SELECTION & SPECIFICATION DATA

Generic Type  | Cycloaliphatic Amine Epoxy
---|---
Description  | Highly chemical resistant epoxy mastic coating with exceptionally versatile uses in all industrial markets. Self-priming and suitable for application over most existing coatings, and tightly adherent to rust. Serves as stand-alone system for a variety of chemical environments and is also designed for various immersion conditions.

Features  | • Excellent chemical resistance  
          | • Surface tolerant characteristics  
          | • Conventional and low-temperature versions  
          | • Self-priming and primer / finish capabilities  
          | • Very good abrasion resistance  
          | • VOC compliant to current AIM regulations  
          | • Suitable for use in USDA inspected facilities

Color  | Refer to Carboline Colour Guide. Certain colours may require multiple coats for hiding.

Finish  | Gloss (70-85)

Primer  | Self-priming.

Dry Film Thickness  | 100 to 150µm per coat  
                    | 150 to 200µm Over light rust and for uniform gloss over inorganic zincs. Do not exceed 250 microns in a single coat. Excessive film thickness over inorganic zincs may increase damage during shipping or erection.

Solid(s) Content  | By volume 75% ± 2%

Theoretical Coverage Rates  | 7.4m²/litre at 100µm  
                             | 6.0m²/litre at 125µm  
                             | 4.9m²/litre at 150µm  
                             | Allow for loss in mixing and application

VOC Value(s)  | Thinner # 2: 10% - 276g/l  
               | Thinner # 33: 10% - 291g/l  
               | As supplied: 217g/l  
               | Use Thinner # 76 up to 5% for Carboguard 890 where non-photochemically reactive solvents are required. These are nominal values and may vary with colour.

Dry Temp. Resistance  | Continuous: 149°C  
                      | Non-Continuous: 177°C  
                      | Discolouration and loss of gloss occurs above 93°C but does not affect performance.

Under Insulation Resistance  | Continuous: 149°C  
                             | Discolouration and loss of gloss occurs above 93°C but does not affect performance.

Limitations  | Do not apply over latex coatings. For immersion projects, use only factory made material in special colours. Consult Technical Service for specifics.  
              | Epoxies lose gloss, discolour and eventually chalk in sunlight exposure.
SUBSTRATES & SURFACE PREPARATION

**General**
Surface must be clean and dry. Remove all dirt, dust, oil and all other contaminants.

**Steel**
- **Immersion:** ISO 8501 Sa2½
- **Non-immersion:** ISO 8501 Sa2½

40 to 75µm ISO 8501 St2 or St3 are suitable cleaning methods for mild environments.

**Galvanized Steel**
Prime with specific Carboline primers as recommended by your Carboline sales representative. Refer to the specific primer’s Product Data Sheet for requirements.

**Concrete or CMU**
Concrete must be cured 28 days at 25°C and 50% relative humidity or equivalent. Prepare surfaces in accordance with ASTM D4258 Surface Cleaning of Concrete and ASTM D4259 Abrading Concrete. Voids in concrete may require surfacing. Mortar joints should be cured a minimum of 15 days.

**Drywall & Plaster**
Joint compound and plaster should be fully cured prior to coating application.

**Previously Painted Surfaces**
Lightly sand or abrade to roughen surface and degloss the surface. Existing paint must attain a minimum 3A rating in accordance with ASTM D3359 ‘X-Cut’ adhesion test.

PERFORMANCE DATA (TYPICAL VALUES)

<table>
<thead>
<tr>
<th>Test Method</th>
<th>System</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrasion (ASTM D4060)</td>
<td>Blasted Steel 1ct Epoxy Pr 1 ct. 890</td>
<td>85mg loss after 1000 cycles, CS17 wheel 1000gm load</td>
</tr>
<tr>
<td>Adhesion (ASTM D3359)</td>
<td>Blasted Steel 1 ct. 890</td>
<td>5A</td>
</tr>
<tr>
<td>Flame &amp; Smoke (ASTM E84)</td>
<td>2 cts. 890</td>
<td>5 Flame 5 Smoke Class A</td>
</tr>
<tr>
<td>Pencil Hardness (ASTM D3363)</td>
<td>Blasted Steel 2cts. 890</td>
<td>Greater than 8H</td>
</tr>
<tr>
<td>Salt Fog (ASTM B117)</td>
<td>Blasted Steel 1 ct. IOZ 1 ct. 890</td>
<td>No effect on plane, no rust in scribe and no undercutting after 4000 hours</td>
</tr>
<tr>
<td>Salt Fog (ASTM B117)</td>
<td>Blasted steel 2 cts. 890</td>
<td>No effect on plane, rust in scribe. 1.6mm undercutting at scribe after 2000 hours</td>
</tr>
<tr>
<td>Scrub Resistance (ASTM D2486)</td>
<td>Blasted Steel 1 ct. 890</td>
<td>93% gloss retained after 10,000 cycles w/ liquid scrub medium</td>
</tr>
</tbody>
</table>

Test reports and additional data available upon written request.

