

# PPG HI-TEMP™ 707 HB

## DESCRIPTION

One component proprietary waterborne liquid insulation that provides thermal resistance and personnel protection up to 177°C (350°F)

## PRINCIPAL CHARACTERISTICS

- 100% adherent, low permeability seamless composite insulation material
- Typically 9% improved thermal performance and energy reduction compared to other similar products
- Suitable for high build applications up to 1250 microns (50 mils) DFT per coat and up to 4 coats or 5000 microns (200 mils) for maximum thermal performance
- Suitable for applications at metal temperature up to 149°C (300°F)
- High film build capability in one single layer of 1250 microns (50.0 mils), reducing labor costs and increasing production rates
- Excellent for use as a personnel protection material, reducing burn injuries and reportable lost time accidents
- Used to prevent or reduce condensate formation
- Offers an economical alternative to conventional insulation and jacketing for process equipment and piping up to 177°C (350°F)
- Able to withstand cyclic temperatures from -57°C (-70°F) to 177°C (350°F)
- Superior energy savings due to its monolithic and adherent composite structure
- Easy visual inspection, facilitating future planning and remediation
- Used to control and stabilize process temperatures for storage tanks, pipelines, and vessels
- Ideal for varying geometric shapes, such as spheres, valves, and complex equipment
- Must always be used with the appropriate primers and topcoats. Refer to the system specification section for approved product systems
- For non-immersion service ONLY; avoid use where standing or pooling water may develop

## COLOR AND GLOSS LEVEL

- White
- Finish is textured to semi-smooth

## BASIC DATA AT 20°C (68°F)

Data for product	
Number of components	One
Mass density	0.7 kg/l (5.5 lb/US gal)
Volume solids	72 ± 2%
VOC (Supplied)	Directive 1999/13/EC, SED: max. 55.2 g/kg max. 48.0 g/l (approx. 0.4 lb/US gal) EPA Method 24: 40.0 g/ltr (0.3 lb/USgal)
Temperature resistance	-57°C (-70°F) to 177°C (350°F)
Recommended dry film thickness	1000 - 1250 µm (40.0 - 50.0 mils) per coat
Theoretical spreading rate	0.6 m <sup>2</sup> /l for 1250 µm (23 ft <sup>2</sup> /US gal for 50.0 mils)
Dry to touch	4 hours



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Data for product	
Dry to topcoat	16 hours
Dry to handle	24 hours
Shelf life	At least 12 months when stored cool and dry

**Notes:**

- See ADDITIONAL DATA – Spreading rate and film thickness
- See ADDITIONAL DATA – Curing time
- For additional information, refer to PPG HI-TEMP 707 HB - APPLICATION GUIDELINES

## RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES

- All surfaces should be prepared in accordance with the appropriate Product Data Sheet for the primer coating that is applied. See PPG HI-TEMP 707 HB APPLICATION GUIDELINES for complete list of approved primers
- Properly primed surfaces must be free from grease, oil, dirt, salts, and other contaminants prior to application of PPG HI-TEMP 707 HB

### Substrate temperature and application conditions

- Substrate temperature during application and curing should be above 10°C (50°F)
- Substrate temperature during application and curing should be at least 3°C (5°F) above dew point
- Relative humidity should not exceed 85%; surface must be free of visible moisture
- Do not apply if rain or excessive dew is anticipated before dry to recoat time is achieved, as per the curing table
- At all times PPG HI-TEMP 707HB should be protected from rain or water until top coat is dried
- If precipitation occurs between layers or before topcoat, allow a minimum of 24 hours after the precipitation ends and the coated surface is dry before applying the next layer. To check for dryness, the existing applied coating should not be able to be pushed with medium thumb pressure to dislodge or separate the coating

### Hot application

- PPG HI-TEMP 707 HB may be applied to surfaces at temperatures up to 149°C (300°F). When applying to surfaces > 66°C (150°F), apply a thin pass first, then apply the remainder of the layer, using good spray technique

### Application equipment

- Texture spray equipment is recommended for application
- Do not pressurize to more than 3.5 MPa (507 p.s.i.)
- Use conventional air spray equipment, do not use airless spray equipment
- Diaphragm pumps are ideal for delivering material to the texture spray gun. The material feed hose should have a minimum 1.9cm (3/4 inch) inside diameter
- Hopper-fed handheld texture spray equipment is suitable for small projects and touch up
- Refer to the PPG HI-TEMP 707 HB APPLICATION GUIDELINES for recommended spray equipment and settings



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## SYSTEM SPECIFICATION

- PPG HI-TEMP 222 G: 200 to 250 µm (8.0 to 10.0 mils) DFT
- PPG HI-TEMP 707 HB: 1 to 4 layers of 1000 to 1250 µm (40.0 to 50.0 mils) per layer
- SIGMADUR 550 or AMERCOAT 450 Series as per Product Data Sheet

