

Selection & Specification Data

Generic Type	Modified silicone.
Description	Single package high temperature coating that withstands continuous temperatures of 1000°F (535°C) and surges upto 1200°F (649°C).
Features	<ul style="list-style-type: none"> Exhibits outstanding thermal shock from 1000°F (538°C) to 32°F (0°C). May be applied directly to properly prepared steel. Application over Carbo Zinc primers will provide superior performance by preventing rusting and rust streaking during a shutdown or when operating temperatures drop below 200°F (93°C). Meets VOC regulation of 5.42 lbs/gal (650 g/l) for high temperature coatings. RECOMMENDED USES: For coating exteriors of stacks, breaching, furnaces, hot piping, mufflers, exhausts and other elevated temperature steel surfaces. Generally used where temperatures exceed 500°F (260°C).
Color	Aluminum C901 only
Primers	None required. A primer coat of a Carbo Zinc primer however, will greatly increase performance over steel. NOTE: A mist coat may be required when applying over inorganic zincs to minimize bubbling
Topcoats	None.
Solids Content	By Volume CARBOLINE 4631 30% + 2%
Theoretical Coverage Rate	481 mil ft ² (12 ft ² /l at 25 microns) 321 ft ² at 1.5 mils (7.5 sq. m ² /l at 40 microns) NOTE: Material losses during mixing and application will vary and must be taken into consideration when estimating job requirements.
VOC Values	As supplied: 5.04 lbs/gal (604 grams/liter)
Limitations	NOT RECOMMENDED FOR: Linings or immersion service or exposure to splash and spillage of acids and alkalis

Substrates & Surface Preparation

General:	Remove any oil or grease from surface to be coated with Thinner #2 or Surface Cleaner #3 (refer to Surface Cleaner #3 Instructions) in accordance with SSPC-SP 1.
Steel	Abrasive blast to a Near White Finish in accordance with SSPC-SP 10 and obtain a 1 to 1 1/2 mil (25-40 micron) blast profile.

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Thermaline® 4631

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 and is available from manufacturers such as Binks, DeVilbiss and Graco.

Conventional Spray Pressure pot equipped with dual regulators, 3/8" ID. minimum material hose, .046" I.D. fluid tip and appropriate air cap.

Airless Spray

<i>Pump Ratio: GPM</i>	30:1 (min) 3.0
<i>Output: Material Hose: (min) 3/8" I.D. (min)</i>	
<i>Tip Size: Output psi:</i>	013"-.015"
<i>Filter Size</i>	2200 60 mesh

Teflon packings are recommended and are available from the pump manufacturers.

Brush & Roller (General) **BRUSH OR ROLLER :** For small touchup areas only. Use a natural bristle brush, applying with full strokes. Avoid re brushing. Use a short mohair nap roller with phenolic core

Mixing Power mix to a uniform consistency before thinning.

Thinning May be thinned up to 12% by volume with Thinner #10.
NOTE: Use of thinner other than those supplied or approved by Carboline may adversely affect product performance and will void product warranty whether express or implied.

Cleanup & Safety

Cleanup Use CARBOLINE Thinner # 2

Safety Read and follow all caution statements on this product data sheet and on the MSDS for this product. Employ normal workmanlike safety precautions. Use adequate ventilation and wear gloves or use protective cream on face and hands if hypersensitive. Keep container closed when not in use.

Ventilation When used in enclosed area, 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 solvent 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 shoe

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Application Conditions

	Material	Surface	Ambient	Humidity
Normal	60-90°F (16-32°C)	65-90°F (18-32°C)	60-90°F (16-32°C)	10-85%
Minimum	40°F (4°C)	40°F (4°C)	40DF (4°C)	0%
Maximum	100UF(38°C)	100UF(38°C)	130°F(54°C)	95%

Do not apply when the surface temperature is less than 5°F or 3°C above the dew point.

Curing Schedule

Surface Temp. & 50% Relative Humidity **Dry to Recoat**

50°F (10°C)	8 hours
60°F (16°C)	4 hours
75°F (24°C)	2 hours
90°F (32°C)	1 hour

NOTE: Will air dry to touch but will remain soft for handling purposes
FINAL CURE: To obtain optimum properties.

Thermaline 4631 must be cured at temperatures of 350°F (177°C) to 450°F (232°C). Allow initial in temperature to proceed slowly up to 350°F (177°C) over a six hour time period

Packaging, Handling & Storage

Shipping Weight (Approximate)
1's

Thermaline 4631 5 Ltrs (5 kg)

Flash Point (Setaflash)

Thermaline 4631	68° F (20° C)
Thinner 10	83° F (28° C)

Shelf Life 4 months minimum when stored at 32° C

***Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.**

