COR-COTE® HP HIGH PERFORMANCE EPOXY

**PRODUCT DESCRIPTION**

COR-COTE HP HIGH PERFORMANCE EPOXY is a 100% solids, self-leveling epoxy formulated for ease of installation. The outstanding broad spectrum chemical resistance of this product provides protection in chemical environments while maintaining properties such as gloss and stain resistance.

- Stain resistant, high gloss finish
- Chemical resistant
- Low odor
- Low viscosity for ease of workability

**PRODUCT CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finish</td>
<td>Gloss</td>
</tr>
<tr>
<td>Color</td>
<td>Haze Gray and Clear</td>
</tr>
<tr>
<td>Volume Solids</td>
<td>100%, mixed</td>
</tr>
<tr>
<td>VOC (calculated)</td>
<td>&lt;100 g/L; 0.83 lb/gal, mixed</td>
</tr>
<tr>
<td>Mix Ratio</td>
<td>2:1</td>
</tr>
</tbody>
</table>

**Recommended Spreading Rate per coat:**

<table>
<thead>
<tr>
<th>Min</th>
<th>Max</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wet mils (microns)</td>
<td>5.0 (125)</td>
<td>10.0 (250)</td>
<td></td>
</tr>
<tr>
<td>Dry mils (microns)</td>
<td>5.0 (125)</td>
<td>10.0 (250)</td>
<td></td>
</tr>
<tr>
<td>Coverage sq ft/gal (m²/L) 1 mil/25 microns</td>
<td>160 (3.9)</td>
<td>320 (7.8)</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

**Drying Schedule @ 5.0 mils wet (125 microns):**

- @ 73°F/23°C
- 50% RH

<table>
<thead>
<tr>
<th>Phase</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>To touch</td>
<td>6 hrs</td>
</tr>
<tr>
<td>To recoat</td>
<td>8 hrs minimum; 7 days maximum</td>
</tr>
<tr>
<td>Light traffic</td>
<td>24 hrs</td>
</tr>
<tr>
<td>To cure</td>
<td>7 days</td>
</tr>
</tbody>
</table>

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

**Test Name** | **Test Method** | **Results**
--- | --- | ---
Abrasion Resistance (coating) | ASTM D4060, CS17 wheel, 1kg load, 1000 cycles | 70 mg loss
Adhesion | ASTM D4541 | Concrete - 350 psi; Steel - 1200 psi
Coefficient of Linear Thermal Expansion | ASTM C531 (in/in°F) | Self-leveling - 13 x 10⁻⁴; Mortar - 13 x 10⁻⁴; Mortar laminate - 12 x 10⁻⁴
Compressive Strength | ASTM C579 | Self-leveling - 12,000 psi; Mortar - 10,000 psi; Mortar laminate - 10,000 psi
Durometer Hardness (coating) | ASTM D2240 | Shore D - 70
Flexural Strength | ASTM C580 | Self-leveling - 4,700 psi; Mortar - 4,200 psi; Mortar laminate - 8,000 psi
Tensile Strength | ASTM C307 | Self-leveling - 5,500 psi; Mortar - 2,000 psi; Mortar laminate - 4,500 psi

**Performance Characteristics**

- **Shelf Life:** 36 months
- **Store indoors at 40°F (4.5°C) to 100°F (38°C)***
- **Viscosity (mixed):** 750 cps
- **Reducer:** Not recommended
- **Clean Up:** Xylene, R2K4

*Continued on back*
COR-COTE® HP
HIGH PERFORMANCE EPOXY

PRODUCT INFORMATION

**Recommended Systems**

<table>
<thead>
<tr>
<th>Surface Preparation Standards</th>
<th>Condition of Surface</th>
<th>ISO 8501-1</th>
<th>Swedish Std.</th>
<th>SSPC NACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete or Steel (coating, lining, containment, flooring):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium Film Coating</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 ct. For Steel: Dura-Plate UHS Primer</td>
<td>4.0-8.0</td>
<td>(100-200)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>For Concrete: Corobond 100 Epoxy Primer/Sealer</td>
<td>4.0-6.0</td>
<td>(100-150)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 ct. Steel-Seam FT910 as required for filling pits and transitioning sharp edges, weld seams, etc. on steel or Steel-Seam FT910 for filling voids and bugholes on concrete</td>
<td>5.0-10.0*</td>
<td>(125-250)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertical surfaces may require multiple coats of Cor-Cote HP to achieve the desired dry film thickness.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*May be applied at higher film thicknesses per coat when used as a self-leveling floor coating.</td>
<td></td>
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</tr>
<tr>
<td>Heavy Duty Mortar Laminate</td>
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<td></td>
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<tr>
<td>1 ct. Cor-Cote HP Epoxy (Clear) with 30 lbs Type M Aggregate per 1.5 gallons (5.7L) 60-65 (1500-1625) yields 75-80 sq. ft. (1.8-2.0 m²/L)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 ct. 10.0 oz. woven roving fiberglass mat with Cor-Cote HP Epoxy (Clear) saturant 30.0-45.0 (750-1125) (with woven roving)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>1 ct. Cor-Cote HP Epoxy (Clear) with 30 lbs Type M Aggregate per 1.5 gallons (5.7L) 60-65 (1500-1625) yields 75-80 sq. ft. (1.8-2.0 m²/L)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The systems listed above are representative of the product’s use, other systems may be appropriate.</td>
<td></td>
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</tr>
</tbody>
</table>

