

FOAMGLAS® CELLULAR GLASS INSULATION IS PROVEN VALUE

PRODUCT VALUES

FOAMGLAS® cellular glass insulation is the result of more than a half-century of proven performance and continual product improvement by Pittsburgh Corning Corporation, the developer of cellular glass insulation.

Selection and Experience

FOAMGLAS® insulation is comprised of a family of seven material grades providing the precise properties and performance for your specific applications, from -450°F to +900°F (-268°C to +482°C). Billions of square feet and lineal feet have been installed throughout the world in thousands of industries and operations.

Worldwide Availability

With plants in the U.S. and Europe, Pittsburgh Corning Corporation and Pittsburgh Corning Europe can uniquely provide consistency of supply, a millions-of-board-feet inventory and ready availability.

Accessory Products

In addition, Pittsburgh Corning offers a full line of complementary accessory products, each laboratory- and service-proven to provide maximum performance specifically with FOAMGLAS® cellular glass insulation.

SERVICE VALUES

Equally critical to product performance is the added value of Pittsburgh Corning's support services to ensure that the product is smoothly and properly incorporated into the customer's requirements, project and facility.

Technical Service

Pittsburgh Corning's Technical Service Staff provides product, application and materials testing—standardized and customized specifications—on-site customer assistance and installation guidance.

Energy Analysis Service

To simplify your insulation specification process, Pittsburgh Corning offers an Energy/Economic Analysis Service, resulting in our exclusive Energy Analysis Report (EAR). Developed with customer-specific data subjected to computer analysis and other calculations, EARs assist systems designers in specifying the proper insulation thicknesses for above or below ground pipelines and for storage vessels, tanks and other equipment. Typical reports present heat flow rates, interface and surface temperatures, and insulation thicknesses required to prevent condensation.

Specialized reports are available for:

- Underground pipelines
- Predicting outlet temperatures

- Estimating exit pressure and quality of steam for long steamlines
- Determining the time for water and sewage to freeze in pipelines
- Calculating heat flow and interface temperatures for tank base systems.

Requests for EARs can be made through your local Pittsburgh Corning representative, or the Energy Analysis Department at our Pittsburgh headquarters by calling 1-800-359-8433.

Sales Support

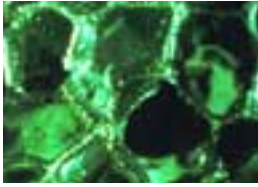
A system of local sales representatives and distributors are available for consultation and problem resolution. Training videos, CD-ROM presentations and literature, are also available from your local sales personnel. Literature is also available electronically on our website at: www.foamglasinsulation.com.

Industry Support

Pittsburgh Corning supports technical and trade organizations, including ASTM, CSI, IDEA, ASHRAE, NACE, NIA, UL and FM. The result is an ever-growing series of application and regional certifications and approvals (see page 18) that provide you with complete assurance of materials compliance for a variety of installations. Pittsburgh Corning is also an ISO 9002 company with registered production processes regarding quality control.



FOAMGLAS® insulation's cellular glass structure ensures constant thermal efficiency.



A UNIQUE COMBINATION OF PROPERTIES CREATES THE INSULATION OF CHOICE

SUPERIOR PHYSICAL ATTRIBUTES

FOAMGLAS® insulation is a light-weight, rigid insulating material composed of millions of completely sealed glass cells, each an insulating space. This all-glass, closed-cell structure provides an unmatched combination of physical properties ideal for piping and equipment above ground, as well as underground, indoors or outdoors, at operating temperatures from -450°F to +900°F (-268°C to +482°C):

- Resistant to water in both liquid and vapor forms
- Noncorrosive
- Noncombustible/nonabsorbent of combustible liquids
- Resistant to most industrial reagents
- Dimensionally stable under a variety of temperature and humidity conditions
- Superior compressive strength
- Resistant to vermin, microbes and mold
- Fiber, CFC and HCFC free.

MANY UNIQUE BENEFITS

FOAMGLAS® insulation's diversity of properties results in an equally unmatched combination of benefits, proven over *decades of in-the-field performance*:

- Constant, long-term energy efficiency provides low, predictable energy costs
- Enhanced process control allows improved, consistent product quality
- Minimal maintenance/repair/replacement of insulation or facility infrastructure reduces life cycle costs
- Fire resistance protects the insulated equipment, and helps minimize subsequent plant shutdown time

- Virtual elimination of the potential for auto-ignition from absorbed combustible liquids or fire from condensed low-temperature gases
- Proven durability for underground and exterior installations
- Manufacturing of FOAMGLAS® insulation puts no stress on the atmosphere's ozone layer ... while its long-term thermal efficiencies reduce energy demand and the effects of burning fossil fuels on the environment.

WIDE-RANGING, SERVICE-PROVEN APPLICATIONS

FOAMGLAS® insulation has over 50 years of applications that have stood the test of time with a record untouched by any other insulation product on the market:

- Cryogenic and low-temperature pipelines, vessels, tanks and equipment
- Medium- and high-temperature pipelines and equipment

- Hot oil/asphalt storage tanks
- Heat transfer fluid systems
- Hydrocarbon and sulfur processing systems
- Underground steam and chilled water piping
- Chilled and hot water service lines
- Off-shore platforms
- Above ground steam lines
- Pulp/paper mills and water treatment plants
- Food processing/cold storage facilities and breweries
- Cyclic and dual temperature applications
- Heat traced pipes and equipment.

