STEEL SPEC™
EPOXY PRIMER

Product Description

STEEL SPEC EPOXY PRIMER is a polyamide epoxy primer which offers outstanding protection during shipping and handling.

- Fast dry with fast handle time
- Corrosion resistant
- Low VOC
- Low temperature application down to 35°F (1.5°C)
- Outstanding application properties

Product Characteristics

Finish: Flat
Color: Red oxide
Volume Solids: 62% ± 2%, mixed
Weight Solids: 78% ± 2%, mixed
VOC (EPA Method 24):
- Unreduced: <340 g/L; 2.80 lb/gal
- Reduced 5%: <340 g/L; 2.83 lb/gal
Mix Ratio: 1:1

Recommended Spreading Rate per coat:

<table>
<thead>
<tr>
<th>Wet mils (microns)</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0 (150)</td>
<td>9.0 (225)</td>
<td></td>
</tr>
</tbody>
</table>

Drying Schedule @ 6.0 mils wet (150 microns):

- @ 35°F/1.5°C
- @ 77°F/25°C
- @ 120°F/49°C 50% RH

- To touch: 1 hour 15 minutes 10 minutes
- Tack free: 2 hours 1 hour 15 minutes
- To recoat: minimum: 6 hours 2 hours 30 minutes
  maximum: 1 year 1 year 1 year
- To cure: 14 days 7 days 3 days

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

Pot Life: 8 hours 6 hours 2 hours
Sweat-in-time: 1 hour 30 minutes 10 minutes

Footnotes:
1 1 ct. Zinc Clad II Plus @ 2.0 - 4.0 mils (50-100 microns) dft
2 1 ct. Steel Spec Epoxy Primer @ 4.0 - 6.0 mils (100-150 microns) dft

Recommended Uses

- Appropriate for structural and support steel
- Appropriate coating for bridges
- Marine applications
- Tested in accordance with ASTM F1679-96 (VIT method); results >.60 (wet or dry, with or without SharkGrip)
- Suitable for use in USDA inspected facilities

Performance Characteristics

Test Name | Test Method | Results |
---|---|---|
Abrasion Resistance (primer only) | ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load | 288 mg loss |
Adhesion (SSPC-SP10) | ASTM D4541 | 1180 psi |
Corrosion Weathering | ASTM D5894, 500 hours | Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering |
Direct Impact Resistance (primer only) | ASTM G14 | 20 in. lb. |
Dry Heat Resistance | ASTM D2485, Method A | 250°F (121°C) |
Flexibility (primer only) | ASTM D522, 180° bend | Passes 3/4 mandrel, 6.5% elongation |
Moisture Condensation Resistance | ASTM D4585, 100°F (38°C), 500 hours | Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering |
Pencil Hardness (primer only) | ASTM D3363 | HB |
Salt Fog Resistance | ASTM B117, 500 hours | Rating 10 per ASTM D610 for Rusting; Rating 10 per ASTM D714 for Blistering |

Footnotes:
1 1 ct. Zinc Clad II Plus @ 2.0 - 4.0 mils (50-100 microns) dft
2 1 ct. Steel Spec Epoxy Primer @ 4.0 - 6.0 mils (100-150 microns) dft
**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
- **Galvanizing:** See Surface Preparations section on page 3 for application of FIRETEX intumescent coating systems

<table>
<thead>
<tr>
<th>Condition of Surface</th>
<th>ISO 8501-1</th>
<th>SSPC</th>
<th>NACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Metal</td>
<td>Sa 3</td>
<td>SP 5</td>
<td>1</td>
</tr>
<tr>
<td>Near White Metal</td>
<td>Sa 2.5</td>
<td>SP 10</td>
<td>2</td>
</tr>
<tr>
<td>Commercial Blast</td>
<td>Sa 2</td>
<td>SP 6</td>
<td>3</td>
</tr>
<tr>
<td>Brush-Off Blast</td>
<td>Sa 1</td>
<td>SP 7</td>
<td>4</td>
</tr>
<tr>
<td>Hand Tool Cleaning</td>
<td>Rusted</td>
<td>St 2</td>
<td>SP 2</td>
</tr>
<tr>
<td>Power Tool Cleaning</td>
<td>Rusted</td>
<td>St 3</td>
<td>SP 3</td>
</tr>
</tbody>
</table>

**Tinting**

Do not tint.

**Application Conditions**

- **Temperature:** 35°F (1.5°C) minimum, 120°F (49°C) maximum
- **Material:** 50°F (10°C) minimum 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: 1 gallon (3.78L) and 5 gallon (18.9L) containers
  - Part B: 1 gallon (3.78L) and 5 gallon (18.9L) containers

- **Weight:** 12.59 ± 0.4 lb/gal ; 1.5 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.

