



# Protective & Marine Coatings

# HEAT-FLEX® HI-TEMP 500

B59-810 SERIES

Revised: December 12, 2017

## PRODUCT INFORMATION

7.17

### PRODUCT DESCRIPTION

HEAT-FLEX HI-TEMP 500 is formulated with a acrylic silicone resin and can be applied direct to stainless steel or over carbon steel with or without primer. It is recommended for continuous operating service temperatures up to 500°F (260°C).

- Does not require heat curing
- Single component
- Recommended for continuous service up to 500°F (260°C)
- User-friendly - can be brushed or rolled
- Excellent spray application properties
- Air dries at ambient
- Can be applied direct to stainless steel

### PRODUCT CHARACTERISTICS

|                       |  |
|-----------------------|--|
| <b>Generic type:</b>  | Acrylic Silicone   |
| <b>Color:</b>         | SW4003 Pallet Tan, SW4054 Basin, SW4070 Generator Green, Black, Aluminum, Cirrus Gray, Shale Gray, Thunder Gray, New-Toned White |
| <b>Finish:</b>        | Semi-Gloss   |
| <b>Volume solids:</b> | 38-41%, depending on color<br>28.6% - Aluminum   |
| <b>VOC:</b>           | 414 g/L; 3.45 lb/gal<br>344.4 g/L: 2.79 lb/gal - Aluminum  |

### Recommended Spreading Rate per coat:

|   | Minimum            | Maximum            |
|---|--------------------|--------------------|
| <b>Wet mils (microns)</b>   | <b>4.5</b> (112.5) | <b>5.5</b> (137.5) |
| <b>Dry mils (microns)</b>   | <b>2.0</b> (50)    | <b>2.5</b> (62.5)  |
| <b>~Coverage sq ft/gal (m<sup>2</sup>/L)</b>  | <b>269</b> (6.6)   | <b>336</b> (8.2)   |
| Theoretical coverage <b>sq ft/gal (m<sup>2</sup>/L)</b><br>@ 1 mil / 25 microns dft | <b>672</b> (16.5)  |                    |

### Drying Schedule @ 50% RH:

|                   | @ 50°F/10°C | @ 77°F/25°C |
|-------------------|-------------|-------------|
| <b>To touch:</b>  | 4-6 hours   | 1-2 hours   |
| <b>To recoat:</b> | 10 hours    | 8-10 hours  |
| <b>To ship:*</b>  | 72 hours    | 24 hours    |

\* Proper procedures for thin-film systems should be followed when handling and shipping. Avoid any mechanical abrasion.  
*Drying time is temperature, humidity, and film thickness dependent*

|                     |  |
|---------------------|--|
| <b>Shelf Life:</b>  | 12 months, unopened<br>Store indoors at 50°F (10°C) to 100°F (38°C). |
| <b>Flash Point:</b> | 80°F (27°C)  |
| <b>Reducer:</b>     | Not recommended  |
| <b>Clean Up:</b>    | Xylene, R2K4   |

**Do not exceed maximum recommended DFT. May affect adhesion.**

### RECOMMENDED USES

- Direct to stainless steel or carbon steel
- Direct to carbon steel or with primer
- Cyclic service up to 500°F (260°C)
  - Stacks
  - Piping
  - Heat exchangers
  - Furnaces
  - Boilers

### RECOMMENDED SYSTEMS

|                      |                         | Dry Film Thickness / ct. |           |
|----------------------|-------------------------|--------------------------|-----------|
|                      |                         | Mils                     | (Microns) |
| <b>Carbon Steel:</b> |                         |                          |           |
| 2 cts                | Heat-Flex Hi-Temp 500** | 2.0-2.5                  | (50-62)   |
| or                   |                         |                          |           |
| 1 ct.                | Heat-Flex Hi-Temp 1200  | 5.0-6.0                  | (125-150) |
| 1 ct.                | Heat-Flex Hi-Temp 500** | 2.0-2.5                  | (50-62)   |
| or                   |                         |                          |           |
| 1 ct.                | EpoPhen FF***           | 7.0-9.0                  | (175-225) |
| 1 ct.                | Heat-Flex Hi-Temp 500   | 2.0-2.5                  | (50-62)   |
| or                   |                         |                          |           |
| 1 ct.                | Phenicon HS FF***       | 5.0-6.0                  | (125-150) |
| 1 ct.                | Heat-Flex Hi-Temp 500   | 2.0-2.5                  | (50-62)   |
| or                   |                         |                          |           |
| 1 ct.                | Cor-Cote HT***          | 4.0-5.0                  | (100-125) |
| 1 ct.                | Heat-Flex Hi-Temp 500   | 2.0-2.5                  | (50-62)   |
| or                   |                         |                          |           |
| 1 ct.                | Cor-Cote HT FF***       | 4.0-5.0                  | (100-125) |
| 1 ct.                | Heat-Flex Hi-Temp 500   | 2.0-2.5                  | (50-62)   |

\*\*Must apply a mist coat of Heat-Flex Hi-Temp 500. Allow 10 minutes flash off and follow with a full coat.

