



Description

Gripset C-1R is a hydraulic setting sealing slurry with outstanding sulphate resistant properties for waterproofing surfaces in subterranean areas and substrates exposed to ground moisture. Designed for use as a sealing slurry membrane on vertical and horizontal surfaces made of concrete, masonry or porous cementitious plaster.

Excellent adhesion properties to porous mineral substrates without any requirement for priming preparation. When dried the C-1R forms a waterproof finish that is resistant to moisture, frost and de-icing salts with outstanding resistance to chemical solutions and highly resistant to mechanical influences on site.

Resistant to positive hydrostatic pressure in underground applications as well as resistance to negative pressure.



Features & Benefits

- * Solvent free and non flammable
- * Highly resistant to sulphates in underground environments
- * Waterproof, withstanding continuously wet environments
- * Resistant to frost and de-icing salts
- * Excellent, primer-less adhesion to concrete, masonry and porous mineral surfaces
- * Highly durable, hard wearing finish with good mechanical resistance
- * Outstanding bonding properties for renders, textures and paints
- * Durable and tough seamless finish
- * Ability to apply over damp and "green" concrete
- * User and environmentally safe

Application

Gripset C-1R is suitable for civil, commercial, and residential applications

Waterproofing Uses

- * Foundations, perimeter concrete slab edges
- * Basement and cellar walls
- * Lift pits
- * Retaining walls (not subject to movement)
- * Water storage and immersed areas (non-potable)
- * Sealing the interfacing between new and existing slabs
- * General porous surfaces where an economical sealing solution is required

Note: Applications where surfaces are prone to shrinkage or require deformable properties refer to instructions on incorporating Gripset 11Y additive. Areas with live or static cracks, or exposed to negative pressure >0.2Bar refer to Gripset C-1P membrane.

Substrates

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

- * Concrete
- * Masonry
- * Cement based plaster systems (minimum 10mm thick)
- * Concrete blocks (enhanced with Gripset 11Y additive)

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, smooth, stable, dry, and clean.

Highly dense, smooth/shiny and steel trowel finished concrete surfaces to be roughened or etched.

Rough surfaces and voids to be evened or filled first and all brick/block surfaces to be pointed flush. (refer to Gripset 11Y for concrete/masonry repairs). All general surface defects to be repaired.

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 objects, 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.

Priming

No primer is required for Gripset C-1R but all surfaces must be pre-dampened ensuring the surface is damp or humid prior to starting as this will be a requirement to optimise adhesion. In warm conditions, wet the surface prior to commencing and apply once all surface water has been removed.

Detailing

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

Voids, gaps and undulating surfaces in concrete/masonry	Filled and evened with Gripset 11Y repair mortar compound.
Static cracks up to 1mm:	Filled with Gripset SB, followed by Gripset RF reinforcement
Live cracks and cracks >1mm:	Filled with Gripset SB followed by 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 or Gripset SB with Gripset RF Reinforcement where collars cannot be utilised Butyl Squares over leak control flanges

Membrane Application

Mixing

- Gripset C-1R consists of a 20kg bag dry powder. Sealing slurry is formed by mixing approx. 240ml/kg or 4.8 litres of water to 20kg of powder. This may vary depending on temperature.
- 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 slurry 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.

Note – For applications where C-1R requires improved crack bridging resistance, enhanced negative hydrostatic resistance or superior resistance in immersed conditions, Gripset 11Y additive is to be used. Add 1 litre of Gripset 11Y to 20kg powder and commence mixing before additional water is added to form a homogenous slurry consistency.

Application

Gripset C-1R is best applied can by stiff fibre bristle brush to aid penetration into surface pores. Brush liberally and do not extend as per paint, brushing in one direction to leave a uniform slurry so surface cannot be seen. Subsequent coats to be applied in opposite direction to the previous coat. If applied by roller, ensure a roller grade is used suitable for cement based compounds.

