HEAT-FLEX® 3500
THERMAL INSULATIVE COATING

B59W-350 WHITE
B59A-350 SLATE GRAY

Product Information

**Product Description**
HEAT-FLEX HI-TEMP 3500 is a multi-purpose, single component water-based, acrylic, spray applied insulative coating. It contains an engineered composite of ceramic and silica microspheres to optimize thermal insulative properties.

- Single component
- Designed to be applied to hot substrates up to 350°F (177°C)
- Suitable to insulate substrates operating from -80ºF up to 350ºF (-62ºC - 177ºC)
- Easy airless spray application
- Very fast dry with minimal overspray risk
- Low odor
- Easy to repair
- Flexible to perform under cyclic thermal shock conditions
- Eliminates hidden CUI commonly found under conventional insulation and cladding

**Product Characteristics**

| Generic type: | Acrylic |
| Color: | White, Slate Gray |
| Finish: | Low Sheen |
| Volume solids: | 83% ± 2% |
| VOC: | <11 g/L; 0.09 lb/gal |

**Recommended Spreading Rate per coat:**

| Wet mils (microns) | 18.0 (457) | 24.4 (610) |
| Dry mils (microns) | 15.2 (381) | 20.3 (508) |
| ~Coverage sq ft/gal (m²/L) | 74 (1.8) | 55 (1.35) |
| Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft | 1,327 (32.6) |

**Drying Schedule @ 77°F/25°C and 50% RH:**

- To touch: 15 minutes
- To recoat: 2 hours*
- To handle: 12 hours

*Estimate @ 20 mils (500 microns) DFT. Actual recoat times vary due to several variables including film thickness, relative humidity, and air movement.

Refer to application information for further details.

**System tested, unless otherwise noted:**
1 ct Heat-Flex 1200, 4 cts Heat-Flex 3500, 1 ct Shercryl HPA

**Performance Characteristics**

<table>
<thead>
<tr>
<th>Test Method</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM D 3359</td>
<td>5A</td>
</tr>
<tr>
<td>ASTM D 4541</td>
<td>360 psi</td>
</tr>
<tr>
<td>ASTM D 5894-9</td>
<td>Rating 10 per ASTM D714 for blisters</td>
</tr>
<tr>
<td>Rating 9 per ASTM D610 for rusting</td>
<td></td>
</tr>
<tr>
<td>Rating 10 per ASTM D1654 for scribe creepage</td>
<td></td>
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<tr>
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<tbody>
<tr>
<td>ASTM E-84</td>
<td>Class A</td>
</tr>
<tr>
<td>ASTM D 522 Method B</td>
<td>Pass</td>
</tr>
<tr>
<td>ASTM C1055/ C1057 ISO 13732 substrate temperature of 300°F</td>
<td>Pass, OSHA requirements with thermesthesiometer simulated skin temperatures below 140°F @ 5 second exposure</td>
</tr>
<tr>
<td>ASTM D6994-09, 10 cycles, 240 hrs, each cycle includes water immersion, 10°F Freezer, and 120°F ambient temperature exposures</td>
<td>Rating 10 per ASTM D714 for blisters</td>
</tr>
<tr>
<td>Rating 9 per ASTM D610 for rusting</td>
<td></td>
</tr>
<tr>
<td>No loss of adhesion to primer</td>
<td></td>
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</tbody>
</table>

**Shelf Life:** 12 months, unopened
Store indoors at 50°F (10°C) to 100°F (38°C). Protect from freezing!

**Flash Point:** None

**Reducer:** Not recommended

**Clean Up:** Water

**Recommended Uses**

- Personnel Protective Coating (PPC) for improved plant safety through burn prevention
- Thermal insulation for hot or cold process energy conservation
- Prevent condensation on cold surfaces
- Minimize radiant solar heat of containers and personnel enclosures
- For application to properly prepared and primed carbon steel and non-ferrous metal surfaces including:
  - Tanks
  - Piping
  - Vessels
  - Furnaces
  - Stacks
  - Containers
  - Oil & Gas Facilities
  - Power Plants
  - Pulp & Paper
  - Offshore / Marine
  - Chemical Plants

Not recommended for:
- Immersion service
- Surfaces operating above 350°F (177°C)

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**HEAT-FLEX® 3500**

**THERMAL INSULATIVE COATING**

**B59W-350**

**B59A-350**

**WHITE**

**Slate Gray**

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**APPLICATION INFORMATION**

**Application Equipment**

- **Reducer/Clean Up**...........Water
- **Airless Spray**
  - Pump.................................35:1 to 50:1, capable of 2@GPM or more, no higher pressure pumps should be used
  - Gun....................................high flow or mastic
  - Pressure ............................1800-2500 psi
  - Hose ..................................3/8" for 50' or less, 1/2" or greater for distances over 50'
  - Tip.......................................027" - .035"
  - Filter...................................Remove all

**Application Procedures**

Prepare surface and apply primer per product data sheet.

Excessive mixing and/or atomization may negatively affect performance properties.

Mixing Instructions: Mix with ½” reversible drill and steel drywall mud paddle. Operate drill in reverse position and slowly mix only to point that pail is homogeneous. Do not allow mix blade to contact bottom or sides of pail. DO NOT MECHANICALLY SHAKE PAILS!

Pump, hose, and gun should be thoroughly flushed and primed with clean water prior to loading product. Pump pressure should be set at minimum pressure required to create a fan pattern. Excessive mixing and/or atomization may negatively affect performance properties.

Coating is considered acceptable for recoat when a firm thumb rotation does not damage film.

When applying to hot surfaces, apply in multiple thin coats to allow water evaporation prior to applying additional thickness.

**Surface Prep**

Refer to specific primer data page for recommended surface preparation.

**Tinting**

Do not tint

**Application Conditions**

- **Surface Temperature:** 50°F (10°C) minimum, 350°F (177°C) maximum
- **Air & material:** 50°F (10°C) minimum, 120°F (49°C) maximum
- **Relative humidity:** 85% maximum

**Ordering Information**

- **Weight per gallon:** 6.00 lbs/gal (0.72kg/L)
- **Packaging:** 5 gallon (18.9 L) pails

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**Disclaimer**

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.

**Warranty**

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

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**Recommended Systems**

**Steel:**

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<tr>
<th>Coating</th>
<th>Dry Film Thickness / ct. Mils</th>
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<tr>
<td>1 ct. Heat-Flex 1200</td>
<td>5.0-6.0</td>
<td>(125-150)</td>
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<td>2-10 cts. Heat-Flex 3500*</td>
<td>15.0-20.0</td>
<td>(375-500)</td>
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<td>1 ct. Sher-Cryl HPA</td>
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<tr>
<td>1 ct. Zinc Clad II or II Plus</td>
<td>2.0-4.0</td>
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*As required to achieve desired insulative properties.

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**Surfacer**

Refer to speciﬁc primer data page for recommended surface preparation.

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**Protective & Marine Coatings**

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