

VWS-Mörtel

Highly hydrophobic mineral adhesive and surfacer for fixing mineral or polysterene insulation boards with adhesive in the ALLFAtherm-thermal insulation systems and for embedding Gittermatte (reinforcement mesh) and corner angle profiles.



Product characteristics

Properties	<ul style="list-style-type: none"> • Normal rendering/plastering mortar according to DIN EN 998-1 • Fire behaviour: Non-combustible" or "flame retardant" depending on the configuration of the individual system • Weatherproof, water-repellent according to DIN V 18550 • Highly diffusion-capable • High compressive strength • Excellent adhesion • Easy to apply • Adhesive and reinforcement compound in one product • Suitable for the application by machine equipment • Long workability / open time • Very good fresh mortar stability • Environmentally friendly
Areas of application	Exterior and interior
Suitable substrates in detail	In all ALLFAtherm insulation systems. As crack repair (heavy-duty reinforcement) on façade surfaces.

Material description

Binder	Cement Lime Synthetic resin dispersible polymer powder
Density	Approx. 1.5 kg/dm ³
Water vapour permeability	≤ 0.1 m according to DIN EN ISO 7783 with 3 mm layer thickness
Water absorption coefficient (w-value)	< 0.2 kg/(m ² · h ^{0.5}) according to DIN EN 1062
Layer thickness	Thickness of reinforcement layers from 2 to 5 mm. For the application as rendering in ETICS the corresponding approval for ETICS must be followed.
Resistance to pressure	Class CS IV according to DIN EN 998-1
Adhesive tensile strength	≤ 0.08 N/mm ² according to DIN EN 998-1
Diffusion resistance	μ < 15 according to DIN EN 998-1
Average consumption (short text)	Fixing insulation boards with adhesive Spot-and-bead method: aprox. 3 - 4 kg/m ² Mechanical bead method (meander-shaped): approx. 6 - 7 kg/m ² All-surface adhesion: 4 - 6 kg/m ² Reinforcement approx. 4.5 - 5.0 kg/m ² (approx. 1.5 kg/mm layer thickness)

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	Corner protection approx. 1.0 - 1.5 kg/m
Average consumption	The consumption varies depending on the application technique and the substrate. It is therefore advisable to determine the exact consumption figure by producing a sample area.
Colour shade	Light grey
Storage	Cool and dry on wooden grids
Thinning	Water

Substrates

Suitable substrates	All usual mineral substrates (plasters/renders, concrete, masonry) Solid, mineral and organic existing paint layers Insulation boards complying with the current ETICS approvals
Substrate conditions	Fixing insulation boards with adhesive The substrate has to be firm and sound, grease- and frost-free. Remove coarse, protruding mortar or concrete parts, level out larger unevennesses using an appropriate mortar. Check existing render for stability and cavities and existing coatings for bearing strength. Non bearing renders and coatings have to be entirely removed. If necessary, substrates have to be primed. The adhesion on bearable existing paint layers or synthetic resin plasters is also possible, however, this requires an additional mechanical fixing. Reinforcement The substrate must be clean, dry, frost-free, firm and sound as well as free from efflorescences, algae, moss, fungal attack, sinter layers and release agents. Follow the building regulations (in Germany VOB, Part C, DIN 18363, Section 3). Mount the insulation boards level as well as flush and plumb in the corner area. The reinforcement can be effected once the bonding of the insulations boards has hardened (after 3 days at the earliest at + 20 °C and 65% relative humidity). Substrate conditions The reinforcement takes place, once the bonding of the insulations boards has hardened (after 3 days at the earliest at + 20 °C and 65% relative humidity) onto clean and dry insulation boards that were mounted level, without offset, as well as flush and plumb in corner areas. For the renovation of rendered façades damaged by cracks, the substrate must be clean, dry, firm and sound and free from efflorescences, sinter layers and release agents. Remove coarse, protruding mortar or concrete parts, level out larger unevennesses using an appropriate mortar. Check existing render for stability and cavities and existing coatings for bearing strength. Non bearing renders and coatings have to be entirely removed. If necessary, substrates have to be primed. Existing paint layers (basement ceilings) Existing paint layers have to be firm and sound. In case of doubt, the carrying capacity has to be checked by trying to tear off a piece of tissue. For this purpose embed a piece of tissue (about 50 x 50 cm) into the adhesive mortar, with a projection of 10 - 20 cm. Try and tear it off after a sufficient drying time (at least 7 days). If the adhesive mortar peels off extensively from the substrate, this substrate is not suitable for a sole adhesion of insulation boards. An additional anchoring using a sufficient number of dowels (such as ceiling insulation screwed plug DDS-Z) will be necessary or the removal of the existing paint layer. If necessary the substrate has to be primed before applying the adhesion.

Application

Application method	Application by spraying or trowel
Spraying data	Standard continuous mixers Mixing pumps with an output of at least 10 L, e.g. inotec inoCOMB Picco Business, PFT Ritmo M + L, PFT G4, M-Tec plastering machine m 300 or mono mix, etc. Accessories: compressor, base render sprayer, air valve 12 - 16 mm.
Coating system	Priming with heavy reinforcement: If necessary apply a primer coat with Kieselit-Grundierfarbe or Grundierfarbe WP. Finishing coat: After curing of the reinforcement layer, apply a priming coat in system with the following finishing render.

