



## EMB

### Elastomeric Waterproofing

Conforms to the requirements of ASTM 836-05  
“Standard specification for high solids Content, Cold liquid-  
Applied Elastomeric Waterproof Membrane for Use with  
Separate Wearing Course”

#### Product Description

**EMB** elastomeric membrane is a liquid applied coating based on polyurethane prepolymers extended with tar, which cures by reaction with atmospheric moisture to give a continuous film that is rubber-like and elastic.

**EMB** is a high solid coating designed to give a high-build film. It can be brush or spray applied ( with airless spray equipment ) but it has a higher viscosity than a conventional paint and should not be diluted.

**EMB** cures to a permanently flexible seamless membrane that, by virtue of its chemical reactivity in the wet state, has good adhesion to a wide range of substrates. Unlike more traditional bitumen based products, **EMB** does not readily embrittle with age, exposure to ultra violet radiation or weathering, and hence it does not crack or craze ( European conditions ).

Since it is elastomeric **EMB** is not adversely affected by extremes of temperature consequently it is resistant to cracking at low temperatures and does not suffer thermal flow at elevated temperatures.

**EMB** can be applied by brush, airless spray or roller without the need to mix, stir or heat before application.

#### Areas of Application

Isothane elastomeric membranes are designed to bond to many types of substrate particularly those commonly requiring a waterproof membrane in ‘tanking’, above and below ground, and internal wet area sections of buildings. It is essential that the substrate and structures are properly prepared, and stable. Surfaces previously treated with silicone-based materials will inevitably be difficult to overcoat and this should not be attempted with ISOTHANE products.



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## EMB Elastomeric Waterproofing

### Storage, Handling and Personal Protection

The recommendations in our Safety Data Sheet for this product must be followed at all times. More general information is included in our publication "A Guide to the Safe Handling of Polyurethane Chemicals" and in the following Technical Data Sheets which are available on request:-

- Decontamination of Isocyanates using Isothane Decontaminant

### Method of Application

The dry film thickness ( DFT ) of **EMB** should not be less than 0.5mm or more than 1.0mm for each coat. Rough or textured surfaces will reduce the coverage rate and consequently more material must be allowed to achieve the minimum DFT.

**EMB** is a membrane coating, not a paint and as such protection is only achieved with a high film build, i.e. 1 mm on flat surfaces minimum. It is therefore essential that this be achieved. The membrane can be applied in one 1 mm or two 0.5mm coats. Two coats are recommended on uneven and jointed surfaces to minimise the possibility of thin patches, missed areas and pinholing. Also sloping or vertical surfaces will only accept 0.5mm per coat. In the case of two-coat application, it is important to re-coat within 24 hours of the first coat becoming sufficiently cured to allow operator access.

### Coverage

Coverage rates may vary with surface texture and porosity. The information given is based on average usage. A site trial is recommended.

**Isothane PU Primer:** 6 – 10m<sup>2</sup> / lt. **Not generally required for tanking, wet areas;** but essential for example when overcoating asphalt.

**EMB:** 1 litre / m<sup>2</sup> on a smooth flat surface will provide an adequate film thickness of approx. 1mm. Any surface texture will increase the surface area which must be allowed for when calculating usage e.g. on a chipping embedded surface the actual area will be approximately doubled.

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Certificate No. FM 21549



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## Method

1. Remove all loose material by vigorous brushing, wire brush if necessary.
2. Treat any fungal growth with proprietary fungicide as recommended.
3. Allow surface to dry thoroughly and any moisture contained in the structure to evaporate. Primer and **EMB** should not be applied to damp substrates.
4. Fill cracks and voids with a polyurethane mastic sealant.
5. **( Not generally required for tanking, wet areas ) Isothane PU Primer** cures to a slightly tacky film within 2 - 4 hours. Overcoat with **EMB** as soon as possible after this time and certainly within 48 hours. If delay exceeds this, re-priming is advised.
6. Apply **EMB** at a maximum film thickness of 0.5 mm for two-coat applications and 1 mm for one coat.
7. In the case of two-coat application, the first coat should be touch dry 12-48 hours ( in some conditions this might be delayed ) and the second coat should be applied within 24 hours of this stage to ensure good adhesion.
8. Second coat delay: - if more than 24 hours elapse after touch dry stage of the first coat, re-prime the entire surface and allow to dry before recoating within 4-8 hours.
9. Day-work joints – where application extends over more than a working day, an overlap of 150mm should be used.
10. Aromatic hydrocarbon solvent should be used to clean equipment etc.

## Spray Application ( Refer to Isothane Procedure guide )

Only airless spray should be used  
Graco King 60 : 1 ratio or similar  
Compressor:- 100psi, 60cfm min  
Tip Size :- 28-30 thou 50° Angle

## Application Rate

**EMB** is easily and quickly applied manually at a rate of 40m<sup>2</sup> per man per day or up to 600m<sup>2</sup> per man per day by spray application.

## Repairs

Minor damage to **EMB** can be repaired by removing loose membrane; cleaning the surrounding area with aromatic hydrocarbon solvent; overlapping by 150mm; priming the area with a suitable product, and finishing with two coats of **EMB**.

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### Typical Properties

Appearance  
Abel closed cup flashpoint ° C (ISO 1523, 1983)  
Application limits ° C  
Approximate Dry Time (20° C, 50% RH)  
Elongation % (ASTM D412) minimum  
Tensile Strength MN/m<sup>2</sup> (ASTM D412) minimum  
Accelerated Weathering 12000hrs (ASTM 953)  
U/V Resistance ( European Conditions )  
Hydrolysis Resistance  
Resistance to Industrial Environments  
Storage Stability in unopened container

### EMB

Black viscous Liquid  
69  
5 – 60  
12 – 24 hrs touch dry, 7 days full cure  
500  
2.0  
No appreciable deterioration  
Excellent  
Excellent  
Good  
6 months

### Tested to ASTM C836-05

Hardness (Shore 00 / A) 90 / 50  
Low temperature Flexibility Crack Bridging No cracking  
Adhesion-in-Peel (mortar) 6.5 lb/in  
Extensibility after Heat Aging No Cracking

### Water Vapour Permeability

Free films were prepared and allowed to cure for 28 days prior to test. The water vapour permeability was measured using the dry cup method under tropical conditions of 38° C and 90% rh as described in ASTM E96-05

Result: 22.2 g/( m<sup>2</sup>/24h)/1mm

### Crack Bridging Ability (ASTM 836-84m)

Result: 2.6mm (20° C, 0.4mm thick EMB)

### Penetration by Fire & Surface Spread of Flame Resistance

Result: EXT.F.AA. (BS476: Part 3)



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