For each of these applications and for all special conditions, FOAMGLAS® insulation is fabricated in a wide range of shapes, thicknesses and sizes to meet virtually all industrial requirements. Pittsburgh Corning's many accessory products are designed to produce the maximum insulation system performance.



FOAMGLAS® insulation—in 2" (50.8 mm)-thick, 12" x 18" (304.8 mm x 457.2 mm) blocks—being applied to a petroleum storage tank at a West Coast refinery. Industrial applications include pipelines as well as vessels of all types.

PROPERTIES AND CERTIFICATIONS OF FOAMGLAS® INSULATION

CERTIFICATIONS* AND APPROVALS

FOAMGLAS® insulation can be certified to conform to the requirements of:

- ASTM C 552-00 “Specification for Cellular Glass Thermal Insulation”
- Canadian Standard CAN/CGSB51.38M
- Military Specification MIL-I-24244C, “Insulation Materials, Thermal, with Special Corrosion and Chloride Requirement”
- Nuclear Regulatory Guide 1.36, ASTM C 795, C 692, C 871
- Flame Spread 0, Smoke Developed 0 (UL 723, ASTM E 84), R2844; also classified by UL of Canada, CR1957
- ISO 9002
- Through-Penetration Firestop Systems UL 1479 System Nos. CAJ5060, CAJ5069, CAJ5103, CAJ5120 and System Nos. WJ5011, WJ5015, WJ5038, WL5038, WL5045, WL5046, WL5051, WL5083
- Board of Steamship Inspection (Canada) Certificate of Approval No. 100/F1-98
- General Services Administration, PBS (PCD): 15250, Public Building Service Guide Specification, “Thermal Insulation (Mechanical)”
- New York City Dept. of Bldgs., MEA #138-81-M FOAMGLAS® insulation for piping, equipment, walls and ceilings
- New York State Uniform Fire Prevention and Building Code Dept. of State (DOS) 07200-890201-2013
- City of Los Angeles General Approval RR22534

FOAMGLAS® insulation is identified by Federal Supply Code for Manufacturers (FSCM 08869)

***Written request for certificate of compliance must accompany order.**

Physical and Thermal Properties of FOAMGLAS® Insulation

PHYSICAL PROPERTIES	USA	METRIC	SI	ASTM TEST
Absorption of Moisture (% By Volume)	0.2%			C 240
	Only moisture retained is that adhering to surface cells after immersion.			
Water-Vapor Permeability	0.00 perm-in	0.00 perm-cm		E 96†
Acid Resistance	Impervious to common acids and their fumes except hydrofluoric acid.			
Capillarity	None	None	None	
Combustibility	Noncombustible, will not burn.			E 136
Composition	Pure glass, totally inorganic, contains no binder.			
Compressive Strength Average, for Standard Material** (+/-10%)	90 psi	6.3 kg/cm ²	620 kPa	C 165, C 240, C 552-00
	Strength for flat surfaces capped with hot asphalt; different capping will give different values. For curved surfaces and pipe supports, contact PCC.			
Density, Average	7.5 lb/ft ³	120 kg/m ³	120 kg/m ³	C 303
Dimensional Stability	Excellent—does not shrink, swell or warp.			
Flexural Strength, Block Average	70 psi	4.9 kg/cm ²	480 kPa	C 203, C 240
Hygroscopicity	No increase in weight at 90% relative humidity.			
Linear Coefficient of Thermal Expansion (25° to 300°C)	5.0 x 10 ⁻⁶ /°F	9.0 x 10 ⁻⁶ /°C	9.0 x 10 ⁻⁶ /°K	E 228
Maximum Service Temperature	+900°F	+482°C	755°K	
Modulus of Elasticity, Approx.	1.3 x 10 ⁵ psi	9,300 kg/cm ²	900 MPa	C 623
Shear Strength	No reliable recognized test method for determination of the shear strength for cellular glass exists at this time. Where shear strength is a design criterion, PCC should be contacted for recommendations.			
Thermal Conductivity	Btu-in/hr-ft ² -°F 0.29 @ 75°F 0.28 @ 50°F	kcal/m-h ² -°C 0.033 @ 0°C 0.034 @ 10°C	W/mK 0.039 @ 0°C 0.040 @ 10°C	C 177, C 518
Specific Heat	0.20 Btu/lb-°F	0.20 kcal/kg-°C	0.84 kJ/kg-°K	
Thermal Diffusivity	0.016 ft ² /hr	0.0042 cm ² /sec	4.2 x 10 ⁻⁷ m ² /sec	

Note: Properties given at 75°F unless otherwise specified. Properties may vary with temperature. These values are average or typical values recommended for design purposes, and are not intended as specification or limit values.

