

# PITWRAP® CW PLUS JACKETING

## Product Datasheet

### 1. Description and Area of Application

PITWRAP® CW PLUS jacketing is a 1.27 mm (50 mil) thick self-sealing, modified bituminous membrane for protecting underground FOAMGLAS® insulation systems on chilled water and hot water service pipelines. Manual pressure seals the jacketing without the use of a torch or heater. PITWRAP® CW PLUS jacketing may be field applied or factory applied on the prefabricated insulation components.

PITWRAP® CW PLUS jacketing consists of a polymer modified bituminous compound reinforced with a glass fabric and a 0.0254 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.

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

PITWRAP® CW PLUS 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 PITWRAP® 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: 69.4 cm x 22.7 m (23.5 in. x 75 ft), Weight approx. 21.7 kg (48 lb).
- Butt Strips: 10.2 cm x 22.7 m (4 in. x 75 ft), 4 per box, Weight approx. 18.1 kg (40 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 <sup>A</sup>	METHOD	SI	ENGLISH
COLOR			Silver
THICKNESS, TOTAL FOIL + BITUMEN – RELEASE FILM		1.27 mm	50 mil
WEIGHT (NOMINAL) FOIL + BITUMEN – RELEASE FILM		~ 1.56 kg / m <sup>2</sup>	~ 0.32 lb / ft <sup>2</sup>
APPLICATION TEMPERATURE, MINIMUM		10 °C	50 °F
MINIMUM W/PRIMER		- 7 °C	20 °F
SERVICE TEMPERATURE <sup>B</sup> MAXIMUM		60 °C	140 °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	≥ 46 kPa	57 ± 6 psi
TENSILE STRENGTH	ASTM D882	≥ 12.4 MPa	≥ 1800 psi
PUNCTURE RESISTANCE	ASTM E154	792 ± 22 N	178 ± 5 lbf
PERMEANCE	ASTM E96	≤ 0.06 ng/Pa·s·m <sup>2</sup>	≤0.001 perm

<sup>A</sup> Properties are subject to change. Consult Pittsburgh Corning.

<sup>B</sup> 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 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 or other UV resistant 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.
- This material is designed for application by trained professional using proper equipment, and is not intended for sale to the general public.

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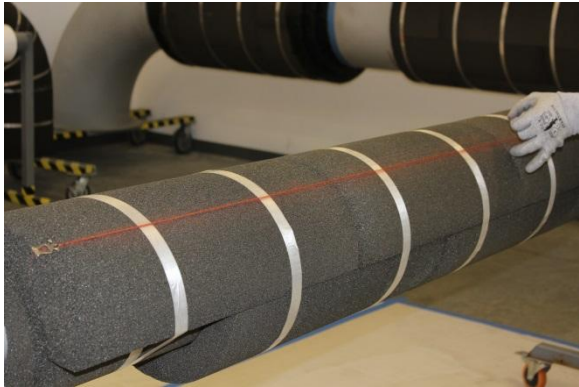



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Supplemental Instructions for Field-Applied Jacketing

<p><b>STEP 1</b></p>	<p><b>STEP 2</b></p>
<p>After FOAMGLAS® insulation is installed; Strike a horizontal line along the insulation convenient for starting jacket positioning and to insure a uniform lap line.</p>	<p>Cut a length of jacketing to provide at least a 50 mm (2 in.) overlap at the longitudinal seam.</p>
	
<p><b>STEP 3</b></p>	<p><b>STEP 4</b></p>
<p>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</p>	<p>Starting on the chalk line, press the surface of the jacketing half way around the FOAMGLAS® insulation.</p>
	

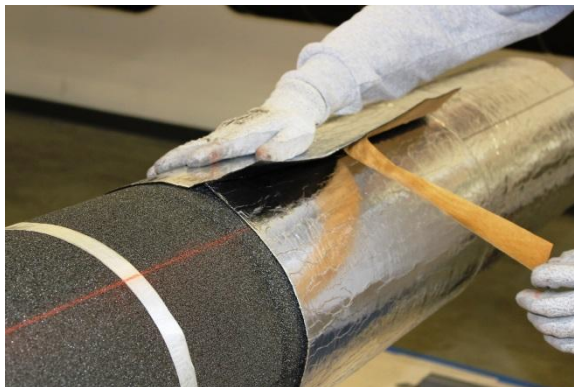
**STEP 5**

Smooth the remaining jacket into place working around the pipe insulation. Avoid entrapment of air bubbles. Once the jacketing is completely around the insulation, lift the overlap and pass the opposite end beneath the overlap.



**STEP 6**

Remove the remaining release paper on the overlap and press tightly to seal the longitudinal joint.



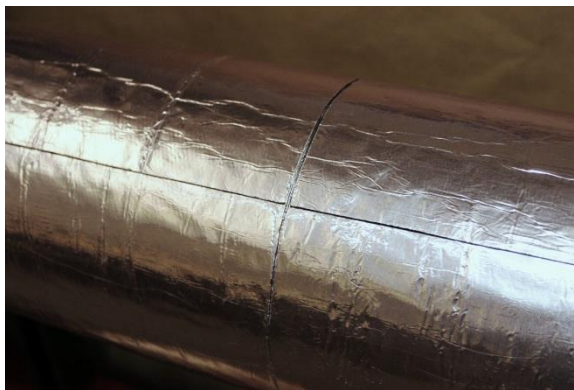
**STEP 7**

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.



**STEP 8**

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**

Apply a bead of PITTSEAL® 444Ns sealant (FI-164s) along the edge of the longitudinal joint the width of the butt strip.



**STEP 10**

Cut a length of butt strip at least 64 mm (2.5 in.) longer than the outer circumference of the jacketed pipe insulation. Remove the release paper from the end of the butt strip and embed the end in the sealant.



**STEP 11**

Smooth the butt strip into place working down and under the jacket and insulation, then up and over, finally overlapping the embedded end.



**STEP 12**

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.

