LA GREENS
Smart Solutions for Sustainable Construction

LA Shield ET100

Epoxy Tar Based Coating for Steel & Concrete Surfaces

Product Description

La Shield ET100 coating is based on solvented coal tar epoxy resins specially formulated to provide a durable coating suitable for application to both vertical and horizontal surfaces.

Supplied as a two - component system comprising a special blend of pitch epoxy resins and amine hardeners.

Uses

Provides protection to concrete and metal structures against corrosion from aggressive environments. Suitable for tanks above ground or in totally submerged conditions such as pipelines. Particularly useful in sewage works, effluent plants and dock and harbour installations.

Advantages

- Excellent resistance to all types of water
- Easily applied by brush or spray
- Provides long term corrosion protection
- No priming necessary in most cases
- Chemical and abrasion resistant
- Economic and versatile product
- Acts as anti rooting for Roof Gardens

Technical Properties

La Shield ET100	20^{0}C	35^{0}C
Pot-life	3 hrs	1 ½ hrs
Time between coats	6 hrs	2 hrs
Initial hardness	24 hrs	16 hrs
Full cure	7 days	5 days
Below 20^{0}C these times will be increased.		
Specific gravity (mixed material)		1.45±0.05
Wet film thickness		100 microns
Dry film thickness		80 microns
No of Coats		2 (minimum)
Adhesive bond strength to concrete /steel		>1N/mm^2

Chemical Resistance

La Shield ET100 has been tested for resistance to a comprehensive range of various chemicals and types of water, commonly encountered in individual locations. Tests were performed by constant immersion for 3 months at 30^{0}C in the selected chemical solution. The fully cured coat is resistant to the attack of:

Effluent water, Sea water & Ground water	
Chemical resistance : Tests were carried out in accordance with ASTM D543. Test was conducted at room temperature of 23°C and specimens were soaked in the solution for a period of 7 days.	
Acids (m/v)	
Hydrochloric acid 10%	Excellent
Sulphuric acid 10%	Very good
Nitric acid 10%	Very good
Phosphoric acid 10%	Very good
Alkalis (m/v)	
Ammonia 15%	Excellent
Sodium Hydroxide 25%	Good
Solvents & Organics	
Oils, vegetable and minerals	Excellent
Ferric Chloride 15%	Very good

However at elevated temperatures or where mixtures of chemicals are involved then the effects may be different than those found in laboratory tests described above.

Specification Clauses

Protective Surface Coating

The protective coating shall be La Shield ET100, a chemically resistant prepacked, two part solvented, coal tar epoxy coating with a minimum of 45% volume solids. The cured film shall be tough and abrasion resistant. It shall be applied on the dry concrete or steel surfaces.

Application Instructions

Preparation

Surface to be coated must be structurally sound, dry and free from loose material. All surface contamination must be removed. Grease and oil should be grit blasted or water jetted. Deeper penetration must be removed by mechanical means. Any laitance must be removed from concrete surface by etching with suitable rust removing agent and then wash off and allow to dry. New concrete should be allowed to cure for at least 28 days prior to priming. Steel surfaces should be thoroughly cleaned with wire brush or any suitable mechanical equipment. It is essential that La Shield ET100 is applied to sound clean, dry substrates in order to achieve maximum adhesion between the coating and substrate.

Mixing
Before mixing, the contents of each can should be thoroughly stirred to disperse any settlement which may have taken place during storage.

The entire contents of the hardener can should be poured into the base container and the materials should be thoroughly mixed for at least 3 minutes. Mechanical mixing using a slow speed (300 - 500 RPM) flame proof or air driven drill fitted with a mixing paddle is recommended.

Coating
The mixed La Shield ET100 shall be applied to the dry, prepared substrate making sure a continuous film is achieved using a standard paint brush, good quality lambswool roller or spray equipment. The optimum dry film thickness of 100 microns is achieved in two coats.

Temperature Limitations
Minimum application temperature : 15^{0}C
At temperatures below 15^{0}C and above 40^{0}C.

Package

La Shield ET100 : 5kg Pack

Coverage

La Shield ET100, 5kg pack covers approx. 35-40m^2 per coat at a WFT of 100 microns. However, practical coverage depends on the nature and porosity of the substrate and application conditions.

Shelf Life

12 months if stored in an unopened condition below 35^{0}C.

Health & Safety

Contact with skin and eyes shall be avoided. Contamination with skin and eyes should be washed with water. Prolonged inhalation of the vapour should be avoided and adequate ventilation be ensured.

Fire

La Shield ET100 is flammable. Adequate ventilation to be ensured when using primers and solvents and do not use near a naked flame.

Flash Point

La Shield ET100 : 25^{0}C

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