

Epiguard (formerly 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. Epiguard 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 ² per kg |
| Dry film thickness | 170 micron per coat |

Tested at 23°C, unless otherwise stated



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| Nufins, Kingston House, 3 Walton Road, Pattinson North, District 15, Washington, Tyne & Wear. NE38 8QA 22 2797-CPR-594215 | |
| EN 1504-2 Surface protection system Coating | |
| Permeability to CO ₂ | S _d >50m |
| Permeability to Water Vapour | Class III |
| Capillary Absorption & Permeability to Water | <0.1 kg/m ² .h ^{0.5} |
| Adhesion | ≥1.5 MPa |
| Dangerous substances | Complies with 5.3 |

| | |
|----------------------------------|------|
| 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 Epiguard

| Properties | Standard | Performance Requirements | Declared Value |
|---|---------------|---|---|
| Appearance | | | Resinous Coating |
| Solids content | | | >90 % |
| Specific gravity | | | 1.31 |
| Viscosity | | | 1120 centipoise |
| Working life | | | 50-65 minutes |
| Coverage | | | 4-6 m ² 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 _d >50 m | S _d >50m Class III |
| Capillary absorption & permeability to water vapour | EN 1062-3 | W<0.1 kg/m ² .h ^{0.5} | W<0.1 kg/m ² .h ^{0.5} |
| 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 (50 Cycles with salt) | 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/mm² = 1 MPa

1 kN/mm² = 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 Epiguard 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 Epiguard. 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 Epiguard by stiff brush or medium nap roller at a rate of 4-6m²/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

Epiguard 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.