† E 96 Wet Cup Method/Procedure B

Physical Properties of FOAMGLAS® HLB Cellular Glass Insulation

The following is a summary of the acceptance values for lot average compressive strength as defined in the Quality Assurance Specifications.

DENSITY AND COMPRESSIVE STRENGTH								
Grade of FOAMGLAS® HLB Insulation	Nominal Lot Avg. Density		Compressive Strength (Tested According to ASTM C 165/C 240)					
			Average			Lower Spec. Limit		
	kg/m ²	pcf	N/mm ²	psi	kg/cm ²	N/mm ²	psi	kg/cm ²
HLB 800	120	7.5	0.80	116	8.12	0.55	80	5.6
HLB 1000	130	8.1	1.00	145	10.15	0.69	100	7.0
HLB 1200	140	8.7	1.20	174	12.18	0.83	120	8.4
HLB 1600	160	10	1.60	232	16.24	1.10	160	11.2

Note: 0.8 N/mm² = 800 kPa

GENERAL SPECIFICATIONS

This specification is offered as a guide for the purpose described herein and should be employed at the discretion of the user. **These specifications are written specifically for FOAMGLAS® cellular glass insulation. No warranty of procedures, either expressed or implied, is intended.** Before using this specification, contact Pittsburgh Corning Corporation to ensure that current details and revisions are incorporated. Pittsburgh Corning Corporation will review plans and specifications of users at no charge to assist in ensuring that proper procedures and materials are used. **However, the ultimate design and installation are the responsibility of the engineer or architect.**

GENERAL NOTES

1. These specifications are general in nature. For specific applications, contact your Pittsburgh Corning representative as listed on the back cover. The final application procedure is the responsibility of the project designer and/or owner. **No warranty of any nature, either expressed or implied, is made as to application or installation.**

2. Prior to application of insulation, surfaces to be insulated must be dry and clean. The use of primers or corrosion-resistant coatings is at the discretion of the owner or the design engineer. All testing, such as hydrostatic, X-ray, etc., should be completed prior to the application of the insulation.

3. The proper insulation thickness should be determined through calculations based on operating, environmental, and any other special conditions. Contact your Pittsburgh Corning representative if calculations are desired.

4. Multiple layers may be required:

- When the total insulation thickness required is greater than the maximum single-layer thickness available.
- To provide an outer layer that falls entirely within the applicable temperature range of a sealant, if one is used.
- To eliminate through joints on piping or equipment operating at extreme temperatures.

5. The use of a bore-coating on the inner surface of the insulation in contact with the pipe may be required if the piping undergoes frequent temperature cycles or if pronounced vibration is present. Contact your Pittsburgh Corning representative for bore-coating recommendations.

6. Ambient temperature is to be defined by the design engineer based on job-site conditions.

7. **Precautions.** There are three situations which require precautions. Contact Pittsburgh Corning for proper procedures to overcome these situations.

Direct exposure to:

- Hydrofluoric acid or strong caustics
- Water during freeze-thaw cycling
- Prolonged exposure to condensing steam or boiling water.

TEMPERATURES BELOW -290°F (-179°C)

Because of the highly specialized nature of applying insulation in this temperature range, it is recommended that you contact your Pittsburgh Corning representative for materials and procedures. Of prime concern is that components of such a system be compatible with liquid oxygen.

-290°F TO -60°F (-179°C TO -51°C)

FOAMGLAS® insulation shall be applied in multiple layers with all joints staggered between layers. The number and thickness of layers shall be calculated so that the innermost layer is entirely above -60°F (-51°C). The outermost layer shall have all joints sealed with joint sealant.

Inner layers of piping insulation may be secured with fiber-reinforced tape. The outermost layer of insulation shall be secured with metal bands of appropriate width and thickness, two bands per insulation section.

The finish over the insulation may be either vapor retarder or weather-barrier reinforced mastic, and/or metal jacketing.

The exterior surface of the insulation under metal jacket shall be coated with PITTCOTE® 300 coating to fill the surface cells.

FOAMGLAS® insulation is impermeable to water or water vapor under most conditions, and providing that all joints between insulation sections are properly sealed, no vapor retarder is required. The designer may desire the use of a vapor retarder as a redundant measure.

-60°F (-51°C) TO AMBIENT

FOAMGLAS® insulation may be applied in a single layer where thickness permits. The use of joint sealant is recommended on all systems that operate below ambient temperature for any length of time, and is required on systems that operate at or below 36°F. In cases where the below ambient system is operating at a temperature higher than 36°F, and the outdoor relative humidity is not routinely expected to exceed 50%, the use of a joint sealant is at the discretion of the design engineer.

For securement and finish recommendations, see the above procedures given for -290°F to -60°F (-179°C to -51°C).

The exterior surface of the insulation under metal jacket shall be coated with PITTCOTE® 300 coating to fill the surface cells.

Tanks, spheres, and vessels operating in this temperature range may also be insulated by adhering FOAMGLAS® insulation to curved or flat surfaces using PC® 88 adhesive. This adhesive may also be used as the joint sealant. Contact your Pittsburgh Corning representative for specifications of materials and procedures for this method.

