

COROGARD 77 EN High Performance Low Build Epoxy Novolac Coating

PRODUCT DESCRIPTION

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

COATING LAYERS COMPOSITION

COROGARD 77 EN is normally applied in two (2) 6-8 mils (150-200 μm) DFT spray coats to achieve a range of 12-16 mils (300-400 μm) DFT, with a target of 14 mils (350 μm) DFT. The recommended primer is **COROFLAKE 67PS PRIMER**. It may be optional for application on steel substrates.

FIELDS OF APPLICATION

COROGARD 77 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 as well as protection for structural steel, concrete containment areas and process floors.

FEATURES

- Easy to apply (spray, roll, brush)
- Excellent chemical resistance
- Solvent free, low odor
- Ambient temperature curing – can be heat cured for chemical and temperature resistance optimization
- Versatile multi-purpose coating material

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** 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 EN** is applied by airless or conventional spray, by roller or brush. Apply **COROGARD 77 EN** in two coats at 6-8 mils (150-200 μm) DFT per coat for a total of 12-16 mils (300-400 μm) DFT. Allow the first coat to cure tack free before applying the second coat. Roller or brush application may require additional coats to meet thickness specifications.

Note: During application the coated surface should be shaded from direct or indirect sunlight when possible. In atmospheric exposure **COROGARD 77 EN** has a tendency to chalking with time.

MIX RATIO

The mix ratio of **COROFLAKE 67PS PRIMER Resin to Hardener No. 7** is 2:1 by volume. The mix ratio of **COROGARD 77 EN Resin to Hardener No. 8** is 3:1 by volume.

CONSUMPTION

| Layer | Thickness mils (μm) | Coverage |
|--|----------------------------------|------------------------------|
| PRIMER on steel | 2-5 (50-125) | 250-300 ft ² /gal |
| PRIMER on concrete | 2-5 (50-125) | 160-200 ft ² /gal |
| BASECOAT: COROGARD 77 EN Resin and Hardener No. 8 | 6-8 (150-200) | 160-220 ft ² /gal |
| TOPCOAT: COROGARD 77 EN Resin and Hardener No. 8 | 6-8 (150-200) | 160-220 ft ² /gal |

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 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 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 No. 7 | 24 months |
| COROGARD 77 EN Resin | 24 months |
| Hardener No. 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 | 3200 ± 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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| RCC Corrosion Control | COROGARD 77 EN | Revision: 05/23/2022 |
| Replaces all previous editions | Product Data Sheet | Page 2 of 2 |