

# PPG HI-TEMP 1027™ ADDITIONAL SYSTEM GUIDE

## Application systems

### CRYOGENIC SERVICE

PPG recommends the following two application systems based on cyclic service temperatures with initial temperature cycle over 150°C (300°F):

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**Cryogenic - insulated and non-insulated service: with service temperature range of -73°C to 204°C (-100°F to 400°F)**

- 250 to 300 µm (10 to 12 mils) DFT PPG HI-TEMP 1027

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**Cryogenic - insulated and non-insulated service: with service temperature range of -195°C to 650°C (-320°F to 1200°F)**

- 150 to 200 µm (6 to 8 mils) DFT; Do not exceed 200 µm (8 mils) total DFT PPG HI-TEMP 1027

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### APPLICATION FOR OFFSHORE AND LIMITED SERVICE ABOVE 150°C (300°F)

PPG recommends the following three application systems for offshore and occasional and limited intermittent service temperatures over 150°C (300°F)

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**Cyclic service insulated or non-insulated service**

- 375 to 450 µm (15 to 18 mils) DFT PPG HI-TEMP 1027

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**Insulated or non-insulated service**

- 75 to 100 µm (3 to 4 mils) DFT DIMETCOTE 9 / SIGMAZINC 9 in accordance with the product data sheet
- 25 to 50 µm (1 to 2 mils) DFT of PPG HI-TEMP 1027 thinned by 30%
- Final coat 250 to 300 µm (10 to 12 mils) DFT PPG HI-TEMP 1027

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**Non-Insulated service with PPG HI-TEMP topcoat**

- 75 to 100 µm (3 to 4 mils) DFT DIMETCOTE 9 / SIGMAZINC 9 in accordance with the product data sheet
- 25 to 50 µm (1 to 2 mils) DFT of PPG HI-TEMP 1027 thinned by 30%
- 125 to 150 µm (5 to 6 mils) DFT PPG HI-TEMP 1027
- 32 to 62 µm (1.5 to 2.5 mils) DFT PPG HI-TEMP 1000 VS or PPG HI-TEMP 500 VS

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### APPLICATION OVER INORGANIC ZINC (IOZ) (FOR CARBON STEEL ONLY)

- PPG HI-TEMP 1027 may be used to overcoat newly applied inorganic zinc surfaces applied and cured, as per the products product data sheet. Ensure that the inorganic zinc rich coating is fully cured.
- PPG HI-TEMP 1027 is compatible with ethyl silicate IOZ coating which are properly dried and cleaned. PPG HI-TEMP 1027 is not compatible with epoxy based zinc, water based sodium, or potassium zinc silicates.
- In all cases the operating temperatures of these systems will be downgraded to that of the inorganic zinc coating material.

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### COATING SYSTEMS APPLICATION OVER IOZ

#### **Surface preparation for aged IOZ**

- PPG HI-TEMP 1027 may be used to repair surfaces coated with aged inorganic zinc where portions of the inorganic zinc coated layer have sacrificed and the steel substrate is rusting. This includes areas where light pitting is occurring. For aged inorganic zinc, assure the surface is free of salts or contaminants by using low pressure potable water wash and allowing the surface to dry completely. Any areas where rust has developed shall be spot prepared by hand tool or power tool cleaning to equal SSPC-SP 15, "Commercial Grade Power Tool Cleaning".
- All areas shall be free of all loose rust paint and other contaminants that may interfere with adhesion of the PPG HI-TEMP 1027 to the IOZ.
- For highly thermal cyclic service, PPG does not recommend inorganic zinc rich coatings.

#### **Insulated or non-insulated service**

- 75 to 100 µm (3 to 4 mils) DFT DIMETCOTE 9 / SIGMAZINC 9 in accordance with the product data sheet
- 25 to 50 µm (1 to 2 mils) DFT of PPG HI-TEMP 1027 thinned by 30%
- 250-300 µm (10 to 12 mils ) DFT PPG HI-TEMP 1027

#### **Non-Insulated service with PPG HI-TEMP topcoat**

- 75 to 100 µm (3 to 4 mils) DFT DIMETCOTE 9 / SIGMAZINC 9 in accordance with the product data sheet
- 25 to 50 µm (1 to 2 mils) DFT of PPG HI-TEMP 1027 thinned by 30%
- 125 to 150 µm (5 to 6 mils) DFT PPG HI-TEMP 1027
- 32 to 62 µm (1.5 to 2.5 mils) DFT PPG HI-TEMP 1000 VS or PPG HI-TEMP 500 VS

### COATING FOR GALVANIZED STEEL

- PPG HI-TEMP 1027 may be applied over galvanized steel for temperature service under 203°C (400°F). Surface preparation prior to application of PPG HI-TEMP 1027 shall be in accordance with ASTM D6386; "Standard Practice for Preparation of Zinc (Hot-Dip Galvanized) Coated Iron and Steel Product and Hardware Surfaces for Painting".
- One coat of PPG HI-TEMP 1027 at 125 to 150 µm (5 to 6 mils) DFT shall be applied after surface preparation is complete in accordance with and in the timeframes designated within ASTM D6386. PPG HI-TEMP 1027 shall be applied in accordance with its product data sheet.

### ALUMINUM, COPPER, NICKEL AND CHROME ALLOYS

PPG HI-TEMP 1027 is not recommended for application over these surfaces.

**NOTE: FOR OTHER APPLICATION SYSTEMS PLEASE CONTACT PPG TECHNICAL SERVICE**

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### LIMITATION OF LIABILITY

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