

## SELECTION & SPECIFICATION DATA

<b>Generic Type</b>	Modified silicone
<b>Description</b>	Single package medium to high temperature coating that withstands continuous temperature up to 400°C peaks up to 540°C.
<b>Features</b>	<ul style="list-style-type: none"> <li>• Resistant to thermal shock conditions from ambient temperature to 400°C.</li> <li>• May be applied directly to properly prepared steel. Application over inorganic zinc primers like Carbozinc 11 will provide superior performance by preventing rusting and rust streaking during a shutdown or when the equipment is exposed to moisture and/or salts at temperature less than 93°C.</li> <li>• Excellent weathering properties.</li> </ul>
<b>Color</b>	Aluminium
<b>Finish</b>	Gloss Matte after high heat exposure
<b>Primer</b>	None required. A primer coat of Carbozinc will greatly increase performance over steel.
<b>Wet Film Thickness</b>	65 - 175 µm per coat, normally 90 µm.
<b>Dry Film Thickness</b>	30 - 80 microns (1.18 - 3.15 mils) per coat Normally 40 µm. Two coats are recommended over bare steel and one or two coats over inorganic zincs such as Carbozinc 11. Excessive film thickness over inorganic zincs may result in blistering and delamination when temperature is increased.
<b>Typical Uses</b>	Exterior protection of equipment such as stacks, incinerators, furnace exteriors, heat exchangers and other elevated temperature steel surfaces.
<b>Solid(s) Content</b>	By volume: 45 ± 2%
<b>Theoretical Coverage Rates</b>	11,2 m <sup>2</sup> /l at 40 µm. Allow for loss in mixing and application.
<b>Dry Temp. Resistance</b>	Continuous: 400°C (752°F) Non-Continuous: 540°C (1004°F)
<b>Limitations</b>	Not recommended for linings or immersion service and exposure to splash and spillage of acids and alkalis.
<b>Topcoats</b>	Normally none.

## SUBSTRATES & SURFACE PREPARATION

<b>General</b>	Surface 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>	Abrasive blast cleaning to Sa 2½ (ISO 8501-1) is recommended with a blast profile of 25 – 40 µm.
<b>Aluminum</b>	Sweep blast cleaning (SSPC-SP16) is recommended.
<b>Stainless Steel</b>	Sweep blast cleaning (SSPC-SP16) is recommended.

# Thermaline 4674

## PRODUCT DATA SHEET



### MIXING & THINNING

**Mixing** | Power mix to uniform consistency. Avoid excessive air entrapment.

**Thinning** | May be thinned up to 12% with Carboline Thinner #10. Use of thinners other than those supplied or approved 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.

**General** | The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco.

**Conventional Spray** | Pressure pot equipped with dual regulators, 3/8" I.D., minimum material hose .043" I.D. fluid tip and appropriate air cap.

**Airless Spray** | Pump ratio: 30 : 1 (min.) \*  
GMP Output: 3.0 (min.)  
Material Hose: 3/8" I.D. (min.)  
Tip Size: .013-.015"  
Output PSI: 2200  
Filter Size: 60 mesh

\* Teflon packings are recommended and available from the pump manufacturer.

**Brush** | For small areas and touch-up only. Use a medium natural bristle brush applying full strokes, avoid re-brushing.

**Roller** | Application by roller is not recommended.

### APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	4°C (39°F)	4°C (39°F)	4°C (39°F)	0%
Maximum	38°C (100°F)	54°C (129°F)	54°C (129°F)	95%

Industry standards are for substrate temperatures to be 3°C above the dew point. Special application techniques may be required above or below normal application conditions.

### CURING SCHEDULE

Surface Temp.	Between Coats	Final Cure
10°C (50°F)	8 Hours	10 Hours
20°C (68°F)	5 Hours	8 Hours
30°C (86°F)	2 Hours	3 Hours

\*These times are based on 40 microns dry film thickness. Excessive film thickness or inadequate ventilation conditions after application require longer dry times and will cause premature failure in extreme cases.

**Final cure:** The optimum physical properties of the film are obtained after oven baking, using the following procedure: After application: Flash-Off for 2h at 25°C, oven dry at 75°C followed by a gradual increase in temperature in 25°C / 30-minute increments until 175°C is reached. Maintain temperature between 175 and 225°C for 2 h. The forced-drying cycle lasts a total of 6 hours.

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## CLEANUP & SAFETY

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<b>Cleanup</b>	Use Carboline 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 vapor concentration from reaching the lower explosion limit for the solvents used.
<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 applicable regulations. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

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## PACKAGING, HANDLING & STORAGE

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<b>Shelf Life</b>	2 years at 24°C
<b>Storage Temperature &amp; Humidity</b>	4° - 43°C 0 - 90% relative humidity
<b>Storage</b>	Stores indoors.
<b>Packaging</b>	<ul style="list-style-type: none"><li>• 10 litres</li><li>• 20 litres*</li></ul> <p>*Not available in all Carboline</p>

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## 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.