**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:**
- Atmospheric: SSPC-SP6/NACE 3, 2 mil (50 micron) profile
- Immersion: SSPC-SP10/NACE 2, 2-3 mil (50-75 micron) profile

**Concrete & Masonry:**
- Atmospheric: SSPC-SP13/NACE 6, or ICRI No. 310.2R CSP 3-5
- Immersion: SSPC-SP13/NACE 6-4.3.1, or 4.3.2 or ICRI No. 310.2R CSP 3-5

**Tinting**

Do not tint.

**Application Conditions**

Temperature: 50°F (10°C) minimum, 90°F (32°C) maximum (air, surface, material). At least 5°F (2.8°C) above dew point

Relative humidity: 85% maximum

Refer to product Application Bulletin for detailed application information.

**Ordering Information**

Packaging:
- Part A: 2 gallons (7.56L) in a 3 gallon (11.3L) container and 5 gallons (18.9L)
- Part B: 1 gallon (3.78L) and 5 gallons (18.9L)

**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.

**Disclaimer**

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**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.
COR-COTE® HP
HIGH PERFORMANCE EPOXY

APPLICATION BULLETIN

Revised: October 17, 2018

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 (immersion service)
Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2-3 mils/50-75 microns). Remove all weld spatter and round all sharp edges. Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

Iron & Steel (atmospheric service)
Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Commercial Blast Cleaning per SSPC-SP6/NACE 3. For better performance, use Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils /50 microns). Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

Concrete and Masonry
For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 3-5. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all lose 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.

Concrete, Immersion Service:
For surface preparation, refer to SSPC-SP13/NACE 6, Section 4.3.1 or 1.3.2 or ICRI No. 310.2R, CSP 3-5.

Application Conditions

<table>
<thead>
<tr>
<th>Application Conditions</th>
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</thead>
<tbody>
<tr>
<td>Temperature: 50°F (10°C) minimum, 90°F (32°C) maximum (air, surface, material)</td>
</tr>
<tr>
<td>Relative humidity: 85% maximum</td>
</tr>
</tbody>
</table>

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.

Reduction Not recommended
Cleanup Xylene, R2K4

Airless Spray
- Pump: Graco Extreme, 68:1
- Gun: Graco XTR
- Fluid Hose: 3/8" - 1/2" ID
- Tip Orifice: .023" - .027"
- Fan Width at 12": 12"
- Fluid Pressure: 2800 - 3100 psi
- Filter Screen: 60 mesh
- Transfer Pump: 5:1 ratio each side
- Static Mixing Tube: 1/2" ID with 32 turns

Brush: Natural bristle for applications in small areas

Roller: 3/8" nap for coatings
Ribbed roller: For mortar laminate applications

Trowel: Notched trowel: For self-leveling applications
Flat trowel: For mortar applications

Squeegee: Notched squeegee: For self-leveling applications
Flat squeegee: For coating applications

If specific application equipment is not listed above, equivalent equipment may be substituted.

Surface Preparation Standards

<table>
<thead>
<tr>
<th>Condition of Surface</th>
<th>ISO 8501-1</th>
<th>Swedish Std.</th>
<th>SSPC</th>
<th>NACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Metal</td>
<td>Sa 3</td>
<td>Sa 3</td>
<td>SP 5</td>
<td>2</td>
</tr>
<tr>
<td>Near White Metal</td>
<td>Sa 2.5</td>
<td>Sa 2.5</td>
<td>SP 10</td>
<td>2</td>
</tr>
<tr>
<td>Commercial Blast</td>
<td>Sa 2</td>
<td>Sa 2</td>
<td>SP 6</td>
<td>3</td>
</tr>
<tr>
<td>Brush-Off Blast</td>
<td>Sa 1</td>
<td>Sa 1</td>
<td>SP 7</td>
<td>4</td>
</tr>
<tr>
<td>Hand Tool Cleaning</td>
<td>Rust</td>
<td>C St 2</td>
<td>SP 2</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Pitted &amp; Rusted</td>
<td>D St 2</td>
<td>SP 3</td>
<td>-</td>
</tr>
<tr>
<td>Power Tool Cleaning</td>
<td>Rust</td>
<td>C St 3</td>
<td>SP 3</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Pitted &amp; Rusted</td>
<td>D St 3</td>
<td>SP 3</td>
<td>-</td>
</tr>
</tbody>
</table>
### APPLICATION PROCEDURES

