

FOAMGLAS[®]

INSULATION

StrataFab[®] SYSTEM For Applications from -100°F to 900°F (-73°C to 482°C)

The StrataFab[®] System is a unique patented method of fabricating FOAMGLAS[®] insulation by bonding blocks together with a special adhesive to create a uniform, multilayered stack. The pre-fabricated insulation unit is then cut into the desired insulation shapes.

Now, in one cost-effective insulation system, you get *all* these significant features:

- **Thermal Shock Resistance.**
- **Single-Layer Installation.**
- **Broad-Temperature Service.**
- **Hot-Surface Application.**
- **Durability.**
- **Product Uniformity.**
- **Simplified Inventory Control.**

No Cracking or Shrinking

The StrataFab[®] System's sandwiched construction provides built-in expansion and contraction joints, which accommodate thermally induced dimensional movement.

Single-Layer Application

A wide range of available insulation thicknesses means that the need for composite systems or double-layering—standard practice with other rigid high-temperature insulations—is often eliminated. The result is a faster, simpler, less labor-intensive system which can reduce total installed insulation costs.

Broad-Temperature Service

The StrataFab[®] System is thermally compatible over a wide temperature range. It can be applied on systems operating at temperatures from -100°F to 900°F (-73°C to 482°C), so you get the widest temperature service of any insulation on the market. This means you can use one system for either extremely hot or cold conditions, above or below ground.



Direct, Hot-Surface Application

Further enhancing the swift, efficient installation of StrataFab[®] insulation is its tolerance for direct application on hot pipelines and other high-temperature surfaces—in many cases without a system shutdown.

Strong and Durable

The StrataFab[®] System's laminate construction produces an extremely durable product, highly resistant to damage during shipment and handling. In addition, the structural integrity of StrataFab[®] insulation permits removal and reuse.

Uniform Product

Specification is easy—anytime, anywhere—because every piece of StrataFab[®] insulation, no matter where or when it's specified, is identical to every other.

Fabricators cut StrataFab[®] insulation from *uniform* billets of FOAMGLAS[®] insulation—which have been made to *specified* dimensions, with a *controlled* number of bond joints following *strict* joint guidelines—and assembled *only* with StrataFab[®] Adhesive. So, anywhere you specify—now, or in the future—you are sure of getting an identical product. Available through authorized Pittsburgh Corning distributors.

The Only Insulation You May Ever Need

Because the StrataFab[®] System offers such a wide spectrum of features, and can be used from -100°F to 900°F (-73°C to 482°C) over a 1000°F (555°C) temperature range, this *single* material could easily meet *all* your plant's industrial insulation requirements. And that can simplify product storage, inventory coordination and installation.

The StrataFab® System Also Gives You All The Benefits and Advantages of FOAMGLAS® Insulation

- **Moisture Resistance.** The most moisture resistant insulation you can buy, thanks to its closed-cell, all-glass composition. Critical, because moisture absorption is the most common failure of other insulations.
- **Constant Insulating Efficiency.** Thermal efficiency will remain consistent for years because no moisture is absorbed.
- **Exceptional Dimensional Stability.** Minimal, totally reversible thermal expansion and contraction ensure system integrity. There's no swelling, warping, shrinking or other distortion.
- **Fire Resistance.** Its 100% glass composition means FOAMGLAS® insulation cannot burn, while its closed-cell construction means combustible liquids cannot be absorbed.
- **High Compressive Strength.** With a high compressive strength, FOAMGLAS® insulation withstands physical abuse in both wet and dry environments, above or below ground. And it does so with comparatively light weight.
- **HCFC/CFC-Free and Fiber-Free.**

Physical and Thermal Properties of FOAMGLAS® Insulation StrataFab® System

PHYSICAL PROPERTIES	USA	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	0.0 perm-in		E 96
Acid Resistance	Impervious to common acids and their fumes except hydrofluoric acid.		
Capillarity	None	None	
Combustibility	Noncombustible, will not burn.		E 136
Composition	Pure glass, totally inorganic, contains no binder.		
Compressive Strength Average, for Standard Material	87 psi	600 kPa	C 165, C 240, C 552
	Strength for flat surfaces capped with hot asphalt, different cappings will give different values.		
Density, Average	7.5 lb/ft³	120 kg/m³	C 303
Dimensional Stability	Excellent—does not shrink, swell or warp.		
Flexural Strength, Block Average	64 psi	441 kPa	C 203, C 240
Hygroscopicity	No increase in weight at 90% relative humidity.		
Linear Coefficient of Thermal Expansion	5.0 x 10 ⁻⁶ /°F	9.0 x 10 ⁻⁶ /°K	E 228
Maximum Service Temperature	+900°F	755°K	
Modulus of Elasticity, Approx.	1.2 x 10 ⁵ psi	800 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.		
Specific Heat	0.19 Btu/lb·°F	0.80 kJ/kgK	
Thermal Conductivity	Btu-in/hr-ft²·°F	W/mK	C 177, C 518
	0.31 @ 50°F	0.044 @ 0°C	
	0.33 @ 75°F	0.045 @ 10°C	
Thermal Diffusivity	0.018 ft²/hr	4.5 x 10 ⁻⁷ Wm²/sec	

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.

Additional Brochures Available for Pittsburgh Corning Corporation FOAMGLAS® Products

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| FOAMGLAS® Insulation Systems (FI-201) | Chilled Water Brochure (FI-188) |
| Underground Direct-Buried Applications (FI-213) | Chilled Water Workbook (FI-230) |
| AdVantage® System (FI-227) | Pulp & Paper Installations (FI-174) |
| | Food Processing (FI-161) |
| | Roofing/Plazas/Parking Decks (FB-181) |

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