Product Data Sheet

RCC CORROSION CONTROL

COROFLAKE 200 MR
Mat Reinforced High Performance Epoxy Novolac Lining

PRODUCT DESCRIPTION
COROFLAKE 200 MR is a fiberglass mat reinforced chemical resistant lining based on premium grade Epoxy Novolac resin.

LINING LAYERS COMPOSITION
The lining system consists of a primer, trowel applied basecoat, one layer of 1.5 oz. fiberglass mat as reinforcement and a glass flake filled topcoat. The applied thickness range of the lining system is 80-120 mils (2.0-3.0 mm) DFT.

FIELDS OF APPLICATION
COROFLAKE 200 MR is used to protect steel and concrete structures that are exposed to alkalis, salts and many acids. It exhibits particularly good resistance to 98% sulfuric acid and all concentrations of sodium hydroxide. It is used in process and storage areas as a protective lining for tanks, trenches, pits, process floors and secondary containment.

FEATURES
- Excellent chemical resistance including exposure to 98% sulfuric acid and 50% sodium hydroxide
- Mat reinforcement provides structural support
- Outstanding adhesion to steel and concrete
- Long term service

CHEMICAL RESISTANCE
Information on the chemical resistance properties is available upon request.

SURFACE PRE-TREATMENT
Carbon steel

For immersion or frequent spillage conditions, abrasive blast to “White Metal” in accordance with SSPC SP-5, NACE Specification #1 or SA 3. For fumes or occasional spill exposure and dry environments, abrasive blast to “Near White” in accordance with SP-10, NACE #2 or SA 2 1/2. A minimum surface profile of 3 mils (75 µm) is required. Refer to specification, RCC TT-14. After blast cleaning the steel surface shall be primed before the formation of any rust bloom

Concrete

The concrete shall have a minimum compressive strength of 3500 psi (25 N/mm²) and a minimum surface strength of 200 psi (1.4 N/mm²) for coatings and 300 psi (2.1 N/mm²) for linings. The concrete must be thoroughly cured and dry at the time of application. The residual moisture content should not exceed 4%. ASTM D 4263 plastic sheet test method is recommended to ensure concrete is moisture free. If moisture is detected, repeat test until dry.

Abrasive blast or mechanically abrade surface to remove the weak laitance and surface contaminants. Refer to specification, RCC TT-3 for details.

APPLICATION
- Prime the substrate with **COROFLAKE 67PS PRIMER** and allow the primer to cure.
- Trowel apply Basecoat mixture (**TOPLINE 288 EN Resin**, **Hardener No. 8** and **F-1 Filler** in one uniform layer at approx. 60 mils (1500 µm) WFT.
- Immediately upon placement of the Basecoat (while it is still wet), the 1.5 oz. fiberglass mat is pressed onto the surface, then saturated and rolled with the mixed **TOPLINE 288 EN Resin** and **Hardener No. 8**. A ribbed roller is used to remove any entrapped air. Allow the mat layer to cure.
- Check the cured reinforcement layer for amine blush. If present, wash with water to remove the film and let dry before application of topcoat.
- Roll or brush apply the topcoat mixture of **COROFLAKE 200 EN Resin** and **200 EN Hardener**. One or two topcoats may be specified.

Note: During application the lined surface should be shaded from direct or indirect sunlight when possible.

MIX RATIO
Mix ratio of **COROFLAKE 67PS PRIMER Resin** to **Hardener No. 7** and **TOPLINE 288 EN Resin** to Hardener No.8 is 2:1 by volume. **COROFLAKE 200 EN Resin** to **200 EN Hardener** has a mix ratio of 4:1 by volume.

