

SAFETY & COMFORT IN HVAC

Sustainable products for fire protection and sound optimized thermal insulation

KNAUF INSULATION TECHNICAL SOLUTIONS

As a well-known insulation specialist in the process industry, HVAC and shipbuilding, Knauf Insulation has more than 40 years experience in insulation industry. We represent one of the fastest growing and most respected names in insulation worldwide.

As part of the Knauf Group, we specialize in the field of technical insulation and produce insulation materials designed for HVAC, the process industry and shipbuilding to provide exceptional energy savings. With our natural binding agent

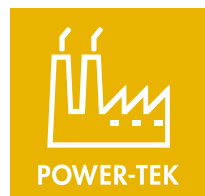
ECOSE® Technology without the addition of formaldehyde, we reduce energy consumption during the production of our products and improve the energy efficiency of the final product. As a result, within the scope of our Power-teK®, Thermo-teK,

Fire-teK® and Sea-teK® segments, we offer the perfect product for every application in technical insulation and provide the best possible combination of energy efficiency, fire protection, sound absorption and sustainability.



Thermo-teK

Sustainable and safe insulation materials for HVAC.



Power-teK®

Economical and efficient insulation for the process industry.



Fire-teK®

Optimal passive fire protection.



Sea-teK®

Marine certified insulation materials for shipbuilding.

HVAC

THERMAL INSULATION EXPERTS FOR HVAC



SUSTAINABLE INSULATION MATERIALS FOR HVAC

Efficient Mineral Wool insulation materials reduce thermal losses and energy costs while offering preventive fire and noise protection. The following Thermo-teK products are perfectly suited for HVAC.

Mineral Wool properties

Energy efficiency

The construction industry is changing rapidly and energy efficiency is high on the agenda as industries around the world look for ways to reduce their CO₂ emissions and energy consumption while remaining competitive (increasing energy costs are becoming a growing burden). The best answer to these changes is hardly complicated: just insulate. Our Mineral Wool products provide the optimal solution for every application and are therefore ideally suited for energy-conscious, cost-conscious and environmentally friendly use.



Sound insulation

Transported air and loud noises from adjacent rooms can be disruptive. Here, proper sound insulation is important to ensure a pleasant living and working environment. The double-sided lamination of the insulation panels with glass fleece or glass fiber fabric increases the sound absorption.



Fire protection

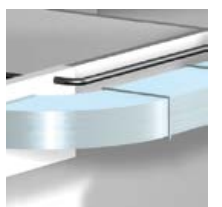
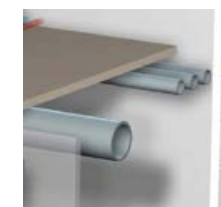
Passive structural fire protection is one of the most important factors in HVAC. High-performance insulation along with appropriate fire protection is necessary to prevent the spread of flames and smoke across rooms in the event of a fire. Our Mineral Wool insulation materials developed specifically for this purpose are in line with fire resistance classes EI30 to EI120.



Applications

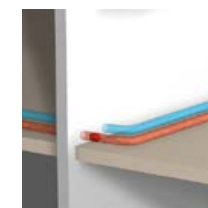
Circular and rectangular ventilation ducts

Ventilation ducts facilitate the circulation of cold and warm air masses of temperatures which may exceed 85 °C. For this purpose, quality technical insulation is particularly important to ensure a pleasant **room climate** through optimal thermal conductivity. What is more, optimal ventilation is provided for in all rooms of the building.



Piping

Heating and hot water pipes provide for the even distribution of the heated water from the boiler throughout the building. Quality technical insulation is particularly important here in order to **decrease heat** and ensure efficient operation. Also, the drinking water pipes must ensure the best possible health protection by protecting against bacteria.



Enclosures

Boilers and heat reservoirs generate and store water at high temperatures. A technically good insulation is particularly important to protect against **overheating** in the boiler room and to reduce **energy consumption** by reducing heat losses.



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KNAUF INSULATION COMPLETE PRODUCT PORTFOLIO FOR HVAC INSULATION

PASSIVE FIRE PROTECTION



Fire-tek® BD is a Rock Mineral Wool insulation board with a one-sided glass fiber-reinforced black aluminum facing.

