Product Data Sheet

RCC CORROSION CONTROL

COROFLAKE 32 VE
Inert Flake Filled Vinyl Ester Coating

PRODUCT DESCRIPTION
COROFLAKE 32 VE is a two-component; inert flake filled Vinyl Ester resin based coating/lining system. The inert 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 typically consists of **COROFLAKE N PRIMER U** and a minimum two coats of **COROFLAKE 32 VE** applied at 8-10 mils (200-250 µm) DFT, target 9 mils (225 µm) DFT per coat. Primer may be optional when coating metal surfaces. Standard coating colors are beige and grey.

FIELDS OF APPLICATION

Due to its excellent resistance to acids, alkalis, bleach solutions, and a wide range of other aggressive chemicals, **COROFLAKE 32 VE** is an ideal corrosion protection material for concrete and steel structures in process and storage areas. Applications include protection of tanks and vessels, floors, pits, dikes and secondary containment structures, at chemical plants and other industries where chemical processes exist.

FEATURES
- Excellent permeation resistance
- Excellent chemical resistance
- Excellent adhesion to steel and concrete
- Application by spraying, brushing or rolling
- Incorporates FDA compliant resin

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 microns) is required. Refer to RCC TT-14. After blast cleaning the steel surface shall be primed or coated 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 weak laitance and surface contaminants. Refer to specification, RCC TT-3, for further details.

APPLICATION
For direct to metal coating options consult RCC Corrosion Control. The primer and coating can be applied by airless or conventional spray, roller or brush.

COROFLAKE 32 VE is applied at 10-12 mils (250-300 µm) WFT per coat to achieve 8-10 mils (200-250 µm) DFT with a target of 9 mils (225 µm) DFT per coat. Total thickness range for two coats is 16-20 mils (400-500 µm) DFT with a target of 18 mils (450 µm) DFT.

Application by roller or brush may require additional coats to achieve the total recommended thickness.

Note: During application, the lined/coated surface should be shaded from direct or indirect sunlight whenever possible.

MIX RATIO
Hardener No. 1 Clear is used for the primer as well as for the **COROFLAKE 32 VE Resin**. The mixing ratio of hardener to resin for primer and coating is 1.5-2.5 oz. per gallon of resin.

The primer and coating components are supplied in premeasured kits to minimize onsite measuring.

CONSUMPTION

Layer	Thickness mils (µm)	Typical Coverage
PRIMER on steel	2-5 (50-125)	250-300 ft²/gal
PRIMER on concrete	2-5 (50-125)	160-200 ft²/gal
BASECOAT	8-10 (200-250)	100-140 ft²/gal
TOPCOAT	8-10 (200-250)	100-140 ft²/gal

WORKING TIME & RECOAT TIME

Temperature	Working Time	Min Recoat	Max Recoat
50°F (10°C)	approx. 90 min	12 hrs	14 days*
70°F (21°C)	approx. 60 min	6 hrs	14 days*
90°F (32°C)	approx. 30 min	3 hrs	7 days*

* Maximum when area is shaded. If exposed to direct or indirect sunlight, maximum recoat time is 7 days @ 70°F (21°C).

CURE TIME (to place in service)

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

Generally **COROFLAKE 32 VE** 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 N PRIMER U	1, 4, 50 gal kits
COROFLAKE 32 VE	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 Resin 6 months
COROFLAKE 32 VE 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.

Technical Data	Testing Standard	Unit	Value
Density	ASTM D1475	lbs/gal (kg/l)	9.57 ± 0.25 (1.15)
Viscosity (Brookfield)	ASTM D2196	cps (mPa·s)	2200 ± 250
Modulus of Elasticity (Bend Test)	ASTM D790	psi MPa	435 K – 580 K 3,000 – 4,000
Tensile Strength	ASTM D638	psi MPa	2500 - 3000 17-20
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	0.0022
Volatile Organic Compounds	EPA Method 24	g/L (lbs/gal)	< 200 (1.7)
Maximum Operating Temperature* Immersion / Condensing Vapors Intermittent Exposure / Splash & Spill Continuous Dry-Steel		 °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.