PITTSTOP™ 196 VAPOR STOP

Product Datasheet

1. Description and Area of Application

PITTSTOP™ 196 Vapor Stop is a two component, butyl rubber elastomer specially designed for use as a vapor stop sealant / coating / adhesive. Its service temperature range is specifically suited for Liquid Natural Gas and other cryogenic insulation systems.

2. Field Application

Always read and understand information contained within product datasheets and safety datasheets before attempting to use this product. If you have questions regarding fitness of use of this product for an application, consult Pittsburgh Corning LLC.

Substrate Preparation

Surfaces must be free of moisture, loose scale and rust, dust, oil and grease.

Environmental Considerations

Temperature of product, substrate and the ambient temperature will affect working time, cure time and application rate. Higher temperatures reduce working time, viscosity, and cure rate. Lower temperatures increase viscosity and lengthen the working time and cure time.

Mixing Guidelines

Combine and mix equal parts by volume of Parts A & B in a bucket with a mixing blade until the material is uniform. Do not mix more material than can be used within the working time of the material.

Cellular Glass Application Guidelines

Apply PITTSTOP™ 196 Vapor Stop by brush, roller or trowel over the surface of the insulation layers from the outside layer down to the pipe substrate. Apply a tack coat of PITTSTOP™ 196 Vapor Stop at a rate of 0.7 to 0.8 L / m² (1.8 to 2 gal / 100 ft²) to FOAMGLAS® insulation and on to the pipe substrate. Embed PC® Fabric 79 or PC® 150 glass reinforcing mesh[1] into the uncured PITTSTOP™ 196 Vapor Stop tack coat overlapping all fabric joints 76 mm (3 in). Smooth the fabric and stretch to remove wrinkles. Allow a minimum of 24 hours before applying a second coat.

Apply a second coat of PITTSTOP™ 196 Vapor Stop after the first coat cures at a rate 0.7 to 0.8 L / m² (1.8 to 2 gal / 100 ft²). Care must be taken to produce a uniform void/pinhole free membrane. If pinholes are present after the applying the second coat, wait 24 hours and add a third coat at the recommended coverage rate.

FOAMGLAS®

When used as a cryogenic adhesive, apply at the rate of 0.7 to 0.8 L / m² (1.8 to 2 gal / 100 ft²) and allow the adhesive to cure for at least 24 hours. Apply a second coat at 0.7 to 0.8 L / m² (1.8 to 2 gal / 100 ft²) and embed the insulation into the adhesive making certain complete contact between the insulation and the pipe is made.

Cleanup and Disposal

Product can be removed or cleaned using scrap pieces of FOAMGLAS® insulation to remove the cured material. PITTSTOP™ 196 Vapor Stop can also be removed from surfaces using toluene or xylene.

Dispose of excessive product and containers in accordance with local, state and federal regulations.

3. Type of Delivery and Storage

- 38 liter (10 gal) kits: One kit is made up of two 18.9 L (5 gal) pails.
- Shipping Weight: 47.2 kg (104 lb)
- Store adhesive out of direct sunlight, in a cool, dry area at temperatures between 4 °C (40 °F) and 38 °C (100 °F) in original, unopened containers.
- Consult Safety Datasheet for additional storage and handling information.

4. Coverage

Standard application of sealant to FOAMGLAS® insulation. Coverage will vary with different substrates.

- One 38 L (10 gal) kit will cover 24 to 27 m^2 (250 to 280 ft^2) not including losses.
- Wet Film Coverage: 0.63 to 0.71 m^2 / L (25 to 28 ft^2 / gal) or 1.4 to 1.6 L / m² (3.6 to 4 gal / 100 ft²)
- Approximate Wet Film Thickness: 1.4 to 1.6 mm (55 to 63 mils)
- Figures do not include losses.

5. Typical Properties

PROPERTY [A]	METHOD	SI	ENGLISH
COLOR		Black	
DENSITY		1.15 ± 0.06 kg / L	9.6 ± 0.5 lb / gal
SOLIDS CONTENT			
WEIGHT	ASTM D1353	73 ± 2 %	
VOLUME	Calculated	63 ± 1 %	
FLASH POINT	TCC	7 °C	45 °F
APPLICATION TEMPERATURE			
MATERIAL		24 ± 14 °C	75 ± 25 °F
SURFACE (MINIMUM)		4 °C	40 °F
SERVICE TEMPERATURE[B]			
MAXIMUM		121 °C	250 °F
MINIMUM		-196 °C	-320 °F
TENSILE STRENGTH	ASTM D412	2.6 ± 0.2 MPa	375 ± 25 psi
ELONGATION AT BREAK	ASTM D412	180 ± 25 %	
SHRINKAGE		No visible shrinkage after 14 days	

WORKING TIME @ MATERIAL TEMPERATURE			~ 21 hours @ 13 °C (55° F) ~ 10 hours @ 24 °C (75 °F) ~1.5 hours @ 35 °C (95 °F)
CURE TIME			
TACK FREE			48 hours @ 24° C (75° F)
FULL CURE			14 days @ 24 °C (75° F)
VOLATILE ORGANIC CONTENT (VOC) MAXIMUM LESS WATER AND EXEMPT		317 g / L	2.65 lb / gal
WATER VAPOR PERMEABILITY[C]	ASTM E96 Desiccant Method	0.01 ng / Pa·s·m	0.01 perm-in

[A] Properties subject to change. Consult Pittsburgh Corning LLC.

[B] Service temperature limits are derived from laboratory evaluation of the product. Variations in substrates, loading conditions, or other external factors may further limit service temperature. Always consult Pittsburgh Corning LLC FOAMGLAS® Insulation System Specification for suitability for use recommendations for a specific application.

[C] Material tested as cured disk.

6. Limitations

- DO NOT apply over wet or contaminated substrates or when inclement weather is imminent.

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