Use: Preventive fire protection of rectangular ventilation ducts for fire classes **EI30** and **EI60**.



Fire-tek® BD 918 is a high-temperature resistant Rock Mineral Wool insulation board.

Use: Especially designed for the fire protective wall / ceiling penetration of rectangular ventilation ducts to get EI30.



Fire-tek® BD 916 is a high compressive strength Rock Mineral Wool soft partition board.

Use: Used to safeguard fire protection paints or fillers and to seal off pipes and cables in wall and ceiling openings.



Fire-tek® WM is a Rock Mineral Wool wired mat with a one-sided glass fiber reinforced black aluminum facing.

Use: Preventive fire protection up to **120 minutes** of circular ventilation ducts.

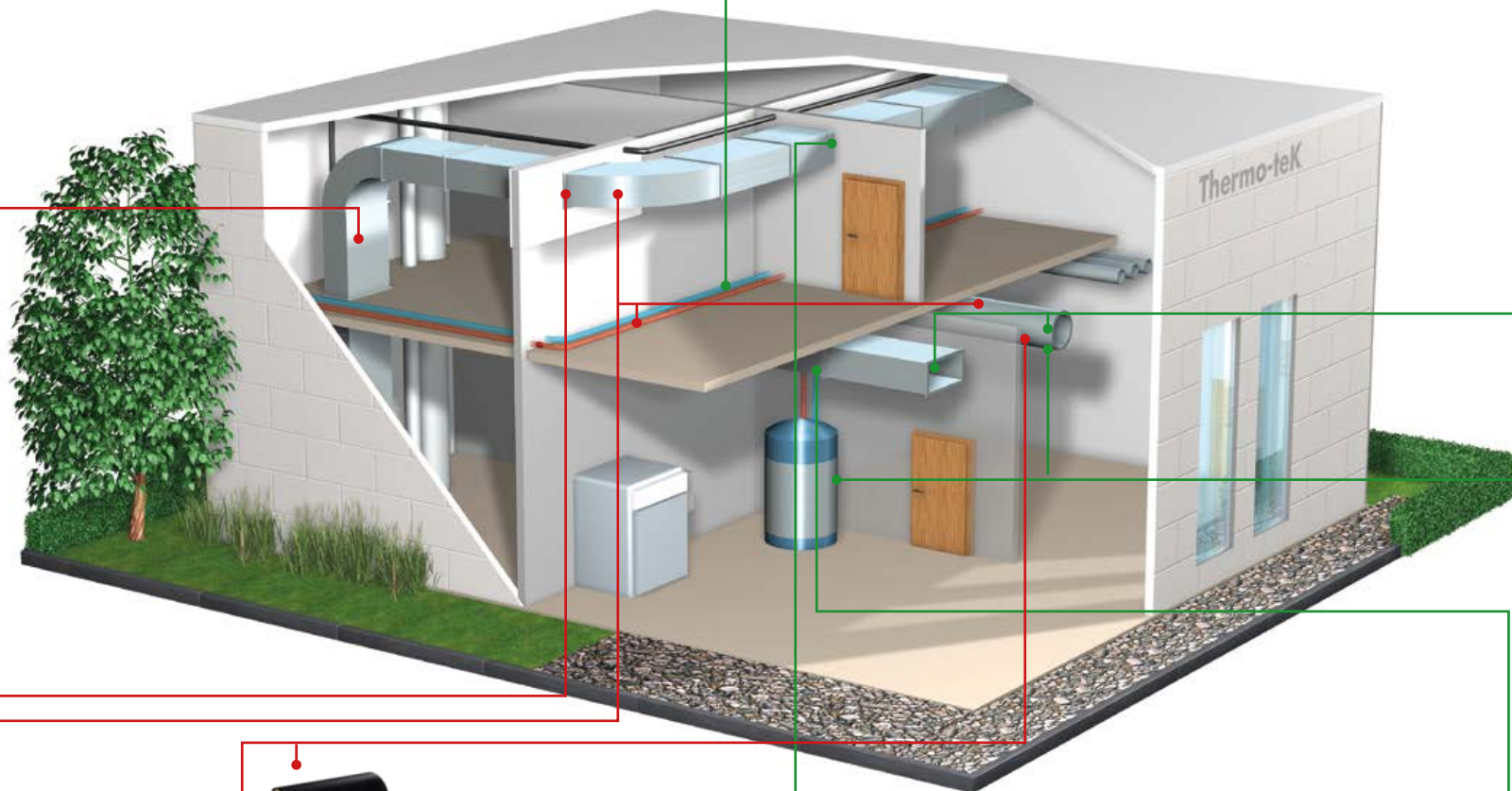


Fire-tek® FM is a Rock Mineral Wool mat with a one-sided glass fiber-reinforced black aluminum facing.

Use: Specially designed for preventive fire protection up to **120 minutes** for ventilation pipes.

FIRE PROTECTION PRODUCTS (EI30- EI120)

| Application | Fire Protection Class | Product name | Insulation thickness (mm) |
|-------------------------------|-----------------------------|-----------------------|---------------------------|
| Rectangular ventilation ducts | EI30 (ve ho i ↔ o)S | Fire-tek® BD 907 ALB | 60, 100 |
| | | Fire-tek® BD 918 | 30 |
| | EI60 (ve ho i ↔ o)S | Fire-tek® BD 912 ALB | 60 |
| Circular ventilation ducts | EI30 (ve ho i ↔ o)S | Fire-tek® WM 910 GGB | 40 |
| | | Fire-tek® FM 910 ALB | |
| | EI60 (ve ho i ↔ o)S | Fire-tek® WM 908 GGB | 80 |
| | | Fire-tek® FM 908 ALB | |
| | EI90 / EI120 (ve ho i ↔ o)S | Fire-tek® WM 908 GGB | 100 |
| Pipes | EI30 - EI120 | Thermo-teK PS Pro ALU | 20 - 120 |



