COR-COTE® E.N. 7000
HIGH BUILD EPOXY NOVOLAC COATING

Product Description

COR-COTE E.N. 7000 is a 100% solids, two component, high build, epoxy novolac coating designed to protect substrates against severe chemical attack. Low viscosity and excellent adhesion characteristics ensure a tight bond to properly prepared concrete and steel surfaces.

- High build
- Chemical resistant
- Abrasion resistant
- Corrosion resistant
- Easy to apply

Product Characteristics

Finish: Gloss
Color: Haze Gray, Tile Red
Volume Solids: 100%, calculated, mixed
VOC (calculated): <100 g/L; 0.83 lb/gal, mixed
Mix Ratio: 2:1 by volume

Recommended Spreading Rate per coat:

<table>
<thead>
<tr>
<th>Wet mils (microns)</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry mils (microns)</td>
<td>10.0</td>
<td>14.0</td>
</tr>
<tr>
<td>Coverage sq ft/gal (m²/L)</td>
<td>115</td>
<td>160</td>
</tr>
</tbody>
</table>

Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft 1600 (39.2)

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance. Vertical surfaces may require 3-4 coats to achieve the desired dry film thickness.

Drying Schedule @ 14.0 mils wet (350 microns):

@ 77°F/25°C 50% RH
To touch: 6-8 hours
To recoat:
  minimum: 8 hours
  maximum: 6 days
To cure: 7 days

If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent.

Pot Life: 30 minutes
Sweat-in-time: None required

Shelf Life:
Part A - 36 months, unopened
Part B - 12 months, unopened
Store indoors at 40°F (4.5°C) to 100°F (38°C).

Flash Point: >200°F (93°C), PMCC, mixed
Reducer: Not recommended
Clean Up: Reducer #54

Recommended Uses

- Protection of concrete and steel surfaces from severe chemical attack. Used on containment structures to protect steel and concrete floors and walls from concentrated acids.
- Secondary containment
- Valves
- Equipment bases
- Spillways
- Lab and processing areas (floors and walls)
- Nuclear Power Plants
- Nuclear fabrication shops
- This product meets specific design requirements for non-safe-ty related nuclear plant applications in Level II, III and Balance of Plant, and DOE nuclear facilities*.

Performance Characteristics

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Test Method</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrasion Resistance</td>
<td>ASTM D4060, CS-17 Wheel</td>
<td>70 mgs lost</td>
</tr>
<tr>
<td>Adhesion</td>
<td>ASTM D1002 (steel), ASTM D4541 (concrete)</td>
<td>Steel: 1,200 psi; Concrete: 350 psi (100% concrete failure)</td>
</tr>
<tr>
<td>Flammability</td>
<td>ASTM D635</td>
<td>Self-extinguishing over concrete</td>
</tr>
<tr>
<td>Gloss</td>
<td>60° Gloss Meter @ 73°F (23°C), 50% RH</td>
<td>90 millage pts</td>
</tr>
<tr>
<td>Hardness, Shore D</td>
<td>ASTM D2240</td>
<td>70</td>
</tr>
<tr>
<td>Impact Resistance, Direct</td>
<td>MIL-D-3134J, inch pound greater than 160</td>
<td>Passes</td>
</tr>
<tr>
<td>Impact Resistance, Reverse</td>
<td>MIL-D-3134J, inch pound greater than 110</td>
<td>Passes</td>
</tr>
<tr>
<td>Permeability</td>
<td>ASTM E96, Procedure E</td>
<td>0.015 perm-inch</td>
</tr>
<tr>
<td>Radiation Tolerance*</td>
<td>ASTM D4082 / ANSI 5.12</td>
<td>Pass</td>
</tr>
<tr>
<td>Resistance to Elevated Temperatures</td>
<td>MIL-D-3134J</td>
<td>No slip or flow at required temperature of 158°F (70°C)</td>
</tr>
</tbody>
</table>

*System tested (Report No. IM54.1157-02-01):
  Cor-Cote HCR @ 7.0 mils (175 microns) dft
  Cor-Cote E.N. 7000 @ 16.0 mils (400 microns) dft

Epoxy coatings may darken or yellow following application and curing.
**COR-COTE® E.N. 7000**

**HIGH BUILD EPOXY NOVOLAC COATING**

**PRODUCT INFORMATION**

**Recommended Systems**

<table>
<thead>
<tr>
<th>Concrete:</th>
<th>Dry Film Thickness / ct. Mils (Microns)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ct. Corobond 100 Epoxy Primer/Sealer</td>
<td>4.0-6.0 (100-150)</td>
</tr>
<tr>
<td>1-2 cts. Kem Cat-i-Coat HS Epoxy Filler/Sealer, as required to fill voids and bugholes to provide a continuous substrate.</td>
<td>10.0-20.0 (250-500)</td>
</tr>
<tr>
<td>1 ct. Cor-Cote E.N. 7000 High Build Epoxy Novolac</td>
<td>10.0-14.0 (250-350)</td>
</tr>
</tbody>
</table>

Vertical surfaces may require 3-4 coats of Cor-Cote EN 7000 to achieve the desired dry film thickness.

* May be applied at higher film thicknesses per coat when used as a floor coating.