MIXING & THINNING

**Mixing**
Power mix separately, then combine and power mix. DO NOT MIX PARTIAL KITS.

**Spray:** Up to 10% with Thinner # 2
**Brush:** Up to 12% with Thinner # 33
**Roller:** Up to 12% with Thinner # 33

**Thinning**
Carboline Thinner # 33 can be used for spray in hot / windy conditions. Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.

* See VOC values for thinning limits.

**Ratio**
1:1 Ratio (A to B)

**Pot Life**
3 Hours at 25°C. Pot life ends when coating loses body and begins to sag. Pot life times will be less at higher temperatures.
APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

Spray Application
This is a high solids coating and may require adjustments in spray techniques. Wet film thickness is easily and quickly achieved.

Conventional Spray
Pressure pot equipped with dual regulators, 10mm I.D. minimum material hose, 1.8mm fluid tip and appropriate air cap.

Airless Spray
Pump Ratio: 45:1 (min*)
GPM Output: 3.0 (min)
Material Hose: 10mm (min)
Tip Size: .017”-.021”
Output PSI: 2100-2300
Filter Size: 60 mesh
* Teflon packings are recommended and available from the pump manufacturer.

Brush & Roller (General)
Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive re-brushing or rerolling. For best results, tie-in within 10 minutes at 25°C.

Brush
Use a medium bristle brush.

 Roller
Use a short-nap synthetic roller cover with phenolic core.

APPLICATION CONDITIONS

<table>
<thead>
<tr>
<th>Condition</th>
<th>Material</th>
<th>Surface</th>
<th>Ambient</th>
<th>Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>10°C (50°F)</td>
<td>10°C (50°F)</td>
<td>10°C (50°F)</td>
<td>0%</td>
</tr>
<tr>
<td>Maximum</td>
<td>32°C (90°F)</td>
<td>52°C (126°F)</td>
<td>43°C (109°F)</td>
<td>90%</td>
</tr>
</tbody>
</table>

This product simply requires the substrate temperature to be above the dew point. Condensation due to substrate temperatures below the dew point can cause flash rusting on prepared steel and interfere with proper adhesion to the substrate. Special application techniques may be required above or below normal application conditions.

CURING SCHEDULE

<table>
<thead>
<tr>
<th>Surface Temp.</th>
<th>Dry to Recoat</th>
<th>Dry to Recoat &amp; Topcoat w/ other finishes</th>
<th>Final Cure General</th>
<th>Final Cure Immersion</th>
</tr>
</thead>
<tbody>
<tr>
<td>10°C (50°F)</td>
<td>12 Hours</td>
<td>24 Hours</td>
<td>3 Days</td>
<td>NR</td>
</tr>
<tr>
<td>16°C (61°F)</td>
<td>8 Hours</td>
<td>16 Hours</td>
<td>2 Days</td>
<td>10 Days</td>
</tr>
<tr>
<td>24°C (75°F)</td>
<td>4 Hours</td>
<td>8 Hours</td>
<td>1 Day</td>
<td>5 Days</td>
</tr>
<tr>
<td>32°C (90°F)</td>
<td>2 Hours</td>
<td>4 Hours</td>
<td>16 Hours</td>
<td>3 Days</td>
</tr>
</tbody>
</table>

Relative Humidity: 50%
Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure. Excessive humidity or condensation on the surface during curing can interfere with the cure, can cause discoloration and may result in a surface haze. Any haze or blush must be removed by water washing before recoating. During high humidity conditions, it is recommended that the application be done while temperatures are increasing. Maximum recoat / topcoat times are 30 days for epoxies and 90 days for polyurethanes at 25°C. If the maximum recoat times have been exceeded, the surface must be abraded by sweep blasting or sanding prior to the application of additional coats.
# CLEANUP & SAFETY

| Cleanup | Use Thinner # 2. In case of spillage, absorb and dispose of in accordance with local applicable regulations. |
|———|———|
| Safety | Read and follow all caution statements on this product data sheet and on the material safety data sheet for this product. Wear protective clothing, gloves and use protective cream on face, hands and all exposed areas. |
| Ventilation | When used as a tank lining or in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. User should test and monitor exposure levels to ensure all personnel are below guidelines. |

## PACKAGING, HANDLING & STORAGE

| Shelf Life | Part A: Min 36 months at 25°C  
Part B: Min 15 months at 25°C  
* When kept at recommended storage conditions and in original unopened containers. |
|———|———|
| Shipping Weight (Approximate) | 10 Litre Kit  
Part A: 6.93kg  
Part B: 8.44kg |
| Storage Temperature & Humidity | 4°C to 43°C  
0-100% Relative Humidity |
| Flash Point (Pensky Martens Closed Cup) | Part A: 32°C  
Part B: 23°C |
| Storage | Store indoors  
This product is solvent-based and not affected by excursions below these published storage temperatures, down to -12°C, for a duration no more than 14 days. Always inspect the product prior to use to make sure it is smooth and homogeneous when properly mixed. |

## WARRANTY

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