CONSUMPTION

Layer	Thickness mils (µm)	Coverage (Mix Ratio)
PRIMER on steel PRIMER on concrete	2-5 (50-125) 2-5 (50-125)	250-300 ft²/gal 160-200 ft²/gal
BASECOAT TOPLINE 288 EN Resin & Hardener No. 8 F-1 Filler	60 (1500)	47-52 ft²/gal (2:1 vol, resin:hardener) 100ft²/50 lb bag (20-25 lb/gal mixed resin)
REINFORCEMENT TOPLINE 288 EN Resin & Hardener No. 8 1.5 oz. Mat	35 (875)	38-42 ft²/gal (2:1 vol, resin: hardener) 1.1 x surface area
TOPCOAT COROFLAKE 200 EN Resin & Hardener	15-20 (375-500)	65-75 ft²/gal (4:1 vol, resin: hardener)

WORKING TIME & RECOAT TIME

Temperature	Working Time	Min Recoat	Max Recoat
50°F (10°C)	60 min	12 hrs	7 days
70°F (21°C)	30 min	6 hrs	2 days
90°F (32°C)	15 min	3 hrs	1 day

CURE TIME (to place in service)

Temperature	Minimum Cure time	Minimum Cure time for concentrated Sulfuric Acid
70°F (21°C)	3 days	7 days
90°F (32°C)	2 days	3 days

Generally **COROFLAKE 200 MR** can be placed in service after the final cure time intervals have been achieved. Shorter or longer intervals may apply depending on service conditions. Consult RCC Corrosion Control for specific recommendations.

CLEANING: Cleaning Agent T-100

SAFETY MEASURES

The material safety data sheets of the individual components as well as the legal requirements for handling hazardous materials must be observed.

PACKING UNITS

The products are supplied in the following standard package sizes:

Description	Package Size
COROFLAKE 67PS PRIMER	.75, 3, 15, 45 gal kits
TOPLINE 288 EN	.75, 3 gal kits
1.5 oz. Fiberglass Mat	Sq ft
COROFLAKE 200 EN	1, 4 gal kits
F-1 Filler	50# bag

STORAGE

The materials must be stored in a cool and dry place. At storage temperature of 70°F (21°C) the shelf life is as follows:

COROFLAKE 67PS PRIMER Resin 24 months
Hardener No. 7 24 months
COROFLAKE 200 EN Resin 24 months
COROFLAKE 200 EN Hardener 24 months
TOPLINE 288 EN Resin 24 months
Hardener No. 8 24 months
F-1 Filler, 1.5 oz. Mat Indefinite, if kept dry

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof.

Technical Data	Testing Standard	Unit	Value
Density – Mixed Basecoat Resin & Hardener	ASTM D1475	lbs/gal (kg/l)	9.50±0.25 (1.14)
Density – Mixed Topcoat Resin & Hardener	ASTM D1475	lbs/gal (kg/l)	9.89±0.25 (1.19)
Flexural Strength	ASTM D790	Psi (MPa)	3000 (21)
Tensile Strength	ASTM C638	Psi (MPa)	3400 (23)
Compressive Strength	ASTM C579	Psi (MPa)	9500 (61)
Linear Coefficient of Thermal Expansion	ASTM C 531	in/in°F (cm/cm/°C)	18-19 x 10^{-6} (32-34 x 10^{-6})
Adhesion Strength - Concrete	ASTM D7234	Psi (N/mm²)	Exceeds concrete strength
Minimum Adhesion Strength - Steel	ASTM D4541	Psi (N/mm²)	1000 (7)
Volatile Organic Compounds - Basecoat (TOPLINE 288 EN)	EPA Method 24	g/L (lbs/gal)	16 (0.13)
Volatile Organic Compounds - Topcoat (COROFLAKE 200 EN)	EPA Method 24	g/L (lbs/gal)	27 (0.23)
Maximum Operating Temperature* Immersion Steel Immersion Concrete Splash/Spill Concrete		°F °C °F °C °F °C	 140 60 160 71 200 93

***Maximum operating temperature limits may vary depending on actual service conditions**

We warrant that our goods will conform to the description contained in the order and that we have good title to all goods sold. This Product Data Sheet is considered accurate and reliable to the best of our knowledge at the date of its publication, but are used as guides only. The user assumes all risks and liabilities in connection therewith regardless of any suggestion, we may give. We assume no liability for performance of the product or for any loss or damage resulting from its use. Our liability, in law and equity, shall be expressly limited to the replacement of non-conforming goods at our factory, or at our sole discretion, to repayment of the purchase price of the non-conforming goods.