

SELECTION & SPECIFICATION DATA

Generic Type	Single package silicone acrylic finish
Description	Air-dried coating available in colors and suitable for high temperature exposures up to 260°C (500°F). Air-drying characteristics allow for faster handling of in-shop applications than with other high-temperature coatings. Heat cure above 149°C (300°F) is recommended and will impart added strength and integrity to the coating.
Features	<ul style="list-style-type: none"> • Temperature resistance up to 260°C (500°F) for black ** • Air-dried curing capabilities • Single-coat application • Excellent resistance to thermal shock • Good weathering and color stability • RTS colors available <p>** Most other colors resistant to 232°C (450°F)</p>
Color	Standard colors are: Black, Gray, White Other colors are made to order Note this is also available in Aluminum as a separate product, Thermaline 4900 Aluminum.
Finish	Semi-Gloss
Primer	Self-priming on stainless steel, aluminum and metalized surfaces. For carbon steel, apply over recommended zinc primer. A mist coating may be required to minimize bubbling over inorganic zinc primers.
Dry Film Thickness	38 - 51 microns (1.5 - 2 mils) per coat Don't exceed 63 micron (2.5 mils) in a single coat. Excessive film thickness over inorganic zincs may increase damage during shipping or erection.
Solids Content	By Volume 40% +/- 2%
Theoretical Coverage Rate	15.7 m ² /l at 25 microns (642 ft ² /gal at 1.0 mils) 10.5 m ² /l at 38 microns (428 ft ² /gal at 1.5 mils) 7.9 m ² /l at 50 microns (321 ft ² /gal at 2.0 mils) Allow for loss in mixing and application.
VOC Values	<p>As Supplied : 4.4 lbs/gal (528 g/l) Thinner 235 : 22 oz/gal (17%): 4.8 lbs/gal Thinner 25 : 22 oz/gal (17%): 4.8 lbs/gal (581 g/l) 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>
Topcoats	Not Applicable

SUBSTRATES & SURFACE PREPARATION

General	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.
Steel	SSPC-SP10 with 12-25 microns (0.5-1 mil) surface profile. Prime with specific Carboline primers as recommended by your Carboline sales representative.

Thermaline 4900

PRODUCT DATA SHEET



MIXING & THINNING

Mixing	Thoroughly mix to a uniform consistency prior to use.
Thinning	Normally not required. May be thinned up to 17% by volume (22 oz./gal.) with Thinner#25 for ambient conditions. For "hot" applications exceeding 66°C (150°F) use Thinner#235 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.
Ratio	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.

Spray Application (General)	The following spray equipment has been found suitable for application of this material. Conventional spray application is preferred.
Conventional Spray	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.
Airless Spray	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: *1800 - 2700 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.
Brush & Roller (General)	Recommended for touchup of small areas or where spray application is not permitted. Avoid excessive re-brushing or re-rolling.
Brush	Use a medium bristle brush.
Roller	Use a short-nap mohair roller cover with phenolic core.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	13°C (55°F)	4°C (39°F)	4°C (39°F)	0%
Maximum	35°C (95°F)	149°C (300°F)	49°C (120°F)	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
25°C (77°F)	4 Hours	1 Hour

These times are based on a 50 micron (2 mil) 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 is an ambient temperature cure coating, optimum performance properties are achieved when final heat cure occurs at 149°C (300°F) after 3 hours. After a 2-hour flash off at 24°C (75°F) allow temperature to increase slowly to 149°C (300°F) and hold it there for approximately 3 hours.

CLEANUP & SAFETY

Cleanup	Use Thinner #2 or acetone. 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 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.
Ventilation	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.
Caution	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

Shelf Life	Min. 24 months at 24°C *Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.
Shipping Weight (Approximate)	Single package: 20 liters 5 liters * * Not available in all Carboline
Storage Temperature & Humidity	4° - 38°C (40° - 100°F) 0-90% Relative Humidity
Flash Point (Setaflash)	25°C (77°F)
Storage	Store Indoors.
Packaging	5 and 20 liters

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PRODUCT DATA SHEET



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.