

WATERPROOF BITUMEN RUBBER MEMBRANE

www.gripset.com

TECHNICAL DATA SHEET

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Description

Gripset 51 is a solvent free bitumen rubber liquid membrane that has excellent sealing and adhesion properties over a number of porous and non porous surfaces.

Gripset 51 is a versatile membrane in both new and existing construction for underground, fully immersed, internal and external areas. Besides offering excellent membrane properties, also can be used as a protective coating for timber and metal surfaces.

Features & Benefits

- * Solvent free, non toxic and non flammable
- * Flexible, accommodating normal substrate movement
- * Ability to withstand continuously immersed areas
- * Crack bridging properties up to 2mm
- * High adhesion properties to porous and non-porous surfaces
- * Protective coating against corrosion, rot and salt damp
- * Bonds to asphalt and bitumen surfaces, ideal for repair of failed and aged coatings
- * Compatible with cement for waterproofing slurries and mortars
- * User and environmentally safe
- * Approved for potable water to AS/NZS 4020:2005 at exposure of 1000mm² per litre
- * Excellent sound deadening properties

Application

- * Gripset 51 is suitable for commercial, residential, industrial, rural and automotive applications.

Waterproofing Uses

- * Retaining walls and underground surfaces
- * External cellar and basement walls
- * Planter boxes and garden beds
- * Fish ponds and stock troughs
- * Water tanks and water storage areas
- * Gutter repairs
- * Roofing and membrane repairs
- * Protective coating over metal and timber surfaces
- * **Note:** When exposed to long term UV, surface crazing may occur.

Substrates

Suitable surfaces for bonding Gripset 51 over include:

- * Concrete, render and masonry.
- * Fibre cement, plasterboard and structural sheeting.
- * Marine ply, timber sheeting and timber posts
- * Clay and concrete blocks/bricks.
- * Galvanised iron and zincalume (not raw steel).
- * Bituminous and asphalt substrates.
- * Polystyrene

When using over existing paints, membranes, coatings or other surface finishes confirm with Gripset Technical Services for suitability. Gripset 51 can be applied over damp surfaces free of surface water, however this will prolong curing.

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 51 is self priming: porous surfaces diluted @ 1:3 with water; non porous surfaces diluted @ 1:1 with water.
- * Gripset GP primer – for general porous building surfaces.
- * Gripset 11Y slurry/primer - for immersed areas, extremely porous surfaces, asphalt/bitumen, non porous and existing surfaces (non porous and existing surface suitability to be checked with Gripset Technical services before commencing).
- * Gripset P10 primer – for surfaces with residual or rising damp

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.

Voids, 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

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Membrane Application

General

For waterproofing applications product is to be applied in a minimum of 2 coats at a total minimum coverage of 1.5litres/m²; forming a minimum dried film thickness of approximately 1.2mm. 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. Product can be applied by roller or brush.

Installing Elastoproof Bond breaker Joint Band

Measure and cut Elastoproof Joint Band for all wall/floor junction areas and expansion/movement joints. Apply first coat of Gripset 51 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. For movement joints apply Gripset 51 to 150mm to both sides of joint and embed Elastoproof joint band. 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 51 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 51 membrane. For floor wastes that are finished level with the floor, Elastoproof Inverted Collars are to be fitted or alternatively the Gripset 51 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 51 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.

Note: when applying by brush, roller or spray unit it is recommended to lightly stir product. If applying by trowel for high build applications do not stir.

Mixing 51 with mortar – High Build Applications

Gripset 51 can be mixed with mortar to:

- * Form waterproof fillets at wall/floor junctions (e.g. planters, garden beds etc)
- * Filling voids and levelling asphalt and bitumen surfaces
- * Thin build render coats on rough and uneven surfaces (e.g. block retaining walls)

Mortar: 3 parts sand to 1 parts cement, or Gripset DM

Note: Wet dry components with water to form a working mortar before being mixed with Gripset 51.

Mixing Ratios of Gripset 51 and mortar for high build applications

At 1:1 – based on parts by volume

Mixing 51 with mortar - Low Build membrane applications

Gripset 51 can be mixed with mortar to:

- * Facilitate membrane drying/curing in colder temperatures
- * Provide enhanced filling properties over porous or uneven substrates
- * Improve coverage efficiencies

Mortar: 3 parts sand to 1 parts cement; or Gripset DM

Important: Wet dry components with water to form a working mortar before being mixed with Gripset 51.

Mixing Ratios of Gripset 51 and mortar for low build membrane applications:

At 3:1 – based on parts by volume

Use Type A Portland cement and wash sand for these applications. Best results achieved mixing components together with an electric stirrer at medium speed.

As an alternative to standard mortar, Gripset DM a premium dry mortar compound can be directly used with Gripset 51 offering a superior quality finish. Wet to form a working mortar before being mixed with Gripset 51.

Storage

- * Best stored at room temperature.
- * Avoid cold freezing conditions and off concrete floors.
- * Do not store in direct sunlight.
- * Shelf life is 12 months in original unopened container.

Packaging

- * 5 litre and 15 litre pails; 200 litre drums

Precautions

- * Not to be used as a trafficable coating
- * Not to be finished directly over with tiles, renders, screeds, paints or other surface finishes
- * Do not apply to areas when rain is imminent
- * Not to be applied over glass or glazed surfaces
- * Not designed as a sealant for expansion or control joints
- * Not to be used in areas where solvent or petroleum based products may be spilled
- * Not to be used in areas subject to rising damp or negative hydrostatic conditions
- * Do not apply when surface temperature is below 5°C or above 35°C
- * Material Safety Data sheet (**MSDS**) available
- * For further information about this product contact technical department of Gripset Industries

Clean up

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

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Technical Data

Appearance	Wet form-Charcoal; Dry - Black
Form	Creamy viscosity – thixotropic
Drying	Tack Free: 60-90 minutes Re-coat: 2-4 hours Dry film – 24 hours Backfill: 5 days curing Flood test: 10 days curing Immersion: 21 days
<small>Based on normal ambient temperatures of 20°C *Temperature, humidity and porosity will vary dry times</small>	
Specific gravity	1.15kg/litre
Shore A hardness (ASTM D2240-97)	52
Tensile Strength (AS1145-1989)	0.3 MPa
Elongation (AS1145-1989)	524%
After Chemical Immersion (AS1145-1989)	310%
Water Vapour Transmission (ASTM E96-95)	1.2g/24h/m ²
Crack Bridging (ASTM C876:95)	Able to bridge cracks up to 2mm
Potable Water (AS/NZS 4020 – 2005)	Suitable
When mixed with mortar	(3 sand : 1 cement) / Gripset DM
Water Absorption (AS121 AppK)	1 part Gripset 51 :1 part mortar – 1.66% (by volume)

VOC Content (ISO 13741-1)	0.065g/litre
<small>The VOC Content of Gripset 51 is below the maximum VOC Content for Architectural and Interior Sealants as required by Green Star Ratings tools Education v1, Healthcare v1, Industrial v1, Multi Unit Residential v1, Office Interiors v1.1, Office Design v2, Office v3, Office As Built v2 and Retail Centre v1</small>	

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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.

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.