For detailed installation instructions, refer to the Installation Procedures for the respective system type in the ControlTech Technical Resource Manual.

Surface preparation must be completed as indicated.

**Mixing Instructions:**

Premix individual components separately, using a low-speed drill and Jiffy Blade model ES mixer. Make certain no pigment remains on the bottom or sides of the cans. Combine one part by volume of Part B to two parts by volume of Part A. Mix with low speed drill and Jiffy Blade model ES mixer for three minutes and until uniform.

**For coatings applications:**

Combine parts A and B as instructed above. To insure that no unmixed materials remain on the sides and bottom of the cans after mixing, visually observe the container by pouring the material into a separate container. Marbled or streaky appearance is an indication of improper mixing. Apply via brush, roller or spray to the film thickness and spreading rate indicated below. Vertical surfaces may require 3-4 coats to achieve the desired dry film thickness.

**Recommended Spreading Rate per coat:**

*Varies with system and application. See recommended systems. Not to be used as a stand alone coating.

**For self-leveling applications:**

Combine Parts A and B as instructed above. Slowly add Type S aggregate at 19 to 22 pounds per 1.5 gallons (5.7L) of mixed resin in a mortar mixer. Blend materials until no lumps remain and the aggregate is uniformly mixed with the resin. Apply via notched trowel and/or squeegee to desired thickness. Apply topcoats as indicated, following application procedures of the products listed in recommended systems.

**For mortar applications:**

Combine Parts A and B as instructed above. Slowly add Type T aggregate at 50 to 60 pounds per gallon to the mixed resin in a mortar mixer. Blend materials until no lumps remain and the aggregate is uniformly mixed with the resin. Apply via hand trowel to desired thickness. Apply topcoats as indicated, following application procedures of the products listed in recommended systems.

**For mortar laminate applications:**

Combine Parts A and B as instructed above. Slowly add Type M aggregate at 30 pounds per 1.5 gallons (5.7L) to the mixed resin in a mortar mixer. Blend materials until no lumps remain and the aggregate is uniformly mixed with the resin. Apply via hand trowel to desired thickness. Apply topcoats as indicated, following application procedures of the products listed in recommended systems.

### CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Xylene, R2K4. Clean tools immediately after use with Xylene, R2K4. Follow manufacturer’s safety recommendations when using any solvent.

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### WARRANTY

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### SAFETY PRECAUTIONS

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### APPLICATION GUIDELINES

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

<table>
<thead>
<tr>
<th>Recommended Spreading Rate per coat:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
</tr>
<tr>
<td>Wet mils (microns)</td>
</tr>
<tr>
<td>Dry mils (microns)</td>
</tr>
<tr>
<td>~Coverage sq ft/gal (m²/L)</td>
</tr>
</tbody>
</table>

Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft: 1604 (39.4)

**NOTE:** Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

### Drying Schedule @ 5.0 mils wet (125 microns):

| To touch: | 6 hours |
| To recoat: | minimum: 8 hours, maximum: 7 days |
| Light traffic: | 24 hours |
| 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:**

| 45 minutes |

**Sweat-in-Time:** None required

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

### PERFORMANCE TIPS

For concrete, always perform Calcium Chloride test as per ASTM F1869. Do not proceed with MVE >3 lbs.

For steel, stripe coat all chine, welds, bolted connections, and sharp angles to prevent early failure in these areas.

Pot life of this material is moderately short. Working time can be extended by mixing small batches and by getting material out of mixing containers and on to the working surface in desired film thickness as quickly as possible.

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

**For Immersion Service:** (if required) Holiday test in accordance with ASTM D5162 for steel, or ASTM D4787 for concrete.

Use of Corobond Conductive Epoxy Primer on concrete is recommended in order to provide a uniform conductive underlayment. Repair holidays found prior to application of final coat.

Do not apply material beyond recommended pot life.

Do not mix previously catalyzed material with new.

Consult your Sherwin-Williams representative for specific application and performance recommendations.

Refer to Product Information sheet for additional performance characteristics and properties.