



FOAMGLAS® ONE™ INSULATION

INDUSTRIAL PIPE & EQUIPMENT INSULATION ASTM C552 GRADE 6

FOAMGLAS® ONE™ insulation is a lightweight, rigid material composed of millions of completely sealed glass cells. It is manufactured by Owens Corning in a block form and then fabricated into a wide range of shapes and sizes to satisfy industrial and commercial insulation requirements.

Features

- Constant insulating efficiency
- Non-combustible
- Non-absorbent
- Impermeable to water and water vapor
- Corrosion/chemical resistant
- Long-term dimensional stability
- Vermin resistance
- High compressive strength

Applications

- Cryogenic systems
- 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
- Steam and chilled water piping
- Commercial piping and ductwork
- Direct burial/underground

FOAMGLAS® ONE™ BLOCK DIMENSIONS

		SI	ENGLISH
STANDARD FORMAT	WIDTH & LENGTH	450 x 600 mm	18 x 24 in.
	THICKNESS	40–180 mm (10 mm increments)	1.5–7 in. (½ in. increments)
LARGE FORMAT	WIDTH & LENGTH	450 x 900 mm	18 x 36 in.
	THICKNESS	100–180 mm (10 mm increments)	4–7 in. (½ in. increments)

Contact a representative for regional availability.

FOAMGLAS® ONE™ insulation is manufactured to comply to the requirements of ASTM C552 "Standard Specification for Cellular Glass Thermal Insulation" (Grade 6).



STANDARD FORMAT
18 x 24 in
450 x 600 mm



LARGE FORMAT
18 x 36 in
450 x 900 mm

Physical and Thermal Properties^{1,2}

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	Non-combustible	
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 (±12%)	C303	117 kg/m ³	7.28 lb/ft ³
Dimensional Stability	–	Excellent — does not shrink or swell	
Flexural Strength	C203/C240	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 C552 ³	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™ INSULATION ³	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)

1 Values represent typical physical and thermal properties.
2 Type 1 Block (Grade 6) limit values, where applicable, are specified by ASTM C552 Standard Specification for Cellular Glass Thermal Insulation.
3 The values were determined by evaluating a polynomial at the insulation mean temperature. Contact Owens Corning for assistance applying our design polynomials to your application.

For additional information on FOAMGLAS® ONE™ insulation or systems, please contact Owens Corning at any of our worldwide offices or visit us at www.foamglas.com. The information contained herein is accurate and reliable to the best of our knowledge. But, because Pittsburgh Corning, LLC has no control over installation workmanship, accessory materials, or conditions of application, NO EXPRESSED OR IMPLIED WARRANTY OF ANY KIND, INCLUDING THOSE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS MADE as to the performance of an installation containing Owens Corning products. In no event shall Pittsburgh Corning, LLC be liable for any damages arising because of product failure, whether incidental, special, consequential, or punitive, regardless of the theory of liability upon which any such damages are claimed. Pittsburgh Corning, LLC provides written warranties for many of its products, and such warranties take precedence over the statements contained herein.

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