PITTWRAP® SS JACKETING

Product Datasheet

1. Description and Area of Application

PITTWRAP® SS (Self Seal) jacketing is a 1.78 mm (70 mil) thick self-sealing, modified bituminous membrane for protecting underground FOAMGLAS® insulation systems with outer surface temperatures at or below 77 °C (170 °F). It is recommended for underground / direct buried pipelines including shallow buried water service pipelines, above ambient service pipelines, commercial chilled water and cold service applications. Manual pressure seals the jacketing without the use of a torch or heater in most circumstances. PITTWRAP® SS jacketing may be factory or field applied to the insulation.

PITTWRAP® SS jacketing consists of a polymer modified bituminous compound reinforced with a glass fabric and a 0.03 mm (1 mil) aluminum top film and release paper backing.

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 a particular application, consult Pittsburgh Corning LLC.

All underground insulation systems must be designed with proper engineering details to control expansion / contraction, anchoring, etc. A qualified engineer should be consulted for design.

Substrate Preparation

All surfaces should be dry and free of dust, loose scale, oil, grease and frost.

Insulation should be secured to the pipe with fiberglass reinforced strapping tape, 2 pieces per section overlapped by at least 50%.

Cellular Glass Application Guidelines

PITTWRAP® SS jacketing may be shop or field-applied. See supplemental application instructions at the end of this document.

A cigarette-wrap application is used around FOAMGLAS® insulation with butt strips over the end joints.

When temperature is below 10 °C (50 °F), or if jacketing surfaces is dusty, apply a thin coat of PITTWRAP® SS Primer (FI-155) by brush to the bituminous surface in the overlap area. If temperature is below

10 °C (50 °F) and surfaces are clean, the overlap may be warmed with a heater or torch, taking care not to burn through the jacket.

Fittings or changes in thickness

With any jacketing or coating, any change in insulation thickness, such as screwed ell covers, pipe step downs, etc., should be field tapered to make a smooth transition. These transitions should be treated as a fitting, using PITTCOTE® 300E coating (FI-120e) and PC® Fabric 79 (FI-159) polyester fabric or PC® 150 mesh (FI-332).

Fittings may be covered with jacketing cut in shapes to fit, or with PITTCOTE® 300E coating and fabrics referenced above. Coating should be extended over the over the aluminum surface of the jacketing by 100 mm (4 in.). Apply coating and fabric over the fitting.

Clean up and Disposal

Dispose of excess jacketing, release film and packaging in accordance with local, state and federal regulations.

3. Type of Delivery and Storage

- Rolls: 60 cm x 15.24 m (23.5 in. x 50 ft.), Gross weight approx. 19.5 kg (43 lb)
- Butt Strips: 10.2 cm x 15.24 m (4 in. x 50 ft.), Gross weight approx. 5.9 kg (13 lb)
- DO NOT stored where it may come in contact with hydrocarbon solvents such as petroleum spirit and diesel oil or other organic solvents.
- Stored on end, under cover and protected from mechanical damage.
- Store in a well-ventilated room and at a maximum temperature of 38 °C (100 °F).
- Store in a heated area for cold weather application.
- Consult Safety Datasheet for additional storage and handling information.

4. Coverage

Standard application of jacketing to FOAMGLAS® insulation:

The required amount of jacketing for a section of insulated pipe can be calculated as follows:

- Required Jacketing Area (A)

  Equation 1, SI, metric Units $A = [\pi \times (d + 2\,t) + 50] \div 1000] \times l$

  Equation 2, Imperial Units $A = [\pi \times (d + 2\,t) + 2] \div 12] \times l$

  Where d = actual pipe diameter in mm or inches, t = insulation thickness in mm or inches, and l = pipe length in m or ft.

Figures DO NOT include losses.

