

## SELECTION & SPECIFICATION DATA

<b>Generic Type</b>	Single package silicone acrylic finish
<b>Description</b>	Air-dried coating available in colors and suitable for 450°F (232°C) high temperature exposures. Air-drying characteristics allow for faster handling of in-shop applications than with other high-temperature coatings. Heat cure above 300°F (149°C) is recommended and will impart added strength and integrity to the coating.
<b>Features</b>	<ul style="list-style-type: none"> <li>• 450°F (232°C) Temperature resistance</li> <li>• Single-coat application</li> <li>• Excellent resistance to thermal shock</li> <li>• Good weathering and color stability</li> </ul>
<b>Color</b>	<p>Grey (C705) and White (1864)</p> <p>A wide range of colors is available upon request using Carboline's Rapid Tint System (RTS). Contact your Carboline representative for RTS color availability.</p>
<b>Finish</b>	Semi-Gloss
<b>Primer</b>	<ul style="list-style-type: none"> <li>• Self-priming on stainless steel, aluminum and metalized surfaces.</li> <li>• For carbon steel, apply over a recommended inorganic zinc or Thermaline Heat Shield.</li> <li>• A mist coating may be required to minimize bubbling over inorganic zinc primers.</li> </ul>
<b>Dry Film Thickness</b>	<p>1.5 - 2 mils (38 - 51 microns) per coat</p> <p>Don't exceed 2.5 mils (63 microns) in a single coat. Excessive film thickness over inorganic zincs may increase damage during shipping or erection.</p>
<b>Solids Content</b>	By Volume 40% +/- 2%
<b>Theoretical Coverage Rate</b>	<p>642 ft<sup>2</sup>/gal at 1.0 mils (15.7 m<sup>2</sup>/l at 25 microns)</p> <p>428 ft<sup>2</sup>/gal at 1.5 mils (10.5 m<sup>2</sup>/l at 38 microns)</p> <p>321 ft<sup>2</sup>/gal at 2.0 mils (7.9 m<sup>2</sup>/l at 50 microns)</p> <p>Allow for loss in mixing and application.</p>
<b>VOC Values</b>	<p>Thinner 25 : 22 oz/gal (17%): 4.8 lbs/gal (581 g/l)</p> <p>Thinner 235 : 22 oz/gal (17%): 4.8 lbs/gal</p> <p><b>As Supplied</b> : 4.4 lbs/gal (528 g/l)</p> <p>Thinner 25 : 8 oz/gal (6%): 4.6 lbs/gal (550 g/l)</p> <p>These are nominal values and may vary slightly with color.</p>
<b>Dry Temp. Resistance</b>	Continuous: 450°F (232°C)
<b>Topcoats</b>	Not Applicable

## 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>	SSPC-SP10 with 0.5-1.0 mils (12-25 microns) surface profile. Prime with specific Carboline primers as recommended by your Carboline sales representative.

## MIXING & THINNING

<b>Mixing</b>	Thoroughly mix to a uniform consistency prior to use.
<b>Thinning</b>	Normally not required. May be thinned up to 22 oz./gal. (17%) by volume with Thinner #25 for ambient conditions. For "hot" applications exceeding 150°F (66°C) use Thinner #230 instead. Use Thinner #238 up to 5% (6 oz) for brush or roller application. (Note: Shake Thinner #238 just prior to use). Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.
<b>Ratio</b>	N/A

## 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.

<b>Spray Application (General)</b>	The following spray equipment has been found suitable for application of this material. Conventional spray application is preferred.
<b>Conventional Spray</b>	Use DeVilbiss P-MBC, E-needle and tip, and a 704 air cap or equal. Use adequate air volume for proper equipment operation. Hold gun 10-12" from the surface and at right angles. Lap each pass 50%. Apply 4.0-5.0 wet mils to obtain desired dry film.
<b>Airless Spray</b>	Pump Ratio: *30:1 GPM Output: *3.0 Material Hose: 1/4" I.D. (6.4 mm) minimum Tip Size: *0.011" - 0.015" Output PSI: *1,800 - 2,700 Filter: *60 mesh *The equipment details listed above are intended to be used as guidelines. We recommend adjusting spray equipment and techniques as needed to provide the correct dry film thickness and the desired appearance. PTFE packings are recommended and available from equipment manufacturers.
<b>Brush &amp; Roller (General)</b>	Recommended for touchup of small areas or where spray application is not permitted. Avoid excessive re-brushing or re-rolling.
<b>Brush</b>	Use a medium bristle brush.
<b>Roller</b>	Use a short-nap mohair roller cover with phenolic core.

## APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	55°F (13°C)	40°F (4°C)	40°F (4°C)	0%
Maximum	95°F (35°C)	300°F (149°C)	120°F (49°C)	90%

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

Surface Temp.	Dry to Topcoat with Itself	Dry to Touch
77°F (25°C)	4 Hours	1 Hour

These times are based on a 2.0 mils (50 micron) dry film thickness. Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure. While Thermaline 4900 will air dry at ambient, optimum film properties are achieved with heat curing. The heat cure cycle consists of a minimum 2-hour flash off at 75°F (24°C) followed by slowly raising the substrate temperature to 300°F (149°C) and hold for at least 3 hours.

## CLEANUP & SAFETY

<b>Cleanup</b>	Use Thinner #2 or acetone. 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. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.
<b>Ventilation</b>	When used 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 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. In areas where explosion hazards exist, workers should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

## PACKAGING, HANDLING & STORAGE

<b>Shelf Life</b>	Min. 24 months at 77°F (24°C) *Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.
<b>Storage Temperature &amp; Humidity</b>	40° - 100°F (4° - 43°C) 0-90% Relative Humidity
<b>Storage</b>	Store Indoors.
<b>Shipping Weight (Approximate)</b>	1 Gallon Kit - 12 Lbs. (5.5 kg) 5 Gallon Kit - 60 Lbs. (27 kg)
<b>Flash Point (Setaflash)</b>	77°F (25°C)

# Thermaline<sup>®</sup> 4900

## PRODUCT DATA SHEET

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### WARRANTY

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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.