

KRYPTON ProLine MFE100

Multifunctional Surface Tolerant Epoxy



Technical Data Sheet

DESCRIPTION

ProLine MFE100 is a multifunctional, surface tolerant epoxy. Specially formulated as a high-performance coating, to protect steel structures, industrial installations, bridges, exterior of tanks, pipingwater condensation areas, EDAR, marine weathering, etc. Can be applied over wet surfaces.

Excellent product for bridge maintenance or floodgate protection. Suitable for concrete protection in water immersion applications.

Version aluminium and micaceous ferrous oxide (MIO).

FEATURES

- High performance for new construction or maintenance situations
- Can be applied over surfaces that have not been optimally prepared, for example manually cleaned steel surfaces, mechanically cleaning or water jetting. It can be applied over wet surfaces.
- Can be applied as primer or intermediate coat or topcoat (multipurpose).
- Due its high wetting, it has excellent edge coverage.
- Excellent corrosion protection in salt and freshwater immersion and corrosive chemical environments.
- Can be applied over rusted surfaces subject to adhesion.
- Suitable with surfaces water jetted.
- Compatible with a wide range of existing coatings
- Very good resistance to condensations and high humidity
- Low temperature cure without additives or additional curing agents.
- Fast dry-to-recoat and rapid handling properties.
- It can be immersed 30 minutes after application.
- Applicable in high thicknesses
- High resistance to splashes, spills and abrasion
- High volume solids, low VOC

PROPERTIES

Appearance

Finish	Semi-gloss
Colour	Ral colour and aluminium

Material properties

Components	2
Mixing ratio (volume)	Resin: 3 parts Cure: 1 part
Pot-life	2 hours at 20°C
Volume solids	87 % (ISO3233) Slight variations $\pm$ 3 % may occur due to colour and testing variances. Color: aluminium 79 % (ISO 3233)

Specific weight	1.36-1.49 g/L
Dry film thickness	100 – 300 μ m per coat Brush or roller could need additional coats, in order to obtain the desired dry film thickness
Number of coats	1 – 2
Theoretical coverage	8.7 m ² /L at 100 μ m Allow for application losses, surface irregularities, etc.
Application method	Airless or conventional spray. Brush or roller .

DRYING TIME

@200 μ m:

	30 °C	20 °C	10 °C	0 °C
To touch	1h 30min	3h	6h	12h
Dry through	4h	6h	12h	24 h

Recoating interval Min.

ProLine MFE100	1h 30min	3h	6h	12h
Topcoat krypton 2k	4h	6h	12h	24h

Recoating interval max

ProLine MFE100	2 months	2 months	2 months	2 months
Topcoat Krypton 2k	2 months	2 months	2 months	2 months

Note: Drying times are dependent on temperature, ventilation and film thickness.
For details please contact Technical Sales Support.

PAINT SYSTEMS

Steel

ProLine MFE100 can be applied directly to the substrate or as an intermediate coat over itself or other epoxy primers. It is compatible with a wide range of solvent-based topcoats, both epoxy and polyurethane.

Concrete

Apply 2 coats of **Krypton ProLine MFE100**. The first layer should be 20 – 25 % diluted. Final dry film thickness should be about 150 – 200 μ m.

In immersion situations, over steel or concrete, apply ProLine MFE100 in 2 or 3 coats with a minimum total DFT of 400 μ m.

SURFACE PREPARATION

Steel

Remove all dirt, grease or other contaminants by one of the following depending on the degree of cleanliness required. The choice of surface preparation will depend on the system selected and end-use service conditions.



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For more severe service and immersion, clean to Sa 2½ ISO 8501-1. Blast to achieve an anchor profile of 50 – 75 µm.

Where abrasive blasting in paint system maintenance is impossible or impracticable, so, it can be applied over surfaces that have been prepared by manual and/or mechanical cleaning, in paint system maintenance, according to ISO 8501-1, St 2 grade.

Water Jetting - to minimum degree Wa 2 FRM, according to ISO 8501-4.

Galvanized steel

Oils and greases should be removed with cleaner. Surface should be lightly blasted with fine abrasive.

Concrete

Concrete should have a 28 day period of cure and a minimal tensile strength of 1.5 N/mm².