AMBIENT TO 400°F (204°C)

FOAMGLAS® insulation shall be applied in a single layer. No joint sealant is required. Staggering of joints is at the discretion of the owner or the design engineer. Pipe insulation may be secured using fiber-reinforced tape if a metal jacket will be used, or with metal bands if a reinforced weather-barrier mastic will be used.

Insulation on vessels shall be secured using metal bands. For operating temperatures up to 160°F (71°C), PC® 88 adhesive may be used to secure the insulation. Contact your Pittsburgh Corning representative for details concerning the use of PC® 88 adhesive.

The finish over FOAMGLAS® insulation on either piping or vessels may be a reinforced weather-barrier mastic or a metal jacket.

ABOVE 400°F (204°C)

Pittsburgh Corning offers several different procedures for applying FOAMGLAS® insulation to piping and vessels operating above 400°F (204°C). The preferred system is the StrataFab® System. Contact your Pittsburgh Corning representative for recommendations on various alternatives.

STRATAFAB® SYSTEM

-100°F TO 900°F (-73°C TO 482°C)

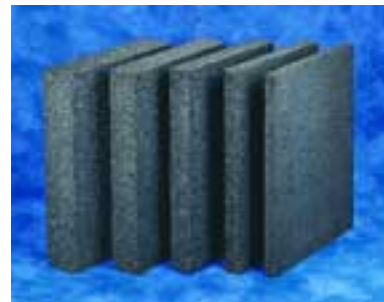
The StrataFab® System shall be applied as a single layer for the temperature range of -60°F to 900°F (-51°C to 482°C). The use of joint sealant is recommended on all systems that operate below ambient temperature for any length of time, and is required on systems that operate at or below 36°F. In cases where the below ambient system is operating at a temperature higher than 36°F, and the outdoor relative humidity is not routinely expected to exceed 50%, the use of a joint sealant is at the discretion of the design engineer. For the temperature range of ambient to 900°F (482°C) no sealant is necessary.

StrataFab® System pipe insulation may be applied using fiber-reinforced tape or metal bands. StrataFab® System insulation for vessels tanks and equipment may be applied with metal bands, weld pins or PC® 88 adhesive, as appropriate for the application. Contact your Pittsburgh Corning Corporation Representative for more information about these systems.

The finish used over the FOAMGLAS® Insulation StrataFab® System may be a weather barrier mastic or metal jacket.

On below-ambient systems, the exterior surface of the insulation under metal jacket shall be coated with PITTCOTE® 300 coating to fill the surface cells.

* For applications from -100°F to -60°F (-73°C to -51°C) refer to the application procedures for FOAMGLAS® insulation in the temperature range of -290°F to -60°F (-179°C to -51°C).



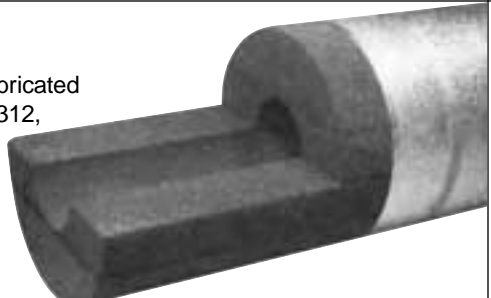


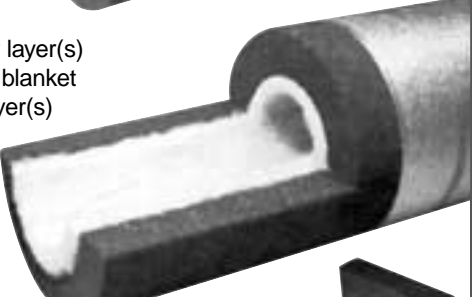

FOAMGLAS® cellular glass insulation is manufactured in 12" x 18" (305 mm x 457 mm) blocks, 1-1/2" (38 mm) through 5" (127 mm) thick, in 1/2" (13 mm) increments and in 18" x 24" (457 mm x 610 mm) blocks 2" (51 mm) through 6" (150 mm) thick in 1/2" (13 mm) increments. For the nearest source of FOAMGLAS® insulation, contact your Pittsburgh Corning representative.



FOAMGLAS® insulation is fabricated into coverings for virtually all standard pipes, valves, fittings, and curved segments, and beveled head and lag segments. Contact your Pittsburgh Corning representative for the nearest fabricating distributor. FOAMGLAS® insulation shapes can be easily modified on-site with ordinary hand tools to insulate valves, tees, flanges, etc.

Pipe Coverings. When requested by the purchaser, FOAMGLAS® pipe and tubing insulation can be fabricated worldwide in accordance with ASTM Standard C 552-00 and C 585. Specifying FOAMGLAS® pipe and tubing insulation in accordance with these standards will ensure proper fit to pipe or tubing and nesting in multiple layer applications. Minimum single layer thickness is 1.5" (38 mm).

