

Insulated Smart Self-Levelling Screed

Fire Barrier F360 Class

Provides European standards
and F360 class fire resistance



Technical Data Sheet

THERMOLOCK
New Generation Construction Materials

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European standards
F360 class fire resistance



Fire resistance
≤ 360 minutes



Acoustic insulation
Rw 56 dB



Working life
≥ 50 years



Shelf life
16 months

Insulated Smart Self-Levelling Screed

THERMOLOCK Insulated Smart Screed (CS4) is a high-performance floor screed that provides thermal, acoustic, and fire insulation. With a dry density of 800-1000 kg/m³, it is specially designed for applications requiring high mechanical strength. It adheres directly to concrete surfaces without the need for primer or adhesive, ensuring easy application and long-term durability.

Unlike conventional screeds, it provides high sound insulation, allowing both floor leveling and sound insulation to be achieved with a single product between floors.

Advantages

- Fire resistance ≤ 360 minutes
- CE-certified
- High thermal insulation
- Easy application
- High compression strength
- High acoustic insulation

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Application

1. The substrate should be clean, free of dust, oil, and weak particles.
2. Mix 25 kg powder with approximately 13-14 liters of clean water using a low-speed mixer.
3. Mixing 6 minutes until a homogeneous mixture is obtained.
4. Allow the mixture to rest for 2-3 minutes for better water integration.
5. Apply manually with a trowel or by machine spraying.
6. Ensure a minimum thickness of 2 cm.
7. Ceramic, stone, granite coatings can be applied after 48 hours.
8. For multilayer applications, allow the first layer to dry before applying the next.

Areas of Application

- Any surface where regular screed is used
- Any type of structure requiring insulation
- Commercial buildings, hotels and skyscrapers
- Storage and industrial areas
- The inner surfaces of the houses
- Spaces needing heat and acoustic insulation

Sound Insulation Performance

- Impact sound reduction (ΔL_w): 56 dB (5 cm thickness)
- Contribution to airborne sound insulation: +4 to +6 dB
- Effective frequency absorption: 100 Hz - 5,000 Hz
- Particularly effective in the 250-1,000 Hz range (speech frequencies)
- Airborne sound improvement: 2-4 dB depending on the floor system
- Effective frequency range: 125 Hz to 4000 Hz
- Sound test procedures compliant with ISO 10140 to be planned. .

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Drying Characteristics and Moisture Content

Initial set: 7 hours

Walkable: after 24 hours (light duty use)

Moisture content: after 24 hours 15%

Complete drying: 72 hours under standard conditions (23 C / 50% RH)

Drying speed depends on ambient temperature and ventilation.

Avoid application below +5 C or above +35 C

Traffic Readiness

Light foot traffic: 24 hours

Heavy loads or coatings: 72 hours

Primer Usage and Bond Performance

Primer is not required for standard applications. However, if higher bond strength is desired, it can be increased through the use of a suitable primer. The table below shows a comparative overview:

Surface Type / Application	Bond Strength Without Primer	Bond Strength With Primer
Standard Concrete Surface	≥ 2.0 Mpa	≥ 2.5 Mpa
Rough/Absorbent Surface	≥ 1.8 Mpa	≥ 2.4 Mpa
Spec. Areas Req. High Adhesion	≥ 2.0 Mpa	≥ 3.0 Mpa

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Technical Specifications

Property	Value
Color	Grey
Binder	Special cementitious formulation
Density (Bulk)	900 ± 10% kg/m ³
Thermal Conductivity (λ)	1.0 W/m·K (±10%)
Fire Classification	A1 Non-Combustible (EN 13501-1)
Fire Resistance	F360 (360 minutes) (1000 oC)
Sound Insulation	Up to 56 dB depending on system
Water Vapor Permeability	High (breathable)
Water Resistance	0,250 (kg/m ² min 0,5) W1
Compressive Strength	CS IIII (≥ 4.0 N/mm ²)
Adhesion Strength	≥ 2.0 N/mm ²
Workability Time	120 minutes
Drying Time	24-48 hours depending on layer thickness
Mixing Water Requirement	13-14 L per 25 kg bag
Application Thickness	20-30 mm (per layer)
Consumption	6.0-6.3 kg/m ² for 10 mm layer
Shelf Life	16 months in dry conditions
Application Temperature Range	+5 C _o - +35C _o
Application Type	Machine or Steel trower
Packaging Type	25 kg

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Storage

- Store in a dry, closed place on pallets.
- Do not stack more than 10 bags.
- When stored this way, it has a shelf life of 16 months.

Safety

Avoid contact with skin and eyes

Wear protective gloves and goggles during application.

Non-flammable and non-toxic. Classified as a non-hazardous cement-based material.

For detailed health information, please refer to the MSDS document.



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