

### DESCRIPTION

One component heat resistant silicone topcoat for use in an elevated temperature coating system, primarily for application over PPG HI-TEMP 1027 primer

### PRINCIPAL CHARACTERISTICS

- Heat resistant topcoat with highly engineered silicone resin, able to withstand severe thermal cycling to 650°C (1200°F)
- Superior color stability to 650°C (1200°F) for black and aluminum – other colors to 538°C (1000°F)
- Can be applied to hot substrates, ranging from 10°C to 149°C (50°F to 300°F)
- Air dries rapidly
- Excellent spray application properties
- User-friendly system with excellent brush and roller application characteristics
- Excellent weathering and corrosion resistance when applied over PPG HI-TEMP 1027 primer, Inorganic Zinc (IOZ) or other approved primers
- No softening in thermal cyclic service

### COLOR AND GLOSS LEVEL

- Standard and custom colors, including aluminum
- Flat

### BASIC DATA AT 20°C (68°F)

<b>Number of components</b>	One
<b>Mass density</b>	1.4 kg/l (11.4 lb/US gal)
<b>Volume solids</b>	34% ± 2%
<b>VOC (Supplied)</b>	Maximum 272 g/kg (Directive 1999/13/EC, SED) Maximum 420 g/l (3.5 lb/gal)
<b>Temperature resistance</b>	To 650°C (1200°F)
<b>Color stability standard and custom colors</b>	To 538°C (1000°F)
<b>Color stability black and aluminum</b>	To 650°C (1200°F)
<b>Recommended dry film thickness</b>	50 to 63 µm (2.0 to 2.5 mils) per coat
<b>Theoretical spreading rate<sup>A</sup></b>	6.8 m <sup>2</sup> /l for 50 µm (273 ft <sup>2</sup> /US gal for 2 mil)
<b>Dry to touch<sup>B</sup></b>	2 hours
<b>Dry to handle</b>	24 hours
<b>Shelf life</b>	2 years when stored at 4°C to 38°C (40°F to 100°F)

<sup>A</sup> See ADDITIONAL DATA – Spreading rate and film thickness

<sup>B</sup> See ADDITIONAL DATA - Overcoating intervals



### RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

#### New or corroded surfaces

- For corrosion resistant service, use of an approved corrosion resistant primer is necessary. Surfaces to be coated with *PPG HI-TEMP 1027* primer or Inorganic Zinc (IOZ) must be prepared and primed in accordance with the appropriate product data sheet. Consult a PPG representative for alternate and approved primers, and if approved, prepare the surface and apply the primer in accordance with the product data sheet for the approved primer. Allow appropriate dry time. Apply one coat of *PPG HI-TEMP 1000 VS* topcoat at 50 to 63 µm (2.0 to 2.5 mils) DFT.
- For cosmetic service only, an approved corrosion resistant primer is recommended but not necessary. Abrasive blast clean to SSPC-SP 6 "Commercial Blast" (ISO-Sa2) with profile of 25 to 38 µm (1.0 to 1.5 mils) or pressure wash to an equivalent of SSPC-SP 6 (ISO-Sa2) condition. Surfaces to be coated must be dry and free of salts, weld splatter, oil, dirt, grease, and all other contaminants. Round off all rough welds and sharp edges. Apply two coats of *PPG HI-TEMP 1000 VS* topcoat at 50 to 63 µm (2.0 to 2.5 mils) DFT per coat for a total of 100 to 125 µm (4.0 to 5.0 mils) DFT.

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#### Previously painted surfaces in good condition

If old coating is intact and there is no evidence of cracking, fracturing, and/or delamination, pressure wash surface to remove all salts, oil, grease, and contaminants and apply one coat of *PPG HI-TEMP 1000 VS* at 50 to 63 µm (2.0 to 2.5 mils) DFT.

#### Previously painted surfaces in poor condition or with some localized corrosion

If old coating shows evidence of cracking, fracturing, delamination, and/or corrosion, follow surface preparation guidelines for new steel. If there is no evidence of cracking, fracturing, or delamination, just small areas of corrosion (less than 10% of the area to be coated), power wash the entire structure, removing all salts, oil, grease, and other contaminants. Once dry, perform surface preparation and apply *PPG HI-TEMP 1027* in accordance with the product data sheet on all areas where the existing paint has been removed. Once these areas are primed and dry, apply one coat of *PPG HI-TEMP 1000 VS* at 50 to 63 µm (2.0 to 2.5 mils) DFT over the entire surface.

