

## 2K Solvent Free Epoxy Primer and Epoxy Mortar System

### DESCRIPTION

**DANOPRIMER I-EPS** is a two-component solvent free epoxy resin-based primer which when cured with polyamide hardener provides tough film with excellent adhesion to concrete & metal surface.

### ADVANTAGES

- Excellent bonding to metal and concrete surfaces, epoxy, polyurethane and polyurea top coats and screeds.
- Good chemical & corrosion resistance.
- Capable of curing under humid condition.
- Good mechanical properties.
- Suitable for preparation of epoxy mortar system.
- Promotes adhesion of epoxy, polyurethane and polyurea floor toppings, coatings and repair mortar with various substrates.
- 100% solids, free of solvent and plasticizer. Eco-friendly.

### USES

**DANOPRIMER I-EPS** is suitable for multi-purpose use:

- As a primer for food grade epoxy, polyurethane and polyurea resin systems.
- As a sealer coat over the epoxy and polyurethane range of underlays before application of epoxy, polyurethane and polyurea resinous overlays.
- For Bonding old concrete to green (fresh) concrete.
- For coating of water tanks, pipes and other metal and concrete structures.
- For filling horizontal and vertical joint in concrete in conjunction with silica filler.
- For preparation of epoxy mortar/ epoxy putty system in conjunction with silica filler.
- As low viscosity injection grout for dry and wet cracks.

### APPLICATION INSTRUCTIONS

#### SURFACE PREPARATION

All surfaces must be sound, clean, dry, free from cracks and crevices, undulations, oil, grease, cement laitance, paint, rising moisture, rust and all loosely adhering particles.

New concrete support must be at least 28 days old and should be sound with tensile strength >1.5 mPa. The residual moisture in the substrate should be lower than 4% and the temperature of the substrate must be at least 3°C above the dew point temperature.

The support defects, if present must be repaired prior to the application of primer.

The existing surface undulation must be filled with epoxy putty prepared using **DANOPRIMER I-EPS** and quartz silica sand mixed in recommended proportion (**DANOPRIMER I-EPS RESIN: DANOPRIMER I-EPS HARDENER: DANOFLOOR SF1 - 100: 50: 150 to 300**).

The existing surface patches must be filled with epoxy mortar prepared using **DANOPRIMER I-EPS** and quartz silica sand mixed in recommended proportion (**DANOPRIMER I-EPS RESIN: DANOPRIMER I-EPS HARDENER: DANOFLOOR SF2 - 100: 50: 500 to 800**).

The cracks in support if present, must be opened with a diamond disc until reaching a depth of 1 to 2 cm, the groove vacuum cleaned and filled with **TIKISEAL PU25** elastomeric polyurethane sealant.

The metal surfaces must be prepared with SA2.5 sand blast and primed within 8 hours of sand blasting.

#### APPLICATION AS PRIMER

Gradually add Hardener component of primer to the Resin component of primer in recommended proportion and mix to achieve homogenous mix. Once mix is prepared, primer is applied in a thin, continuous film using stiff brush/ roller or trowel.

In order to provide mechanical key to subsequent applications, after application of primer, immediately broadcast quartz silica sand **DANOFLOOR SF2** until saturation. Once dry, remove the excess un-bonded quartz silica sand using vacuum.

Porous surfaces may require two coats of primer.

Primer should be allowed to cure sufficiently, normally 6 to 18 hrs., prior to application of subsequent epoxy or polyurethane or polyurea floor toppings or coatings.

#### PROPERTIES OF COMPONENTS

Property	Part A Resin	Part B Hardener
Type of compound	Solvent free epoxy resin	Polyamide
Colour/Appearance	Pale brownish clear liquid	Brownish yellow to slight hazy liquid
Density at 25°C	1.15 ± 0.05 g/cc	0.97 ± 0.05 g/cc
Viscosity at 25°C	500 to 700 mPa.s	10000 to 30000 mPa.s

#### MIX PROPORTION & POT LIFE FOR PRIMER

Mix Ratio, PBW RESIN: HARDENER	100: 50
Pot Life at 25°C	120 Minutes approx.
Coverage per Kg. *	On metal surface: 6 to 8 m <sup>2</sup> On concrete surface: 4 to 6 m <sup>2</sup>

\*Coverage is approximate and it depends upon the site conditions and surface porosity at the time of application.

#### APPLICATION AS MORTAR / PUTTY

Gradually add Hardener component of primer to the Resin component of primer in recommended proportion and mix to achieve homogenous mix. Once mix is prepared, gradually add quartz silica filler **DANOFLOOR SF2** and mix to achieve homogeneous mix. Immediately apply prepared mortar on a tacky primed surface using flat trowel to build required thickness.

#### MIX PROPORTION FOR EPOXY PUTTY / MORTAR

Mix Ratio, PBW RESIN: HARDENER: <b>DANOFLOOR SF2</b>	100:50:500 to 800
Pot life at 25°C, approx.	140 Minutes
Curing Schedule	
At 20°C	48 Hours
At 30°C	20 to 24 Hours
At 40°C	16 to 20 Hours

#### APPLICATION AS BONDING AGENT FOR BONDING OLD CONCRETE TO GREEN (FRESH) CONCRETE

Gradually add Hardener component of primer to the Resin component of primer in recommended proportion and mix to achieve homogenous mix. Once mix is prepared, apply in a thin, continuous film using stiff brush/ roller on to the prepared surface to be adhered.

The new cementitious surface (screed or concrete) should be applied and adhered to the old cementitious surface coated with **DANOPRIMER I-EPS**, while the applied coating is still tacky. In case the applied coating has dried or become tack free, a second coat must be applied on the same day of application of first coat, otherwise the first coat must be mechanically removed prior to application of fresh coat of **DANOPRIMER I-EPS**.

## PROPERTIES OF CURED MATERIAL

Specimens cured for 15 days at room temperature (25 <sup>0</sup> C to 40 <sup>0</sup> C)		
Properties	Standard	Value
Flexural Strength	ISO 178	50 MPa
Impact Strength	ISO 179	8.5 KJ/m <sup>2</sup>
Compressive Strength	ISO 604	66 MPa
Tensile Strength	ISO 527	46 MPa
Water Absorption	ISO 62	23 mg
Hardness, Shore D	ISO 868	76
Bond Strength	ASTM D4541	35 Kg. /cm <sup>2</sup> Concrete failure

## SUPPLY

**DANOPRIMER I-EPS** is supplied as two component kit comprising of Resin and Hardener. It has a shelf life of 12 months when stored under the covered shed in sealed condition.

PACKING: 7.5 Kg.

Available Packing	Resin	Hardener
Pack Size	5 Kg.	2.5 Kg.

## CLEANING

Immediately after application of **DANOPRIMER I-EPS**, use suitable aromatic solvent for cleaning application tools.

## STORAGE

**DANOPRIMER I-EPS** must be stored above 5°C. Store under the shed & protect from extremes of temperature, heat, direct sunlight, spark and children.

## SAFETY PRECAUTIONS

Use gloves, goggles and barrier cream. Avoid contact with skin. Ensure adequate ventilation during application. For further detail, refer to Material Safety Data Sheet.

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