

SELECTION & SPECIFICATION DATA

Generic Type	Single package silicone finish
Description	High-performance finish for areas exposed to extreme temperatures. Suitable for service from 204°C-538°C (400°F-1000°F). Requires heat curing.
Features	<ul style="list-style-type: none"> • Resistant to severe thermal shock • Provides outstanding long-term performance when applied over Carbozinc inorganic zinc primers • Provides barrier protection prior to heat curing (full film physical properties occur after heat curing)
Colour	Aluminum only (C901). 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.
Finish	Gloss Initially (flat after heat curing)
Primer	Inorganic zincs. None needed for stainless steel or aluminum.
Dry Film Thickness	38 - 51 microns (1.5 - 2 mils) per coat Do not exceed 50 microns in a single coat. One or two coats are typical. Two coats are recommended over stainless steel.
Solids Content	By Volume 30% +/- 2%
Theoretical Coverage Rate	11.8 m ² at 25 microns (481 ft ² at 1.0 mils) 7.9 m ² at 38 microns (321 ft ² at 1.5 mils) 5.9 m ² at 50 microns (241 ft ² at 2.0 mils) Allow for loss in mixing and application.
VOC Values	As Supplied : 592 g/l
Dry Temp. Resistance	Continuous: 540°C (1004°F) Non-Continuous: 649°C (1200°F)
Limitations	<ul style="list-style-type: none"> • Do not use for immersion service. • Do not exceed thickness recommendation. • Excessive film thickness may result in blistering and delamination when the temperature is increased
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	Follow surface preparation for recommended or specified primer. When using direct to steel surfaces abrasive blast to AS 1627.4 Sa 2½ (SSPC-SP 10) with a 12-25 microns surface profile.

Thermaline 4700 Aluminium

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SUBSTRATES & SURFACE PREPARATION

Aluminium | Clean and abrade as per SSPC-SP 16 to achieve 12 to 25 microns surface profile.

Stainless Steel | Clean and abrade as per SSPC-SP 16 to achieve 12 to 25 microns surface profile.

MIXING & THINNING

Mixing | Power mix until uniform in consistency. Avoid excessive air entrapment.

Thinning | For spray application thinning of this product is recommended to increase control over film thickness (minimise over-application).
For normal ambient conditions may be thinned up to 12% by volume with Thinner #10.
May be thinned up to 25% by volume with Thinner #22 for "hot" applications exceeding 66°C (150°F) and for mist coating.
Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.

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.
Note: Different application procedures or methods will result in non-uniform appearance with aluminum containing products.

Conventional Spray | Thinning of this product is recommended for maximum control (see "Thinning" above). 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 250- 300 from the surface and at right angles. Overlap each pass 50%. Apply 100 wet microns to obtain desired dry film.

Airless Spray | Airless not recommended.

Brush & Roller (General) | Recommended for touch up of small areas or where spray application is not permitted. Avoid excessive rebrushing or re-rolling will create a non-uniform appearance.
Brush & roller application may result in a streaky appearance due to orientation of the aluminum pigment. For the best aesthetic appearance, spray application is required.

Brush | Use a medium bristle brush.

Roller | Use a short-nap mohair roller cover with solvent resistant core.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	13°C (55°F)	4°C (40°F)	4°C (40°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.

CURING SCHEDULE

Surface Temp.	Dry to Handle	Dry to Touch	Dry to Topcoat with Itself
24°C (75°F)	8 Hours	1 Hour	4 Hours

These times are based on a 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. Excessive humidity or condensation on the surface during curing can interfere with the cure and may cause discoloration. During high humidity conditions, it is recommended that the application be done while temperatures are increasing. If the final cure time is exceeded, then surface must be abraded prior to the application of additional coats.

Full physical properties will be reached when heat curing has been completed. After a 2 hour flash off at 24°C, allow temperature to increase at a maximum rate of 1°C per minute to 200°C. Hold at 177°C to 232°C for 2 hours.

CLEANUP & SAFETY

Cleanup	Use Thinner #2. 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 vapour 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 suitable approved respirator.

PACKAGING, HANDLING & STORAGE

Shelf Life	36 months at 24°C Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers. For products/components exceeding the stated shelf life, contact Technical Services for further advice.
Storage Temperature & Humidity	Between 4°C-38°C 0-90% Humidity
Flash Point (Setaflash)	20°C
Shipping Weight (Approximate)	4 litre Pack - 5.8 kg
Storage	Store Indoors.

Thermaline 4700 Aluminium

PRODUCT DATA SHEET



WARRANTY

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