scyon™, plaster board surfaces
- \* Plasters and general mineral surfaces
- \* Aerated concrete panels and blocks
- \* Metals
- \* Glazed and rigid plastic surfaces

Refer to GC1 fixing applications for specified adhesives for different surfaces.

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. Rough surfaces are to be evened or filled first (refer to Gripset 11Y). All building surfaces and substrates 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, dust, 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. All surfaces are to be made good before Gripset products are applied.

### Priming

The types of substrates where Gripset GC1 is applied will determine the grades of adhesive and primer to be used. The following guideline is to be referred to:

#### Porous surfaces

- On porous surfaces such as concrete, masonry, mortar etc, priming is required. GP primer is to be used at a coverage rate of 1 litre per 6m<sup>2</sup>
- Porous substrates with a surface prone to forming a surface dust after correctly preparing, e.g. fibre cement wall linings, aerated concrete or similar should be primed with Gripset GP primer to seal any surface dust from compromising adhesion of the membrane.
- Porous substrates in external areas containing any residual moisture are to be primed against moisture vapours using either Gripset E60 or Gripset P10 primers before applying.

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### Priming

#### Non porous surfaces

- When applying GC1 membrane to non-porous building surfaces (i.e. no absorption properties) with the GC General Adhesive, surfaces are to be first primed with Gripset OP.

- When applying GC1 membrane to non-porous building surfaces (i.e. no absorption properties) with the GC Pro Adhesive, surfaces do not require to be primed once correctly cleaned and prepared.

*Refer to individual data sheets for primers. Further information on suitable adhesives and primers for building surfaces and GC1 applications should be directed to the Technical Services department of Gripset Industries.*

### 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.

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

### Membrane Application

Gripset GC1 is supplied in a 30m x 1m wide roll. When applied in lengths less than roll size, cut to measured dimensions needed for the application and re-roll the sheet in preparation for laying into adhesive bed.

Apply the GC General Adhesive by roller or small 3-4mm notch toothed trowel onto the surface, ensuring 100% coverage of adhesive to where the membrane is to be laid. Unroll the GC1 membrane into the wet bed of adhesive and using a flat steel float, smooth roller or similar, press the sheet into the adhesive to ensure a firm bond to the adhesive bed, removing any air pockets or excess adhesive. Sheet joints must be a minimum 50mm overlap. Joints are adhered together using the GC General Adhesive, followed by brushing or rolling the adhesive over the lapped sheet joint to fully seal the lip of the overlapped section.

With pipe penetrations, the GC1 membrane is to be cut to enable the sheet to slide over penetrations. This is best achieved by measuring the pipe diameter and in the position where the sheet will cover the pipe, a cross "+" should be cut that is the pipe diameter length and sliding this over the pipe. Adhere the GC1 sheet into the bed of adhesive and trim any of the loose membrane around the upturn of the pipe from the section where the cross "+" was formed ensuring the GC1 membrane is firmly bonded around the pipe. Once this is in place the Elastoproof Collars are to be used to seal the pipe penetration, bonding the collar to the GC1 membrane with the GC General Adhesive and brushing or rolling the edge of the collar to the GC1 sheet with the GC Adhesive.

The GC1 membrane is to be adhered on all floor areas to be waterproofed, abutting the edge of the walls of these areas. Once the GC1 sheet has covered the floors, the Elastoproof Joint Band is to be adhered at wall/floor junctions as the bond breaker. Using the GC General Adhesive, adhere the Elastoproof Joint Band in place at the wall/floor junction over the GC1 sheet that has been laid and adhering the Joint band upturn to the wall surface.

At all internal and external corners, Elastoproof Prefabricated corners should be adhered in place with GC General Adhesive prior to the Joint Band at wall/floor junctions. All joins of the Elastoproof Joint Band, including over corners, should be lapped a minimum 50mm. Once in place, the GC General Adhesive is to be brushed or rolled over these lapped sections and onto all edges of the Joint Band adhering to the GC1 sheet, to fully seal the lip of the Joint Band and GC1 sheet.

The above instructions are for general applications, primarily wet areas, using the Gripset GC1 system. There are additional details and requirements for other waterproofing applications using this system. Refer to the GC1 product manual or any Gripset specification issued for further details. All other enquiries regarding this system are to be directed to Gripset Technical Services.