FABRICATED FOAMGLAS® INSULATION SYSTEMS

SYSTEM	BENEFITS	RECOMMENDED TEMPERATURE RANGE	LIMITS
<p>Asphalt Bonded Single or multiple layers of FOAMGLAS® insulation fabricated with hot asphalt (ASTM D 312, Type III) in all joints.</p> 	<ul style="list-style-type: none"> Standard, readily available fabrication technique for cold to moderately warm applications. 	<p>-290°F (-179°C) to 250°F (121°C)</p> <p>251°F (122°C) to 400°F (204°C)</p>	<ul style="list-style-type: none"> Do not use at or below temperatures where liquid oxygen (LOX) will form (-297°F/-183°C). When above ground, recommended only in well ventilated areas. Bonding adhesive softens and may smoke in contact with hot surfaces above 125°F (52°C). Where stainless steel stress corrosion potential exists, contact your PCC representative.
<p>HYDROCAL® B-11* Bonded Single or multiple layers of FOAMGLAS® insulation fabricated with a special inorganic adhesive.</p> 	<ul style="list-style-type: none"> Fabrication technique allows usage over broadest temperature range. 	<p>-450°F (-268°C) to Ambient</p> <p>Ambient to 900°F (482°C)</p>	<ul style="list-style-type: none"> Joint zone is permeable to water vapor below ambient. Use a double layer system, seal joints of outer layer with PITTSEAL® 444N, cover with a vapor retarder finish. Use a double layer system at temperatures above 400°F (204°C). Where stainless steel stress corrosion potential exists, contact your PCC representative.
<p>StrataFab® System A patented method of fabricating FOAMGLAS® insulation by bonding blocks together with a high-temperature-resistant, flexible adhesive to create a uniform, multi-layered stack from which are cut the desired insulation shapes.</p> 	<ul style="list-style-type: none"> Minimal breakage during shipment and installation. Can be installed directly on hot surfaces. Provides excellent control of stress relief cracking. Wide range of thickness eliminates need for double layering. 	<p>-100°F (-73°C) to Ambient</p> <p>Ambient to 900°F (482°C)</p>	<ul style="list-style-type: none"> Joint zone is permeable to water vapor below ambient. Use a double layer system, seal joints of outer layer with PITTSEAL® 444N, cover with a vapor retarder finish. When used in a tunnel, vault, or other confined air space, ventilation is recommended. Bonding adhesive may smoke in contact with hot surfaces above 125°F (52°C). See MSDS for safe handling and use.
<p>Composite System Insulation consisting of inner layer(s) of high-density fibrous glass blanket or mineral wool and outer layer(s) of FOAMGLAS® insulation.</p> 	<ul style="list-style-type: none"> Fabrication technique allows usage on systems: <ul style="list-style-type: none"> undergoing continuous thermal cycling. undergoing excessive vibration. operating above 900°F (482°C). 	<p>401°F (205°C) to 1200°F (649°C)</p>	<ul style="list-style-type: none"> Not for service on systems containing combustible liquids.
<p>Advantage® System A method of fabricating FOAMGLAS® insulation by bonding segments or lags of insulation to a flexible facing with special adhesives.</p> 	<ul style="list-style-type: none"> Provides excellent control of stress relief cracking Can be supplied with jacketing pre-applied. Shipped flat for less damage, lower shipping costs. Supplied in 2' sections; other sizes available upon request. 	<p>Ambient to 900°F (482°C)</p>	<ul style="list-style-type: none"> Organic facing adhesive may smoke in contact with hot surfaces.

* A product of U.S. Gypsum Co.



FOAMGLAS® insulation was installed as part of a composite insulation system. It incorporates a one-inch layer of fibrous glass felt material directly around the pipe, covered with FOAMGLAS® insulation.



StrataFab® sections were installed in succession and butted against one another with PITTWRAP® butt stripes at the interfaces, and heat sealed.

