

PROTAL™ ST EPOXY MASTIC

Surface Tolerant Liquid Epoxy Glass Flake Coating

Description

Protal ST Epoxy Mastic is a two part, high solids, fast drying, glass flake epoxy coating for application directly onto wire brushed rusty steel substrates to SSPC-SP2/3. Its good penetration and adhesive properties ensure excellent protection in long term exterior exposure.

Uses

Used wherever steel grit blasting is not possible. Protal ST Epoxy Mastic can be used alone or in combination with other topcoats for long term exposure to water in applications such as: structural steel, pipe externals, pipe racks, tanks, offshore platforms, locks, gates, and bridges.

Features

- Minimal surface preparation (SSPC-SP2/3)
- Long term exterior protection
- Excellent water/sea water resistance
- Good resistance to acids and alkalis
- Does not shield cathodic protection
- Good flexibility, hardness and adhesion
- Good impact resistance
- Low VOC's

Application

Prepare surfaces by removing all loose scale, rust or other foreign matter in accordance to SSPC-SP2 "Hand Tool Cleaning" or SP3 "Power Tool Cleaning". High pressure water wash of 3,000 - 7,000 psi (20.68 - 48.26 MPa) is also suitable. This can be achieved using power brushing or machine grinding. If the surface is severely corroded, chipping hammers and needle guns will be required. The surface should finally be cleaned with a vacuum cleaner, clean dry with compressed air or a clean brush. The steel should then have a faint metallic sheen. Use as supplied in pre-weighed packs Part A (base component) with Part B (hardener). Pour all of Part B into Part A and thoroughly mix with a power whip for at least 2 minutes.

The substrate temperature must be a minimum of 5°F (3°C) above the dew point temperature before proceeding with the coating operation. The first coat can then be applied by brush or spray to a wet film thickness of 10 mils / 254 microns (8 mils / 203 microns DFT). Check the film thickness of the coating regularly with a wet film gauge during application. Minimum wait time for overcoating is 4 hours at 77°F (25°C).

Spraying is carried out using a 68:1 airless spray pump and a 21 to 31 thousands of an inch tip. Below 59°F (15°C) add 5% MEK. Apply the second coat at 10 mils (254 microns) wet film thickness in the same manner as the first. When dry, a final weather resistant top coat such as a water based acrylic or polyurethane can be applied by brush or spray.

Storage

Store the containers in a dry, well ventilated area. The containers should be kept tightly sealed. Shelf life: 12 months, when stored between 40°F - 100°F (4°C - 38°C).



TECHNICAL DATA SHEET

Cleaning

Clean equipment with MEK or equivalent solvent cleaner.

HSE

Spray or brush under well ventilated conditions. Wear suitable protective clothing and glasses. See material safety data sheet.

Packaging

0.5 (1.9 liter) gallon kits. Other package sizes are available upon request.

Tech Data

Properties	Imperial	Metric
Pot Life @ 77°F (25°C) (ASTM D2196)	1 hour	1 hour
Touch Dry @ 77°F (25°C) (ASTM D1640)	3 hours	3 hours
Theoretical Wet Film Thickness (typical)	10 mils per coat	10 mils per coat
Theoretical Coverage	163 ft ² /gallon @ 10 mils	4 m ² /liter @ 254 microns
Solids by Volume	87%	87%
Mixing Ratio by Volume	2 Parts Base: 1 Part Hardener	2 Parts Base: 1 Part Hardener
Application Temperature	-20°F to 125°F	-29°C to 52°C
<i>Note: If temperature falls below 50°F (10°C), surface must be preheated.</i>		
Service Temperature	-20°F to 150°F	-29°C to 65°C
Dry Film Thickness		
First coat Denso Protal ST	8 mils (DFT)	203 microns
Second coat Denso Protal ST	8 mils (DFT)	203 microns
Final coat acrylic, enamel or polyurethane	2 mils (DFT)	50.8 microns
Overcoating Time (min.) (ASTM D3359B)		
50°F (10°C)	12 hours	12 hours
60°F (16°C)	8 hours	8 hours
77°F (25°C)	4 hours	4 hours
95°F (35°C)	2 hours	2 hours
Shore D Hardness @ 77°F (25°C)	85	85
Adhesion to Steel (ST2) (Elcometer pulloff)	1,800 psi	12.41 MPa
Hot Salt Fog @ 95°F (35°C) (ASTM B117)	1500 hours	1500 hours
Humidity Test @ 104°F (40°C) w/100%	1500 hours	1500 hours
Cathodic Disbondment Test (ASTM G95)		
28 Days @ 73°F (23°C)	6mm	6 mm
Impact Resistance (ASTM G14-04)	42.48 in-lbs	4.8 J
Color	Light Gray	Light Gray



DENSO, INC.

HOUSTON:
9710 Telge Road,
Houston, Texas,
U.S.A. 77095
Tel: 281-821-3355
Fax: 281-821-0304

TORONTO:
90 Ironside Crescent,
Unit 12, Toronto,
Ontario, Canada M1X1M3
Tel: 416-291-3435
Fax: 416-291-0898

www.densona.com

info@densona.com

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