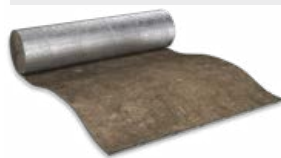
THERMAL INSULATION



Thermo-teK PS Pro ALU and PS Eco (ALU) are Rock Mineral Wool wound pipe sections with a longitudinal cut for easy assembly. They are 1,200 mm long and available with or without glass fiber-reinforced aluminum facing.

Use: Thermal insulation of hot & cold water pipes*, heating pipes, Thermo-teK PS Pro ALU also for passive fire protection (for wall / ceiling penetration with fire protection classification EI30 - EI120).

* Observe boundary conditions such as media / ambient temperature and air humidity.



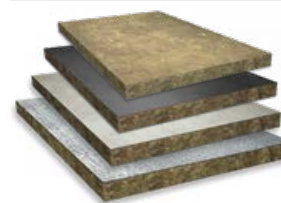
Thermo-teK RL is a lightweight Glass Mineral Wool roll with fibre glass reinforced, tear-resistant aluminium foil or tear-resistant kraft paper based aluminium foil or tear-resistant aluminium foil on one side and with overlap along the roll.

Use: Thermal insulation of rectangular air ducts – outside insulation, circular air ducts – outside insulation and ducts in technical & acoustic rooms.



Thermo-teK LM (lamella mat) consists of individual Rock (LM Eco ALU, LM pro ALU) or Glass (LM Air ALU) Mineral Wool strips (lamellas) that are bonded on one side to a glass-fiber-reinforced aluminum facing.

Use: Thermal insulation of ventilation ducts, pipes and heat storage tanks.



Thermo-teK BD is a Rock Mineral Wool insulation board without facing or with a one-sided facing of glass fleec, glass fabric or aluminum.

Use: Thermal insulation of ventilation ducts and housings, also used in the production of sound absorbers.

SOUND INSULATION



Sound-tek® FM is a Rock Mineral Wool felt mat with a one-sided facing of glass fleec, glass fabric or aluminum.