TYPICAL ABOVE GROUND INSTALLATION DETAILS

FIGURE 9: Two-Layer Expansion Contraction Joint

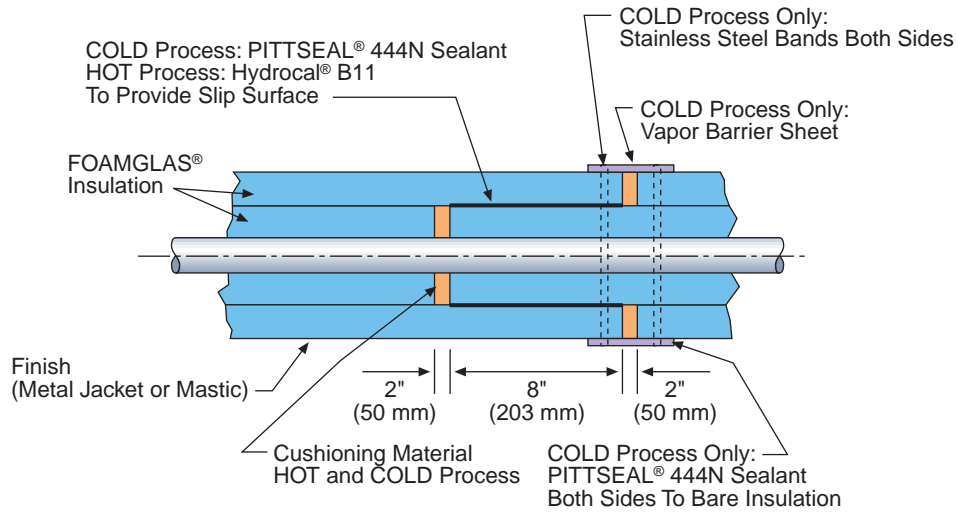
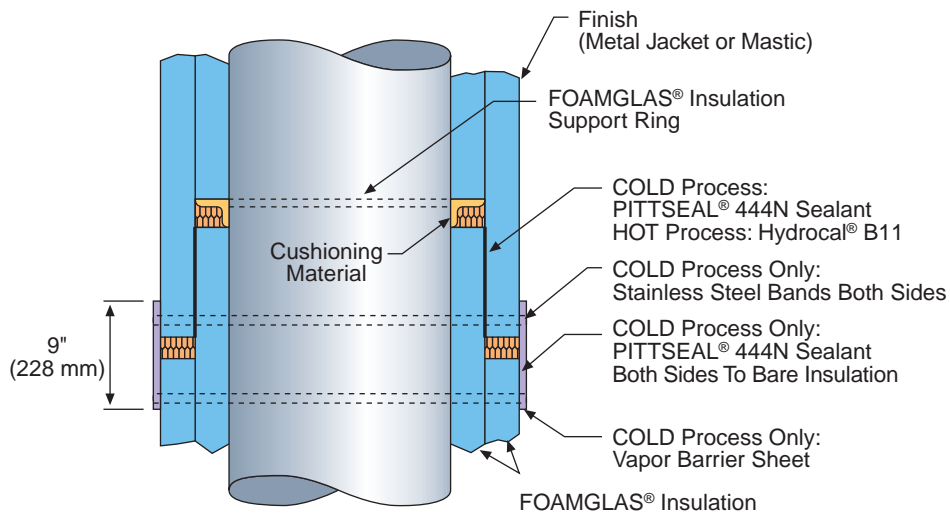
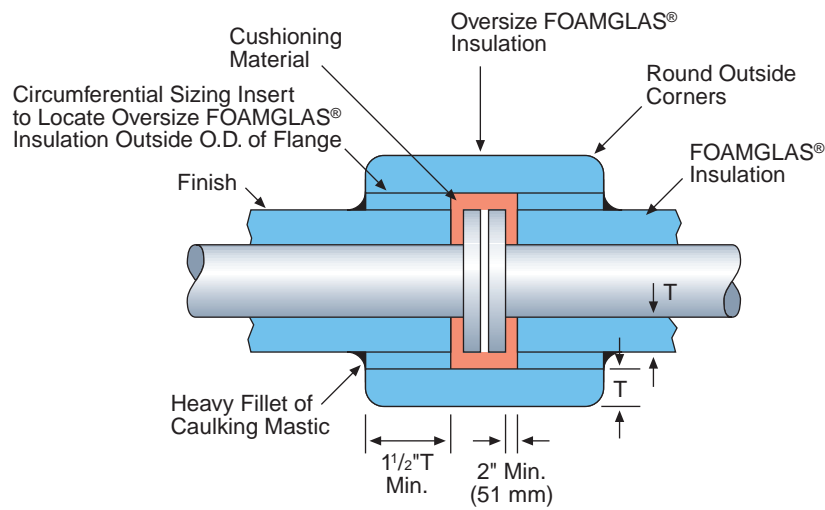
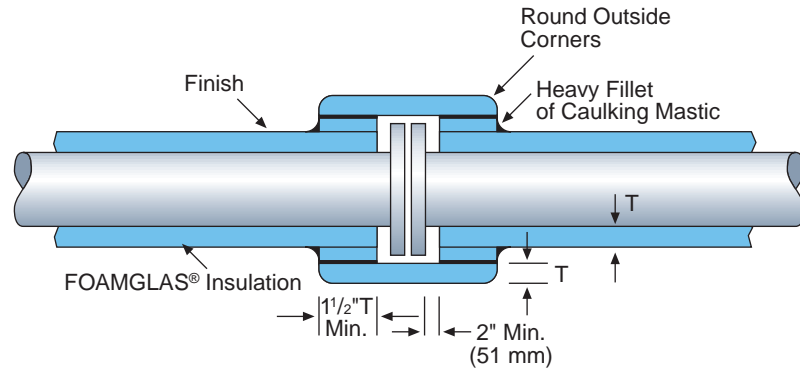
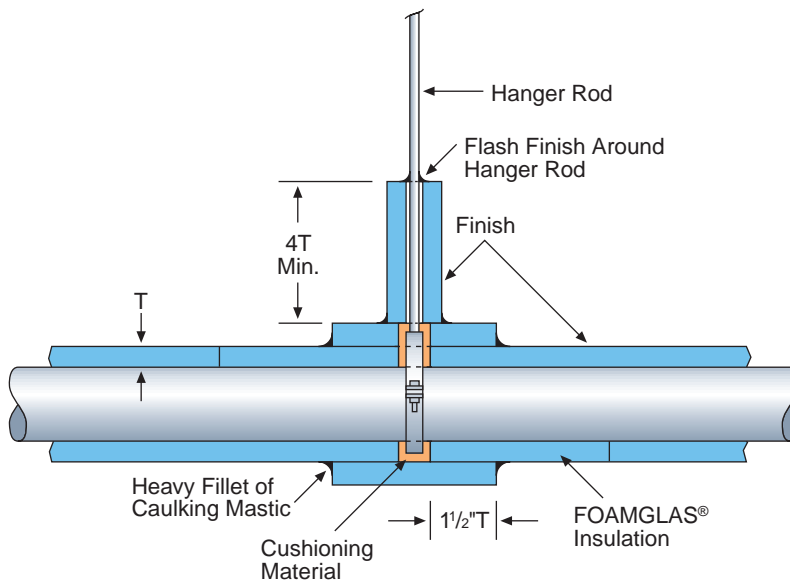


