Technical Data Sheet

EPOSHIELD EPP

Non Toxic Two Parts Flexible Chemical Resistant High Build Epoxy Polysulphide Coating

Description:

EPOSHIELD EPP is a high build elastomeric chemical resistant two component liquid applied protective coating membrane, based on epoxy resins modified with Polysulfide for high elasticity and high durability. EPOSHIELD EPP has excellent adhesion to most substrates including concrete, plaster, masonry, and metal surfaces.

EPOSHIELD EPP cures to form highly dense seamless continuous monolithic membrane that has excellent adhesion to most substrates. The cured membrane has high flexibility and high resistance to chemicals. It is specifically developed as lining and waterproofing coating for potable water retaining structures and as a superior chemical resistance flexible protective coating for industrial structures. Its flexibility and ease of application also make it ideal for use as crack sealing coating.

Uses:

- Internal water proofing membrane for water tanks, concrete or steel.
- Wet areas, showers, bathrooms, kitchens, balconies, planters, pools, especially in public used utilities.
- Water proofing at meat and poultry factories.
- Water proofing membrane at food processing areas.
- Swimming pools and water parks waterproofing, where high features of waterproofing membrane are required.
- Hard wearing and chemically resistant floor coating in industrial areas.
- Heavy duty protective coating for concrete and steel in oil refineries, paper mills, garages, hospitals, hangers, man holes, sewage water tanks and most liquid containment areas
- Intake channels, culverts and canals.
- Sewage & sludge aeration & sedimentation tanks.

Advantages:

- High build liquid applied membrane in single application.
- Fast drying chemically cured product.
- Highly flexible to be applied where movement is expected.
- Self-priming, requires no primer to adhere to substrate.
- Crack bridging ability, can serve as waterproofing membrane in car park systems.
- Chemical resistant to detergents, cleaning materials, brackish water and salt water.
- Nontoxic

Instructions for Use:

Surface Preparation:
All surfaces should be sound, clean, dry and free from loose material, efflorescence, laitance, curing compounds; dirt, oil and grease. Ensure that concrete surfaces are cured for at least 28 days and have moisture content not exceeding 5%. Old or existing floor should be refurbished mechanically to ensure clear sound substrate. Mechanical methods like grinding or grit/captive blasting in order to provide a suitable profiled open textured surface is strongly recommended.

Surface irregularities, cracks and blow holes shall be repaired with LAVAPOXY range of products. Cracks, expansion joint and control joints should be properly addressed, prior to application. After all preparation is complete, ensure dust is removed from the surface using an industrial vacuum. Apply injection material for penetrating cracks to ensure structurally sound containment before applying EPOSHIELD EPP membrane. Steel Surfaces should be grit blasted to surface quality SA 2 1/2. Coat the surface before it starts to re-oxidize.

Priming:
Priming is not usually required provided the substrate is sound, untreated, non-porous concrete.

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Porous surfaces should be primed with ARMOPRIME EP100. A second coat of primer may be required if the substrate is excessively porous.

ARMOPRIME EP100 should be mixed in the proportions supplied. Add the entire contents of the hardener into the base. When thoroughly mixed, preferably using a slow speed drill and paddle, the primer should be applied in a thin continuous film, using rollers or stiff brushes. The primer should be left to achieve a tack-free condition before applying the top-coat.

Mixing:
EPOSHIELD EPP is supplied in two pre-weighed components kit. Thoroughly stir the contents of the base and hardener separately. Pour component B hardener into the pail of Component A base and mix well with a heavy duty mixer fitted with a proper paddle operated at low speed till a homogenous mix is reached. Scrape the side of the pail to ensure the entire product has been properly mixed. Leave the mixed material for a period of 2 minutes to release entrapped air from the mix.

Application:
Apply EPOSHIELD EPP uniformly over primed surfaces with a roller, trowel, brush or spray machine. It is recommended to apply two coats with a minimum total dry film thickness of 500 micron to achieve the best results of product. Apply a rich coat to the surface in a spread rate of 4 square meters/liter/coat. Second coats can be applied with same rate of application preferably in 90 degree direction.

