TWO COMPONENT EPOXY SELF – LEVELING FLOOR COATING

DESCRIPTION

PENEPOX™ CS is a premium, self-leveling, rigid, two component epoxy coating with high impact and abrasion strength and very good resistance against acidic and basic solutions, common and domestic detergents. Used for self-leveling flooring applications, or as a thin layer coating. It cures by reaction (cross linking) of the two components.

RECOMMENDED FOR

PENEPOX™ CS is mainly used in heavy-duty industrial floor coating, either as a self-leveling coating or as a thin-layer coating (paint)

- Heavy duty factories
- High traffic car parking areas
- Warehouses
- Distilleries
- Food preparation-packaging or storage factories
- Night clubs
- Super Markets etc.

ADVANTAGES

- Solvent free
- Provides high tensile and impact strength
- Abrasion resistant
- Provides strong resistance to chemicals and detergents
- Self-leveling, so it provides perfectly even flooring results
- Resistant to bacteria and fungus
- Stops the creation of dust
- Decorate the surface and improves the working environment
- Gives a glossy and easy-to-clean surface

TECHNICAL CHARACTERISTICS

Characteristics	Test Result	Test Method
Composition	Pigmented Epoxy resin + Hardener	
Color	Grey, light grey, beige, red, green and light green	
Mixing ratio	A : B = 10 : 3 (by mass)	
Hardness (Shore D Scale)	80	ASTM D 2240
Solids content	98% ± 1%	Inside Lab Test
Adhesion to Concrete	2.2 ± 0.2 N/mm^2 (concrete failure)	ASTM D 903
Application temperature	50 ºF to 95 ºF (10 ºC to 35 ºC)	Conditions: 68 ºF (20 ºC), 50% RH
Pot Life	40 min	
Light trafficking	12 hours	
Final curing time	7 days	

Chemical resistance of PENEPOX™ CS

Sulfuric acid 10%	+	*Sea water*	+
Hydrochloric acid 10%	+	*Mineral oils*	+
Nitric acid 5%	+	*Gasoline (unleaded)*	+
Acetic acid 5%	+	*Ethanol 10%*	±
Ammonia 5%	±	*Aviation fuels (JET A1)*	+
Sodium hydroxide 10%	±	*Dichlormethane*	-
Calsium hydroxide 10%	+	*N methyl pyrrolidon (brake fluid)*	-

+ : Stable. - : Non stable (color change). ± : Stable for a short period.

All data are average values obtained under laboratory conditions. Impractical use, temperature, humidity and absorption of the substrate may influence the above given values.

DIRECTIONS FOR USE

Surface Preparation: The surface needs to be grinded with a stone- or a diamond-grinding machine. The surface needs to be clean, dry and sound, free of any contamination, which may harmfully affect the adhesion of the coating. Maximum moisture content should not exceed 5%. Substrate compressive strength should be at least 3,626 psi (25 MPa) and cohesive bond strength at least 218 psi (1.5 MPa). New concrete structures need to dry for at least 28 days. Old coatings, dirt, fats, oils, organic substances and dust need to be removed by a grinding machine. Possible surface irregularities need to be smoothened. Any loose surface pieces and grinding dust need to be thoroughly removed.

NOTE: Careful surface preparation is essential for optimum finish and durability**.** Do not wash surface with water.

Priming: Clean cracks and hairline cracks, of dust, residue or other contamination. Fill all cracks with suitable mortar. Prime all surfaces with the PENEPOX™ SF PRIMER A+B, by roller or by brush. Mix with dry silica sand powder (QUARTZ SAND MIX or similar) for repairing – sealing by trowel. Disperse evenly dry silica sand (QUARTZ SAND MIX or similar), 0.1 lb/ft^2 (0.5 kg/m^2) onto the wet primer, to increase bonding and let it dry.

Expansion joint sealing: Prime the expansion joints with the appropriate primer (U-SEAL 110 for porous substrates). Apply a polyethylene backing rod, of the appropriate section (PENETRON® BACKING ROD) inside the joint and fill the joint with the appropriate sealer, U-SEAL or SiMP®SEAL.

