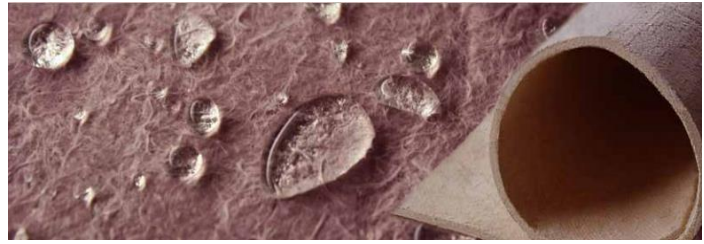


PYROGEL® XTE

High-Performance Aerogel Insulation for Industrial and Commercial Applications

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 defence.

With its extremely low thermal conductivity, **Pyrogel® XTE** is up to 75% thinner than competing materials. Its thin profile makes it ideal for installation in congested areas or to resolve mechanical clashes, increasing both plant safety and efficiency.

Pyrogel® XTE is mechanically robust, enabling pre-insulation to save time and money. It can be removed and reused after inspection, lowering total cost of ownership.

The versatility of **Pyrogel® XTE** makes it suitable for a wide range of applications, from small-bore pipe to the largest format process vessels and equipment.

Advantages

- Best-in-class CUI protection
- Hydrophobic and breathable, resists liquid water and avoids the damaging effects of wet insulation
- Up to five-times better thermal performance versus competing materials
- Faster application rates, especially on large-bore pipes and vessels
- Tough enough to maintain thermal performance even after compression events
- Versatile format can be cut to fit any piece of piping or equipment
- Reduced logistics costs relative to rigid insulation—lower scrap, transport costs, and man hours on project and turnaround work
- Durable format permits pre-insulation and reuse

Physical properties

Thicknesses*	5 mm	10 mm
Roll size**	139.355 m ² bulk rolls	78.968 m ² bulk rolls
Max. Use Temp.	650°C	
Width tolerance	1473,2 ±50,8 mm	
Color	Maroon	
Density*	0.20 g/cc	
Hydrophobic	Yes – No added PTFE/PFOA	

* Nominal Values

** Also available in Pony rolls

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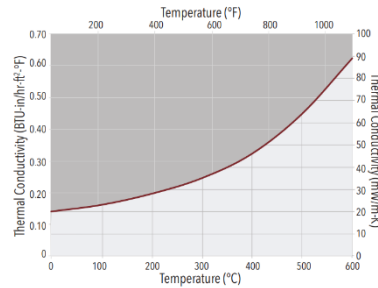
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PYROGEL® XTE

Mean Temp. C	mW/m-K
0	20
100	23
200	28
300	35
400	46
500	64
600	89

† Thermal conductivity measured at a compressive load of 13.8 kPa



Specification compliance and performance

Pyrogel XTE is produced from aerogel blankets that comply with ASTM C 1728 type III, grade 1A and meet the following requirements.

Test procedure	Property	Results
ASTM C 165	Compressive Resistance [‡]	≥ 20.7 kPa @ 10% deformation
ASTM C 356	Linear Shrinkage Under Soaking Heat	<2% at 650°C
ASTM C 411	Hot Surface Performance	Pass
ASTM C 447	Estimation of Max. Use Temperature	650°C
ASTM C 795	Insulation for use over austenitic stainless steel	Pass
ASTM C 1101/1101M	Flexibility of blanket insulation	Flexible
ASTM C 1104/1104M	Water Vapor Sorption	≤ 5% (by weight)
ASTM C1338	Fungal Resistance of Insulation Materials	Pass
ASTM C1617	Corrosiveness to Steel	Pass
ASTM C1763	Water Absorption by Immersion	Pass
ASTM E84	Surface Burning Characteristics	Flame Spread Index ≤5 Smoke Developed Index ≤10

[‡]Compressive Resistance measured using a pre-load of 2 psi.

The aerogel advantage

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. The patented process integrates this unique aerogel into a fiber-batting to create flexible, resilient, and durable aerogel blankets with superior insulating performance.

Working with Pyrogel®

Clean, flush, and accurate cutting of Pyrogel® can be achieved using conventional cutting tools such as scissors, tin snips, or razor knives. As with all technical insulation materials, appropriate personal protective equipment (PPE) should be worn when handling, cutting and installing Pyrogel®. See SDS for complete health and safety information.

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PYROGEL® XTE

System performance of Pyrogel XTE

Pyrogel XTE's performance in acoustic service and fire protection applications has been evaluated according to the following test methods.

Contact Insulcon technical service for configuration details.

- ISO 15665 - Acoustic Insulation for Pipes, Valves, and Flanges:
Configurations meeting Class A2, B2, C2, and Shell D2 possible

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