

## Epigard

### High Performance Waterproof Membrane

#### Description

A two component extended epoxy high build coating characterised by its inbuilt flexibility, excellent adhesion and its resistance to water and a wide range of chemicals. Epigard successfully protects highway and infrastructure concrete structures including wing walls, bearing shelves, abutments, culverts, drainage channels, silos and tanks. Complies with EN 1504 Part 2 (system 2+)

#### Advantages

- Solvent free, low odour & inert once cured
- Low environmental impact
- Excellent bond strength
- Inbuilt flexibility & waterproof
- Good chemical & abrasion resistance
- Resistant to sulphates
- Long term protection

#### Applications


- Protective coating for concrete & steel structures
- Coastal, water & sewage treatment works
- Oil or water retaining structures
- Power & utility sub-station bunds
- Above & below ground industrial & agricultural applications

#### Technical Information

Type	Epoxy
S.G.	1.3
Pot life	65 minutes @ 20°C
Pot life	>2 hours @ 5°C
Full cure	7 days
Hardness	70 (Shore D)
Coverage	4-6 m <sup>2</sup> per kg
Dry film thickness	170 micron per coat

Tested at 23°C, unless otherwise stated



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EN 1504-2 Surface protection system Coating	
Permeability to CO <sub>2</sub>	S <sub>D</sub> >50m
Permeability to Water Vapour	Class 1
Capillary Absorption & Permeability to Water	<0.1 kg/m <sup>2</sup> .h <sup>0.5</sup>
Adhesion	≥1.5 MPa
Dangerous substances	Complies with 5.3

#### Chemical Resistance

Hydrochloric Acid (Conc.)	Fair
Nitric Acid 25 %	Good
Sulphuric acid 50 %	Good
Sodium Hydroxide 50 %	Good
Ammonia 10 %	Good
White Spirit	Good
Methylated Spirit	Good
Xylene	Good
Lubricating Oil	Good
Petrol	Good
Skydrol	Good
Sodium Hypochlorite (Bleach)	Good
Salt (Sodium Chloride saturated)	Good
Ammonium Sulphate 10 %	Good

## Technical properties of Epigard

Properties	Standard	Performance Requirements	Declared Value
Appearance			Resinous Coating
Solids content			>90 %
Specific gravity			1.31
Viscosity			1120 cps
Working life			50-65 minutes
Coverage			4-6 m <sup>2</sup> per kg
Application temperature			7°C to 35°C
Maximum intercoat period			48 hours @ 20°C
Permeability to water vapour	EN ISO 7783-1	S <sub>D</sub> >50 m	S <sub>D</sub> >50m (Class III)
Capillary absorption & permeability to water vapour	EN 1062-3	W<0.1 kg/m <sup>2</sup> .h <sup>0.5</sup>	W<0.1 kg/m <sup>2</sup> .h <sup>0.5</sup>
Tear strength			>6 MPa
Tensile strength	BS 2782-3		>8 MPa
Elongation	BS 2782-3		30 %
Slip resistance	EN 13036-4		Class 1
Adhesive bond strength	EN 1542	>1.5 MPa	>2.0 MPa
Adhesion after freeze/thaw	EN 13687-1	>1.5 MPa	>2.0 MPa
Adhesion after thunder shower (30 Cycles)	EN 13687-2	>1.5 MPa	>2.0 MPa
Adhesion after dry cycling (30 Cycles)	EN 13687-4	>1.5 MPa	>2.0 MPa

Technical data shown are statistical results and do not correspond to guaranteed minima.

Tolerances are those described in appropriate performance standards.

All testing was performed at 23°C, unless otherwise specified.

1 N/mm<sup>2</sup> = 1 MPa

1 kN/mm<sup>2</sup> = 1 GPa

## Surface Preparation

Preparation shall be such as to leave dry, clean, sound surfaces, free from chemical contamination. Oil, grease, dirt, coatings, dust, loose particles and laitance must be removed; methods include wire brushing, abrasion, needle-gun or grit-blasting, to achieve a textured surface. To allow optimum protection, substrates must be level. Where strength or surface stability of the substrate be in doubt, then we recommend a trial of Epigard to assess suitability.

**Concrete;** new concrete should be a minimum of 21 days old with a moisture content less than 6% (see Limitations).

High pressure water-blasting can be used if deemed appropriate, though surfaces and concrete will need to dry to required levels.

Blow holes and other minor surface imperfections can be repaired using Nupatch Cosmetic or Epibond. Nucem Skimcoat can be used to level irregular surfaces and renders or larger defects can be made good using Acropak HB40 Mortar or Nucem HB Mortar (refer to these separate TDS).

**Steel;** all surfaces should be dry, free from loose scale and rust prior to the application of resin. The preferred method of removal is by grit blasting to Swedish Standard SA2.5. Galvanised steel should be treated with Mordant Solution and all residues removed before priming with Epicon DSP (see separate TDS).

## Mixing

Mix only full units of Epigard. The entire contents of the hardener should be added to the base container. Mix slowly using a variable speed high torque drill and helical stirrer for 2-3 minutes until it is homogenous. Care should be taken not to entrain excess air and to prevent any unmixed material remaining on sides and base of the mixing vessel. Thinning with is not normally required, however for porous substrates, the first coat only may be thinned with up to 100ml of Nuwash to assist application.

## Application Instructions

Primer is not normally required for concrete or brickwork. Apply Epigard by stiff brush or medium nap roller at a rate of 4-6m<sup>2</sup>/kg on levelled surfaces. Actual coverage depends on surface rugosity and porosity. Minimum recommended application is two coats, applied at right angles to each other.

For spray application contact Nufins technical department.

## Cleaning

Keep all mixing equipment and tools continuously clean throughout the day using Nuwash and avoid product build up.

## Packaging

Epigard is available in 5kg units.

Nuwash is available in 5 & 20 litre drums.

## Storage

The shelf life is 12 months when stored unopened in dry, normal conditions and away from direct sunlight. Protect from frost. If stored in cold conditions the containers should be warmed prior to use as this will assist mixing and application.

## Health & Safety

Product Safety Data Sheets (SDS) are available from Nufins. SDS sheets are provided to help customers satisfy their safe handling, use and disposal needs as well as assist with any conformance requirements made locally by health and safety regulations.

SDS are continually updated to provide the latest information to our customers. We therefore recommend contacting our head office to obtain the most recent and accurate SDS before handling and using any product.

## Limitations

Do not apply at temperatures below 7°C or when rain has been forecast. Epicon DSP can be used as a primer for application to damp or new concrete less than 21 days old. Contact Nufins technical department for further advice.

## Disclaimer

The information contained herein is to the best of our knowledge true and accurate and is given in good faith but without warranty. The user will be deemed to have satisfied themselves independently as to the suitability of our products for their own particular purpose. In no event shall Nufins be liable for consequential or incidental damages.

Users must always refer to the most recent issue of the Technical Datasheets, copies of which will be supplied on request.

## Technical Support

Through our technical department and laboratories we can offer a comprehensive service to specifiers and contractors. Technical contacts are available throughout the UK to provide further information and arrange demonstrations.