

Data Sheet

GLT Products fabricates FOAMGLAS® Insulation for use in industrial and commercial applications. A lightweight, rigid material composed of millions of completely sealed glass cells. As an inorganic compound containing no binders and fillers it is ideal for both above ground and underground insulation systems. Manufactured in block form, the blocks are then cut, shaped and tapered into the fabricated pipe insulation fittings and covers.

Key Applications

- Cryogenic systems
- Low temperature pipe, tanks and vessels
- Piping
- Steam and chilled water piping
- Commercial piping and ductwork
- Direct burial/underground
- Heat transfer fluid systems
- Hot oil and asphalt storage tanks



TEMP RANGE: -450°F to 900°F

FOAMGLAS® ADVANTAGES

- Corrosion resistant
- Zero water vapor permeability
- Easy installation
- Long term dimensional stability
- Moisture resistant
- Fire resistant
- High compressive strength

Type	Form	Minimum compressive resistance (lbs/in ³)
Type I, Grade 6	Flat Block manufactured	20
Type II, Grade 6	Pipe and Tubing insulation fabricated from Type 1	35
Type III, Grade 6	Special shapes fabricated from Type I	45
Type IV, Grade 6	Board fabricated from Type 1	22

COMPLIANCE DATA

ASTM METHOD
C240, E96, E84, E136, C871
C692, C1617, C165, C240, C177, C518, C335

FITTING TYPES

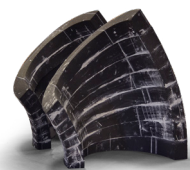
90° Elbows

45° Elbows

Tees

Pipe Covering

Segmented



GLT Products proudly manufactures and distributes high quality goods used in the mechanical insulation industry. Technical specifications illustrated in this document represent typical, average values obtained in accordance with accepted test methods, are subject to normal manufacturing variations and are subject to change without notice. Installation, design, or application conditions are out of GLT Products control, as such no warranties, expressed or implied, are given. Fitness for use is the sole determination of the purchaser.

Physical Properties

Physical and thermal properties are provided by Pittsburgh Corning.

Physical and Thermal Properties^{2,3}

PROPERTY	ASTM METHOD	SI	ENGLISH
Absorption of Moisture	C240	< 0.2% by Vol	< 0.2% by Vol
Capillarity	–	None	
Chemical Resistance	–	Impervious to common acids and their fumes	
Coefficient of Linear Thermal Expansion	E228	25 to 300°C, 9.0 x 10 ⁻⁶ /K	75 to 575°F, 5.0 x 10 ⁻⁶ /°F
		-170 to 25°C, 6.6 x 10 ⁻⁶ /K	-274 to 75°F, 3.7 x 10 ⁻⁶ /°F
Combustibility	E136	Noncombustible	
Composition	–	Soda-lime glass. Inorganic. No fibers or binders.	
Compressive Strength	C165/C240/C552	AVG = 620 kPa	AVG = 90 lb/in ²
		LSL = 414 kPa	LSL = 60 lb/in ²
Corrosion, Water Soluble Ions, and pH	C871 C692 C1617	Acceptable for use with stainless steel Pass < DI Water	
Density (±10%)	C303	115 kg/m ³	7.18 lb/ft ³
Dimensional Stability	–	Excellent – does not shrink or swell	
Flexural Strength	C203/C240	AVG = 480 kPa	AVG = 70 lb/in ²
		LSL = 283 kPa	LSL = 41 lb/in ²
Hygroscopicity	–	No increase in weight at 90% relative humidity	
Modulus of Elasticity, Approximate (ν = 0.25)	C623	900 MPa	1.3 x 10 ⁵ lb-in ²
Service Temperature	–	-268 to 482°C	-450 to 900°F
Specific Heat	E1461	0.77 kJ/kg·K @ 25°C	0.18 BTU/lb°F @ 77°F
Surface Burning Characteristics	E84	Flame Spread Index 0/Smoke Development Index 0	
Water Vapor Permeability	E96 Wet Cup	0.00 ng/Pa·s·m	0.00 perm-inch

Thermal Conductivity (λ) Values at Select Mean Temperatures (ASTM C518, C177)

TEMPERATURE	°C (°F)	204 (400)	149 (300)	93 (200)	38 (100)	24 (75)	10 (50)	-18 (0)	-46 (-50)	-73 (-100)	-101 (-150)	-129 (-200)	-157 (-250)	-165 (-265)
ASTM C552³	W/m K (BTU in/hr °F ft²)	0.084 (0.58)	0.069 (0.48)	0.058 (0.40)	0.048 (0.33)	0.045 (0.31)	0.043 (0.30)	0.039 (0.27)	0.035 (0.24)	0.030 (0.21)	0.027 (0.19)	0.025 (0.17)	0.023 (0.16)	N/A
FOAMGLAS® ONE™ INSULATION⁴	W/m K (BTU in/hr °F ft²)	0.078 (0.54)	0.066 (0.46)	0.054 (0.38)	0.044 (0.31)	0.042 (0.29)	0.040 (0.28)	0.036 (0.25)	0.032 (0.22)	0.029 (0.20)	0.026 (0.18)	0.023 (0.16)	0.021 (0.14)	0.020 (0.14)

2 Values represent typical physical and thermal properties.

3 Type 1 Block (Grade 6) limit values, where applicable, are specified by ASTM C552 Standard Specification for Cellular Glass Thermal Insulation.

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For more information on GLT Products, please call toll-free at 800.874.1748 or visit us online at www.gltproducts.com.



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