Surface should be dry, cohesive, clean, porous and exempt of powder, dirt, grouts and grease. In situations where this has not been verified, it's necessary to carry out a previous cleaning with water jet (from 70 to 350 bar) up to CSP1 preparation degree, of ICRI N.º 310.2R guide. If the concrete has decouplers, different additives such as concrete hardeners, grouts, efflorescences and other pollutants, it's essential to remove these compounds before coating so that the adhesion is not reduced. It's recommended to prepare the surface by high pressure washing (superior than 350 bar) or by abrasive blasting to CSP3 degree, of ICRI N.º 310.2R guide.

Aged coatings

All surfaces must be clean, dry, tightly bonded and free of loose paint, corrosion products or chalky residue. Abrade or clean the surface. **ProLine MFE100** is compatible over most types of properly applied and tightly adhering coatings, however a test patch is recommended to confirm compatibility.

Repair

Prepare damaged areas to original surface preparation specifications, feathering edges of intact coating. Thoroughly remove dust or abrasive residue before touch-up. The performance of the paint system is proportional to the grade of surface preparation.

APPLICATION

Add cure to resin solution and stir material for 5 minutes. In confined areas ventilate with clean air. Turing application and drying until solvents are removed.

Environmental conditions

Air temperature	-10 to 40 °C
Product temperature	>10 °C
Minimum surface temperature	3 °C above dew point
Maximum surface temperature	100 °C

Application Equipment

Conventional spray	Recommended
Fluid tip orifice size	0.055 – 0.070 inches (1.39 – 1.77 mm)
Air pressure	3.5 – 5.3 kg/cm ²
Fluid pressure	0.7 – 1.7 kg/cm ²
Thinning	0 – 15 %

Airless spray	Recommended
Fluid tip orifice size	0.015 – 0.019 inches (0.38 – 0.48 mm)
Fluid pressure	150 – 200 kg/cm ²
Thinning	0 – 10 %

Brush/Roller	Thinning	0 – 15 %
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Thinner: Rayston thinner EP

Cleaner: Rayston thinner EP

The use of thinners not recommended by Krypton may affect the ease of application, require excessive dilution and affect the drying / cure of the product, and may affect performance over time.

REMARKS

Adequate for immersion in water only for light colours

Color Aluminium:

volume solid: 79 % (ISO 3233)

Theoretical coverage: 4,0 m²/L for DFT 200 µm

As is normal with epoxy products, this product may get dusty and may also present colour variations due to sunlight exposure. This variation can be more or less obvious depending on colour, time and intensity of UV radiation exposure. Getting dusty does not affect the anticorrosive performance of the product.

In the same way, if the product is immersed in water with a drying time inferior than dry through drying time (minimum 30 minutes after its application), some colour variations can be observed, these variations are most evident in dark colours, but its performance is not affected.

Whenever an aesthetic finish is required, recommended products with good colour and gloss retention for outdoor situations, should be used.



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ADDITIONAL INFORMATION

Curing mechanism

By solvent release and reaction between components.

Volatile Organic Compounds (VOC)

EU limit for this product (cat. A/j)	500 g/L
This product contains max.	210 g/L VOC. (TVOC: 15 %) *)
Supplying form	<150 g/L (TVOC: < 10 %)
VOC Resin	117 g/L (TVOC: 7 %)
VOC Cure	240 g/L (TVOC: 25 %)
VOC Thinner EP	839 g/L (TVOC: 100 %)

PACKAGING AND STORAGE

Packaging

Resin: 15 L.

Cure: 5 L.

Storage

Stored indoors in original containers at 5 to 40 °C. Resin: 2 years. Cure: 1 year.

HEALTH, SAFETY AND THE ENVIRONMENT

Protect the eyes and skin from contact, gloves, goggles and appropriate clothing should be worn. Keep out of the reach of children. Use only in well ventilated areas. Do not empty into drains. Keep the container properly sealed and stored in the correct place. Take correct measures when transporting the product so as to avoid any accidents that could rupture the can or cause damage to the packaging. Ensure that the container is correctly stacked in a safe area. Do not store or use the product in extreme temperature conditions. Always take account of the appropriate legislation relating to the environmental and Health and Safety at Work.

For detailed information on the health and safety protection for use of this product see Safety Data Sheet (SDS).

IMPORTANT NOTE

The above-mentioned information is given according to our laboratory tests and practical application experience.

The manufacturer takes into consideration the fact that the material can be used out of control; the manufacturer cannot give guarantees except of the material quality.

The manufacturer has the right to improve the product and change the above-mentioned data without preliminary notification.

THE PRESENT TECHNICAL DATA SHEET REPLACES ALL PREVIOUS EDITIONS.



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