

DF-40

LATEX CEMENT LIQUID MEMBRANE

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Description

Danlaid DF-40 is a two component latex polymer enhanced cementitious membrane designed for waterproofing wet areas, showers, podiums, terraces, balconies, immersed and subterranean areas. Compliant to AS/NZS 4858:2004, Danlaid DF-40 holds CSIRO Technical Assessment No. 347 (Gripset 2P membrane), satisfying the requirements of AS3740 "Waterproofing Wet Areas in Residential Buildings".

Developed by advanced polymer technology, Danlaid DF-40 provides a unique durable membrane while maintaining flexible and permanent waterproofing properties. Danlaid DF-40 is fast drying and possesses high adhesion to a range of substrates while providing outstanding bonding properties to surface finishes such as renders, screeds, and tile adhesives. Suitable for cool or humid environments to enable tiling after 24 hours.

Features & benefits

- Water based, free of solvents, non toxic and non flammable
- Waterproof, withstanding continuously wet and immersed environments
- Excellent adhesion to surfaces
- Flexible, accommodating normal substrate movement from building surfaces.
- Excellent bonding properties for renders, screeds, tile adhesives and toppings
- Durable and tough
- Can be applied by brush or roller on horizontal and vertical surfaces without sagging
- Low odour and free of dangerous fumes in warm and/or confined areas.

Application

Danlaid DF-40 is suitable for commercial, industrial and residential applications.

Waterproofing uses

- Internal wet areas, bathrooms, laundries and tiled areas
- Balconies, decks, podiums, terrace floors
- Parapet and feature walls
- Water features, swimming pools
- Planters, retaining walls, earth shelters
- General tiled areas to prevent moisture ingress

Substrates

Substrates suitable for bonding Danlaid DF-40 over include:

- Concrete, render and masonry
- Fibre cement sheeting, plasterboard and structural sheeting
- Wet area timber sheeting and external grade plywood
- Aerated concrete panels and blocks

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



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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. 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

Danlaid DF-40 membrane must be applied onto primed surfaces

- Danlaid GP-100 primer – for general vertical and horizontal building surfaces. Brush or roller apply primer to total surface area at a minimum coverage of 1 litre per 5m² and allow drying for 30 minutes or once wet film dries to a clear transparent coating.
- Gripset P10 primer – for surfaces with residual or rising damp (refer to product data). 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 6 hours before applying membrane. Primer must be tack free before applying membrane.
- Gripset 11Y slurry – for immersed areas. 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 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.

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 flexible sealant
Cracks >1mm:	Filled Gripset SB flexible sealant, 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 to be used



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Membrane application

Mixing

1. Danlaid DF-40 consists of a 10kg liquid component and a 15kg dry powder component. Membrane is formed by mixing 15kg Danlaid DF-40 powder to 10kg Danlaid DF-40 liquid.
2. To mix smaller quantities, measure on parts by volume, mix 1:1 liquid to dry powder.
3. When mixing, slowly add the dry powder component to the liquid, ensuring the mixing of components is continuous while the powder is added. Using an electric/mechanical stirrer with a paddle attachment at a slow-medium speed, mix the dry component until it is evenly dispersed into the liquid and lump free.
4. Allow the mix to settle for 3-5 minutes then re-stir before use. Pot life once mixed is 60-75 minutes; however this may be reduced in warmer weather.

General

The application of Danlaid DF-40 must comply with AS3740. Product is to be applied in a minimum of 2 coats at a total minimum coverage of 1.5 litres/m²; forming a minimum dried film thickness of approximately 1.2mm. For immersed applications a total minimum coverage of 2litres/m²; forming a minimum dried film thickness of approximately 1.6mm. 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. Apply first coat of Danlaid DF-40 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 (90o) and external (270o) 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 Danlaid DF-40 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 Danlaid DF-40 membrane. For floor wastes that are finished level with the floor, Elastoproof Inverted Collars are to be fitted or alternatively the Danlaid DF-40 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 Danlaid DF-40 membrane to the total floor area and to walls at 150mm high in general wet areas and balcony decks, and at 1.8m high in shower alcoves. A continuous seamless membrane should be the final finish to the total area upon completion of the waterproofing membrane application.



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Tiling & Surface Toppings

- It is recommended when tiling directly over Danlaid DF-40 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 Danlaid DF-40 with Gripset C-Set tile adhesive.
- If applying a screed, render or concrete topping over Danlaid DF-40 it is recommended to incorporate Gripset 11Y as a proprietary bonding agent and water resistant additive.
- For use of other adhesives over Danlaid DF-40 contact the technical department of Danlaid Contracting for detail of compatibility.
- Pre mixed tile adhesives are not recommended to be used over Danlaid DF-40.
- Drying time before tiling is 24 hours.

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

Storage conditions

- Best stored at room temperature.
- Avoid cold freezing conditions and off concrete floors.
- Do not store in direct sunlight.
- Shelf life: Liquid component is 12 months; powder component is 6 months in original unopened packaging.

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 5oC or above 30oC
- 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 negative hydrostatic pressure
- 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 Danlaid Contracting

Packaging

- Liquid Component – 10kg pail
- Dry Powder Component – 15kg bag

Clean up

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



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Technical data

Appearance	Liquid – white; Dry – light grey
Form	When mixed – off white viscous paste
	When dried – grey/olive appearance
Drying - Based on normal ambient conditions of 20°C * Temperature, humidity and porosity will vary dry times	Tack free: 45-60 minutes
	Re-coat: 2-4 hours
	Dry film: 8-10 hours
	Tiling or toppings over: 24 hours
	Immersion: 7 days curing
Mixing ratio	1 parts liquid : 1 parts dry (by volume)
Specific gravity of mixed product	1.25kg/litre
Shore A Hardness (ASTM D2240-97)	92

Durability test results for AS/NZS 4858 – 2004:

Elongation	Class II
Classification	239%
Tensile Strength	1MPa
Water Immersion Test - 56 Days	PASS
Bleach Immersion Test - 56 Days	PASS
Detergent Immersion Test - 56 Days	PASS
Heat Ageing	PASS
Cyclic Movement Test	PASS
Water Absorption Test	PASS
Vapour Transmission Test	0.22g/24h/m2

Statements made in this bulletin are for the assistance of our customers. They are based on our experience and judgement but must not be regarded as amounting to a legal warranty or as involving any liability on our part.

for further information please contact:

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