

COROGARD 77-VT EN High Performance Variable Thickness Epoxy Novolac Coating

PRODUCT DESCRIPTION

COROGARD 77-VT EN is a two-component, 100% solids, high functionality Epoxy Novolac coating.

COATING LAYERS COMPOSITION

COROGARD 77-VT EN is designed for application in two spray coats at a variable thickness range of 12-24 mils (300-600 µm) DFT per coat to achieve a total 24-48 mils (600-1200 µm) DFT thickness. The recommended primer is **COROFLAKE 67PS PRIMER**. Use of primer may be optional for coating applications on steel but is mandatory for use when coating concrete.

FIELDS OF APPLICATION

COROGARD 77-VT EN is used to protect steel and concrete structures that are exposed to a wide range of hydrocarbons, petroleum products, salts, acids, alkalis and many solvents. It is ideally suited as a lining in steel process and storage tanks, cargo tankers and trailers, and as a protective coating for structural steel, concrete containment areas and process floors.

FEATURES

- Versatile multi-purpose coating material
- Variable application thickness range
- Can be applied direct to metal without primer
- Solvent free, low odor
- Excellent chemical resistance
- Ambient temperature curing – can be heat cured for chemical and temperature resistance optimization

CHEMICAL RESISTANCE

Information on the chemical resistance properties is available upon request.

SURFACE PRE-TREATMENT

Carbon steel

For immersion or frequent spillage conditions, the preferred recommendation is to abrasive blast to “White Metal” in accordance with SSPC SP-5, NACE Specification #1 or SA 3. The minimum acceptable standard shall be SP-10, NACE #2 or SA 2.5. A minimum surface profile of 3 mils (75 µm) is required. 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 the surface to remove the weak laitance and surface contaminants.

APPLICATION

- **COROFLAKE 67PS PRIMER**, when used is normally applied in one coat at 2-5 mils (50-125 µm) WFT using a roller or brush. Apply the primer to the prepared substrate and let it cure before over-coating.
- **COROGARD 77-VT EN** is generally designed for spray application using airless or conventional spray equipment. Apply **COROGARD 77-VT EN** in two coats at 12-24 mils (300-600 µm) DFT per coat. Allow the first coat to cure tack free before applying the second coat.
- Application by roller or brush may require additional coats to achieve the total recommended thickness.

Note: During application the coated surface should be shaded from direct or indirect sunlight when possible. In atmospheric exposure **COROGARD 77-VT EN** tends to chalk with time.

MIX RATIO

The mix ratio of **COROFLAKE 67PS PRIMER Resin to Hardener 7** is 2:1 by volume. The mix ratio of **COROGARD 77-VT EN Resin to Hardener 8** is 3:1 by volume.

CONSUMPTION

Layer	Thickness mils (µm)	Typical Coverage
PRIMER on steel	2-5 (50-125)	250-300 ft ² /gal
PRIMER on concrete	varies	160-200 ft ² /gal
BASECOAT: COROGARD 77-VT EN Resin and Hardener No. 8	12-24 (300-600)	55-110 ft ² /gal (± 20% waste)
TOPCOAT: COROGARD 77-VT EN Resin and Hardener No. 8	12-24 (300-600)	55-110 ft ² /gal (± 20% waste)

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)	40 min	6 hrs	2 days
90°F (32°C)	20 min	4 hrs	1 day

CURE TIME (to place in service)

Temperature	Minimum Cure time
50°F (10°C)	7 days
70°F (21°C)	3 days
90°F (32°C)	2 days

Generally **COROGARD 77-VT EN** 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
COROGARD 77-VT EN	1, 4 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 7	24 months
COROGARD 77-VT EN Resin	24 months
Hardener 8	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	12.4 ± 0.50 1.49
Viscosity - mixed	ASTM D2393	cps mPa·s	4250 ± 200
Solids Content		% Vol	100
Tensile Strength	ASTM D638	Psi MPa	3300 27.8
Adhesion Strength - Concrete	ASTM D7234	Psi N/mm ²	Exceeds concrete strength
Adhesion Strength - Steel	ASTM D4541	Psi N/mm ²	1000 7
Volatile Organic Compounds	EPA Method 24	g/L lbs/gal	16 0.13
Maximum Operating Temperature*			
Immersion (ambient temperature cure)		°F °C	120 49
Immersion (heat cured)		°F °C	200 93
Splash/Spill		°F °C	180 82
Continuous Dry		°F °C	300 149

*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.

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