CARCLAD™ MACROPOXY HS is an epoxy mastic designed for application to properly prepared steel surfaces. It may be used as a one or two coat, direct-to-metal protective coating, or over a Macropoxy Primer. It can be applied to marginally prepared surfaces.

- High build for good coverage on rough corners and edges
- Long term durability
- Corrosion resistant
- Resistant to many solvents and chemicals

**PRODUCT CHARACTERISTICS**

**Color:** Black, Gray, White, and Boxcar Red

**Volume Solids:** 80% +/- 2% mixed, may vary by color

**VOC (EPA Method 24):**
- Unreduced: 241 g/l; 2.0 lb/gal
- Reduced (10%): Oxsol 100 Exempt Solvent
- Reduced (10%): MEK: 290 g/l; 2.42 lb/gal
- Reduced (10%): Reducer #54: 268 g/l; 2.24 lb/gal

**HAPS:**
- Unreduced: 0.91 lbs HAPS / gal Coating Solids
- Reduced: 0.91 lbs HAPS / gal Coating Solids (Oxsol 100)
- Reduced: 1.32 lbs HAPS / gal Coating Solids (MEK)
- Reduced: 1.57 lbs HAPS / gal Coating Solids (Reducer #54)

**Mix Ratio:** 1:1 by volume

**Recommended Spreading Rate per coat:**

<table>
<thead>
<tr>
<th>Wet mils</th>
<th>Dry mils</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>5.0</td>
</tr>
<tr>
<td>Maximum</td>
<td>8.0</td>
</tr>
</tbody>
</table>

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

**Drying Schedule @ 6.0 mils wet @ 50% RH:**

<table>
<thead>
<tr>
<th>@ 50°F</th>
<th>@ 77°F</th>
<th>@ 100°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>To touch</td>
<td>7 hours</td>
<td>4 hours</td>
</tr>
<tr>
<td>To recoat:</td>
<td>minimum: 24 hours</td>
<td>18 hours</td>
</tr>
<tr>
<td>maximum: 30 days</td>
<td>30 days</td>
<td>21 days</td>
</tr>
<tr>
<td>To stencil: 8 hours</td>
<td>4-6 hours</td>
<td>4 hours</td>
</tr>
<tr>
<td>To cure: 10 days</td>
<td>7 days</td>
<td>3 days</td>
</tr>
</tbody>
</table>

*Do not apply below 50°F. If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent.*

**Pot Life:** 6 hours 2.5 hours 2 hours

**Sweat-in-Time:** 30 minutes 15 minutes 5 minutes

*Reduced 10% Oxsol 100, exempt solvent
**Reduced 10% R7K111, exempt solvent

**Surface Preparation Standards**

**Surface Preparation Standards**

<table>
<thead>
<tr>
<th>Condition of Surface</th>
<th>ISO 8501-1</th>
<th>Swedish Std.</th>
<th>SSPC NACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface</td>
<td>BS5709:A1</td>
<td>SS5055900</td>
<td>SP 5 1</td>
</tr>
<tr>
<td>White Metal</td>
<td>Sa 3</td>
<td>Sa 3</td>
<td>SP 5 1</td>
</tr>
<tr>
<td>Near White Metal</td>
<td>Sa 2.5</td>
<td>Sa 2.5</td>
<td>SP 10 2</td>
</tr>
<tr>
<td>Commercial Blast</td>
<td>Sa 2</td>
<td>Sa 2</td>
<td>SP 6 3</td>
</tr>
<tr>
<td>Brush-Off Blast</td>
<td>Sa 1</td>
<td>Sa 1</td>
<td>SP 7 4</td>
</tr>
<tr>
<td>Hand Tool Cleaning</td>
<td>Rusted</td>
<td>Rusted</td>
<td>SP 2 -</td>
</tr>
<tr>
<td>Power Tool Cleaning</td>
<td>Rusted</td>
<td>Rusted</td>
<td>SP 2 -</td>
</tr>
</tbody>
</table>

**Recommended Uses**

- Rail Cars
- Tank Cars

**APPLICATION CONDITIONS**

**Temperature:** Do not apply below 50°F. Surface temperature must be at least 5°F above dew point.

**Relative humidity:** 85% maximum

**Shelf Life:** 36 months, unopened

**Store indoors at 40°F to 100°F**

**Flash Point:** 105°F, PMCC, mixed

**Reducer / Clean Up:** Reducer #54, Xylene, or MEK. Use Oxsol 100 (exempt solvent).
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 can be calculated using 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.

Do not apply the material beyond recommended pot life.

Do not mix previously catalyzed material with new.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Reducer #54, R7K54.

Quick-Kick Epoxy Accelerator is acceptable for use. See its data page for details.

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 / Clean Up**
- Reducer #54, Xylene, or MEK
  - Use Oxsol 100 (exempt solvent)

**Airless Spray**
- Pressure: 3200 – 3600 psi
- Hose: 3/8”
- Tip: .017” – .021”
- Filter: 60 mesh
- Reduction: As needed up to 10% by volume

**Conventional Spray**
- Gun: Binks 95
- Fluid Nozzle: 68
- Air Nozzle: 68 PB
- Atomization Pressure: 60 psi
- Fluid Pressure: 10-20 psi
- Reduction: As needed up to 10% by volume

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

**Roller**
- Cover: 3/8”-1/2” woven with phenolic 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.

Do not apply below 50°F

Mix contents thoroughly with power agitation.

Mix each component separately prior to using spray equipment.

Always-flush spray equipment with Reducer #54 prior to use.

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

Application of coating outside of the listed parameters may adversely affect coating performance.

**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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