aerohik

THERMHIK

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THERMHIK

PRODUCT DATA SHEET

Thermhik is a high-performance thermal insulation mat based on aerogel, divided into three main categories: Thermhik HT (High Temperature), Thermhik CT (Cryogenic Temperature), and Thermhik Custom Solutions (Specialized Solutions).
Each category is optimized for different temperature ranges and specific project requirements. It ensures high energy efficiency and exceptional thermal insulation for various applications.

01 Thermhik HT (High Temperature)

Thermhik HT is specifically designed for continuous operating temperatures ranging from -40°C to +650°C.
It delivers outstanding thermal performance and is ideal for high-temperature applications.

02 Thermhik CT (Cryogenic Temperature)

Thermhik CT is specifically designed for applications with extremely low temperatures, ranging from -200°C to +150°C.

03 Thermhik Custom Solutions (Special Solutions)

Thermhik Custom Solutions provides tailored solutions for applications requiring temperatures exceeding 650°C and up to 1240°C.

THERMHIK HT

(HIGH-TEMPERATURE APPLICATIONS – RELIABLE INSULATION UP TO 650°C)

Thermhik HT was developed for demanding applications with continuous **Temperatures Ranging From -40°C to +650°C** and offers short-term mechanical resistance up to **+1100°C.** With a thermal conductivity of only **0.021 W/mK,** it provides outstanding thermal insulation properties.

Thanks to its **Superhydrophobic Properties, Thermhik HT** ensures excellent water, moisture, and steam resistance, effectively preventing material deformation, collapse, and mold growth (slipping and dampness).

Additionally, its non-combustible classification **(A2-s1, d0)** ensures the highest safety and reliability in challenging operating environments.

Continuous Operation	**-40°C to +650°C**
Thermal Conductivity (λ)	**0,021 W/mK**
Short-Term Mechanical Load	**+1100°C**
Fire Protection Class	**A2-s1, d0 (Non-combustible)**
Strength	**6 mm, 8 mm, 10 mm (Standart), 12 mm**
Superhydrophobic	**Yes**
Density	**0.15-0.25 g/cm³**
Mold Resistance	**Very High**
Compressive Strength	**80 kPa**
Corrosivity towards Steel	**None**

THERMHIK CT

(CRYOGENIC TEMPERATURES – FOR EXTREME COLD APPLICATIONS)

Thermhik CT was specifically developed for applications requiring extreme **Temperature Ranges From -200°C to +150°C.** With an impressively **Low Thermal Conductivity of 0.019 W/mK,** It guarantees excellent thermal insulation at cryogenic temperatures.

Thanks to its **Superhydrophobic Properties,** the material remains resistant to water and **Moisture,** providing reliable performance even in challenging environments.

Continuous Operation	**-200°C to +150°C**
Thermal Conductivity (λ)	**0,019 W/mK**
Strength	**6 mm, 8 mm, 10 mm (Standart), 12 mm**
Superhydrophobic	**Yes**
Density	**0.15-0.25 g/cm³**
Mold Resistance	**Very High**
Film Alternative	**Yes**
Corrosivity towards Steel	**None**

THERMHIK CUSTOM SOLUTIONS

(SPECIAL SOLUTİONS)

01

High-Temperature Solutions for Demanding Applications

Thermhik Custom Solutions develops **custom-made high-temperature solutions for extreme conditions, requiring temperatures from over 650°C to 1240°C.** Our products are **based on state-of-the-art Aerogel Technology** and guarantee the **Highest Efficiency** for the most demanding applications.

02

Innovative Materials and Outstanding Properties

Our **Superhydrophobic Mats**, made from **HR Glass** fiber and **Ceramic Fibers,** offer an **Extremely Low Thermal Conductivity** of only **λ = 0.021 W/mK.** These materials meet the highest fire protection class **A2-s1, d0,** ensuring M**aximum Safety** and **Efficiency** in any **Environment.**

03

Customization and Durability

With **Customizable Moisture Barriers** and **Special Coatings**, we tailor our solutions to meet the **Specific Requirements** of our customers. Our products are **Characterized by Their Durability, Water Resistance,** and **Reliability—** even **Under Extreme Conditions.**

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OUTSTANDING PROPERTIES AND BENEFITS

Aerogel is used in all areas of life and industry.

HIGH-PERFORMANCE INSULATION

MAXIMUM INSULATION PERFORMANCE WITH MINIMAL THICKNESS, ENHANCED ENERGY EFFICIENCY.

OUTSTANDING THERMAL INSULATION

THERMAL CONDUCTIVITY OF 0.021 W/MK ENSURES MINIMAL ENERGY LOSS.

WIDE TEMPERATURE RANGE

OPTIMIZED OPTIONS FOR DIFFERENT TEMPERATURE REQUIREMENTS.

FLEXIBLE AND LIGHTWEIGHT STRUCTURE

SAVES SPACE AND FACILITATES INSTALLATION IN TIGHT AREAS.

DURABILITY

SUPERHYDROPHOBIC STRUCTURE, WATER- AND MOISTURE-PROOF, FOR LONG-LASTING PERFORMANCE.

FIRE PROTECTION

HIGH FIRE RESISTANCE WITH A2-S1, D0 FIRE PROTECTION CLASS.

ENVIRONMENTALLY FRIENDLY AND COST-EFFICIENT

REDUCES ENERGY COSTS AND IS BOTH ENVIRONMENTALLY AND BUDGET-FRIENDLY.

CUSTOMIZABLE OPTIONS

CUSTOMIZABLE DESIGNS AND MATERIAL COMBINATIONS FOR SPECIFIC PROJECTS.

THERMHIK

AREAS OF APPLICATION

1 Energy Sector

Aerogels are used in the energy sector as high-performance insulating materials to minimize heat losses in pipelines, storage facilities, and turbines, thereby enhancing energy efficiency.

2 Pharma & Chemical Industry

In the pharmaceutical and chemical industries, aerogels are used as carrier materials for active ingredients, catalysts, or adsorbents to optimize chemical processes and enable the storage of sensitive substances.

3 Construction, Building Services, Interior Design

In construction, aerogels are used for building insulation as they provide excellent thermal insulation with minimal thickness while reducing energy consumption.

4 Industry, Engineering

In industry, aerogels are used in high-temperature processes, such as insulating industrial furnaces or reducing energy losses in technical systems.