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

### PHYSICAL AND THERMAL PROPERTIES OF FOAMGLAS® ONE™ INSULATION

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>SI</th>
<th>ENGLISH</th>
<th>ASTM STANDARD</th>
<th>EUROPEAN STANDARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absorption of Moisture (% by Volume)</td>
<td>0.2%</td>
<td>0.2%</td>
<td>C 240</td>
<td>EN 1609</td>
</tr>
<tr>
<td>Only moisture retained is that adhering to surface cells after immersion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water-Vapor Permeability</td>
<td>0.00 perm-cm</td>
<td>0.00 perm-cm</td>
<td>E96 Wet Cup, Procedure B</td>
<td>EN ISO 10456</td>
</tr>
<tr>
<td>Acid Resistance</td>
<td>Impervious to common acids and their fumes except hydrofluoric acid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capillarity</td>
<td>None</td>
<td>Non</td>
<td></td>
<td>EN 1609</td>
</tr>
<tr>
<td>Compressibility</td>
<td>None</td>
<td>None</td>
<td></td>
<td>EN ISO 1182 (Class A1)</td>
</tr>
<tr>
<td>Composition</td>
<td>Soda-lime silicate glass — inorganic with no fibers or binders.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compressive Strength Average</td>
<td>600 kPa</td>
<td>90 psi</td>
<td>C 165</td>
<td>EN 826</td>
</tr>
<tr>
<td>for Standard Material (+/-10%)</td>
<td></td>
<td></td>
<td>C 240</td>
<td></td>
</tr>
<tr>
<td>C 552</td>
<td></td>
<td></td>
<td>C 177</td>
<td></td>
</tr>
<tr>
<td>Density, Average</td>
<td>120 kg/m³</td>
<td>7.5 lb/ft³</td>
<td>C 303</td>
<td></td>
</tr>
<tr>
<td>Flexural Strength, Block Average</td>
<td>480 kPa</td>
<td>70 psi</td>
<td>C 203</td>
<td>EN 1604</td>
</tr>
<tr>
<td>C 240</td>
<td></td>
<td></td>
<td>C 246</td>
<td></td>
</tr>
<tr>
<td>Dimensional Stability</td>
<td>Excellent — does not shrink, swell or warp.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hygroscopicity</td>
<td>No increase in weight at 90% relative humidity.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linear Coefficient of Thermal Expansion 25°C to 300°C (75°F to 575°F)</td>
<td>9.0 x 10⁻⁴/K</td>
<td>5.0 x 10⁻⁴/°F</td>
<td>E 228</td>
<td>EN 13571</td>
</tr>
<tr>
<td>Maximum Service Temperature</td>
<td>480°C</td>
<td>+900°F</td>
<td></td>
<td>EN 14706</td>
</tr>
<tr>
<td>Modulus of Elasticity, Approx.</td>
<td>900 MPa</td>
<td>1.3 x 10⁵ psi</td>
<td>C 623</td>
<td></td>
</tr>
<tr>
<td>Thermal Conductivity</td>
<td>W/mK</td>
<td>Btu-in/hr-ft²°F</td>
<td>C 177</td>
<td>EN 12667</td>
</tr>
<tr>
<td>0.039 @ 0°C</td>
<td></td>
<td>0.29 @ 75 °F</td>
<td>C 518</td>
<td>EN 12939</td>
</tr>
<tr>
<td>0.040 @ 10°C</td>
<td></td>
<td>0.28 @ 50 °F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Heat</td>
<td>0.84 kJ/kg•°K</td>
<td>0.20 Btu/lb•°F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thermal Diffusivity</td>
<td>4.2 x 10⁻⁷ m²/sec</td>
<td>0.016 ft²/hr</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: Measurements were collected using ASTM guidelines and, unless otherwise specified, properties were collected at 24°C (75°F).

Properties may vary with temperature. The measurements listed in the table are average or typical values recommended for design purposes, and are not intended as specification or limit values.

Manufactured to comply with ASTM C552-07.
FOAMGLAS® ONE™ 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.

Totally Impermeable

Long Term Performance

Because it consists of closed glass cells, FOAMGLAS® insulation resists moisture in both liquid and vapor forms. 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.

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.

For complete data on FOAMGLAS® Insulation Systems, please visit our Web site at www.foamglas.com, or contact Pittsburgh Corning at any of the following locations:

Pittsburgh Corning USA
( Corporate Headquarters)
800 Presque Isle Drive
Pittsburgh, PA 15239
Tel: 1-724-327-6100
Fax: 1-724-387-3807

Pittsburgh Corning Europe NV
(Europe / Middle East Africa
Headquarters)
3-7-4-304 Hikarigaoka
Nerima-ku, Tokyo, Japan 179-0072
Tel & Fax: 011 81-3-5997-0248

Pittsburgh Corning Europe AS
(Asia Headquarters)
3-7-4-304 Hikarigaoka
Nerima-ku, Tokyo, Japan 179-0072
Tel & Fax: 011 81-3-5997-0248

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

*Written request for certificate of compliance must accompany order.

STANDARDS, CERTIFICATIONS* AND APPROVALS

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

- ASTM C 552 “Specification for Cellular Glass Thermal Insulation”
- 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 5, Smoke Developed 0 (UL 723, ASTM E 84), R2844; also classified by UL of Canada, CR1957
- ISO 9001:2000
- UL 1709

For a listing of UL Through Penetration Fire Stop Approved Systems please search the UL Database at http://www.ul.com/

Once on this page click on CERTIFICATIONS on the left hand side. Under General Search click on UL FILE NUMBER and type in R15207 and then SEARCH

- 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

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ISO 9001:2000

BCCA ISO 9001:2000

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