DRITHERM® TECHNOLOGY

Innovative fibre-level water-repellence

Engineered for durability in high-humidity environments

KNAUF INSULATION

Build on us.

Knauf Insulation uses a unique technology called DriTherm® in the manufacture of glasswool insulation for Southeast Asia's commercial market sector.

What is DriTherm Technology?

DriTherm Technology is an innovative manufacturing process developed by Knauf Insulation, designed to protect each fibre throughout the product and deliver exceptional water-repellent performance. This advanced technology prevents water absorption and maintains thermal efficiency, even when exposed to humidity or used in high-moisture environments. By integrating water-repellent functionality directly into the fibres, DriTherm Technology offers long-term durability and reliability, making it an ideal solution for construction projects where moisture exposure is a concern. It ensures stable insulation performance during installation in humid climates, meeting building standards and contributing to the creation of energy-efficient indoor spaces.

Why it matters

Conventional glasswool can absorb moisture, which reduces thermal efficiency and leads to long-term issues. DriTherm prevents this by repelling both liquid water and vapour, allowing the insulation to preserve its performance over time.

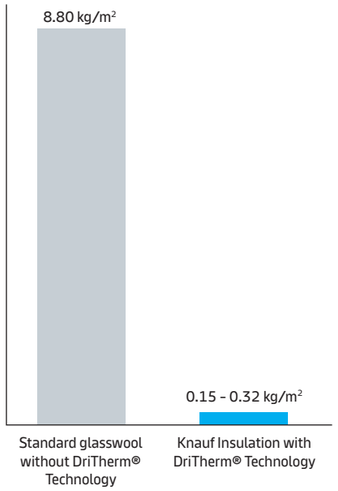
Performance and testing criteria

To meet the demands of moisture-prone environments, DriTherm Technology must deliver performance proven under internationally recognised standards:

Test	Test Standard	DriTherm® Technology
Short-Term Water Absorption (24 hrs)	ISO 29767 ≤ 1.0 kg/m²	Pass: 0.15 ~ 0.32 kg/m²
Long-Term Water Absorption (28 days)	ISO 16535 ≤ 3.0 kg/m²	Pass: ≤ 1.00 kg/m²
Water Vapour Absorption	ASTM C1104 ≤ 5%	Pass: 3% (95% RH, 96 hours)
Long-Term Thermal Conductivity Test	2 years outdoor exposure in tropical climate	Pass: No performance degradation

Short term water absorption testing to ISO 29767

Amount of water absorbed in 24 hours (kg/m²)
Pass = ≤ 1.00 kg/m² (Knauf Insulation testing)



BENEFITS

Maintains performance under moisture

DriTherm Technology protects thermal and acoustic insulation by preventing moisture from displacing air within the fibres. This ensures consistent performance and reliability, even in high-humidity environments.

Fibre-level water-repellence

Unlike surface treatments, our silicone additive is embedded into each fibre, ensuring consistent and reliable water-repellency throughout the insulation. This performance remains uncompromised, even after cutting or handling.

High performance at low density

DriTherm delivers superior water-repellency from 16 kg/m³, thanks to its silicone fibre treatment. Its lightweight design enhances handling, simplifies installation, and reduces both material and transport costs.

Plant-based ECOSE® binder advantage

Glasswool made with ECOSE® Technology—a plant-based binder free from added formaldehyde—complements DriTherm® Technology by delivering superior water-repellency. It ensures safety in schools, hospitals, and green buildings while promoting cleaner air and sustainability.

Proven long-term durability

DriTherm Technology maintains thermal and acoustic performance by repelling water, mould, and humidity. Its durability ensures longevity, lowers maintenance, and reduces carbon emissions—making it a sustainable, cost-effective solution.

How it works

The water-repellent additive is applied during production and becomes an integral part of each fibre. Unlike surface-coated alternatives, this ensures consistent repellence throughout the product—before, during, and after installation. Combined with our formaldehyde-free, ECOSE® binder, DriTherm offers durability, safety, and lasting protection.

DriTherm is applied during Knauf Insulation's glasswool manufacturing process:

1. Raw Material Input

Natural and abundant raw materials, including up to 80% recycled glass.

2. Melting

Raw materials are melted at approximately 1,400°C to form liquid glass.

3. Fibre Formation

Fine insulation fibres are created using high-speed spinning nozzles.

4. Binder and DriTherm Application

The ECOSE plant-based binder and DriTherm water-repellent technology are applied simultaneously, becoming integrated into the fibres.

5. Curing

Fibres pass through an oven for heat curing, fixing strength and water-repellent properties.

6. Cutting and Packaging

Insulation is cut to customer specifications and compressed for efficient transport, reducing carbon emissions.

KNAUF INSULATION

Products in our range which use this technology are as follows, all of which require water-repellence in their applications.

- Knauf Insulation Internal Partition range
- Earthwool® Roof Blanket
- Knauf Insulation External Duct Roll

If you'd like to explore our DriTherm® Technology range in the Southeast Asian market, please scan the QR code.

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