



Temperlite® 1200° Perlite Thermal Insulation

Temperlite® 1200° is a rigid, high temperature, water resistant molded perlite thermal insulation available in block, pipe or molded fitting form. The product is a light gray material with dark heat stabilized flecks throughout the product for easy identification as an insulation which **does not contain asbestos**.

Applications

The product has an application temperature range up to 1200° F, even under cyclic condition. Its unique water resistant formulation makes it especially suitable for those applications up to 600° F where water incursion is a consideration and where cellular glass or other foam insulation have previously been the only viable option. The product binder is sodium silicate which is naturally high in silicate, making it the preferred choice for those applications where stress corrosion is a consideration. Because the material is resistant to moisture, it does not contribute to premature corrosion of protective jacketing system.

For additional information, visit www.itwinsulation.com, call 1-800-231-1024 or contact your local ITW representative.

Features and Benefits

Moisture Resistance:

At temperatures up to 600° F, **Temperlite® 1200°** is extremely resistant to water absorption. Mechanical strength and thermal performance are preserving and the insulation will not act as a reservoir for jacket corrosion as is common with many other rigid insulations.

Corrosion Resistance:

Because **Temperlite® 1200°** is high in silicates and non-wicking, it will, not cause or promote stress corrosion cracking of austenitic stainless steel.

Thermal Performance:

Temperlite® 1200° provides excellent thermal insulating properties throughout its full range of use. This thermal efficiency results in reliable temperature control for critical process operations.

Fire Resistance:

Temperlite® 1200° will not burn or carry flame. It has a flame spread of zero and smoke developed of zero when tested per ASTM E 84.

Heat Stability:

Unlike some other rigid insulation, **Temperlite® 1200°** will maintain its integrity and insulating efficiency even under conditions of soaking heat up to its full 1200° F recommended operating range.

Rigidity:

Temperlite® 1200° is designed and manufactured to provide strength required to withstand personnel traffic and other common installation and application abuses.

Ease of fabrication:

Temperlite® 1200° cuts easily and cleanly, minimizing fabrication time in the field and prolonging fabrication equipment life.

Specification Compliance:

ASTM C 610 Type II "Standard Specification for Expanded Perlite Block and pipe Thermal Insulation".

ASTM C 795 "Standard Specification for Wicking-Type Thermal Insulation for Use Over Austenitic Stainless Steel.

MIL-I-24244C (SH) "Insulation Material with Special Corrosion: Chloride, and Fluoride Requirements".

NRC Reg. Guide 1.36 "Nonmetallic Thermal Insulation for Austenitic Stainless Steel".

DuPont "Dana" Accelerated Stress Corrosion Test after 700°F Soaking Heat
USCG 164.009/308/0 "Noncombustible Material".

*Waiver required on tumbling friability.

Physical Properties of Temperlite* 1200° Perlite Thermal Insulation

Property	Test Method	Value	
Density	ASTM C 302/303	12.0-14 pcf	
Water Absorption	ASTM C 209	2 hrs: 5.8% max	
Flexural Strength	ASTM C 203	45-58 psi	
Compressive Strength (5 % deformation)	ASTM C 165	70-90 psi	
Linear Shrinkage (1200°F for 24 hrs)	ASTM C 356	2 % max in width/length, 5% max in thickness	
Surface Burning Characteristics	ASTM E 84	Flame Spread 0 Smoke Developed 5	
Acid Resistance	7 days-10 % HCl	No visible change	
	7 days-10 % H2SO4	No visible change	
	24 hrs-25 % HCl	No visible change	
	24hrs-25 % H2SO4	No visible change	
pH	MIL-I-24244C (SH)	10.4-10.7	
Thermal Conductivity	ASTM C 177 or C 335	Mean Temperature °F (°C)	Thermal Conductivity (Btu-in/hr-ft ² °F) (W/m - °C)
		100 (38)	0.453 (0.065)
		200 (93)	0.510 (0.074)
		300 (149)	0.567 (0.082)
		400 (204)	0.624 (0.090)
		500 (260)	0.681 (0.098)
		600 (316)	0.737 (0.106)
		700 (371)	0.793 (0.114)

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