Coverage

- * For general waterproofing applications against ground moisture no higher than foundation heights – consumption is 2kg/m² at a dry layer thickness of 2mm formed in 2 coats.
- * For continuously wet damp areas, including immersed - consumption is 4kg/m² at a dry layer thickness of 3mm formed in a minimum 2 coats.
- * For areas exposed to negative pressure (maximum 0.2 Bar) - consumption is 6kg/m² at a dry layer thickness of 4mm formed in a minimum 3-4 coats.

Subsequent coats can be applied once the previous coat is dried. This will be dependent on porosity of surface, humidity, and surrounding temperature. In general next coat can be applied after 1-2 hours, should be applied within 4-5 hours of the previous coat.

Installing Elastoproof Bond Breaker Joint Band

Measure and cut Elastoproof Joint Band for all wall/floor junction areas. Apply first coat of Gripset C-1R slurry extending 150mm up walls and on to floors, and embed Elastoproof Joint Band into wet bed of product, 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-1R



Installing Elastoproof Prefabricated Corners



Installing Elastoproof B50 Bond Breaker Joint Band

Sealing floor wastes and penetrations

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-1R. For sealing penetrations where Elastoproof product cannot be used, seal around base of penetration at abutment to substrate using Gripset SB sealant followed RF Fabric turned up the penetration and embedded into C-1R membrane.

For floor wastes that are finished level with the floor, the Gripset C-1R membrane with Gripset RF Fabric embedded is to be dressed down into the waste outlet at a minimum 50mm ensuring the perimeter of the pipe/substrate abutment is sealed.

For leak control flanges apply Gripset SB or compatible sealant around edges of flange at interface with floor substrate. Gripset C-1R membrane with Gripset RF Fabric embedded is to be applied over edges of flange at floor substrate abutment until total perimeter is sealed. Return the C-1R membrane down into flange. For alternative sealing option see Elastoproof Butyl Squares.

When the detailing application has been completed apply Gripset C-1R membrane to the total floor area and to wall and floor areas as required. A continuous seamless membrane should be the final finish to the total area upon completion of the waterproofing membrane application.

Surface Toppings

When applying cement based systems including screeds, renders or concrete toppings over Gripset C-1R, it is recommended to incorporate Gripset 11Y as a proprietary bonding agent and water resistant additive.

Storage

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

Packaging

- * 20kg bags

Precautions

- * Not to be used as a trafficable surface
- * Do not apply if rain is imminent within 12 hours after final coat
- * Do not apply when surface temperature is below 5°C or above 30°C
- * Not to be applied over non porous surfaces. Refer Gripset C-1P
- * Not to be applied onto surfaces that are subject to movement or vibration. Refer Gripset C-1P.
- * 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
- * Not to be used in potable water, or water storage applications. Refer to Gripset C-1P
- * For application where negative pressure will exceed 0.2 Bar and for immersed areas, refer to Gripset C-1P.
- * In hot or windy conditions, it is recommended to cover the applied area with plastic or damp sheets to prevent rapid curing.
- * Compatible if required to be over coated with Gripset C-1P, C-Plug and Gripset 2P products
- * For further information about this product contact Gripset Technical Services

Clean up

- * Clean up with water while wet
- * Once dried product needs to be removed mechanically

TECHNICAL DATA

Appearance	Grey powder
Form	When mixed – grey viscous slurry When dried – light grey film
Drying	Pot Life: 45-60 minutes Tack Free: 15-20 minutes Re-coat: 90-120 minutes Dry film – 4-5 hours Toppings or finishes over: 24 hours Exposure to water pressure: 7 days
Mixing ratio	240ml/kg; 4.8 litres water to 20kg of powder
Tensile Strength @ 28days	3.0N/mm ²

Adhesion to concrete	1.14MPa
Tensile Strength - incorporating Gripset 11Y after 28 days immersion after freeze thaw cycle after exposure at 70°C	1.13MPa 1.56MPa 0.9MPa 0.94MPa 0.9MPa
Water Pressure	0.2 bar, negative pressure 2 bar, positive pressure

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.