Note: Prior to application of *PPG HI-TEMP 1000 VS* over other coatings, prepare a small test patch area and test for adhesion

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#### Substrate temperature

Should be above 10°C (50°F) and below 149°C (300°F), and at least 3°C (5°F) above dew point during application and curing

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### SYSTEM SPECIFICATION

#### Uninsulated steel

##### Option 1

- *PPG HI-TEMP 1027*: 125 to 150 µm (5.0 to 6.0 mils)
- *PPG HI-TEMP 1000 VS*: 50 to 63 µm (2.0 to 2.5 mils)

##### Option 2

- Inorganic Zinc (IOZ) or other approved primer (refer to the respective Product Data Sheet for DFT)
- *PPG HI-TEMP 1000 VS*: 50 to 63 µm (2.0 to 2.5 mils)

Note: Do not exceed recommended dry film thickness



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### INSTRUCTIONS FOR USE

- Use mechanical agitation for mixing. Mix materials until uniform in consistency.
  - Thinning is normally not required. If a condition warrants thinning, only PPG thinners should be used and in accordance with applicable regulations
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#### Air spray

##### **Recommended thinner - application to ambient substrate below 66°C (150°F)**

- THINNER 21-06 (PPG HI-TEMP THINNER 11/AMERCOAT 65)
- THINNER 91-10 or PPG HI-TEMP THINNER 10 (VOC compliant)

##### **Recommended thinner - application to hot substrates 66°C to 149°C (150°F to 300°F)**

THINNER 21-25 or PPG HI-TEMP THINNER 5

##### **Volume of thinner**

0 – 5%, depending on required thickness and application conditions

##### **Nozzle orifice**

1.8 – 2.2 mm (approx. 0.071 - 0.087 in)

##### **Nozzle pressure**

0.4 – 0.6 MPa (approx. 4.1 – 5.5 bar; 60 – 80 p.s.i.)

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#### Airless spray

##### **Recommended thinner - application to ambient substrate below 66°C (150°F)**

- THINNER 21-06 (PPG HI-TEMP THINNER 11/AMERCOAT 65)
- THINNER 91-10 or PPG HI-TEMP THINNER 10 (VOC compliant)

##### **Recommended thinner - application to hot substrates 66°C to 149°C (150°F to 300°F)**

THINNER 21-25 or PPG HI-TEMP THINNER 5

##### **Volume of thinner**

0 – 5%, depending on required thickness and application conditions

##### **Nozzle orifice**

0.43 – 0.53 mm (approx. 0.017 – 0.021 in)

##### **Nozzle pressure**

20.7 MPa (approx. 207 bar; 3000 p.s.i.)



# PPG HI-TEMP™ 1000 VS

## PRODUCT DATA SHEET

June 30, 2014  
Revision of February 18, 2014

### Brush/roller

#### **Recommended thinner - application to ambient substrate below 66°C (150°F)**

- THINNER 21-06 (PPG HI-TEMP THINNER 11/AMERCOAT 65)
- THINNER 91-10 or PPG HI-TEMP THINNER 10 (VOC compliant)

#### **Recommended thinner - application to hot substrates 66°C to 149°C (150°F to 300°F)**

THINNER 21-25 or PPG HI-TEMP THINNER 5

### **Volume of thinner**

Up to 5% of the thinners listed above can be added if desired

Note: Spray application is recommended but when spray painting is not possible, brush or roller is an appropriate application method. The coating should be applied with a suitable brush or short nap roller.

### Cleaning solvent

- THINNER 21-06 (PPG HI-TEMP THINNER 11 / AMERCOAT 65)
- THINNER 91-10 or PPG HI-TEMP THINNER 10 (VOC compliant)
- THINNER 21-25 or PPG HI-TEMP THINNER 5

## ADDITIONAL DATA

Spreading rate and film thickness	
DFT	Theoretical spreading rate
50 µm (2.0 mils)	6.8 m <sup>2</sup> /l (273 ft <sup>2</sup> /US gal)
63 µm (2.5 mils)	5.4 m <sup>2</sup> /l (218 ft <sup>2</sup> /US gal)

Curing time for DFT up to 63 µm (2.5 mils)			
Substrate temperature	Dry to touch	Dry to overcoat	Dry to handle
10°C (50°F)	4 hours	10 hours	72 hours
20°C (68°F)	2 hours	8 hours	24 hours
32°C (90°F)	2 hours	6 hours	16 hours
66°C (150°F)	30 minutes	4 hours	12 hours

Note: When shipping and handling equipment coated with PPG HI-TEMP 1000 VS follow procedures for thin film coatings. Avoid mechanical damage and abrasion.



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### SAFETY PRECAUTIONS

The product is for use only by professional applicators in accordance with information in this product data sheet and the applicable material safety data sheet (MSDS). Refer to the appropriate MSDS before using this material. All use and application of this product should be performed in compliance with all relative federal, state and local, health, safety and environmental regulations or in compliance with all pertinent local, regional and national regulations as well as good safety practices for painting, and in conformance with recommendations in SSPC PA 1, "Shop, Field and Maintenance Painting of Steel."

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### WORLDWIDE AVAILABILITY

It is always the aim of PPG Protective and Marine Coatings to supply the same product on a worldwide basis. However, slight modification of the product is sometimes necessary to comply with local or national rules/circumstances. Under these circumstances an alternative product data sheet is used.

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### REFERENCES

- CONVERSION TABLES SEE INFORMATION SHEET 1410
  - EXPLANATION TO PRODUCT DATA SHEETS SEE INFORMATION SHEET 1411
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