5. Typical Properties

PROPERTY [A]	METHOD	SI	ENGLISH
COLOR		Rose	
THICKNESS, TOTAL FOIL + BITUMEN – RELEASE FILM		1.78 mm	70 mil
WEIGHT (NOMINAL), FOIL + BITUMEN – RELEASE FILM		~ 2.35 kg / m^2	~ 0.48 lb / ft^2
APPLICATION TEMPERATURE,			
MINIMUM		10 °C	50 °F
MINIMUM W/PRIMER		- 7 °C	20 °F
SERVICE TEMPERATURE [B]			
MAXIMUM		77 °C	170 °F
MINIMUM		-32 °C	-25 °F
CHEMICAL RESISTANCE			
WATER		Good	
ALKALI		Good	
ACID		Good	
PETROLEUM SOLVENT		Poor	
REACTION TO FIRE		Combustible	
LAP ADHESION	ASTM D882	≥ 172 kPa	≥ 25 psi
TENSILE STRENGTH	ASTM D882	≥ 7.9 MPa	≥ 1150 psi
PUNCTURE RESISTANCE	ASTM E154	90 ± 0.8 kgf	199 ± 1.8 lbf
PEARMEANCE	ASTM E96	1.7 ng / Pa·s·m^2	0.03 perm
WATER VAPOR PERMEABILITY	ASTM E96 (Wet Cup)	0.003 ng / Pa·s·m	0.002 perm-in

[A] Properties are 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.

6. Limitations

- DO NOT use over combustible insulations or install where open flames are not permitted
- DO NOT use above ground without a metal jacket.
- DO NOT use where jacketing will be exposed to solvents that will dissolve asphalt.
- Not intended for indoor use.
- ALWAYS observe practical precautions when backfilling so not to puncture jacket.

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Pittsburgh Corning LLC
One Owens Corning Parkway
Toledo, OH 43659 USA

For web-based Sales and Technical Service inquiries, please visit www.foamglas.com.

To contact by phone or email:

Industrial & Commercial Sales

Americas
+1 724 327 6100
+1 800 327 6126
Asia-Pacific
Singapore: + 65 9635 9184
China: +86 (0) 21 6140 8002
Japan: + 81 50 7554 0248
Europe, Middle East & Africa
+32 13 661 721

Technical Services

Americas & Asia Pacific
+1 800 327 6126
foamglastechnical@owenscorning.com
Europe, Middle East & Africa
+32 13 611 468
Industrytechnical@foamglas.com

