

## SELECTION & SPECIFICATION DATA

<b>Generic Type</b>	Modified Epoxy Amine adduct
<b>Description</b>	Designed specifically as a tank lining coating where high abrasion and chemical resistance is required.
<b>Features</b>	<ul style="list-style-type: none"> <li>• Excellent overall chemical resistance to a wide range of acids, alkalies and solvents</li> <li>• Superior abrasion resistance and flexibility</li> <li>• Complies with FDA 21 CFR 175.300 criteria for food contact</li> </ul>
<b>Color</b>	White, Light Gray, & Light Blue
<b>Primer</b>	Self-priming, Plasite 9060 or Plasite 9060 HAR can be primers depending on service.
<b>Dry Film Thickness</b>	<p>6 - 7 mils (152 - 178 microns) per coat</p> <p>Two coats will produce a 12-15 mils (300-375 microns) film for immersion service.</p>
<b>Solids Content</b>	By Volume 80% +/- 2%
<b>Theoretical Coverage Rate</b>	<p>1283 ft<sup>2</sup>/gal at 1.0 mils (31.5 m<sup>2</sup>/l at 25 microns)</p> <p>214 ft<sup>2</sup>/gal at 6.0 mils (5.2 m<sup>2</sup>/l at 150 microns)</p> <p>183 ft<sup>2</sup>/gal at 7.0 mils (4.5 m<sup>2</sup>/l at 175 microns)</p> <p>Allow for loss in mixing and application.</p>
<b>VOC Values</b>	<p><b>As Supplied</b> : 1.32 lbs/gal (158 g/l) ± 2%</p> <p>VOC Content varies between colors. Contact Carboline Technical Service Department for VOC of specific colors.</p>
<b>Temperature Resistance (Immersion)</b>	Dry film resistance is 400°F (204°C) for short periods: 250°F (121°C) continuous. Immersion temperatures depend on particular chemical service.

## SUBSTRATES & SURFACE PREPARATION

<b>General</b>	Surfaces must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating.
<b>Steel</b>	<p><u>Immersion</u>: SSPC-SP10</p> <p><u>Non-Immersion</u>: SSPC-SP6</p> <p><u>Surface Profile</u>: 2.0-3.0 mils (50-75 micron)</p>
<b>Concrete or CMU</b>	Consult Carboline Technical Service.

# Plasite 9060 HAR

## PRODUCT DATA SHEET



### PERFORMANCE DATA

Test Method	System	Results
*Abrasion Resistance (Taber CS-17 Wheel, 1000 gram weight, 1000 cycles)	Plasite 9060 HAR (Two Coats)	15.5 milligrams average loss
*Surface Hardness (ASTM Method D4366-84) König Pendulum (Glass Standard = 250 seconds)	Plasite 9060 HAR (Two Coats)	120.6 seconds
NACE TM 0174 method-B, testing @ 100°F (38°C)	Plasite 9060 HAR 12-15 mils (300-375 microns)	Gasoline OK Methyl ethyl ketone OK Methyl Alcohol OK
NACE TM 0174 method-B, testing @ 150°F (65.5°C)	Plasite 9060 HAR 12-15 mils (300-375 microns)	Ethyl Alcohol OK Ammonium Nitrate 65% OK Latex OK
NACE TM 0174 method-B, testing @ 180°F (82°C)	Plasite 9060 HAR 12-15 mils (300-375 microns)	Sodium Hydroxide OK Potassium Chloride 50% OK Fatty Acid OK
NACE TM 0174 method-B, testing @ 210°F (99°C)	Plasite 9060 HAR 12-15 mils (300-375 microns)	Crude Oil OK Ethylene Glycol 30% OK 1,1,1,Trichloroethane OK
Thermal Shock	Plasite 9060 HAR (Two Coats)	Unaffected 5 cycles, minus -70°F (-57°C) to plus 200°F (93.3°C)

\*Note: Above tests were conducted on film cured at 150°F (65.5°C).

#### CHEMICAL RESISTANCE

These tests were conducted on mild steel panels.

The panels are one-half immersed in the solution for the noted time with no effect to the coating.

Plasite 9060 HAR can also be used for more aggressive exposures (acids) for intermittent (splash or fume) use. Consult Carboline Technical Service for your specific needs.

### MIXING & THINNING

**Mixing** | Power mix coating separately, then add curing agent slowly and mix completely. DO NOT MIX PARTIAL KITS.

**Thinning** | Thinners #225 E, #246, or #71 are recommended. The amounts required will vary depending upon air and surface temperatures and application equipment. Normal application temperatures and conditions will require approximately 5 to 10% by volume.

**Ratio** | 4:1 (A to B)

**Pot Life** | Approximately 1 hour at 70°F (21°C)

### 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 (General)** | All spray equipment should be thoroughly cleaned of contaminants.

