

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 450°F (232°C). 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.
Features	<ul style="list-style-type: none"> ▪ Temperature resistance up to 450°F (232°C) for most colors ▪ Air-dried curing capabilities ▪ Single-coat application ▪ Excellent resistance to thermal shock ▪ Good weathering and color stability
Color *	Available in a variety of colors. Standard colors are: Black (C900), Aluminum (C901) Other colors are made to order.
Finish	Semi-gloss
Primers	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.
Topcoats	Not applicable
Dry Film Thickness	1.5 - 2.0 mils (38 - 50 microns) per coat. 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.
Solids Content	By Volume: 48% ± 2% Aluminum 40% ± 2% Other Colors
Theoretical Coverage Rate	770 mil ft ² (18.9 m ² /l at 25 microns) Aluminum 642 mil ft ² (15.8 m ² /l at 25 microns) Colors Allow for loss in mixing and application
VOC Values (Colors)	As supplied: 4.4 lbs./gal (528 g/l) Thinned: 8 oz/gal w/ #25 (6%) 4.6 lbs./gal (550 g/l) 22 oz/gal w/ #25 (17%) 4.8 lbs./gal (581 g/l) 22 oz/gal w/ #235 (17%) 4.8 lbs./gal (578 g/l) These are nominal values and may vary slightly with color.
VOC Values (Aluminum)	As supplied: 3.8 lbs./gal (456 g/l) Thinned: 8 oz/gal w/ #25 (6%) 4.0 lbs./gal (480 g/l) 22 oz/gal w/ #25 (17%) 4.3 lbs./gal (517 g/l) 22 oz/gal w/ #235 (25%) 4.2 lbs./gal (542 g/l) These are nominal values and may vary slightly with color.
Dry Temp. Resistance	Most colors: 450°F (232°C)

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

* The alignment of aluminum flakes in aluminum-filled finishes is very dependent on application conditions and techniques. Care must be taken to keep conditions as constant as possible to reduce variations in final appearance. It is also advisable to work from a single batch of material since variations can occur from batch to batch. For more information consult Carboline Technical Service Department.

Thermaline® 4900 R

Application Equipment

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.

General Guidelines:

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.

Brush & Roller (General) Recommended for touchup of small areas or where spray application is not permitted. Avoid excessive rebrushing or rerolling.

Brush Use a medium bristle brush.

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

Mixing & Thinning

Mixing Thoroughly mix to a uniform consistency prior to use.

Thinning 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 #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.

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 MSDS 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, workmen should be required to use non-

ferrous tools and wear conductive and non-sparking shoes.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Normal	55°-95°F (13°-35°C)	40°-150°F (4°-65°C)	40°-120°F (4°-49°C)	90%
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. & 50% Relative Humidity	Dry to Touch	Dry to topcoat with itself
77°F (25°C)	1 Hour	4 Hours

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 R is an ambient temperature cure coating, optimum performance properties are achieved when final heat cure occurs at in-service temperatures of 300°F (149°C) for 3 hours. After a 2-hour flash off at 75°F (24°C) allow an increased in temperature to proceed slowly up to 300°F (149°C) over a 6 hour period.

Packaging, Handling & Storage

Shipping Weight (Approximate) 1 Gallon Kit 5 Gallon Kit
12 Lbs. (5.5 kg) 60 Lbs. (27 kg)

Flash Point (Setaflash) 77°F (25°C)

Storage Temperature & Humidity 40° - 100°F (4° - 43°C) Store indoors.
0-90% Relative Humidity

Shelf Life 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.**



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