

## SELECTION & SPECIFICATION DATA

<b>Generic Type</b>	Single package silicone finish
<b>Description</b>	High-performance finish for areas exposed to extreme temperatures. Suitable for service from 204°C-538°C (400°F-1000°F). Requires heat curing.
<b>Features</b>	<ul style="list-style-type: none"> <li>• Resistant to severe thermal shock</li> <li>• Provides outstanding long-term performance when applied over Carbozinc inorganic zinc primers</li> <li>• Air-dries to touch (full film formation properties occurs after heat curing)</li> </ul>
<b>Colour</b>	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.
<b>Finish</b>	Gloss (70-85)
<b>Primer</b>	Inorganic zincs. None needed for stainless steel or aluminum.
<b>Dry Film Thickness</b>	38 - 51 microns (1.5 - 2 mils) per coat  Do not exceed 50 microns in a single coat. Two coats are recommended over stainless steel and one or two coats over inorganic zincs.
<b>Solids Content</b>	By Volume 30% +/- 2%
<b>Theoretical Coverage Rate</b>	11.8 m <sup>2</sup> at 25 microns (481 ft <sup>2</sup> at 1.0 mils) 7.9 m <sup>2</sup> at 38 microns (321 ft <sup>2</sup> at 1.5 mils) 5.9 m <sup>2</sup> at 50 microns (241 ft <sup>2</sup> at 2.0 mils) Allow for loss in mixing and application.
<b>VOC Values</b>	<b>As Supplied</b> : 604 g/l
<b>Dry Temp. Resistance</b>	Continuous: 538°C (1000°F) Non-Continuous: 649°C (1200°F)
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• Do not use for immersion service.</li> <li>• Do not exceed thickness recommendation.</li> <li>• Excessive film thickness may result in blistering and delamination when the temperature is increased</li> </ul>
<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>	Follow surface preparation for recommended or specified primer. When using direct to steel surfaces abrasive blast to AS 1627.4 Class 2½ (SSPC-SP10) with a 12-37 microns surface profile.
<b>Aluminum</b>	Sweep blast cleaning with fine non-metallic abrasive media is recommended.

# Thermaline 4700 Aluminium

## PRODUCT DATA SHEET



### SUBSTRATES & SURFACE PREPARATION

**Stainless Steel** | Abrasive blast using non-metallic media to achieve a 12-37 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 streaky or 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 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** | 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

<b>Curing Details</b>	<p><b>Surface Temp.</b> • 24°C</p> <p><b>Dry to Handle*</b> • 8 hours</p> <p><b>Dry to Self-Recoat</b> • 4 hours</p> <p><b>Dry to Touch</b> • 1 hour</p> <p><b>*Dry to handle (thumb-twist test).</b></p> <p>These times are based on nominal 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, can cause discolouration. During high humidity conditions, it is recommended that the application be done while temperatures are increasing. If the final cure time is exceeded, the surface <u>must</u> be abraded prior to the application of additional coats.</p> <p>Final hardness and ultimate film properties are not reached until heat curing has been achieved. Final cure: To obtain optimal properties, must be cured at 200°C (400°F). After a 2 hour flash off at 24°C, allow temperature to increase slowly to 200°C. Hold at 175°C to 230°C for 2 hours. The coating may then be placed in service.</p>
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## CLEANUP & SAFETY

<b>Cleanup</b>	Use Thinner #2. 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 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.
<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 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

<b>Shelf Life</b>	Shelf Life: 12 months at 25°C  *Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.
<b>Shipping Weight (Approximate)</b>	4 litre Pack - 5.8 kg
<b>Storage Temperature &amp; Humidity</b>	Between 4°C-38°C 0-90% Humidity
<b>Flash Point (Setaflash)</b>	20°C
<b>Storage</b>	Store Indoors.

# Thermaline 4700 Aluminium

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### **WARRANTY**

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