Product Data Sheet

RCC CORROSION CONTROL

COROFLAKE 28 NVE
Glass Flake Filled Novolac Vinyl Ester Coating

PRODUCT DESCRIPTION
COROFLAKE 28 NVE is a two-component glass flake filled coating/lining system based on Novolac Vinyl Ester resin. The glass flake fillers are oriented parallel to the substrate surface to form a high level of protection against permeation and ensure a long service life.

COATING LAYERS COMPOSITION
The coating system consists of a primer (**COROFLAKE N PRIMER U or S PRIMER U***)* and minimum two coats of **COROFLAKE 28 NVE** applied at 15-20 mils (375-500 µm) DFT, target 18 mils (450 µm) DFT per coat. The number of coats and total system thickness depends on the specific operating service conditions. **COROFLAKE 28 NVE** is available in standard white and grey colors.

FIELDS OF APPLICATION
COROFLAKE 28 NVE has excellent resistance to acids and organic chemicals. It is ideal protection for steel and concrete structures in chemical process and storage areas including tanks, vessels, trenches, pits and secondary containment. **COROFLAKE 28 NVE** is also designed for use in FGD applications including flue gas ducts, bag houses, scrubbers and tanks.

FEATURES
- Dry temperature resistance to 400°F (204°C)
- Excellent chemical resistance
- Excellent permeation resistance
- Outstanding adhesion to steel and concrete
- Can be applied direct to metal without primer
- Can be exposed to process conditions shortly after application

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 further detail.

APPLICATION
The Primer can be applied by spray, roller or brush. **COROFLAKE 28 NVE** must be spray applied using airless or conventional spray equipment. Application of **COROFLAKE 28 NVE** by brush or roller should be limited to touch up and small areas only.

The target thickness of **COROFLAKE 28 NVE** should be 18 mils (450 µm) DFT per coat with a range of 15-20 mils (375-500 µm) DFT. The total DFT for two coats should be approximately 36 mils (900 µm) with a range of 30-40 mils (750-1000 µm) DFT. Total DFT range for a three coat specification is 45-60 mils (1125-1500 µm) with a target of 54 mils (1350 µm).

Note: During application, the lined surface should be shaded from sunlight whenever possible.

MIX RATIO
HARDENER No. 1 Clear is used for the **COROFLAKE N PRIMER U** or **S PRIMER U** as well as for the **COROFLAKE 28 NVE Resin**. The mixing ratio of hardener to resin for primer and coating is 1.5-2.5 oz. per gallon by volume.

The primer and coating components are supplied in premeasured units so that weighing or measuring of the components is kept to a minimum.

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	15-20 (375-500)	50-70 ft²/gal
TOPCOAT	15-20 (375-500)	50-70 ft²/gal

WORKING TIME & RECOAT TIME

Temperature	Working Time	Min Recoat	Max Recoat
50°F (10°C)	approx. 90 min	12 hrs	7 days*
70°F (21°C)	approx. 60 min	6 hrs	7 days*
90°F (32°C)	approx. 30 min	3 hrs	3 days*

* Maximum when area is shaded. If exposed to direct or indirect sunlight, maximum recoat time is 4 hrs @ 70°F (21°C).

CURE TIME (to place in service)

Temperature	Minimum Cure time
50°F (10°C)	72 hrs
70°F (21°C)	48 hrs
90°F (32°C)	24 hrs

Generally **COROFLAKE 28 NVE** 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.

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 N PRIMER U	1, 4, 50 gal kits
COROFLAKE S PRIMER U	1, 4, 50 gal kits
COROFLAKE 28 NVE	1, 4, 25 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 N PRIMER U & S PRIMER U Resin 6 months
COROFLAKE 28 NVE Resin 6 months
Hardener No. 1 Clear 12 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.

CLEANING: Cleaning Agent T-100

Technical Data	Testing Standard	Unit	Value
Density	ASTM D1475	lbs/gal (kg/l)	9.98 ± 0.25 (1.2)
Viscosity (Brookfield)	ASTM D2196	cps (mPa·s)	2550 ± 250
Modulus of Elasticity (Bend Test)	ASTM D790	psi MPa	500 K – 650 K 3,500 – 4,500
Tensile Strength	ASTM D638	Psi (MPa)	5800 (40)
Abrasion Resistance	ASTM D4060	mg	90
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	15-17 x 10^{-6} 27-30 x 10^{-6}
Water Vapor Permeability	ASTM E-96, Procedure E	perm-inch	0.001
Volatile Organic Compounds	EPA Method 24	g/L (lbs/gal)	157 (1.31)
Maximum Operating Temperature* Immersion Steel (30-40 mils DFT) Immersion Steel (45-60 mils DFT) Immersion Concrete Continuous Dry		 °F °C °F °C °F °C °F °C	 140 60 150 65 150 65 400 204

***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.