Polyguard FC85

FLOW COAT EPOXY

Product Description

A two-component, high solid, amine cured epoxy coating pigmented with zinc phosphate. It provides superior corrosion and barrier protection in atmospheric and heavy industrial environments. This product is specially designed for Flow Coating application method, and also available in the MIO version.

Typical Uses

Polyguard FC85 is suitable for both new construction and maintenance coating needs. It offers excellent anticorrosive and barrier protection to industrial and coastal infrastructure and equipment, such as transformers, radiators, tanks, etc., in various atmospheric exposures. It is recommended as a high-build primer for use in high-performance coating systems where short overcoating and faster throughput are a requirement.

Depending on project specifications, it can be applied in a single coat with a dry film thickness (DFT) ranging from 50 to 275 microns. As project requirements and exposure conditions vary significantly, detailed specifications are available separately from TRPL.

Features

- Flow coat-able
- Fast drying
- Fast overcoating
- Corrosion resistant
- Surface tolerant
- Low VOC
- Meets ISO 12944-6:2018 C1-C5 requirements

Technical Properties

Color / Shades	Grey, Red Oxide
Gloss	Low sheen
Volume Solids	85 ± 2%
Specific Gravity	1.71 Kg/L
Mix ratio	3:1 by volume
Typical Thickness	50-175 micron [2-7 mils] dry equivalent to 59-206 microns [2.3-8 mils] wet
Coverage	10.6 m^2/liter at 80 microns DFT (theoretical)
Flash Point (Typical)	25^{0}C (77^{0}F)
VOC	196 g/L
Thinner / Cleaner	Thinner E1

Drying Time

Surface Temperature		25^{0}C
Touch		70 Minutes
Dry to handle		2.5 Hours
Recoat	Min:	2.5 Hours
	Max:	Ext
Hard Dry		4 Hours
Pot Life		2 Hours
Cured to service		7 Days

The above drying times are calculated for a dry film thickness of 100-125 microns [4-5 mils] at standard conditions.

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Surface Preparation

The coating performance will depend on the quality of surface preparation. The surface to be coated must be clean, dry, and free from contaminants. Before applying paint, inspect and treat all surfaces according to the standard ISO 8504:2000. Remove any dirt buildup with a dry bristle brush, and use fresh water to wash away any soluble salts.

When preparing new surfaces, maintaining already coated surfaces, or dealing with aged coatings, it is essential to remove all contaminants that can interfere with coating adhesion and to prepare a sound substrate for the subsequent products.

Surface preparation and coating should normally commence only after all welding, degreasing, removal of sharp edges, weld spatter, and treatment of welds is complete. All hot work must be completed before coating commences.

Defective welds must be replaced and finished properly before painting. Temporary welds and brackets removed from the parent metal need to be ground down to a flat finish.

Pitting in steel can be challenging to cover completely with most coatings. In certain areas, it is practical to use a filler to fill in the pits. This should be done either after the initial surface preparation or after the application of the first coat.

Iron & Steel

Abrasive blast clean to a minimum Sa 2½ (8501-1:2000) or SSPC–SP6 to a sharp and angular surface profile of 30-85 microns, grade fine to Medium (G) (ISO 8503-2). In case oxidation has occurred between blasting and application of the surface, it should be re-blasted.

Use non-metallic blast media such as corundum or garnet for non-ferrous metals and alloys, including stainless steel and aluminum. Sweep the blast to create a consistent, dense profile that is free of blank spots. Remove any loose items, blast media, and dust.

Galvanized Steel

The surface shall be sweep blast-cleaned with the nozzle angle at 45-60° from perpendicular at reduced nozzle pressure to create a sharp and angular surface profile using approved nonmetallic abrasive media. As a guide, a surface profile 25-55 µm, grade Fine G; Ry5 (ISO 8503-2) should be achieved.

Maintenance & Repair

Hand or power tool clean to a minimum St2 (ISO 8501-1:2007) or SSPC-SP2. Note that all scales must be removed, and areas that cannot be prepared adequately by chipping or needle gun should be spot-blasted to a minimum standard of Sa2 (ISO 8501-1:2007) or SSPC-SP6. Typically, this would apply to C or D grade rusting in this standard.

Application

Application Method	Thinning	Application Parameters
Airless Spray	10-20%	Nozzle pressure: 225 bar [3300 psi] Nozzle orifice: 0.019 - 0.023
Flow Coat	30-40%	Not applicable
Brush / Roller	30-40%	Not applicable

When using a brush, roller or flow coat application, you will need to apply additional coats to achieve the specified dry film thickness. The spray data given is only a guide and may require adjustments. The pressure measurements are based on a material temperature of 25°C (68°F).

Note

- The material is supplied in two containers as a complete unit. Always mix the entire unit in the proportions provided.
- Stir the base thoroughly for optimal results and homogeneity.
- Combine the entire contents of the hardener (Part B) with the base (Part A) and mix thoroughly using a power mixer before spraying. Continue mixing until the entire compound has been used, or use a steel rod to ensure complete homogeneity of the mixture.
- For flow coat application, it is recommended to use 40% thinner at 25°C, to achieve required application viscosity.

Application Conditions

- The optimal paint temperature for proper mixing, pumping, and spraying is 20°C (68°F).
- To prevent condensation, ensure you apply the paint on a clean and dry surface with a temperature at least 3°C (5°F) above the dew point.
- The surface temperature must be above 10°C (50°F) during both application and curing.
- The relative humidity should remain below 85% during application and curing.

Application Notes

- This product requires heavy-duty spray equipment; keep spray hoses as short as possible.
- Metallized surfaces should be overcoated before being exposed to open-air conditions.
- It is recommended to use a flash-coat technique when overcoating porous substrates.

Storage

Shelf Life

12 Months, unopened

Storage Condition

The product must be stored in compliance with local regulations, at a maximum temperature of 40°C (104°F), away from direct sunlight, and protected from rain and snow.

Safety: Handle with care. Before & during use, observe all safety labels on packaging and paint containers, consult Material Safety Data Sheets, and follow all local or national safety regulations. Avoid inhalation, avoid contact with skin & eyes, and do not swallow. Take precautions against possible risks of fire or explosions as well as protection of the environment. Apply only in well-ventilated areas.

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