NOTE: Apply the first layer of PENEPOX™ CS after 12-18 hours (but not later than 24 hours).

Mixing: After 12 hours, but not later than 24 hours, pour the content of PENEPOX™ CS B into the PENEPOX™ CS A container and mix thoroughly for at least 3-5 mins, until the mixture becomes fully homogeneous. The mixing of the components has to be effected very thoroughly, especially on the walls and bottom of the pail, with a drilling mixer and a mixing wand. Then, pour the PENEPOX™ CS A+B mixture in a larger container and add quartz aggregates and mix thoroughly with a mechanical mixer.

Mixing ratios: Mixing ratio of PENEPOX™ CS A+B is A : B = 10 : 3 (by mass).

The mixing ratio of the dry quartz sand is 60"%-100% by mass, regarding the application conditions (temperature, humidity), and regarding requirements of liquidity, flatness and tolerance. Indicatively, 8-13 kg of dry quartz sand per 13 kg of PENEPOX™ CS A+B.

Application:

Self-leveling coating: Apply the mixture of PENEPOX™ CS A+B with the dry quartz aggregates onto the surface and lay it out by 3-4 mm teeth trowel, until all surface is covered. Wear spike shoes and roll the entire wet coating with a spike roller, to help encapsulated air escape.

Thin-layer coating (paint): Apply two layers of PENEPOX™ CS A+B mixture by roller. Each layer needs 12 – 24 hours to cure. Apply a primer, prior to PENEPOX™ CS application, if needed and wait 12-24 before PENEPOX™ CS application.

NOTE: To avoid craters and bubbles use the spike roller carefully and many times, to ensure the escape of the entrapped air.

COVERAGE

Self-leveling coating: 0.16 lb/ft^2 (0.8 kg/m^2) PENEPOX™ CS mixed with 0.16 lb/ft^2 (0.8 kg/m^2) quartz sand mix 0.1-0.3 mm, per 0.04 in (1 mm) layer in thickness. Minimum layer thickness is 0.08-0.12 in (2-3 mm).

Thin-layer coating (paint): 0.08-0.16 lb/ft^2 (0.4-0.8 kg/m^2) in two layers.

SPECIAL CONSIDERATIONS

For best the results, the temperature application and curing should be between 50 ºF to 95 ºF (10 ºC to 35 ºC). Low temperatures cause curing retardation, while high temperature speed up curing. High humidity may affect the final finish.

Careful compliance with the time margins is essential for an excellent result.

Contact PENETRON HELLAS S.A. for further information regarding your project.

PACKAGING

PENEPOX™ CS A+B is available in 22+6.6 lb (10+3 kg) containers.

STORAGE / SHELF LIFE

PENEPOX™ CS can be stored for 12 months in its original packing (unopened container) at 41 – 86 ºF (5 – 30 ºC) in a cool, dry place. Keep away from wet areas and direct sunlight.

SAFE HANDLING INFORMATION

Avoid skin and eye contact. If contact is made, flush areas with lots of water and seek medical advice. Protective gloves, mask and goggles should be worn. For further information please refer to Safety Data Sheet. PENETRON HELLAS S.A. has recently updated Safety Data Sheet on the safe use of PENETRON® products. Each Safety Data Sheet contains health and safety information for the protection of your employees and your customers. KEEP OUT OF REACH OF CHILDREN.

CERTIFICATION

PENEPOX™ CS is certified by the General Chemical State Laboratory that after curing, satisfies the conditions of EN 1935/2004 and EN 1895/2005 Regulations and the Article 25 of the Food and Drinks Code Regulation.

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PENEPOX CS
EN 13813/1301 TSUS
14.022-03-10D100919-05
EN 13813 SR-B2,0-AR0,5-IR10
Epoxy self – leveling floor coating
Reaction to fire: F
Abrasion Resistance: Class AR 0.5
Adhesion: Class B 2,0
Impacts Strength: IR min. 10Nm

Dangerous Substances: NPD

WARRANTY – DISCLAIMER

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