<table>
<thead>
<tr>
<th>Steel:</th>
<th>Dry Film Thickness / ct. Mils (Microns)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ct. Macropoxy 240 (if required)</td>
<td>3.5-5.0 (88-125)</td>
</tr>
<tr>
<td>1 ct. Cor-Cote E.N. 7000 High Build Epoxy Novolac</td>
<td>10.0-14.0 (250-350)</td>
</tr>
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Vertical surfaces may require 3-4 coats of Cor-Cote EN 7000 to achieve the desired dry film thickness.

* May be applied at higher film thicknesses per coat when used as a floor coating.

The systems listed above are representative of the product's use, other systems may be appropriate.

**Surface Preparation**

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:

- **Iron & Steel:** SSPC-SP6/NACE 3, 2 mil (50 micron) profile
- **Concrete & Masonry:** SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 2-3

**Surface Preparation Standards**

<table>
<thead>
<tr>
<th>Condition of Surface</th>
<th>ISO 8501-1</th>
<th>BS7079:A1</th>
<th>Swedish Std.</th>
<th>SSPC NACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Metal</td>
<td>Sa 3</td>
<td>Sa 3</td>
<td>Sa 3</td>
<td>SP 10</td>
</tr>
<tr>
<td>Near White Metal</td>
<td>Sa 2.5</td>
<td>Sa 2.5</td>
<td>Sa 2.5</td>
<td>SP 6</td>
</tr>
<tr>
<td>Commercial Blast</td>
<td>Sa 2</td>
<td>Sa 2</td>
<td>Sa 1</td>
<td>SP 7</td>
</tr>
<tr>
<td>Brush-Off Blast</td>
<td>C St 2</td>
<td>C St 2</td>
<td>C St 2</td>
<td>SP 2</td>
</tr>
<tr>
<td>Hand Tool Cleaning Rusted</td>
<td>D St 2</td>
<td>D St 2</td>
<td>C St 3</td>
<td>SP 2</td>
</tr>
<tr>
<td>Hand Tool Cleaning Pitted &amp; Rusted</td>
<td>D St 3</td>
<td>D St 3</td>
<td>C St 3</td>
<td>SP 3</td>
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<tr>
<td>Power Tool Cleaning Rusted</td>
<td>D St 3</td>
<td>D St 3</td>
<td>C St 3</td>
<td>SP 3</td>
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<td>Power Tool Cleaning Pitted &amp; Rusted</td>
<td>D St 3</td>
<td>D St 3</td>
<td>C St 3</td>
<td>SP 3</td>
</tr>
</tbody>
</table>

**Tinting**

Do not tint.

**Application Conditions**

- **Temperature:** 55°F (13°C) minimum, 100°F (38°C) maximum
- **Relative humidity:** 85% maximum

Refer to product Application Bulletin for detailed application information.

**Ordering Information**

**Packaging:**

- 2:1 mix
- Part A - 2 gallons (7.56L) in a 3 gallon (11.3L) pail
- Part A - 5 gallons (18.9L)
- Part B - 4 gallons (15.1L) in one box
- Part B - 5 gallons (18.9L)

**Weight:**

- 10.5 ± 0.2 lb/gal ; 1.3 Kg/L, mixed

**Safety Precautions**

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

**Warranty**

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.

www.sherwin-williams.com/protective
**Surface Preparations**

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

**Iron & Steel**
Minimum surface preparation is commercial blast cleaning per SSPC-SP6/NACE 3. Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Remove all weld spatter and round all sharp edges. Prime any bare steel within 8 hours or before flash rusting occurs.

**Concrete and Masonry**
For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 2-3. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets and other voids with Steel-Seam FT910. Primer required.

Follow the standard methods listed below when applicable:
ASTM D4258 Standard Practice for Cleaning Concrete.
ASTM D4259 Standard Practice for Abrading Concrete.
ASTM D4260 Standard Practice for Etching Concrete.
ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete.
SSPC-SP 13/Nace 6 Surface Preparation of Concrete.
ICRI No. 310.2R Concrete Surface Preparation.

**Application Conditions**

| Temperature: | 55°F (13°C) minimum, 100°F (38°C) maximum (air, surface, and material) |
| Relative humidity: | 85% maximum |

**Application Equipment**

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

**Clean up:** Reducer #54

**Airless Spray**
- Pump: 74:1 minimum
- Hose: 3/8” ID
- Tip: 0.023”
- Filter: 60 mesh
- Reduction: Not recommended

**Brush**
- Brush: Natural Bristle
- Reduction: Not recommended

**Roller**
- Cover: 3/8” woven with solvent resistant core
- Reduction: Not recommended

If specific application equipment is not listed above, equivalent equipment may be substituted.
Surface preparation must be completed as indicated.

Mixing Instructions: Mix individual components only after all surfaces are completely prepared and ready to be coated. Thoroughly agitate each component using low speed mechanical agitation, i.e., Jiffy Blade model ES. Then combine 2 parts by volume of Part A with 1 part by volume of Part B. Using mechanical agitation, thoroughly mix material for 3 minutes at 250 rpm. Only mix full units. Be sure to mix material from the bottom and sides of the containers.

Apply paint at the recommended film thickness and spreading rate as indicated below:

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  - To touch: 6-8 hours
  - To recoat:
    - minimum: 8 hours
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  - To cure: 7 days

If maximum recoat time is exceeded, abrade surface before recoating.

Drying time is temperature, humidity, and film thickness dependent.

Pot Life: 30 minutes
Sweat-in-time: None required

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

Clean up Instructions
Clean spills and spatters immediately with Reducer #54. Clean tools immediately after use with Reducer #54. Follow manufacturer’s safety recommendations when using any solvent.

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