

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 that can be applied at metal temperatures up to 149°C (300°F)
- High film build capability in one single layer of 1250 µm (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)

| | |
|--|---|
| Number of components | One |
| Mass density | 0.66 kg/l (5.5 lb/US gal) |
| Volume solids | 72% ± 2% |
| VOC (Supplied) | Maximum 55.2 g/kg (Directive 1999/13/EC, SED) Maximum 48 g/l (0.4 lb/gal) |
| Temperature resistance | -57°C (-70°F) to 177°C (350°F) |
| Recommended dry film thickness | 1000 to 1250 µm (40.0 to 50.0 mils) per layer |
| Theoretical spreading rate ^A | 0.58 m ² /l for 1250 µm (23 ft ² /US gal for 50.0 mils) |
| Dry to touch | 4 hours |
| Dry to recoat/topcoat ^B | 16 hours |
| Dry to handle | 24 hours |
| Shelf life | 1 year minimum when stored at 4°C to 38°C (40°F to 100°F); do not freeze |

^A See ADDITIONAL DATA – Spreading rate and film thickness

^B See ADDITIONAL DATA - Overcoating intervals



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. Refer to the specification section for 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

Surface temperature must be a minimum of 3°C (5°F), above the dew point. Do not apply to substrates at temperatures below 10°C (50°F). Do not apply *PPG HI-TEMP 707 HB* if the relative humidity exceeds 85% or if rain or excessive dew is anticipated before dry to recoat time is achieved, as per the curing time table.

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
- Diaphragm pumps are ideal for delivering material to the texture spray gun. The material feed hose should have a one inch diameter minimum ID. Delivery rate should be a minimum of 15 liters (4 gallons) per minute
- Recommended spray gun is the Graco Texture Model 248094, bleeder with fine finish kit or equivalent
- Hopper-fed handheld texture spray equipment is suitable for small projects and touch up
- The fluid pressure should not exceed 500 p.s.i. during the application of *PPG HI-TEMP 707 HB*, as pressures exceeding 500 p.s.i. can affect thermal performance and the high-build characteristics
- Other spray equipment should not be used without a recommendation from PPG

SYSTEM SPECIFICATION

- *PPG HI-TEMP 707 HB* requires the use of approved primers
- Approved primers (one coat) are: *PPG HI-TEMP 222G*, *PPG HI-TEMP 1027* or approved alternate
- *PPG HI-TEMP 707 HB*: 1 to 4 layers (1000 to 1250 µm (40.0 to 50.0 mils) each)
- Approved topcoats for *PPG HI-TEMP 707 HB* are: *PPG PITT-TECH*, *PPG HI-TEMP 850 TC* or approved alternate
- Topcoats may require two coats to achieve uniform color and gloss consistency



THICKNESS RECOMMENDATIONS

| Insulation and Personnel Protection | | |
|-------------------------------------|---|-------------|
| Operating Temperature | Recommended PPG HI-TEMP 707HB Thickness | # of layers |
| 66°C (150°F) | 1250 µm (50.0 mils) | 1 |
| 93°C (200°F) | 2500 µm (100.0 mils) | 2 |
| 135°C (275°F) | 3750 µm (150.0 mils) | 3 |
| 177°C (350°F) | 5000 µm (200.0 mils) | 4 |

Anti-condensate: 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 (PPG HI-TEMP RMX1) at slow speed. Mix until fully homogenized, Counterclockwise rotation of the auger may aid initial mixing
- 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 potable 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 reuse. Any material mixed and left uncovered for 4 hours must be discarded

Air spray

- Use Air spray equipment described in the previous section.
- 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 gallon) pail if required

Nozzle orifice

Fine finish disc "A"; 6mm or 8mm hole

Nozzle pressure

Do not exceed 3.4 MPa (approx. 34 bar; 500 p.s.i.)



Cleaning solvent

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

ADDITIONAL DATA

| Spreading rate and film thickness | |
|-----------------------------------|--|
| DFT | Theoretical spreading rate |
| 1000 µm (40.0 mils) | 0.72 m ² /L (29 ft ² /gal) |
| 1250 µm (50.0 mils) | 0.58 m ² /L (23 ft ² /gal) |

Note: High humidity conditions may adversely affect film build characteristics

| Curing time for DFT up to 63 µm (2.5 mils) | | | |
|--|--------------|-------------------------|---------------|
| Substrate temperature at 50% RH | Dry to touch | Dry to recoat / topcoat | Dry to handle |
| 10°C (50°F) | 6 hours | 20 hours | 2 hours |
| 24°C (75°F) | 4 hours | 16 hours | 30 minutes |
| 32°C (90°F) | 3 hours | 10 hours | 15 minutes |

Note:

- 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 between layers or before seal coating the system, 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

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.

PPG HI-TEMP™ 707 HB

PRODUCT DATA SHEET

June 30, 2014
Revision of February 19, 2014

REFERENCES

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