Note: Topcoats may require two coats to achieve uniform color and gloss consistency

## THICKNESS RECOMMENDATIONS

Insulation and Personnel Protection		
Operating temperature	Recommended thickness	Number of layers
66°C (151°F)	1250 µm (50.0 mils)	1
93°C (199°F)	2500 µm (100.0 mils)	2
135°C (280°F)	3750 µm (150.0 mils)	3
177°C (350°F)	5000 µm (200.0 mils)	4

Note: For anti-condensation applications, please contact technical support regarding the appropriate recommended thickness of PPG HI-TEMP 707 HB to help prevent or reduce condensation formation

## INSTRUCTIONS FOR USE

- Store PPG HI-TEMP 707 HB in a dry place as close to room temperature as possible. Storage temperature should be between 4°C to 38°C (40°F to 100°F). DO NOT ALLOW TO FREEZE
- When a container is first opened, PPG HI-TEMP 707 HB will normally have a dry, crumbly crust at the top of the container; this crust may extend several centimeters (inches) down into the can. Beneath is a liquid layer
- Use only a screw auger mixer at slow speed or a 30" mud mixer. Mix until fully homogenized, See further mixing instructions, refer to the PPG HI-TEMP 707 HB Application Guide
- When properly mixed, the consistency of PPG HI-TEMP 707 HB should be heavy-bodied (high viscosity) but free flowing, and there should be few or no lumps
- PPG HI-TEMP 707 HB should be fully mixed without thinning. Any decision to thin the material should be made only after fully mixing and observing the condition of the mixed material. If thinning is needed, add small amounts of tap water at a time. Note: Adding water to PPG HI-TEMP 707 HB will reduce viscosity and will affect film build and the drying properties of the product
- Mixed material may dry out and become unusable. Remixing may allow for reuse. Any material mixed and left uncovered for 4 hours must be discarded

Notes:

- Do not apply if rain or heavy dew is anticipated before dry to recoat time is achieved
- Do not apply where sitting or pooling water may develop



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## **Air spray**

- Use diaphragm texture spray equipment or conventional air spray equipment. See PPG HI-TEMP 707 HB Application Guide for specific equipment and settings
- Do not apply using airless spray equipment

## **Recommended thinner**

- Potable water

## **Volume of thinner**

Add only one cup of water at a time to a 20 liter (5 US gallon) pail if required

## **Cleaning solvent**

- Potable water

Note: Clean-up immediately after use with potable water. Discard clean up material in accordance with federal and local environmental regulations

## **ADDITIONAL DATA**

<b>Spreading rate and film thickness</b>	
<b>DFT</b>	<b>Theoretical spreading rate</b>
1000 µm (40.0 mils)	0.7 m <sup>2</sup> /l (29 ft <sup>2</sup> /US gal)
1250 µm (50.0 mils)	0.6 m <sup>2</sup> /l (23 ft <sup>2</sup> /US gal)

Note: High humidity conditions may adversely affect film build characteristics

<b>Curing time for DFT up to 1250 µm (50.0 mils)</b>			
<b>Substrate temperature</b>	<b>Dry to touch</b>	<b>Dry to recoat/topcoat</b>	<b>Dry to handle</b>
10°C (50°F)	6 hours	20 hours	24 hours
24°C (75°F)	4 hours	16 hours	24 hours
32°C (90°F)	3 hours	10 hours	24 hours

### Notes:

- Dry times can vary based on environmental and substrate conditions
- Excessive wet film thickness (of each layer) will significantly impact dry time
- If precipitation occurs during coating, allow a minimum of 24 hours after the precipitation ends and the coated surface is dry before applying the next layer
- Allow 24 hours dry time between all layers when relative humidity is above 70% during application or drying



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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."

## 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.

## REFERENCES

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

## WARRANTY

PPG warrants (i) its title to the product, (ii) that the quality of the product conforms to PPG's specifications for such product in effect at the time of manufacture and (iii) that the product shall be delivered free of the rightful claim of any third person for infringement of any U.S. patent covering the product. THESE ARE THE ONLY WARRANTIES THAT PPG MAKES AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES, UNDER STATUTE OR ARISING OTHERWISE IN LAW, FROM A COURSE OF DEALING OR USAGE OF TRADE, INCLUDING WITHOUT LIMITATION, ANY OTHER WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR USE, ARE DISCLAIMED BY PPG. Any claim under this warranty must be made by Buyer to PPG in writing within five (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life of the product, or one year from the date of the delivery of the product to the Buyer, whichever is earlier. Buyer's failure to notify PPG of such non-conformance as required herein shall bar Buyer from recovery under this warranty.

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