Durathane 100 EA

Solventless spray applied elastomeric PU lining

Description

Durathane 100 EA, a solventeless spray applied elastomeric polyurethane fast curing coating, is recommended as a protective coating and lining for concrete and steel structures. It is applied by plural component airless spray equipment. It is ideally suited for the areas where higher DFT is required as a protective barrier. The coating has excellent film build capabilities and can achieve 500 microns to 3000 microns DFT in single application with multiple passes. Durathane 100 EA is exceptionally resistant to most chemicals and is resilient to withstand accelerated weathering conditions. It has other remarkable physical and mechanical properties such as low permeability, elongation and a very high level of abrasion resistance. It protects against microbiologically induced corrosion (MIC) making it ideal for waste water applications.

Uses

Durathane 100 EA finds extensive uses in areas where high build coatings and linings are required to protect steel and concrete structures against highly corrosive and erosive environments. Durathane 100 EA coatings and linings are highly recommended for critical structures such as storage tanks, mounded bullets, reserviors, overhead tanks, marine and off shore structures. It is extensively used for internal and external linings for pipelines, concrete tunnels and thermal power cooling towers.

Key features

- Solvent-free
- Fast return to service / No VOC
- Unlimited film thickness
- Excellent corrosion and erosion resistance
- Longer life expectancy

Properties

Type	:	Solventless elastomeric polyurethane ASTM D 16, Type V
General composition	:	Polyester polyol aromatic isocyanate
Mixing ratio (R:H)	:	3 : 1
Pot life ASTM D 2471	:	2 - 5 minutes
VOC Contents ASTM D 2369	:	Zero
Dry to touch	:	≥ 30 minutes
Substrate temperature	:	5^0C to 60^0C
Return to service	:	≥ 2 hrs
Ambient temperature	:	5^0C to 50^0C
Ambient moisture	:	Max. 85% R.H.
Material temperature	:	≥ 30^0C
Flash point ASTM D 3278	:	Part A ≥ 200^0C Part B ≥ 100^0C
Cleaning solvents	:	MEK, Ethyl Acetate
Shelf life	:	12 months in the un-opened container
Packaging	:	200 litre MS drums
Theoretical coverage	:	1 lt / sq m @ 1mm
Recommended thickness Steel Concrete	: :	 ≥ 1500 microns ≥ 2500 microns

Performance data

Tensile strength ASTM D 638	:	≥ 10 MPa
Recoverable elongation ASTM D 638	:	≥ 30 %
Water vapour transmission ASTM D 1653	:	≤ 0.5 g / m^2 /24 hrs
Adhesion pull off test ASTM D 4541 On concrete On steel	: : ≥ 2 MPa : ≥ 10 MPa	
Resistance to service temperature 60^0C Max	:	Passes
Accelerated weathering ASTM G 154 2000 hrs	:	Passes
Flexibility test, 180 Bend over 1 inch mandrel ASTM D 522	:	Passes
Abrasion resistance Taber Abrasor H-10 wheel 1000 g, 1000 cycles ASTM D 4060	:	< 50 mg loss

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Sea water resistance Immersion in sea water for 30 days		
a. Weight change	:	< 1 %
b. Hardness change	:	< 5 %
c. Tensile strength change	:	< 5 %
Salt spray test ASTM B 117, 6000 hrs	:	Passes
Hardness, Shore D ASTM D 2240	:	≥ 55

Directions to use

Surface preparation on concrete substrates

Decontaminate the surface as per ASTM D 4258. Abrasive blast cleaning is done as per ASTM D 4259. Surface must be free of condensation and moisture before priming. The surface should be free of surface porosities, honey combs etc. Apply prime coat of Cipoxy 16D by airless spray. Allow to cure for max 5-6 hours. If the time is lapsed for more than 24 hours, abrade the primed surface to have mechanical key.

Surface preparation on steel substrates

Decontaminate the surface as per SSPC SP-1. Abrasive blast clean is done as per SSPC SP-10. Surface must be dry and dust free before priming. Apply primer ACPC 60 by airless spray. Allow to cure for minimum 3-4 hours. If the time is lapsed for more than 24 hours, abrade the primed surface to have mechanical key or apply a mist coat before subsequent top coat.

Application of Durathane 100 EA

Stir Resin (Part A) thoroughly just prior to use. Apply Durathane 100 EA by plural component airless spray equipment. Application is carried out by Graco "Hydracat" or equivalent spray machine to achieve the film build up through multiple passes. Allow to cure for 4 hours.

Packaging : Durathane 100 EA is available in 20 / 200 litre MS drums and has a maximum shelf life of 12 months in the un-opened containers.

Storage and handling

The product should be stored in accordance with national regulations. It should be kept in a cool, well ventilated area, away from heat, direct sunlight, sparks and children. Handle with care. Mix resin and hardener as per the recommended ratio. Use the mix solution within the pot life time.

Health and safety precautions

Please refer to MSDS. Observe reasonable care and employ ordinary hygienic principles such as washing the hands with soap and water before eating or smoking. It is recommended to wear gloves, goggles and nose masks while application. Incase of splashes on the skin, dampen the cloth with diluent PUT 502 and wipe the hands with the cloth. Wash then with soap and water. Dried film is non toxic. Incase of contact with eyes, rinse with plenty of water and seek medical advice. Incase of continuous exposure to vapours, the applicator should be immediately moved to get fresh air. The disposal of excess or waste material should be carried out in accordance with the local legislations.

Disclaimer

All information contained in this data sheet is given to the best of our knowledge but no warranty is made with respect thereto. This data sheet becomes invalid as soon as a new edition has been published. Please contact us for latest edition. Description and advice regarding Cipy's products are based on long term field and laboratory tests carried out by us. No condition of warranty is given covering the results from the use of materials in the circumstances of any particular application, because the storage, handling and application of the materials are beyond our control.

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SPECIALIZED FLOOR COATINGS

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