Proofex SM*

constructive solutions

Polymer based spray applied waterproofing membrane

Uses

Proofex SM is a spray applied polymer based waterproofing membrane designed for a range of applications including underground structures, basements, equipment foundations, roofing, water-tanks, tunnels, pile-tops, terraces, balconies.

Advantages

- Rapid application rate
- Sets instantly on application
- Forms a continuous seamless waterproof membrane
- High bond strength
- High elongation and flexibility
- Excellent crack bridging capability
- Can be used as a curing membrane

Specification

The waterproofing membrane shall be Proofex SM, a two part spray applied material for waterproofing concrete using specifically designed spray application equipment. The coating shall be applied at the recommended coverage rate to provide a nominal dry film thickness of 2 mm in a single coat application. The cured membrane shall have elongation properties in excess of 2000% with a recovery of 95% at 350% elongation and have crack bridging capability of 10 mm to withstand movement within the concrete.

Description

Proofex SM is a polymer based waterproofing membrane. The material is spray applied in conjunction with a water soluble catalyst through specifically designed spray equipment. It can be applied over a variety of surfaces including green concrete.

Properties

Form	**:** Liquid
Solids content	**:** 60%
Density	**:** 1.02 kg/litre
Ultimate elongation	**:** 2000% (ASTM D412)
Ultimate tensile strength (ASTM D412)	**:** 0.12 N/mm^2
Modulus (ASTM 412)	**:** 0.06 KN/mm^2
Recovery from 350% elongation (ASTM D412)	**:** 95%
Tear resistance	**:** 1.53 KN/M (ASTM D412)
Puncture resistance (ASTM E154)	**:** 10.5 N (@ maximum displacement)
Crack bridging capability	**:** > 10 mm
Water pressure resistance	**:** negative-passes @ 1 bar **:** positive-passes @ 7 bar
Water absorption continual immersion	**:** < 1% (@ 10 months)
Hardness Shore 'A'	**:** 40 max (ASTM S2240)
Water vapour permeability @ 2 mm dft (nominal) (Taywood Method)	
Equivalent air layer	**:** 12.85 m
Flux	**:** 4.24 gm/m^2 @ 24 hours
Chloride ion diffusion (Taywood Method)	**:** Nil @ 120 days
Sulphate Resistance (BS 8110)	**:** Resistant to Class **V** soil conditions
Curing efficiency	
(ASTM C156)	**:** > 90%
(ASTM C309)	**:** Pass
Chemical resistance	**:** Resistant to mild alkalis & mild acids

Note: For specific information on chemical resistance contact your Fosroc office.

Instructions for use

The instructions for use are those generally to be followed. However, as the product may be applied in a wide variety of differing situations, your local Fosroc office should be contacted to provide specific method statements.

Surface preparation

All surfaces shall be clean and free from dust, dirt, oil, grease, moss, release agent residue or curing membrane and other materials which may affect adhesion. All nibs and protrusions must be removed. Proofex SM may be used on a variety of substrates or applied onto green concrete in the saturated surface dry condition. Proofex SM should not be applied to permanently wet substrates or on standing water.

Blow & pin holes

Blow and pin holes shall be repaired using a suitable Fosroc product.

Fillets

All internal angles shall be filled using a sand/cement/PVA 25 mm x 25 mm radiused fillet. In substructure applications where differential movement or settlement can occur, Fosroc Plastijoint shall be used to provide a 25 mm x 25 mm radiused fillet (concave).

Sharp edges

All sharp edges shall be re-profiled by grinding to provide a smooth curved surface.

Application

Proofex SM is applied to an unprimed substrate using specifically designed spray application equipment. It is applied in a single coat using wet on wet passes to give a nominal dry film thickness of 2 mm. The material is applied from the lowest to the highest point in slow even strokes. Overspray can be prevented by the use of baffle boards or by masking off. Care is to be taken when spraying in windy conditions. Whilst nominal dry film thickness of 2 mm are recommended as standard, 3 mm & 4 mm thickness may be applied to suit particular site conditions.

Note (1): As the conversion from wet film to dry is instantaneous dry film measurements may be taken 5 minutes after time of application.

Note (2): In certain conditions intercoat blistering may occur as a result of water loss. These blisters will shrink back over a period of 36 hours and will have no effect on subsequent product performance.

Protection

Proofex SM membrane must be protected from traffic, backfill, settlement scour, following trades and weathering immediately after application using geotextile materials, protection board, sand, screed or polyethylene as appropriate.

For complete details refer to Fosroc method statement or drawings.

In most general applications only a Fosroc approved 200gm/m^2 weight geotextile will be applied to the Proofex SM immediately after the product has been sprayed and the surface is still wet but not tacky. The 200gm/m^2 weight geotextile will provide protection from penetration and settlement scour in most applications. However, in certain heavy duty applications the geotextile type and weight may be changed to meet certain specific site conditions, contact your Fosroc office for details.

Cleaning

It is not necessary to clean the spray application machine after use. The dip tubes and spray hoses can be left full of material and simply transferred to the drums of material even after standing overnight. It is important however that unused drums of material are re-sealed to prevent skinning of the material. Clean down the spray tips of the gun with kerosene after use.

Estimating

Supply

Proofex SM is packaged in 1600 litre yield units, supplied as 8 × 200 litre screw top barrels of Proofex SM membrane and 1 × 200 litre polyethylene barrel of Catalyst.

Coverage

Proofex SM	**:** 528 m^2/1600 litre unit @ 2 mm dft
Possible application rate	**:** 780 litres per hour

Storage

The material must not be stored at temperatures below 5°C or above 50°C.

Precautions

Health and safety and fire

Wear suitable protective clothing, gloves and eye protection. Use with adequate ventilation.

Proofex SM is non flammable

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