
Fiber reinforced polymer-modified thermal insulation adhesive mortar

DOMOSHIELD is a single-component fiber reinforced, resin-modified cement based adhesive, ideal for bonding and coating of thermal-insulation boards in external thermal-insulation systems. It satisfies the requirements of adhesive type C2 according to EN 12004 and is classified as a general purpose (GP) rendering mortar type CS III of low water absorption W 2 according to EN 998-1.

Field of application

DOMOSHIELD, used as adhesive, is suitable for the adhesion of all types of thermal insulation boards, made of expanded/extruded polystyrene, mineral wool, cork, etc., on concrete, plaster or brickwork surfaces. In addition, is used as basecoat for cement board, or reinforced with fiberglass, suitable for smoothing insulation boards.

Advantages

- Ready for use mortar, just with addition of water.
- Excellent adhesion to substrate due to its composition of organic polymers and synthetic resins.
- Minimizes the risk of cracking because of its non-shrinking ability.
- Quick and easy to apply.
- Thixotropic, application to vertical surfaces without flowing.
- High initial strength.
- Waterproof, weather and frost resistant after hardening.
- Flexible.

Method of use

Substrate condition:

Must prepare the substrate in order to be clean of loose pieces, as well as peeled off paints and oils. Wet the surface before application.

Mixing

A bag 25 kg of DOMOSHIELD is added to 6.5 L water (26% w/w of dry cement). Stir constantly until a homogeneous mass is formed. Better mixing is achieved with a low speed mixer so as to prevent air introduction into the mixture. Let the mixture 10 minutes to settle and stir again.

Application

As an adhesive:

In smooth surfaces, comb the adhesive with a notched trowel onto the insulation board. In uneven substrates, apply the adhesive with a trowel around the board and in few points in the center. The amount of the material should cover 40% of the board surface. Then, press the boards on their final position.

As a basecoat for external thermal insulation system:

After 24 hours, from the board fixing, comb one layer DOMOSHIELD on the boards. Then, place the reinforcement (fiberglass 160 g/m²) and nested it into DOMOSHIELD by using the smooth side of the trowel, in order to also smooth the final surface. Prime the next day with DOMOSHIELD PRIMER and when it gets dried on touch (about 2-3 hours) apply the acrylic pasty plaster DOMOSHIELD WALLFIX.

Additional information

- Do not add cement, aggregates or additives to the product.
- Do not add water if the mortar has begun to set.

- Do not apply at temperatures below 5°C and above 35°C or during rain. When the application temperature is at 5-8°C, then the mixing and saturation water of the substrate is recommended to be warm to hot. At 30-35°C, water is recommended to cold.
- Protect surfaces from sun, wind and rainfall and do not apply the mortar with rain or strong wind.
- Do not use the product for adhesion to metal or wooden surfaces.
- The product contains cement and is classified as irritant.
- Clean tools immediately after use with water.

Consumption

As adhesive: 2-4 kg/m² depending on the substrate.

As basecoat: 1.5 kg/m² for thickness of 1 mm.

Storage

It can be retained at least 12 months from its production day, in unopened package protected from the moisture.

Packaging

Bags of 25 kg.

Colors

Available in white and grey.

Certificates

The product is certified according to EN 998-1 as a general purpose (GP) rendering mortar for external use type CS III of low water absorption W 2.

Specifications

Form	Powder
Shading	White, Grey
Bulk density	1.40 ± 0.04 g/cm ³
Mixing ratio	6.5 L water / 25 kg powder
Pot life	5-6 hours
Open application time	>30 min
Temperature application	+5°C to +35°C

Adhesion strength according to EN 12004

Initial adhesion strength	1.4 N/mm ²
After water immersion	1.1 N/mm ²
After heat ageing at 70°C	1.1 N/mm ²
After freeze-thaw cycles	1.4 N/mm ²

Adhesion strength to XPS for 28 days

Initial adhesion strength	0.6 N/mm ²
After water immersion for 2 days	0.3 N/mm ²
After water immersion for 2 days and at standard conditions for 7 days	0.6 N/mm ²

Adhesion strength to EPS for 28 days

Initial adhesion strength	0.6 N/mm ²
After water immersion for 2 days	0.2 N/mm ²
After water immersion for 2 days and at standard conditions for 7 days	0.7 N/mm ²

Compressive strength (EN 1015-11) (CS III)	4.67 N/mm ²
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Adhesion (EN 1015-12)	1.28 N/mm ²
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Capillary water absorption (EN 1015-18) (W 2)	0.055 kg/m ² h ^{0.5}
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Water vapour permeability coefficient (EN 1015-19)	μ 30
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Thermal conductivity (EN 1745)	0.42 W/mK
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Ready to be used	After 24 hours
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Temperature durability	-20°C to +80°C
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All the technical data stated in the present Technical Data Sheet are based on laboratory tests and the knowledge and experience of the company. Different conditions may apply at field applications that are beyond the control of the company. Therefore, the end user is ultimately responsible to make sure that the product is suitable for the application in question and to know the real conditions of the project.