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Preparation of Material

Add bag contents (25 kg) into 5 - 6 litres of tap (potable) water and mix carefully until the mixture is free of lumps. Allow to stand and cure for about 10 - 15 minutes and stir up again.

Bonding insulation boards:

Apply the mortar to the back of the insulation board using the spot-and-bead method. This involves a bead of adhesive around the outside and individual spots over remaining area of the insulation boards. When bonding mineral wool insulation boards, the mortar must be applied first thinly to improve the initial adhesion. Mount the insulation boards level, flush and plumb in mutually offset layers. There should be no protruding boards. If necessary, smooth down rigid polystyrene foam by sanding. Take care to ensure that none of the mortar enters the board joints. Plugging may only take place once the mortar has hardened (about 36 hours). Do not attempt to make already stiffening material workable again with water.

Embedding mesh:

Prepare the mortar as stated above and apply generously in an even layer using the smoothing trowel. Place cut-to-size Gittermatte lengths (reinforcing mesh) overlapping by 10 cm (also at corners and edges), starting from the top. Press them on and spread mortar over the whole surface. The application takes place "wet-on-wet". The fabric mesh must lie centrally in a reinforcing layer of even thickness. Before full-coverage embedding of the mesh, embed corner angles (Eckwinkel) centrally in the mortar, ensuring overlap (10 cm) to protect corner regions of windows and doors, etc. At corners and openings in buildings also use the corner reinforcing components Gewebe-Eckpfeil or Sturzeckwinkel (specially shaped corner angel for lintels). In order to increase the impact protection of the thermal insulation before reinforcing with Gittermappe (fabric mesh) place the reinforcing fabric VWS-Panzergewebe into the mortar. The reinforcing fabric must not overlap, but should form butt joints instead. Then apply Gittermatte over it.

Application hints

The following regulations have to be observed : the technical data sheet of each product, the relevant valid building approvals, the current ALLFAtherm application brochure "Verarbeitung von ALLFAtherm-Dämmsystemen", DIN 55699 and in Germany BFS Fact Sheet No. 21 and the guidelines referred therein, as well as Technical System Information "Compendium ETICS and Fire Protection" published by the professional association Wäremedämmverbundsysteme (ETICS).

Do not apply under a glaring sun, during strong wind or on warm substrates.

Note

The figures given for parameters are average values. Due to the use of natural raw materials in our products, the actual value determined on the individual supplied product may differ slightly without affecting its suitability. These data refer to the white respectively standard product. Tinting may cause deviations.

Adjacent areas, particularly glass, ceramics, clinker, need to be masked carefully, as the product may affect the surface.

Practical hints

Dark Colour Shades on ETICS

Colour shades with a light reflectance value ≥ 20 are possible on ETICS without limitations. On request, darker shades are possible based on a specific TSR-formulation. Please observe the information regarding colour stability with brilliant and intensive hues.

Sidelight

Unfavourable lighting conditions (sidelight) may occur for instance after the subsequent installation of lights. This fact must be known before works. Specific requirements on evenness and uniformity of the coating have to be previously agreed upon.

Temperature limit

Between + 5° C and + 30° C for substrate and ambient air during processing and drying.

Drying time

At + 20° C for substrate and ambient air and 65% relative humidity (RH), final hardness after approx. 4 - 6 days. Depending on layer thickness, low temperatures and higher humidity, the drying time may be extended. Working time (pot-life): approx. 2 hours at + 20° C.

Tool cleaning

Immediately after use with water

Information

Product code

ZP01

Hazard statements and safety advice

This mineral powder product reacts alkaline. Causes skin irritation. Causes serious eye damage. May cause respiratory irritation. Keep out of reach of children. Do not breathe dust or mist. Wear protective gloves/ protective clothing/ eye protection/ face protection. If swallowed: Rinse mouth. Do not induce vomiting. If in eyes Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/ attention.

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Declaration of ingredients	Polyvinyl-acetate dispersion, cement, calcium hydroxide, siliceous fillers, additives
Observe safety data sheets	Further details: See Safety Material Data Sheet (MSDS)
VOC content (in gram per litre)	< 1 g/l
Waste disposal	Only completely emptied containers should be given for recycling. Dispose dried/hardened product residues as construction site/demolition waste.

Container size

Content		EAN code	Article no.
25 KG	Papiersack	4002822150129	610517
800 KG	Einweg-Container	4002822012540	803851
1000 KG	Silo/Big-Bag	4002822017163	721942

This data sheet cannot deal with all types of application arising in practice. Therefore, we cannot be held responsible for their content. These instructions do not release the purchaser / applicator from his responsibility of professionally examining the substrate and determining the suitability of the product in consideration of the project characteristics. In case of queries please request the technical assistance of ALLIGATOR FARBWERKE.