

TECHNICAL DATASHEET: Pyrogel XTE

PRODUCT DESCRIPTION

Pyrogel® XTE is a flexible, high-performance, aerogel blanket insulation designed for use in industrial and commercial applications. Pyrogel XTE is engineered to deliver superior thermal performance while offering excellent protection against corrosion under insulation (CUI). Hydrophobic and breathable, Pyrogel XTE ensures long-lasting water resistance for both the insulation layer and underlying asset; they remain drier for longer, preserving process conditions, and saving energy in the harshest of environments. These characteristics make Pyrogel XTE the “go-to” insulation for industry-leading CUI defense. Aerogel is a lightweight solid derived from gel in which the liquid component of the gel has been replaced with air. The process of creating aerogel results in a material with extremely low density and the lowest thermal conductivity of any solid. These remarkable properties make aerogel one of the world’s most efficient insulating materials. Our patented process integrates this unique aerogel into a fiber-batting to create flexible, resilient, and durable aerogel blankets with superior insulating performance.

TYPICAL APPLICATIONS

- Extremely low thermal conductivity, its thin profile (75% thinner than competing materials) makes it ideal for installation in congested areas or to resolve mechanical clashes, increasing both plant safety and efficiency.
- Mechanically robust, enables pre-insulation to save time and money.
- It can be removed and reused after inspection, lowering total cost of ownership.

PRODUCT FEATURES & BENEFITS

- Hydrophobic and breathable, resists liquid water and avoids the damaging effects of wet insulation
- Tough enough to maintain thermal performance even after compression events
- Versatile format can be cut to fit any piece of piping or equipment from small-bore pipe to the largest format process vessels and equipment.
- Durable format permits pre-insulation and reuse

TECHNICAL DATA	VALUE	TEST METHOD / STANDARD
THICKNESS	0.2", 0.4"	
MATERIAL/SUBSTRATE	Aerogel	
COLOR	Maroon	
DENSITY	12.5 lb/ft ³	
STANDARD SPECIFICATION FOR FLEXIBLE AEROGEL INSULATION	Complies	ASTM C1728, Type III, Grade 1A
COMPRESSIVE RESISTANCE @ 10% DEFORMATION	≥ 3 psi	ASTM C165
LINEAR SHRINKAGE UNDER SOAKING HEAT @ 1200°F	< 2%	ASTM C356
HOT SURFACE PERFORMANCE	Pass	ASTM C411
ESTIMATION OF MAXIMUM USE TEMPERATURE	1200°F	ASTM C447
INSULATION FOR USE OVER AUSTENITIC STAINLESS STEEL	Pass	ASTM C795
FLEXIBILITY OF BLANKET INSULATION	Flexible	ASTM C1101/1101M
WATER VAPOR SORPTION	≤ 5% (by weight)	ASTM C1104/1104M
FUNGAL RESISTANCE OF INSULATION MATERIALS	No Growth	ASTM C1338
CORROSIVENESS TO STEEL	Pass	ASTM C1617
WATER ABSORPTION BY IMMERSION	Pass	ASTM C1763

Specifications are believed to be accurate at the time of publication and are subject to change without notice. It is the responsibility of the end-user to test and determine suitability of this material for a particular application. H-O will provide samples for this purpose at no charge. **REV. 0**