APCODUR EPOXY CONCRETE SEALER

Two components, polyamide cured, epoxy primer for concrete surface

PRODUCT DESCRIPTION

Two component, polyamide cured, epoxy primer for concrete surface

FEATURES AND RECOMMENDED USE

- Designed for use as a primer for concrete surface
- Good adhesion properties for subsequent coats
- Excellent water & corrosion resistance
- Good flow and wetting properties

TECHNICAL DATA

Colour	Grey & Specific Range
Gloss	Matt
Volume Solids	Approx. 48%
Recommended DFT/ Coat	30 - 50 microns
Theoretical covering capacity	16.0 sq.mtr/ l @ 30 microns DFT
	9.6 sq.mtr/ l @ 50 microns DFT
Flash point	Base : Not less than 24°C
	Hardener : Not less than 24° C
Drying time at 30° C	Surface dry: 60 minutes
	Hard dry : 16 hours
	Full cure : 7 days
Over coating Interval at 30° C	Min. : 16 hours
	Max. : 1 month, provided surface is dry and clean from all contamination
Shelf Life (cool and dry place)	At least 12 months

Mechanical/ Physical Property

Bond Strength (ASTM D 4541) : Not less than 2.5 MPa (Concrete Failure)

Application Instruction

Substrate Quality: Concrete substrates must be sound and of sufficient compressive strength (minimum 20 Mpa) with a minimum tensile strength of 1.5 Mpa. A sound, clean and dry substrate is absolutely essential for successful coating application and ensuring maximum bonding between the substrate and coating system. The substrate must be clean, dry and free of all contaminants such as dirt, oil, grease, coatings and surface treatments, etc. and have a moisture content less than 5% prior to application of the primer. Ensure that the substrate does not suffer from rising moisture and potential osmosis problems.

Surface Preparation:
New concrete floors
Should be at least 28 days old or have a moisture content of less than 5% before proceeding with epoxy primer application. Laitance and deposits on new concrete floors are preferably removed by light grit/ shot blasting, mechanical scarifying or grinding to achieve an open textured surface.

Old concrete floors
Determine the general condition, soundness, presence of contaminants, presence of moisture vapour emissions and the best methods to prepare the surface to receive floor coating system. Mechanical surface profiling by grit or shot blasting, grinding or scarifying are the preferred floor preparation methods on old concrete floors. Hydrophobic contaminants can be identified by a simple water drop test. Other contaminants can be identified by pH. Remove localized weak or deteriorated materials from the surface. Remove bond-inhibiting materials such as oils, grease, wax, fatty acids, and other contaminants. This can be accomplished by the use of detergent scrubbing, low pressure water cleaning (less than 5000 psi), steam cleaning, or chemical cleaning. Acids and alkalis can be removed by neutralizing to form a water soluble salt and then high pressure water cleaning and mopping it off to dry state. In the areas where the contaminants cannot be removed, complete removal and replacement of the contaminated surface is typically considered. Surface defects such as voids, bug holes, excess porosity, and physical and chemical damage are usually filled or repaired prior to the installation of the floor coating system. Materials such as slurries, mortars, and polymer concrete are used to level, smooth and patch concrete surfaces. High spots must be removed by grinding. Technical Data Sheet Note - Acid etching of the surface is not recommended as a preparation technique partly because of the implications for Health & Safety but also because the surface is left saturated with water and calcareous salts which may ultimately lead to debonding or osmotic blistering.

MIXING

Stir the base and hardener separately. If settling is observed in the base or hardener, loosen the settled material with the help of hand stirrer followed by power driven stirrer for quick homogenous mixing. Mix hardener gradually into the base under continuous stirring.

Mixing Ratio (by volume)	Base: Hardener 2 : 1
Induction time	30 minutes
Pot life at 30° C	6 hours

Floor Joints

All cracks and construction joints present, based on the depth of the crack, should be filled either with epoxy putty or mortar after primer application. The expansion joints should not be overcoated with the coating and to be addressed with suitable material.

Application

All dust presents must be removed by vacuuming prior to primer application. It is suggested that the product be applied by stiff brush/ roller for better penetration. The primer should be well 'scrubbed' into the substrate to ensure full coverage, but care should be taken to avoid over application or 'ponding'. The coverage would vary significantly based on the nature of the concrete surface. On porous surface where the primer is absorbed quickly leaving dry patches, a second coat is recommended. Out gassing may occur due to the porosity of some concrete surfaces. To reduce the effect of out gassing,
the primer and coating should be applied when the temperature of the concrete substrate is dropping. This usually occurs in the evening; however, the concrete substrate temperature should be measured with a surface thermometer for verification. Double priming will greatly reduce the effects of out gassing by additionally filling the pores in the concrete and prevent air release from the porous substrate which may cause bubbles in the final epoxy topping later. Primed surfaces should be recoated within 24 hours. For longer waiting periods, wipe with xylene until surface becomes tacky. If surface remains hard, abrasive sanding is required. A minimum dry film thickness of 50 microns is recommended. Thinner T 141 (0 – 10 % by volume) may be used depending on the site condition. Freshly applied primer should be protected from damp, condensation and water for atleast 24 hours. At low temperatures, the chemical reactions are slowed down; this lengthens the pot life, open time & curing times. High temperatures speed up the chemical reactions thus the time frames mentioned above are shortened accordingly.

Application Conditions

- Residual moisture content of the concrete substrate should not exceed 5%
- No rising moisture & potential osmosis problems
- Substrate temperature should be at least 3°C above dew point but not above 50°C
- Recommended ambient temperature for application is between 10°C - 40°C
- Relative Air Humidity (RH) to not exceed beyond 80%

APPLICATION

Brush/ Roller

Recommended thinner	: T 141 /Apcodur Epoxy Thinner
Volume of thinner	: 0 - 10 %

Air Spray

Recommended thinner	: T 141 /Apcodur Epoxy Thinner
Volume of thinner	: 5 - 15 %
Nozzle Orifice	: 1.5 mm - 3.00 mm
Nozzle pressure	: 0.3 - 0.4 Mpa (43 - 57 p.s.i.)

Airless Spray

Recommended thinner	: T 141 /Apcodur Epoxy Thinner
Volume of thinner	: 0 - 15%
Nozzle Orifice	: 0.33 - 0.38 mm
Nozzle pressure	: 15 MPa (= approx. 150 atm; 2100 p.s.i)

STORAGE&PACKING

Storage: Store in a cool, dry place. Store in accordance with local regulations.

Packing: **4 ltr** (Base: 2 × 4 ltrs & Hardener: 1 × 4 ltrs)

SAFETY INFORMATION

- As a general safety measure, inhalation of solvent vapours or paint mist and contact of liquid paint with skin & eyes, should be avoided. Forced ventilation should be provided when applying paint in confined spaces or stagnant air. Even when ventilation is provided, respiratory, skin and eye protection are always recommended when spraying paint.
- Please refer our Material Safety Data Sheet prior to using the product.