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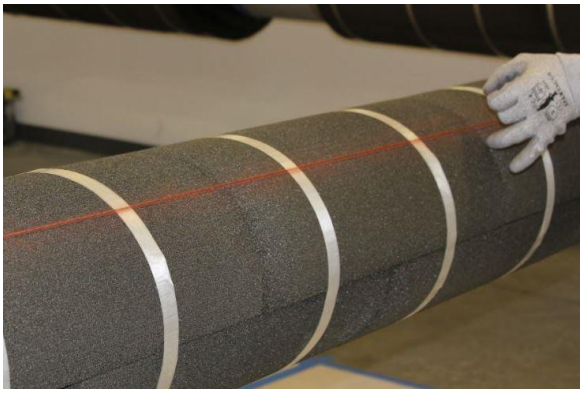
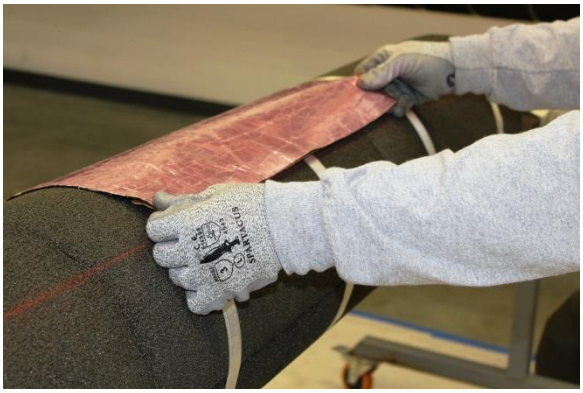
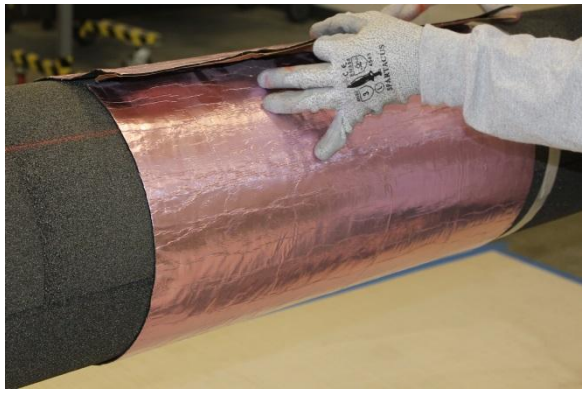
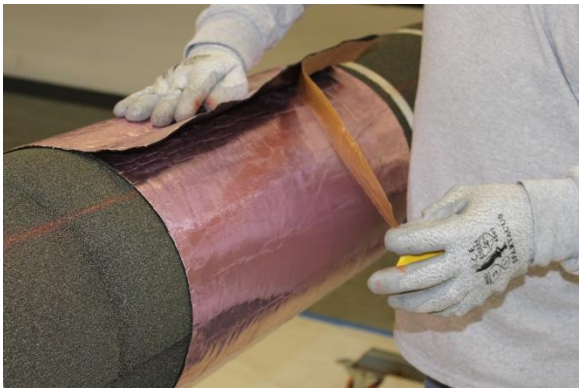
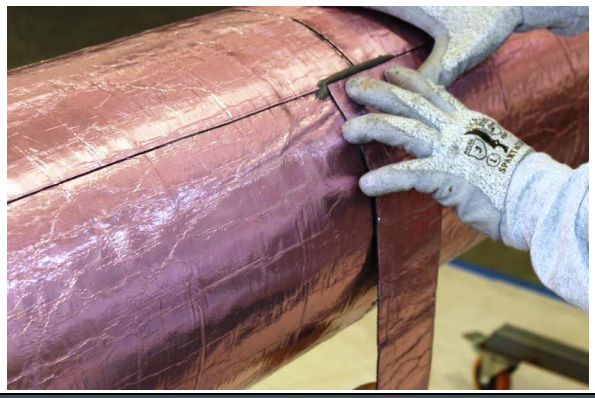
FOAMGLAS®

Supplemental Instructions for Field-Applied Jacketing

STEP 1	STEP 2
After FOAMGLAS® insulation is installed; Strike a horizontal line along the insulation convenient for starting jacket positioning and to insure a uniform lap line.	Cut a length of jacketing to provide at least a 50 mm (2 in.) overlap at the longitudinal seam.
	
STEP 3	**STEP 4**
Slit the release film at this overlap, taking care not to slit jacket. Remove release film except at the overlap. Dirt and dust must be kept off jacketing	Starting on the chalk line, press the surface of the jacketing half way around the FOAMGLAS® insulation.
	

STEP 5	STEP 6
Smooth the remaining jacket into place working around the pipe cover. Avoid entrapment of air bubbles. Once the jacketing is completely around the insulation, lift the overlap and pass the opposite end beneath the overlap.	Remove the remaining release paper on the overlap and press tightly to seal the longitudinal joint.
	
STEP 7	**STEP 8**
Cut another length of jacketing and slit the release film as shown in steps one and two. Align this piece of jacketing along the chalk line butting it against the previously installed jacketing section.	Succeeding sections are applied in the same matter outlined. Succeeding sections are placed to butt against the previous section of jacket. All longitudinal joints should be started on the same line to facilitate placement of butt strips.
	

STEP 9	STEP 10
Apply a bead of PITTSEAL® 444Ns sealant (FI-164s) along the edge of the longitudinal joint the width of the butt strip.	Cut a length of butt strip at least 64 mm (2.5 in.) longer than the outer circumference of the jacketed pipe cover. Remove the release paper from the end of the butt strip and embed the end in the sealant.
	
STEP 11	**STEP 12**
Smooth the butt strip into place working down and under the cover, then up and over, finally overlapping the embedded end.	After application, inspect all joints, smooth and re-press any loose areas. Use primer or heat the same as for applying the jacket, if required.