FIGURE 10: Vertical Contraction Joint



Contact your Pittsburgh Corning representative for assistance on other typical details.

FIGURE 11: Insulation on Line Flanges**FIGURE 12: Pipe Hanger Assembly Insulation**

Cushioning material typically TYPE E Glass Fiber Pelt.
 Contact your Pittsburgh Corning representative for assistance on other typical details.

UNDERGROUND SYSTEMS AND PIPE SUPPORTS/HANGERS

Underground Systems

For direct burial of insulated pipes and vessels, FOAMGLAS® insulation is uniquely qualified for such remote, inaccessible applications. In this type of an installation without protective tunnels, high compressive strength in an insulation material is mandatory. When properly designed and installed with FOAMGLAS® insulation incorporating a protective jacketing, neither overburden loads nor above ground traffic are critical design issues. The long-term thermal efficiencies, impermeability, corrosion resistance and extended service life of FOAMGLAS® insulation make it an ideal choice for cost-effective field installed systems.

For design information, refer to Pittsburgh Corning Corporation's *FOAMGLAS® Insulation Systems for Underground Direct Burial Applications* (FI-213).

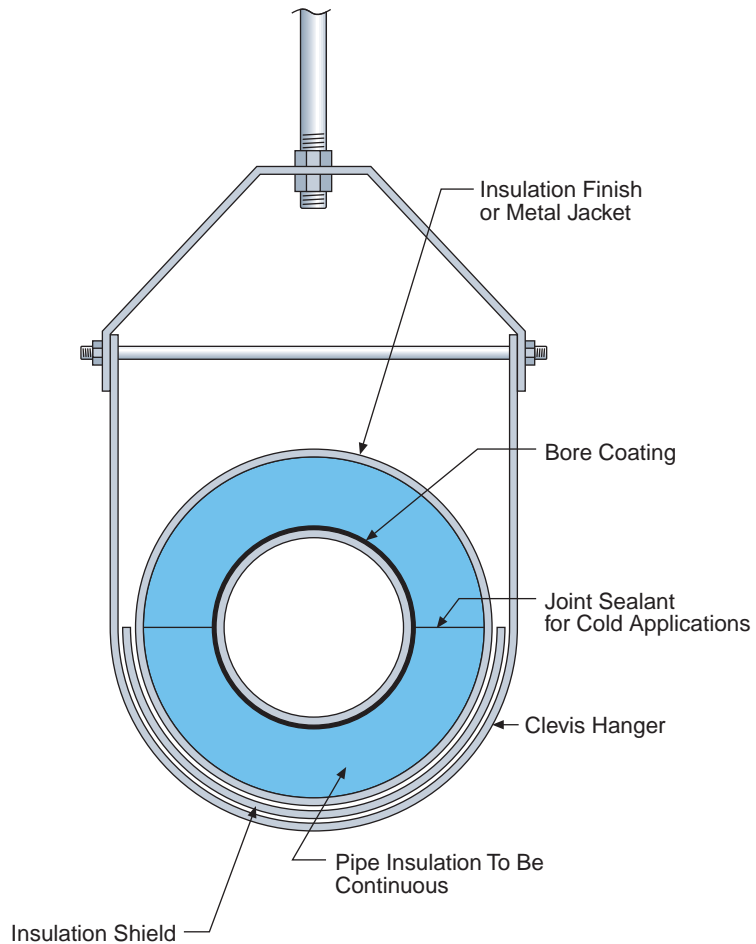
Pipe Supports and Hangers

An insulation that has the ability to be used as a support component eliminates or significantly reduces the potential problems of direct thermal paths in the system. Resistance to settlement or failure of insulated pipe supports also means that pipes remain in their proper alignment, without stresses at nozzles, flanges or fittings. FOAMGLAS® insulation

also supports its own weight without sagging or slumping, making it ideal for vertical pipe runs of all heights (see Figure 13).

For design information, refer to Pittsburgh Corning Corporation's *Guidelines for Using FOAMGLAS® Insulation at Pipe Hangers and Supports* (Specification I-S-83-07-01).