\*\*\*Refer to respective product data sheet for maximum service temperature recommendation.

### Stainless Steel:

|        |                       |         |         |
|--------|-----------------------|---------|---------|
| 2 cts. | Heat-Flex Hi-Temp 500 | 2.0-2.5 | (50-62) |
|--------|-----------------------|---------|---------|

NOTE: Heat-Flex Hi-Temp 500 is also suitable for use over inorganic zinc rich primers. Not recommended for:

- Service above 500°F (260°C)
- Interiors of industrial air pollution control devices
- Immersion service

### TINTING

Do not tint

### APPLICATION CONDITIONS

|              |   |
|--------------|---|
| Temperature: | 50°F (10°C) minimum, 120°F (50°C) maximum |
|              | Air, surface, and material                |
|              | At least 5°F (2.8°C) above dew point      |
|              | Maximum 85% relative humidity             |

### ORDERING INFORMATION

|                    |                    |
|--------------------|--------------------|
| Weight per gallon: | 11.2 lb. (5.2 kg.) |
|--------------------|--------------------|

### SURFACE PREPARATIONS

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Minimum recommended surface preparation:

- Iron & Steel: SSPC-SP6, 1.5-2.5 mil (40-63 micron) profile  
Or SSPC-SP11, 1.0-2.5 mil (25-63 micron) profile

- Stainless Steel: SSPC-SP1, Do not use chlorinated solvents for cleaning



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### SURFACE PREPARATIONS (CONT'D)

#### Iron & Steel

Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Commercial Blast Cleaning per SSPC-SP6/NACE 3. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (1.5-2.5 mils / 40-63 microns maximum). If SSPC-SP6/NACE 3 is not possible, Power Tool Cleaning to Bare Metal per SSPC-SP11 is also acceptable (1.0-2.5 mil / 25-63 micron profile maximum). Hand Tool Cleaning per SSPC SP 2 or Power Tool Cleaning per SSPC SP 3 are acceptable preparation methods when SSPC SP 6 or SSPC SP 11 are not possible. Coat any bare steel the same day as it is cleaned or before flash rusting occurs. On stainless steel, clean per SSPC-SP1. Aluminum Oxide grit is also acceptable for use. Do not use chlorinated solvents for cleaning stainless steel. Product performance is relative to the surface preparation achieved.

#### Surface Preparation Standards

| Condition of Surface | ISO 8501-1<br>BS7079:A1 | Swedish Std.<br>SIS055900 | SSPC  | NACE |
|----------------------|-------------------------|---------------------------|-------|------|
| White Metal          | Sa 3                    | Sa 3                      | SP 5  | 1    |
| Near White Metal     | Sa 2.5                  | Sa 2.5                    | SP 10 | 2    |
| Commercial Blast     | Sa 2                    | Sa 2                      | SP 6  | 3    |
| Brush-Off Blast      | Sa 1                    | Sa 1                      | SP 7  | 4    |
| Hand Tool Cleaning   | C St 2                  | C St 2                    | SP 2  | -    |
| Pitted & Rusted      | D St 2                  | D St 2                    | SP 2  | -    |
| Rusted               | C St 3                  | C St 3                    | SP 3  | -    |
| Power Tool Cleaning  | D St 3                  | D St 3                    | SP 3  | -    |

### APPLICATION EQUIPMENT

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Conventional spray is the recommended method of application. Do not apply in heavier films than specified as blistering may occur.

#### Conventional Spray:

- Gun ..... Graco 700N
- Fluid Nozzle ..... 0.045" - 0.055"
- Air Nozzle ..... 20 cfm
- Atomizing Pressure ..... 50 psi
- Fluid Pressure ..... 20-30 psi

#### Airless Spray:

- Pressure ..... Minimum 2000 psi
- Hose ..... 3/8" ID
- Tip ..... 0.013" - 0.017"
- Reduction ..... Not recommended

### APPLICATION EQUIPMENT (CONT'D)

#### Brush

- Brush ..... Natural bristle
- Reduction ..... Not recommended

#### Roller

- Cover ..... 1/4"-3/8" woven with solvent resistant core
- Reduction ..... Not recommended

If specific application equipment is not listed, equivalent equipment may be substituted. For brush and roller application, maintain a wet edge while avoiding runs or excess film build.

### APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

**Mixing Instructions:** Mix paint thoroughly with low speed power agitation before use. Obtain a uniform consistency. Do not incorporate air.

### CLEAN UP

Clean spills and spatters immediately with Xylene, R2K4. Clean tools immediately after use with Xylene, R2K4. Follow manufacturer's safety recommendations when using any solvent.

### SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

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