The full range of Gripset membranes is compatible with the GC1 sheet. For situations where any other of the Gripset membranes are to be applied over the GC1 sheet, apply after the fixing instructions above have been completed.

### Membrane & Adhesive Coverage

General consumption for use in waterproofing applications is 1.05m per metre, allowing for a 50mm overlap on all edges. For use in dry areas as an anti-fracture system or tile underlay, overlaps are not required.

#### Mixing GC General Adhesive

GC General Adhesive is a dry powder product that requires the addition of water. Following guidelines are to be followed:

GC General Adhesive consists of a 20kg bag dry powder. Adhesive is formed by mixing approx. 4 litres of water to 20kg 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 approx. 45 minutes; however this may be reduced in warmer weather.

When applying the adhesive to surfaces, a minimum 1mm wet bed of adhesive is to be formed, applying by roller or 3mm notched tooth trowel. A 20kg bag of GC General Adhesive will cover approx. 15m<sup>2</sup> of area to adhere the Gripset GC1 sheet to surfaces.

### Installing Elastoproof Bond breaker Joint Band

Measure and cut Elastoproof Joint Band for all wall/floor junction areas. Apply coat of GC General Adhesive to approximately 150mm extending up walls and onto floor sheet of the GC1 membrane, and embed Elastoproof Joint Band into wet bed of adhesive, ensuring fabric edges are fully wet out and no air bubbles exist behind the fabric. 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 adhesive.

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 GC Adhesive. For floor wastes that are finished level with the floor, Elastoproof Butyl Square Collars are to be fitted directly over, finishing inside the rebate of the collar. This step is best carried out before the GC1 Sheet is applied as the Butyl Square Collar will adhere directly to the plastic floor waste.

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### Tiling & Surface Toppings

Tiling or laying of screeds over the GC1 System can commence once the GC General Adhesive used for sealing joint laps is dried. This is usually 1 hour after the application is complete but may take longer in cooler conditions.

When screeding over the GC1 membrane, it is recommended to incorporate the Gripset 11Y additive into the screed to enhance adhesion to the substrate or Gripset C-Bed pre-bagged screed can be used directly onto the membrane. A proprietary acrylic or latex bonding additive is to be incorporated into general mortar beds that are applied onto the GC1 membrane.

Tile adhesives or self-levelling compounds being directly fixed to the GC1 membrane are to be polymer modified. Pre-mixed adhesives and cement based compounds without any polymer enhancement are not to be used for direct adhesion to the membrane.

For use of other adhesives over the GC1 membrane system contact the technical department of Gripset Industries for details of compatibility.

**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, indoors.
- \* Do not stack heavy items onto the membrane
- \* Do not store in direct sunlight
- \* Protect against mechanical damage

### Packaging

- \* Cardboard carton, consisting of 1 Roll: 30m x 1m
- \* 30 cartons/pallet

### Precautions

- \* Not to be used as a trafficable surface or a long term exposed membrane surface. Must always be covered with suitable finishes.
- \* To be adhered with recommended Gripset adhesives as specified in the data sheet.
- \* Flood testing able to commence after 12 hours of finished application.
- \* When pre-dampening concrete ensure surface is free of surface water
- \* Do not apply when surface temperature exceed 35°C. Ensure surfaces are free of frost and ice.
- \* 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.
- \* Material Safety Data sheet (MSDS) available.
- \* For further information contact technical department of Gripset Industries.

### Clean up

- \* GC1 Sheet is non-hazardous substance.
- \* May be disposed of as building site waste.

### Technical Data

Following data is based on test results carried out to ETAG022-2	
Weight	290g/m <sup>2</sup>
Reaction to fire (EN13501-1)	Class E
Water vapour diffusion resistance (23°C – 75/100% RH)	S <sub>d</sub> =97m
Tensile Strength AS4654.1/AS1145.3	13.52 MPa
Lap Joint Tensile Strength	4.52MPa
Elongation AS4654.1/AS1145.3	348%
Dimensional Stability	Longitudinal -0.14%, Transverse -0.15%
Crack bridging ability	1.5mm
Bond strength on concrete	>1.0MPa
Joint bridging ability	Watertight over 2mm gap
Resistance to temperature EN1296	Resistant (70°C, 4 weeks)
Resistance to alkalinity EN1847	Alkali resistant (50°C, 16 weeks)
Radon Barrier	Pass

### 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.