

EUNICOTE PE11

Pitch Epoxy Coating System



Product Description

EUNICOTE PE11 is a solvent free, two-pack, pitch extended epoxy resin coating system, consisting of a preweighed epoxy resin and a tar-modified polyamine hardener. It is designed as a high integrity chemical resistant protective coating.

Uses

Waterproof coatings for pipes, sewage tank protection with fiberglass laminate, manhole access, metal protection in marine environments, car park floor protection and anti-slip wearing courses with broadcast aggregate.

Advantages

- Provides a high quality, high build, protective coating with good chemical resistance.
- Suitable for use on most types of substrate and can be applied by brush, roller or airless spray.
- Excellent adhesion and physical strength.
- Can be laminated with glass fiber mat to form protective tank linings.
- Complies with ASTM C 881, Type IV; Class C.

Typical Properties

Appearance

Resin: Black, viscous liquid

Hardener: Pale, viscous liquid

Specific gravity

Resin: 1.34±.02 at 20°C

Hardener: 1.14 at 20°C

Mixed: 1.28 at 20°C

Flash Point (Abel closed cup): > 100°C

Mixed Ratio

Resin: Hardener 4:1 by volume Shelf life: 12 months in sealed containers.

Application Coverage

Prime: 0.15-0.20 kg/m²

Finish: 0.20- 0.30 kg/m²

Prime coat includes 5% -15% thinners to aid

substrate penetration.
ASTM D 2471:

Property	10°C	30°C
Pot life	80 min	40 min
Touch Dry	18 hrs	4 hrs
Full cure	48 hrs	24 hrs
Recoat	min	Max
Time	8 hrs	24 hrs

Minimum Application

Temperature: 5°C

service Film thickness: 200 microns dft at 0.25 kg/m² Temperature Range: -30°C to 75°C.

Test results for tensile strength and elongation % after curing for 7 days in air at 20°C. Tested in accordance with ASTM C881.

- Tensile strength :52 MPa
- Elongation at Break : 31%
- Bond Strength, 2 days
- (moist cure): 7.5 MPa
- Bond Strength, 14 days
- (moist cure): 11 MPa
- Water Absorption, 24h%: Nil
- Thermal Compatibility: passes test

Anti-Carbonation: EUNICOTE PE11 has been tested as an airtight coating to give protection to concretes containing embedded steel which may be depassivated by the action of atmospheric carbon dioxide. Gas permeability properties have been evaluated to determine the rate of carbon dioxide and oxygen diffusion through the coating. Diffusion resistance coefficient, RCO₂, 200 dft 321 m
RO₂, 200 dft 97 m
RO₂, 500 dft 334 m
Chloride diffusion characteristics have been

determined for a 2 coat, 450 micron dft application to concrete. After 180 days the amount of chloride transmitted was so small as to be insignificant indicating that for practical purposes EUNICOTE PE11 can be considered a total barrier for chloride.

Chemical Resistance

Typical data at a solution temperature of 20°C are given below:

E= Excellent, no change

VG=Very Good, slight attack

P=Poor, heavy attack

Solution	Result
Fresh/saline water	E
Diesel oil	E
Sodium hydroxide 30%	E
Salt solution	E
Hydrochloric acid 10%	E
Sulphuric acid 10%	VG
Ammonia	E
Formic acid 5%	P
Sewage	E
Toluene	P

Method of Use

Surface Preparation: All surfaces should be dry, sound and free of oil, grease and other contaminants. Thorough surface preparation is essential to obtain maximum adhesion and optimum performance from EUNICOTE PE11. Concrete surfaces should be grit blasted or flame scaled to remove surface laitance. Sand blast steel surfaces to remove rust and scale, to produce bright steel (SA 2½). Remove all dust prior to application.

Mixing

Premixed the hardener pack with a slow speed electric drill/stirrer, to incorporate any separated filler, and then slowly mix in the contents of the resin pack, until homogeneous.

Prime coats should be thinned with 5% - 15% EUNICOTE PE11 thinners prior to use, depending on porosity of substrate. In case of any cracks or damaged concrete coat EUNICOTE PE11 with any diffusion in two coats to insure proper protection.

Application

Coatings: Use a brush, roller or airless spray to apply a thinned prime coat onto the prepared substrate. Airless spray tip 0.012 in., pressure 90 bars, is typical for a mix containing 10% thinners. Work well into the surface, with an even application. Leave until dry (6-24 hours).if the finish coat cannot be applied within 48 hours scatter a light coat of fine dried sand onto the wet primed surface to provide a key. Finish coats should be of un thinned resin and hardener. Wipe any condensation from the primed surface before coating. Apply the finish coat(s) evenly making sure to obtain complete coverage. Airless spray tip 0.030 in., pressure 160 bar, typical. In tanking applications allow the prime coat to dry and follow with an unthinned coat lay on glass fiber mat. After EUNICOTE PE11 has cured (6-24 hours), a finish coat of EUNICOTE PE11 should be used to cover and seal the surface.

Non-Skid surfacing: EUNICOTE PE11 can be used to bond skid resistant dressings to areas required to be nonslip, such as ramps, walkways, bridges, etc. Typically the scattered aggregated method of application is used, as follows: EUNICOTE PE11: 0.5 kg/m² Bauxite Aggregate: 3.0 kg/m² Excess aggregate can be removed, cleaned and reused.

Packaging

EUNICOTE PE11 is a two-pack system of resin and hardener, packed in separate containers. Packs giving 6kg and 28kg of mixed resin are available.

Storage

EUNICOTE PE11 is combustible material and should be stored in a cool, dry place, with good ventilation, protected from extremes of temperature. Do not smoke or expose a naked flame in the storage area. Store in closed containers.

Health and Safety

For further information see the EUNICOTE PE11 Material Safety Data Sheet.

Technical Service

The Technical Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

Contact Information

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