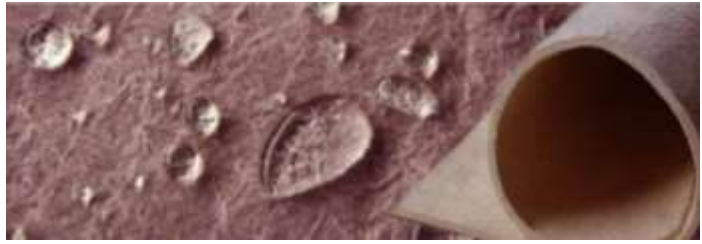


PYROGEL® XTE

High-Performance Aerogel Insulation for Industrial 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 |
|-----------------|--------------------------|-------|
| 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

Insulcon B.V. - The Netherlands - Tel: +31 (0) 167 565750
Insulcon GmbH - Germany - Tel: +49 (0) 2131 408548-0
Insulcon N.V. - Belgium - Tel: +32 (0) 3 711 02 78
Insulcon Projects S.A. - Switzerland - Tel: +41 (0) 91911739-0

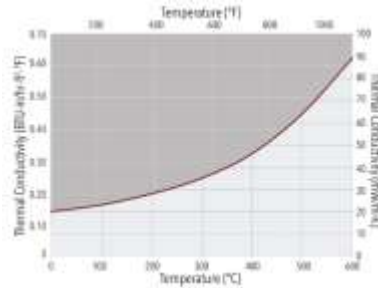
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PYROGEL® XTE

| 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



Performance properties of Pyrogel® XTE Insulation blanket

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-battling to create flexible, resilient, and durable aerogel blankets with superior insulating performance.

Working with Pyrogel® XTE

Clean, flush, and accurate cutting of Pyrogel® XTE 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.

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 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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