Product Data Sheet

RCC CORROSION CONTROL

COROFLAKE 611 EP
High Solids Flake Filled Epoxy Coating

PRODUCT DESCRIPTION
COROFLAKE 611 EP is a two-component, high solids, inert flake filled Epoxy resin based coating system.

COATING LAYERS COMPOSITION
This system consists of a primer (**COROFLAKE 67PS PRIMER**) followed by two coats of **COROFLAKE 611 EP** applied at 6-8 mils (150-200 µm) DFT, target 7 mils (175 µm) DFT per coat. Total applied thickness is 12-16 mils (300-400 µm) DFT with a target of 14 mils (350 µm) DFT.

FIELDS OF APPLICATION
COROFLAKE 611 EP is used to protect steel and concrete structures that are exposed to alkalis, dilute acids and petroleum products. Applications include protection of tanks, vessels, trenches, pits, vaults, dikes, equipment, structural steel, walls & ceilings and secondary containment at chemical plants, and other industries where chemical processes are present.

FEATURES
- Good chemical resistance
- Convenient component mix ratio (1:1 by volume)
- Easy to apply
- Low temperature cure capability
- Moisture tolerant

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 or coated before the formation of any rust bloom. For direct to metal coating options consult RCC Corrosion Control.

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
- **COROFLAKE 67PS PRIMER** and **COROFLAKE 611 EP** can be applied by airless or conventional spray, roller or brush.
- **COROFLAKE 611 EP** is typically applied at 8-10 mils (200-250 µm) WFT per coat to achieve 6-8 mils (150-200 µm) DFT with a target of 7 mils (175 µm) DFT. The total coating thickness range for two coats should be 12-16 mils (300-400 µm) DFT with a target of 14 mils (350 µm) DFT.
- Application by roller or brush may require additional coats to achieve the total recommended thickness

Note: During application the surface should be shaded from direct or indirect sunlight whenever possible. In atmospheric exposure **COROFLAKE 611 EP** has a tendency to chalking with time. Attention should be paid especially in case of light colored coatings.

MIX RATIO
The resin to hardener mix ratio of **COROFLAKE 67PS PRIMER** to **Hardener No. 7** is 2:1 by volume. The mix ratio of **COROFLAKE 611 EP Resin** to **COROFLAKE 611 EP Hardener** is 1:1 by volume.

CONSUMPTION

Layer	Thickness mils (µm)	Coverage
PRIMER on steel	2-5 (50-125)	250-300 ft²/gal
PRIMER on concrete	2-5 (50-125)	160-200 ft²/gal
Basecoat	6-8 (150-200)	140-180 ft²/gal
Topcoat	6-8 (150-200)	140-180 ft²/gal

WORKING TIME & RECOAT TIME

Temperature	Working Time	Min Recoat	Max Recoat
50°F (10°C)	approx. 120 min	16 hrs	2 weeks
70°F (21°C)	approx. 60 min	8 hrs	2 weeks
90°F (32°C)	approx. 30 min	4 hrs	1 week

CURE TIME (to place in service)

Temperature	Minimum Cure time
50°F (10°C)	5 days
70°F (21°C)	3 days
90°F (32°C)	2 days

Generally **COROFLAKE 611 EP** 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
COROFLAKE 611 EP	1, 5 gal kits

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 611 EP Resin	24 months
COROFLAKE 611 EP Hardener	24 months

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	ASTM D1475	lbs/gal kg/l	10.69±0.25 1.28
Viscosity Mixed (Brookfield)	ASTM D2196	Cps (mPa·s)	1000 ± 200 (mixed)
Modulus of Elasticity (Bend Test)	ASTM D790	psi MPa	145K <1000
Abrasion Resistance	ASTM D 4060	mg	100
Adhesion Strength - Concrete	ASTM D7234	psi N/mm²	Exceeds concrete strength
Minimum Adhesion Strength - Steel	ASTM D4541	psi N/mm²	1000 7
Linear Coefficient of Thermal Expansion	ASTM C531	in/in°F cm/cm°C	17 x 10^{-6} 30 x 10^{-6}
Solids Content		% vol	80
Volatile Organic Compounds	EPA Method 24	g/L (lbs/gal)	219 (1.83)
Maximum Operating Temperature* Immersion Splash/Spill Concrete Continuous Dry		 °F °C °F °C °F °C	 120 49 160 71 220 104

***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.