FIGURE 13: Insulated Pipe Hanger (Clevis Type Only)



ACCESSORY MATERIALS

Pittsburgh Corning Corporation offers a line of accessory materials exclusively designed for FOAMGLAS® cellular glass insulation for use in major types of industrial applications.

Pittsburgh Corning Corporation is continually evaluating accessory materials. While these materials are tested and selected especially for use with FOAMGLAS® insulation, the information given here is for general guidance. For the latest recommendations and specific data sheets on the individual accessories, consult your distributor or Pittsburgh Corning Corporation.

Pittsburgh Corning makes no warranties whatsoever, and specifically disclaims warranties of merchantability and fitness for a particular use for these accessory products.

Adhesives

PC® 88 ADHESIVE. A multi-purpose, two component adhesive for adhering FOAMGLAS® insulation to itself or to other porous or non-porous substrates. Air curing is not required. It has excellent wetting characteristics and cures to form a flexible bond that absorbs mechanical and thermal shock. Service temperature range: low to moderate.

PC® RTV 450 SILICONE

ADHESIVE. A one-part, acetoxycure, silicone adhesive/sealant formulated for use at high temperatures. It cures to an elastomeric solid at room temperature. Service temperature range: -50°F to 400°F (-45°C to 204°C).

Sealants

PITTSEAL® 444N SEALANT.

Non-setting butyl sealant used for sealing joints in FOAMGLAS® insulation systems, and to seal protrusions and metal jacket laps. Stainless steel compatible. Service temperature range: low to moderate.

PITTSEAL® 727 SEALANT.

A specially formulated styrene-butadiene rubber sealant used for sealing joints in FOAMGLAS® insulation systems, and to seal protrusions and metal jacket laps. Stainless steel compatible. Preferred for chilled water applications.

Coatings

PITTCOTE® 300 COATING.

Vapor and weather barrier asphalt coating especially formulated for use with FOAMGLAS® insulation. Service temperature range: low to moderate.

PITTCOTE® 404 COATING.

A highly flexible acrylic latex coating used with FOAMGLAS® insulation where a superior weather barrier coating is required. Service temperature range: low to moderate.

Fabric

PC® FABRIC 79. An open mesh synthetic fabric for reinforcing PITTCOTE® 404 or PITTCOTE® 300 coating over FOAMGLAS® insulation. Service temperature range: low to moderate.

Jacketing

PITTWRAP® jacketing is a 125 mil (3.2 mm) thick heat-sealable, multi-ply laminate for protecting underground FOAMGLAS® systems with outer surface temperatures below 190°F (87.7°C).

PITTWRAP® jacketing consists of three layers of a polymer-modified,

bituminous compound separated by glass reinforcement and aluminum foil. An outer layer of polyester film is laminated to the bituminous compound. Release paper prevents sticking in the roll before use. PITTWRAP® jacketing may also be factory-applied on the insulation.

PITTWRAP® SS jacketing is a 70 mil (1.8 mm) thick self-sealing, modified bituminous membrane for protecting underground FOAMGLAS® insulation systems with outer surface temperatures below 170°F (76.7°C). Manual pressure seals the jacketing without the use of a torch or heater. PITTWRAP® SS jacketing may also be factory-applied on the insulation.

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

PITTWRAP® CW Plus jacketing is a 50 mil (1.3 mm) thick self-sealing, modified bituminous membrane for protecting underground FOAMGLAS® insulation systems on chillwater and hot service* pipelines. Manual pressure seals the jacketing without the use of a torch or heater. PITTWRAP® CW Plus jacketing may also be factory-applied on the insulation.

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

PITWRAP® CW30 jacketing is a 30 mil (0.8 mm) thick self-sealing, modified bituminous membrane for protecting above ground FOAMGLAS® insulation systems on chillwater and hot service pipelines. Manual pressure seals the jacketing without the use of a torch or heater. Metal jacketing must be used over the PITWRAP® CW30 jacketing for UV protection. PITWRAP® CW30 jacketing cannot be factory-applied on the insulation.*

PITWRAP® CW30 jacketing consists of a polymer modified bituminous compound reinforced with a 4 mil (0.1 mm) high density cross laminate polyethylene top film and release paper backing.

Miscellaneous

ANTI-ABRASIVE 2A. An oil modified urethane coating designed for use as a bore coating or anti-abrasive coating for FOAMGLAS® insulation. Temperature range: very low to moderate.

HYDROCAL® B-11. A reactive gypsum product which when mixed with water forms an inorganic, non-combustible adhesive or coating for fabricating or bore coating FOAMGLAS® insulation.

PC® 136 ADHESIVE. A reactive cementitious product that is mixed with water to form an inorganic, noncombustible adhesive or coating for fabricating, bore coating or forming HT reinforced FOAMGLAS® insulation shapes.

It is normally used at ambient and above temperatures to 900°F (482°C) where stress-crack corrosion is a concern with stainless steel.

* Do not use in underground tunnels/trenches where jacketing will be exposed to air temperatures in excess of 140°F (60°C).

FOR COMPLETE DATA ON FOAMGLAS® INSULATION SYSTEMS, CONTACT PITTSBURGH CORNING'S MARKETING DEPARTMENT

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