

PAKAN ATIYE



I Rogel®

HT



With 10 mm thickness I Rogel®_{LT} is suitable for High Temperature, CUI Defense, Petrochemicals, Cryogenic, Power Generation, District Energy, LNG, Subsea, Buildings, etc.

HIGH PERFORMANCE FLEXIBLE INDUSTRIAL INSULATION FOR HIGH AND LOW TEMPERATURE APPLICATIONS

Maximum Aerogel Loaded Blanket

IRogel®

HT



IRogel®

FLEXIBLE INSULATION FOR HIGH TEMPERATURES

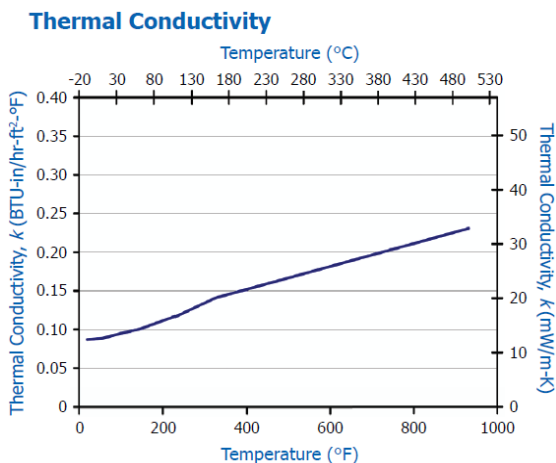
IRogel® materials are flexible aerogel nanoporous insulation blankets designed for Different-temperature applications. The unique properties of very low thermal conductivity, high temperature resistance, good flexibility, and ease of use have made IRogel® essential for those seeking the ultimate in thermal protection.

Using nano technology, IRogel® materials combine a silica aerogel with reinforcing fibers to deliver superior thermal performance in an environmentally safe and nontoxic product.

IRogel® is an opacified aerogel blanket for effective blocking of the radiation component of heat transfer. It delivers excellent thermal insulation up to 1200°F (650°C) for applications including aerospace, transportation, industrial equipment, power generation, high-temperature thermal and fire protection.



10 mm Thickness



Advantages

Superior Thermal Performance

Up to ten times better thermal performance than competing insulation products and maximum aerogel loaded blanket in the world

Minimum Weight and Thickness

Low thermal conductivity at a fraction of the thickness

Less Time and Labor to Install

Easily cut and conformed to complex shapes, tight curvatures, and spaces with restricted access

Physically Robust

Soft and flexible but with excellent spring back, IRogel® recovers its thermal performance even after compression events as high as 100 psi

Shipping and Warehousing Savings

Reduced material volume, high packing density, and low scrap rates can reduce logistics costs by a factor of six or more compared to rigid, pre-formed insulations

Simplified Inventory

Unlike rigid pre-forms such as pipe cover or board, the same IRogel® blanket can be kitted to fit any shape or design

Excellent Fire Protection

Equal to or better than other insulation materials, including mineral wool and calcium silicate

Hydrophobic Yet Breathable

IRogel® repels liquid water but allows vapor to pass through

Environmentally Safe

Landfill disposable, shot-free, with no respirable fiber content



Super Hydrophobic



| Product Performance Data | | |
|-----------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------|
| ASTM C 1728, Type III, Grade 1A | Standard Specification for Flexible aerogel insulation | Complies |
| ASTM C 165 | Compressive Strength | Stress at 10% strain = 15.8 psi Stress at 25% Strain = 28.6 psi |
| ASTM C 356 | Linear Shrinkage Under Soaking Heat | < 1.5 % @ 650 °C |
| ASTM C 411 | Hot Surface Performance | Passed |
| ASTM C 447 | Estimation of Maximum Use Temperature | (650 °C) |
| ASTM C 592-04 (Section 11.11, Modified) | Heat and Vibration Aging | -20 % mass change after 6 hr Vibration |
| ASTM C 795 | Insulation for Use Over Austenitic Stainless Steel | Passed |
| ASTM C 1101 | Classifying the Flexibility of Mineral Fiber Blankets | Class: Resilient Flexible |
| ASTM C 1104 | Water Vapor Sorption | 1.8 % (By Weight) |
| ASTM C 1338 | Fungal Resistance of Insulation Materials | Passed |
| ASTM C 1511 | Liquid Water Retention After Submersion | < 5% (By Weight) |
| ASTM E 84 | Surface Burning Characteristics | Flame Spread Index = 0 Smoke Develop Index = 0 |
| ASTM E 1354 | Cone Calorimetry | No Ignition at 50 kw/m ² |
| ASTM EN 13501-1: 2017 | Reaction to Fire Performance | Passed Euroclass A2 |
| ISO 1182- 1990 | non- combustibility | Meets Criteria Outlined in ISO 1182-1990 |

Flammability

IRogel® meets the requirements of Transportation, Aviation Regulations for Compartment Interiors, (60 Second Ignition Time with 0.0 seconds after flame).

Handling Characteristics

IRogel® can be cut using conventional textile cutting tools including scissors, electric scissors and razor knives. The material can be dusty and it is recommended gloves and dust mask be worn when handling material. See MSDS for complete health and safety information.

Effects of Moisture and Solvents

IRogel® series products are hydrophobic as produced. Exposures to 750°F (400°C) or above can degrade the hydrophobic properties. It is not recommended to expose **IRogel®** products directly to most organic solvents.

Encapsulation

Encapsulation is recommended to protect the aerogel from harsh environments. In addition, encapsulation helps to contain the material, prevent contamination and assist in its attachment to a surface. Encapsulation can be done in numerous ways.