Use: Sound insulation and acoustic decoupling of ventilation ducts and installations in wall penetration.



Sound-tek® BD is a Rock Mineral Wool insulation board which is laminated with black glass woven cloth black or glass veil facing on both sides.

Use: Combined thermal and sound insulation of sound absorbers.



EXPERIENCE THE NEXT DIMENSION IN INSULATION

with **ECOSE®** TECHNOLOGY



SPECIFIERS CAN TRUST OUR **SUSTAINABLY DEVELOPED PRODUCTS** AND INSTALLERS BENEFIT FROM **USER-FRIENDLINESS.**



BINDER WITHOUT ADDED FORM-ALDEHYDE

The binding agent consists primarily of naturally occurring raw materials. No formaldehyde is added during the manufacturing process. Products made with ECOSE® technology **do not contain any phenols.**



NATURAL LOOK

Insulation products with ECOSE® technology **do not contain any dyes or artificial colorings.**



TECHNICAL PERFORMANCE

Products with ECOSE® technology guarantee high insulation efficiency for thermal comfort and non-flammability for personal safety, and **meet all the relevant standards.**



ENVIRONMENTALLY FRIENDLY

Renewable components in the binder replace nearly all fossil fuel-based materials. **We save energy, lower electricity costs and CO₂ emissions.**

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Building Information Modeling (BIM) is a digital, future-oriented process for planning, building and operating buildings that helps increase productivity in the construction industry. It bundles all information that can be accessed at every step of the life cycle of a building, from design to demolition. Parts lists can be created just as easily during planning, as can comprehensive, timely maintenance overviews during regular operation.

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Environmental Product Declarations (EPD)

In order to provide for the proper assessment with regard to the impact of our insulation materials on the environment, we provide you the information necessary to assist you in your decision making. Our products are assessed with regard to their sustainability over their entire life cycle. This is done with the help of Life Cycle Assessment across each phase – from start to finish.

We make the results available to you in the form of environmental product declarations (EPD) for each individual product. <https://www.knauf-insulation-ts.com/environmental-product-declarations-epds>



Reliable certified products:

These apply to our standard products



Recycling



HVAC – relevant certificates





Our products save energy, cut emissions and are designed to make sure buildings and applications are good for the environment and keep people healthy, safe and well. Across our company, we have been working on sustainability for over a decade. We have focused on zero harm, reducing our energy use and emissions, recycling our production waste, incorporating circular economy principles and constantly campaigning for better and more sustainable buildings and applications. Over the past decade, we have achieved great things and we are proud of how we have changed our company, helped our colleagues, communities and customers and reduced our impact on the environment. But sustainability is a process of continuous improvement. We must do more for our people and our environment. That's why we've created our new sustainability strategy. We call the new strategy 'For A Better World' because it builds on the success of our mission statement: "Our vision is to lead the change in smarter insulation solutions for a better world."



LIVING WITH A GREEN HEART

LIVING WITH A GREEN HEART

The "Living with a Green Heart" initiative promotes a comprehensive approach to sustainable development with

emphasis on societal and social sustainable development, placing an informed individual at the forefront of sustainable transformation of society. "Living with a Green Heart" presents a unique story and approach that encourages companies, organisations, and individuals to:

- ✓ Create sustainable products and solutions which can transform grey cities into green oasis, build safe and comfortable homes and lead to a better world for all of us.
- ✓ Lead social sustainability actions, cocreating a more informed and kinder future for ourselves and those that come after us.
- ✓ Build a friendlier and more responsible environment for employees at all levels and in all aspects, appreciating the diversity and improving our relationships, as well as the way we work, collaborate, and coexist within our environments.

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COMPANY PROFILE

Knauf Insulation is one of the most respected names in the insulation industry worldwide with over 40 years of experience and still growing fast. Over 5.500 employees in more than 40 countries and 27 manufacturing sites. Being part of the family-owned Knauf group, Knauf Insulation Technical Solutions provides solutions for customers' requirements in industry, marine applications, heating, ventilation and air conditioning. A profound market understanding and insulation know-how enables us to provide a broad range of products to meet your specific needs.

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