

Two component bituminous liquid membrane for waterproofing of underground structures and intricate details in conjunction with Proofex waterproofing systems

Uses and advantages

- For the waterproofing of intricate details e.g. pipe entries, covings etc
- For external waterproofing of underground structures
- Can be applied to damp surfaces
- Resists hydrostatic head of up to 70 metres
- Seamless - flexible with crack-bridging capabilities
- Simple trowel application
- Solvent-free - environmentally friendly and harmless to ground water
- Resistant to aggressive ground water
- Compatible with Proofex waterproofing systems

Standard compliance

Materialprüfanstalt Nordrhein-Westfalen; tested in accordance with DIN 18195, parts 4 to 6. General test certificate No. P-22 1356 8 96-1, MPA Dortmund

Description

Two component bituminous rubber emulsion with special hydraulically hardening fillers.

Properties

Consistency:	Paste-like (mixture)
Density:	Approximately 1.2 g/cm ³ (mixture) while fresh
Pot life:	Approximately 90 minutes at +20°C
Application temperature:	Approximately: minimum +5°C up to +35°C ambient temperature
Primer:	Mixed material diluted with water 1:10
Curing:	1 to 3 days depending on temperature, relative humidity, substrate and layer thickness. Typical cure time at 20°C, 60% relative humidity, 3.3 mm coating, is approximately 24 hours. Resistant to rain after 3 hours at +20°C/65% relative humidity
Resistance:	To numerous salt solutions, weak acids and aggressive substances normally existing in soil

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Proofex LM	
EN 15814: Polymer modified bituminous thick coatings (PMB) for waterproofing in below ground structures	
Watertightness	W2A
Crack bridging ability	CB2
Water resistance	No discolouration of the water. No debonding from inlay
Flexibility at low temperatures	No cracks
Dimensional stability at high temperatures	No sliding or draining down
Reaction to fire	Class E
Resistance to compression	Class C2A
Durability of watertightness and reaction to fire	Pass

Application instructions

Substrate preparation

All surfaces to be sealed must be clean and free from all loose particles and all other adhesion inhibiting substances. Mortar residues, laitance, etc., should be removed.

The substrate to be waterproofed may be dry or damp (not shining wet). There should be no standing water on horizontal areas. If the surface is dry, it is recommended that the substrate is dampened by spraying water beforehand. All substrates to be waterproofed with Proofex LM must be primed prior to applying the waterproofing layer. The primer is prepared by diluting one part Proofex LM (premixed product) with ten parts of clean water and applied by brush. Once priming is complete, the first coat of Proofex LM can be applied straight away.

Macro-porous substrates with cavities require a scratch-coat of Proofex LM to avoid bubble formation or risk of blistering. The scratch-coat should be left to dry for 1 to 2 hours before applying the next layer.

It is recommended that, where required, each full first coat of Proofex LM is left to dry overnight before applying a second coat.

Fosroc® Proofex LM

Mixing

Proofex LM kits consist of exact quantities of two components contained within the same pack. The powder component is carefully mixed into the liquid component by means of a slow speed drill with paddle until it forms a homogeneous, paste-like compound of uniform colour.

Application by trowel

Proofex LM is applied by steel float in one or two even layers depending on the maximum loading. To avoid crack formation the applied material must not be worked on, once the coating starts to dry.

In areas with extreme loadings (coving, edges and pipe penetrations) the material has to be applied twice. Fosroc recommend the use of a Proofex LM mesh allowing 10mm overlaps between the first and the second coat.

Application temperatures

The pot life of Proofex LM is at least 90 minutes at +20°C and normal humidity. Higher temperatures shorten while lower temperatures lengthen the pot life.

Protection of the waterproofing

The structure may only be backfilled after complete curing of the waterproofing layers has taken place. Sharp objects should not come in contact with the membrane.

The completed installation may be protected as required with Proofex Protection Board.

Proofex LM should not be exposed for prolonged periods. The cured membrane should therefore be protected from the elements (including sunlight) if the product will be left exposed for several weeks.

Suitable noise, heat and mechanical insulation materials such as styrene and mineral foam may be glued to Proofex LM.

Estimating

Supply

28 kg pack.

Coverage and yield

Normal application:

Proofex LM primer: Dilute Proofex LM with water in a mixing ratio of 1:10.

Damp conditions with no water pressure present	Waterproofing (one layer)
Layer thickness (wet):	Approximately 3.3 mm
Coverage:	Approximately 4 kg/m ²

Positive water pressure:

Up to 1 bar (10 metre head of water)	Waterproofing (one or two layers)
Layer thickness (wet):	Approximately 4.0 mm
Coverage:	Approximately 5 kg/m ² . Incorporate reinforcement mesh at all sharp corners
Up to 7 bar (70 metre head of water)	Waterproofing (two layers)
Layer thickness (wet):	Approximately 6.7 mm
Coverage:	Approximately 8 kg/m ² . With or without incorporating reinforcement mesh

Coverage per m²/mm wet film thickness equals approximately 1.2 kg Proofex LM.

Proofex LM primer: Approximately 50 to 80 g/m² unthinned material, depending on the porosity of the substrate.

Storage

The product has a shelf life of 12 months from the date of manufacture if kept in a dry storage in the original, unopened containers.

Store in unopened containers in cool dry internal conditions. If stored at high temperatures and/or high humidity conditions the shelf life may be reduced to less than 6 months.

Precautions

Health and Safety

For further information, refer to appropriate Product Safety Data Sheet.

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