EPOSHIELD EPP should not be applied on surfaces with a risk of rising dampness and should not be applied at temperature below 5°C. Water test should be executed after 14 days of material application to allow the membrane to be fully cured.

If the product will be totally exposed to sun and atmosphere, apply a top coat of ARMOFLOOR UVR-a UV protective polyurethane coating layer. While applying the product in wet areas, it is recommended to pay extra attention to penetrations. An additional strip of product to be applied around penetrations such as pipes and conduits to ensure proper sealing and waterproofing features. Tiles can be applied once the membrane totally cures.

For park decking system, EPOSHIELD EPP can be applied as a flexible crack bridging wear coat with an anti-slip finish. Broadcast quartz on the first coat while it is still wet and allowed to dry completely. After overnight drying, the excess quartz can be brushed away and the second coat can be applied.

If EPOSHIELD EPP is applied as a membrane liner in water tanks, no further coating is required, as it is a non-toxic membrane and the membrane can contain potable water. Expansion joints in water tanks should be treated with MEGASEAL PU sealant. Use HYDROJOINT TAPE on the sealed expansion joints, around pipe through penetrations and to corner angles of the water tanks, to ensure a water tight system.

For application on steel surfaces, all surfaces should be grit blasted to meet the requirements of SA 2½, First Quality or equivalent.

The lining work should be programmed so that newly cleaned steel is coated as soon as possible before the formation of rust or scale.

Standards:

- ASTM D2240, D412, D624

TECHNICAL PROPERTIES	
Color	Grey and Light Blue
Density	1.50 ± 0.03 kg/lit
Solid Content	100%
Potlife at 25°C	40 minutes
Application Temp.	+5°C to + 40°C
Touch Dry	6 hours
Full Dry	24 hours
Adhesion to concrete (ASTM D4541)	>2.0 N/mm² cohesive failure within concrete
Tensile strength (after 7 days) (ASTM D412)	12.0 N/mm²
Elongation at Break (ASTM D412)	Approx. 45 %
Shore A hardness (after 7 days) (ASTM D2240)	40
Water Penetration	NIL
Service Temperature	-5°C to +80°C
Chemical Properties	
Acidic solutions	Resistant
Alkali solutions	Resistant
Sea, brackish water	Resistant
Oil and grease	Resistant
Detergents	Resistant
Thinners and solvents	Moderate resistance

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*Values indicated may vary depending on the environment and conditions of the material. Figures given are tested according to standard laboratory conditions.

Coverage:

EPOSHIELD EPP achieves coverage of 2 square meter/liter @ 500 micron dry film thickness.
*Coverage rate is an approximate value, and subject to actual site conditions.

Packaging:

EPOSHIELD EPP is available in a set of 4 and 15 liter supplied in metallic dual pack.

Storage:

Store in original packing in dry conditions away from direct sunlight and in a shaded warehouse.

Shelf Life:

EPOSHIELD EPP can be utilized within 12 months of production date if stored in proper conditions in an unopened original packing.

Cleaning:

All tools and equipment should be cleaned immediately after use with ARMOSOLVENT.

Health and Safety:

- Avoid contact with eyes and skin. Wear suitable protective clothing such as coveralls, goggles, dust mask and gloves. Use barrier cream. Ensure that there is adequate ventilation. Do not breathe vapour or spray mist.

FIRST AID:

Eyes:	In the event of accidental splashes, flush with warm water and seek medical advice.
Skin:	Wash skin thoroughly with soap and water
Inhalation:	Remove to fresh air, keep patient rested
Ingestion:	Do not induce vomiting. Seek immediate medical attention.

For further safety information, please refer to EPOSHIELD EPP Material Safety Data Sheet.

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P.O. BOX: 29585, Dubai, UAE, Tel: +971 4 333 4140, Fax: +971 4 333 4115
Email: info@matex.ae, www.matex-global.com