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**Recommended Systems**

<table>
<thead>
<tr>
<th>Steel:</th>
<th>Dry Film Thickness / ct.</th>
<th>Mils</th>
<th>Microns</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ct.</td>
<td>Steel Spec Epoxy Primer</td>
<td>4.0-6.0</td>
<td>(100-150)</td>
</tr>
<tr>
<td>1-2 cts.</td>
<td>Tile-Clad HS Epoxy</td>
<td>2.5-4.0</td>
<td>(63-100)</td>
</tr>
</tbody>
</table>

**Steel:**
- 1 ct. Steel Spec Epoxy Primer 4.0-6.0 (100-150)
- 1-2 cts. Acrolon 218 HS 3.0-6.0 (75-150)

**Firetex Only:**
- 1 ct. Steel Spec Epoxy Primer 4.0-6.0 (100-150)
- 1-2 cts. Pro Industrial DTM Acrylic Coating 2.5-4.0 (63-100)

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

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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:
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). Remove all weld spatter and round all sharp edges. Prime any bare steel within 8 hours or before flash rusting occurs.

Galvanized Steel
In preparing galvanized steel substrates for the application of FIRETEX intumescent coating systems, Surface Preparation Specification SSPC-SP 16 must be followed obtaining a surface profile of minimum 1.5 mils (38 microns). Optimum surface profile will not exceed 2.0 mils (50 microns).

**Surface Preparation Standards**

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<td>3</td>
</tr>
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<td>SP 5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
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<td>Sa 2</td>
<td>SP 6</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Brush-Off Blast</td>
<td>Sa 1</td>
<td>SP 7</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Hand Tool Cleaning</td>
<td>Rusted</td>
<td>D SI 2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Power Tool Cleaning</td>
<td>Rusted</td>
<td>D SI 2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Pitted &amp; Rusted</td>
<td>SP 2</td>
<td>-</td>
<td>-</td>
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<td></td>
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<td>SP 2</td>
<td>-</td>
<td>-</td>
</tr>
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</table>

**Application Conditions**

- Temperature:
  - Air and surface: 35°F (1.5°C) minimum, 120°F (49°C) maximum
  - Material: 50°F (10°C) minimum
  - At least 5°F (2.8°C) above dew point

- 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.

**Reducer/Clean Up**

- Below 80°F (27°C) ........ R7K54
- Above 80°F (27°C) ...... R7K100

**Airless Spray**

- Pressure: 2400 psi
- Hose: 1/4” ID
- Tip: 0.017” - 0.021”
- Filter: 60 mesh
- Reduction: As needed up to 5% by volume

**Brush**

- Brush: Natural Bristle
- Reduction: Not recommended

**Roller**

- Cover: 3/8” - 1/2” woven with solvent resistant core
- Reduction: Not recommended

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

Surface preparation must be completed as indicated.

**Mixing Instructions:** Mix contents of each component thoroughly with low speed power agitation. Make certain no pigment remains on the bottom of the cans. Then combine one part by volume of Part A with one part by volume of Part B. Thoroughly agitate the mixture with power agitation. Allow the material to sweat-in as indicated prior to application. Re-stir before using.

If reducer solvent is used, add only after both components have been thoroughly mixed, after sweat-in.

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

<table>
<thead>
<tr>
<th>Recommended Spreading Rate per coat:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Wet mils (microns)</td>
<td>Minimum</td>
</tr>
<tr>
<td></td>
<td>6.0 (150)</td>
</tr>
<tr>
<td>Dry mils (microns)</td>
<td>4.0 (100)</td>
</tr>
<tr>
<td>~Coverage sq ft/gal (m²/L)</td>
<td>176 (4.3)</td>
</tr>
<tr>
<td>Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft</td>
<td>992 (24.3)</td>
</tr>
</tbody>
</table>

**Drying Schedule @ 6.0 mils wet (150 microns):**

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<td><strong>To touch:</strong></td>
<td>1 hour</td>
<td>15 minutes</td>
<td>10 minutes</td>
</tr>
<tr>
<td><strong>Tack free:</strong></td>
<td>2 hours</td>
<td>1 hour</td>
<td>15 minutes</td>
</tr>
<tr>
<td><strong>To recoat:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>minimum</td>
<td>6 hours</td>
<td>2 hours</td>
<td>30 minutes</td>
</tr>
<tr>
<td>maximum</td>
<td>1 year</td>
<td>1 year</td>
<td>1 year</td>
</tr>
<tr>
<td><strong>To cure:</strong></td>
<td>14 days</td>
<td>7 days</td>
<td>3 days</td>
</tr>
</tbody>
</table>

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

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

**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 R7K54 (below 80°F / 27°C) or R7K100 (above 80°F / 27°C). Clean tools immediately after use with Reducer R7K54 (below 80°F / 27°C) or R7K100 (above 80°F / 27°C). Follow manufacturer's safety recommendations when using any solvent.

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**PERFORMANCE TIPS**

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle.

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.

Excessive reduction of material can affect film build, appearance, and adhesion.

Excessive film build, poor ventilation, and cool temperatures may cause solvent entrapment and premature coating failure.

Do not mix previously catalyzed material with new.

Do not apply the material beyond recommended pot life.

Material must be at least 50°F (10°C) prior to catalyzing.

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

**SAFETY PRECAUTIONS**

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**WARRANTY**

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