PITTSBURGH CORNING FOAMGLAS® INSULATION

FOAMGLAS® insulation is manufactured by Pittsburgh Corning Corporation in a basic block form. Blocks are fabricated into a wide range of shapes, thicknesses and sizes to satisfy industrial insulation requirements

Industrial Piping, Ducts and Equipment

FOAMGLAS® insulation is a lightweight, rigid material composed of millions of completely sealed glass cells. Each cell is an insulating entity. FOAMGLAS® insulation's all-glass, closed-cell structure provides the following benefits:

- Constant Insulating Efficiency
- Zero Water Vapor Permeability
- Moisture Resistance
- Fire Protection
- Corrosion Resistance
- Long-Term Dimensional Stability
- Vermin Resistance
- CFC and HCFC Free

These benefits result in FOAMGLAS® Insulation Systems that are long-lasting, require little maintenance and are ideal for:

- Low temperature pipe, equipment, tanks and vessels.
- Medium and high temperature pipes and equipment.
- Hot oil and hot asphalt storage tanks.
- Heat transfer fluid systems.
- Hydrocarbon processing systems.
- Chemical processing systems.
- Above ground and underground steam and chilled water piping.
- Commercial piping and ductwork.

Manufactured to comply with ASTM C552-00.

Physical and Thermal Properties of FOAMGLAS® Insulation

Physical Properties	USA	Metric	SI	ASTM Test
Absorption of moisture (% by volume)	0.2% Only moisture retained is that adhering to surface cells after immersion.			C 240
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 Strength for flat surfaces capped with hot asphalt, different capping will give different values. For curved surfaces and pipe supports, contact PCC.	6.3 kg/cm^2	620 kPa	C 165, C 240, C 552-00
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	C203, 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•°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

ISO 9002
KEMA CERTIFICATE
ACCREDITED BY THE DUTCH COUNCIL FOR CERTIFICATION
The manufacture of FOAMGLAS® cellular glass insulation. 10025.03 Sedalia, MO

Totally Impermeable

Long Term Performance.

Because it consists of closed glass cells FOAMGLAS® insulation resists moisture in both liquid and vapor form. When tested in accordance with ASTM E96, it has a permeability rating of 0.00 perm-in.

Noncombustible.

FOAMGLAS® insulation is 100% glass and contains no binders or fillers—it cannot burn. FOAMGLAS® insulation will not absorb flammable liquids or vapors. If a fire does occur, FOAMGLAS® insulation will help contain it.

Corrosion-Resistant.

All-glass FOAMGLAS® insulation is unaffected by common chemicals and by most corrosive plant atmospheres. It does not promote metal corrosion and its moisture resistance will help keep water from reaching equipment and piping.

Dimensionally Stable.

FOAMGLAS® insulation is unaffected by temperature differentials and humidity. It will not swell, warp, shrink or otherwise distort. The insulation system's integrity remains intact.

High Compressive Strength.

FOAMGLAS® insulation can withstand loads which crush most other insulating materials. In a properly designed piping system, FOAMGLAS® insulation eliminates the need for special treatment at pipe cradles. It also provides a firm base for roof membranes, jacketing, or vapor retarders, prolonging their life.

In addition, FOAMGLAS® insulation weighs only 7.5 lb/ft^3. This makes it easy to handle in difficult installations.

Technical Service.

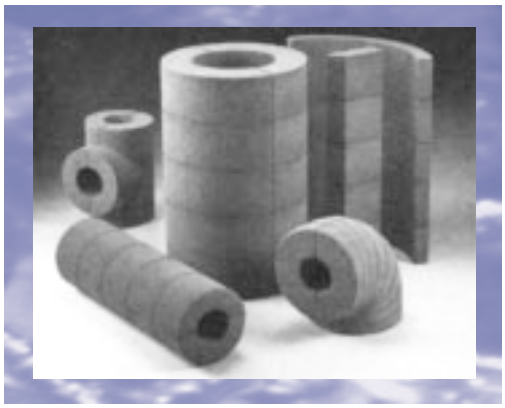
Pittsburgh Corning's Technical Service Staff provides product, application and materials testing—standardized and customized specifications—on-site customer assistance and installation guidance.

INSULATION DECISION TREE™

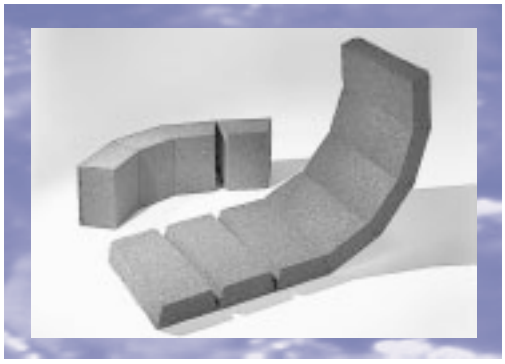
LEARN MORE AT...
www.foamglasinsulation.com

FOAMGLAS® Insulation Systems for Industrial Applications

Pittsburgh Corning has developed insulation systems for a wide range of piping and equipment applications—above ground or underground, indoors or outdoors—at operating temperatures from -450°F to +900°F (-268°C to +482°C).



With the patented StrataFab® System, blocks of FOAMGLAS® insulation are laminated into billets using a special high temperature adhesive. These billets are fabricated into the desired shapes and sizes for pipe, tank, vessels, flanges and valves—practically any industrial insulation application.



The Advantage® System is a method of fabricating FOAMGLAS® insulation by bonding segments or lags of insulation to a flexible facing with special adhesives. Designed specifically for temperature ranges from ambient to 900° F.

PITTSBURGH CORNING FOAMGLAS® INSULATION

Standing the Test of Time®

For complete data on FOAMGLAS® Insulation Systems, contact Pittsburgh Corning at any of the following locations:

Corporate Headquarters
800 Presque Isle Drive
Pittsburgh, PA 15239, U.S.A.
Tel: 800-359-8433 or
724-327-6100
Fax: 724-325-9704

Canada
Edmonton, Alberta
Tel: 780-424-2640
Montreal, Quebec
Tel: 514-866-9100

International
Pittsburgh Corning
International Sales Corporation
Tel: 724-327-6100
Fax: 724-733-4815

Printed in U.S.A.

FG-3 50M Rev. 1/02