**Conventional Spray** | Pressure pot equipped with dual regulators, 3/8" (9.5 mm) I.D. minimum material hose, 0.055-0.070" (0.38-0.53mm) I.D. fluid tip and appropriate air cap.

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<b>Airless Spray</b>	Pump Ratio: 30:1 (min.) Output: 3.0 GPM (11.5 LPM) (min.) Material Hose: 3/8" (9.5 mm) I.D. (min.) Tip Size: .015-.021" (0.38-0.53mm) Output PSI: 2100-2300 (145-160 bar) Filter Size: 60 mesh PTFE packings are recommended and available from the pump manufacturer.
<b>Brush</b>	Not recommended for tank lining applications except when striping welds and touching up. Use short-nap solvent resistant roller. Use medium bristle brush.

## APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	50°F (10°C)	50°F (10°C)	50°F (10°C)	0%
Maximum	90°F (32°C)	105°F (41°C)	105°F (41°C)	80%

Substrate temperature should be 5°F (3°C) above the dew point.

## CURING SCHEDULE

Surface Temp.	Dry to Recoat	Immersion Service (Most Chemical Service)
70°F (21°C)	12 Hours	7 Days
90°F (32°C)	9 Hours	5 Days
105°F (41°C)	6 Hours	4 Days

### DRYING TIME

Surface will normally be tack-free in 10 to 12 hours at 70°F (21°C). Curing will take place in 5 days at 90°F (32.2°C) and 7 days at 70°F (21°C). For food grade service contact Carboline Tech Service for specific cure instructions.

### RECOAT TIME

Must be topcoated within two weeks for metal temperature exposure to 130°F (54.4°C). For temperature exposure of 131-150°F (55-66°C), must be topcoated in a maximum of 24 hours.

### CURING

Normally curing will take place in 5 days at 90°F (32.2°C) and 7 days at 70°F (21°C). This coating should not be applied when air temperature or temperature of surface to be coated is below 50°F (10°C).

Within 24 hours after coating is applied, a minimum substrate temperature of 70°F (21°C) is required for proper polymerization. In order to insure the complete removal of solvents and odor, force curing is generally recommended when coating is to be used in food related service.

Force cure as follows: An air-dry time of 2 to 5 hours at temperatures from 70°F (21°C) to 100°F (37.8°C) should be allowed before force curing. After the air dry period substrate temperature should be raised approximately 30°F (18°C) each 30 minutes until the desired force curing metal temperature is reached. Curing time begins when the specific substrate temperature is reached.

Non-Food related services, 36 hours @ 120°F (49°C), 18 hours @ 130°F (55°C), 10 hours @ 140°F (60°C), 6.0 hours @ 150°F (65°C), 4.5 hours @ 160° (71°C), 3.5 hours @ 170°F (77°C), 2.5 hours @ 180°F (82°C), 2 hours @ 190°F (88°C), 1.75 hours @ 200°F (93°C).

Final cure may be checked by exposing coated surface to MIBK for ten minutes. If no dissolving and only minor softening of film occurs, the curing can be considered complete. The film should reharden after exposure if cured.

Epoxies may form amine blush under some curing conditions. Blush must be removed before coating or placing in some services.

# Plasite 9060 HAR

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### CLEANUP & SAFETY

<b>Cleanup</b>	Use Thinner #2, #71, #225 E, or #246. In case of spillage, absorb and dispose of in accordance with local applicable regulations.
<b>Safety</b>	Read and follow all caution statements on this product data sheet and on the SDS for this product. Employ normal workmanlike safety precautions.
<b>Ventilation</b>	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. The ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for the solvents used. User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor levels, use MSHA/NIOSH approved supplied air respirator.
<b>Caution</b>	This product contains flammable solvents. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code.

### PACKAGING, HANDLING & STORAGE

<b>Shelf Life</b>	12 months at 70°F (21°). Film build drops upon aging.
<b>Storage</b>	Store indoors
<b>Shipping Weight (Approximate)</b>	1 gal unit: 14.7 lbs (6.7 kg) 5 gal unit: 73.8 lbs (33.5 kg)
<b>Flash Point (Setaflash)</b>	Part A: 24.8°F (-4°C) Part B: 24.8°F (-4°C)

### WARRANTY

To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact Carboline Company to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. We guarantee our products to conform to Carboline quality control. We assume no responsibility for coverage, performance, injuries or damages resulting from use. Carbolines sole obligation, if any, is to replace or refund the purchase price of the Carboline product(s) proven to be defective, at Carbolines option. Carboline shall not be liable for any loss or damage. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. All of the trademarks referenced above are the property of Carboline International Corporation unless otherwise indicated.