

FOR EPS

KOMBI

Mineral
adhesive/base coat for EPS

MAIN ADVANTAGES

- High resistance to shrinking cracks
- Optimum impact resistance
- No run-off from a vertical surface
- High adhesion to the substrate and EPS
- Easy to apply
- Universal use (for fixing EPS boards and making a mesh-reinforced layers)
- Contains microfibres and reinforcing fibres
- For use with white and grey EPS**

AREAS OF APPLICATION

Mineral mortar for fixing insulating expanded polystyrene (EPS) boards to the substrate and creating a layer reinforced with fibreglass mesh in the following EWI systems: **KABE THERM RENO, KABE THERM EPS, KABE THERM AVANT, KABE THERM MARMURIT / MOZAIKER, KABE THERM MARMURIT COLORATO / MOZAIKER COLORATO, KABE THERM ELASTO, KABE THERM EPS ELASTOLITH / HAAKSBERGEN, KABE THERM DECOR EFFECT, KABE THERM CK, KABE THERM WHITE***. It can also be applied for levelling out (unevenness up to 5 mm) and smoothing mineral substrates before applying paints and thin-coat renders. To be applied on mineral substrates made of fine masonry components (bricks, blocks, stone, etc.) or concrete (monolithic or prefabricated products). The **KOMBI** render can be used in the technology of external thermal insulation composite system – ETICS.

TECHNICAL DATA

Base binder: hydraulic and polymer binders with modifiers added;

Bulk density: approx. 1.5 to 1.6 g/cm³;

Mixing ratio: approx. 6.0 l of water per 25 kg of mortar;

After adding water, the product must be used within: approx. 2 hours;

Open drying time: ≥ 20 min.

Colour: light grey;

Consumption:

- as adhesive for EPS boards
- for reinforcing layer

approx. 4.0 kg/m²;

approx. 4.0 kg/m².

Temperature of application (air and substrate): from +5°C to +25°C;

Packaging: Disposable paper packaging containing 25 kg of product.

Storage: Product should be stored in original sealed packaging, in a dry room, protected from moisture and frost.

Note: The product must be kept out of the reach of children.

Shelf life: 12 months from the date of production printed on the packaging, with originally sealed packaging.

HOW TO USE

SUBSTRATE PREPARATION: Substrate for fixing thermal insulation boards should be sound/stable (without scratches and cracks), degreased, clean and dry, and free of biological contamination or chemical efflorescence. In case of algae/fungi growth, the substrate should be cleaned mechanically and then washed with water and disinfected with **ALGIZID**. The substrate must be protected against capillary moisture intake and precipitation water. Any loose layers, not bound to the substrate (e.g., loose render or flaked coatings), should be removed. Old and/or dirty substrates should be washed and degreased with water and **CLEANFORCE** cleaning agent. If any substrate unevenness exceeds 1 cm, first use a levelling compound. Absorbent substrates should be primed with **BUDOGRUNT ZG** before applying a levelling compound. Drying time for the product applied on the substrate in optimum weather conditions is approx. 3 hours (at +20°C and at a relative air humidity of 55%). The substrate for applying paints and thin-coat renders must be even, so for particularly uneven substrates (from 5 mm to 15 mm), first use levelling compounds, and then level out the wall surface with **KOMBI** adhesive/base coat. Minor unevenness (up to 5 mm) can be levelled out and smoothed straight away with **KOMBI** adhesive/base coat. An absorbent substrate should be primed with **BUDOGRUNT ZG** before applying levelling compounds or base coats. Before fixing EPS boards on unstable substrates, an adhesion test should be performed. The test involves fixing a few (8–10) EPS board samples (with 10 x 10 cm dimensions) in various places of the façade and then tearing them off after 3 days. The substrate load-bearing capacity is sufficient when tearing happens within the EPS layer. If the whole sample, including adhesive and substrate layer, is torn off, then it is necessary to remove the poorly bound layer from the substrate and prime it with **BUDOGRUNT ZG**. When the primer is dry, repeat the adhesion test. If the repeated test also gives a negative result it is necessary to consider additional mechanical fixing or a special substrate preparation. **Note:** Before applying a thin layer of **KOMBI** render, prime the mineral substrate with **BUDOGRUNT ZG** diluted 1:1 with water and protect with meshes to prevent excessively rapid vaporizing of make-up water and burning the render.

PRODUCT PREPARATION: Gradually pour the entire packaging contents into a container with a pre-measured amount of cool water (approx. 6.0 litres), stirring constantly (with a low-speed mixer/drill with a stirrer), until a homogeneous, lump-free mixture is obtained. After leaving it for 5 minutes and remixing, the mortar is ready to use. After adding water, mortar must be used up within approx. 2 hours (at an ambient temperature of +20°C).

FIXING EPS BOARDS: On even surfaces, EPS boards can be fixed using the layer-to-layer gluing method. To do this, put some adhesive/base coat on an EPS board with a trowel and, using the edge, spread it evenly all over to apply a thin coat. During this operation, the mortar should be pressed against the board surface with a trowel. Then apply an additional portion of mortar onto the board and spread it with a notched trowel edge (with a minimum tooth dimension of 10 x 10 mm). Once the mortar is applied, put the board immediately onto the wall in the target position and press firmly to flush it with neighbouring boards. Boards must be tightly fitted next to each other using the staggered method. Remove the excess of squeezed mortar, so as not to leave any remains on board edges. Properly applied mortar should cover the whole board surface, and its thickness after fixing should not exceed 1 cm. After allowing a sufficient time to set (at least 48 hours), the boards can be fixed by means of adequate mechanical fixings, as intended by the thermal insulation system design. In order to obtain an even surface of all the boards installed, the whole front surface of the EPS board should be sanded using a trowel covered with suitable coarse sandpaper.

When fixing EPS boards on uneven substrates, the adhesive/base coat should be applied on boards using the ribbon and dab method. The ribbon should be 3–6 cm wide, and should be applied onto the board perimeter. In addition, 3 to 6 dabs of mortar (approx. 10–15 cm in diameter) should be evenly placed on the central surface of the board. The ribbons applied on the board perimeter must be formed in a prism shape. To do so, spread it with a trowel positioned at a 45° angle towards the board surface. Once the mortar is applied, put the board immediately onto the wall in the target position and press firmly to flush it with neighbouring boards. Fit the boards tightly next to each other using the staggered method. Remove the excess of squeezed mortar, so as not to leave any remains on the board perimeter. Correctly applied mortar should cover min. 40% of board surface area, while the mortar thickness after fixing should not exceed 1 cm. After allowing a sufficient time to set (at least 48 hours), the boards can be fixed by means of adequate mechanical fixings, as intended by the thermal insulation system design. In order to obtain an even surface of all the boards installed, the whole front surface of the EPS board should be sanded using a trowel covered with suitable coarse sandpaper.

APPLYING THE REINFORCED LAYER: First, the edges of window and door openings should be reinforced by fixing to their corners diagonally (i.e., at a 45° angle) fibreglass mesh (with the dimensions 25 x 30 cm) using the **KOMBI** adhesive/base coat. The reinforced layer can be applied on even, cleaned (previously sanded) surfaces of EPS boards, not earlier than 3 days from the date of board installation. Apply a continuous and even layer of the adhesive/base coat onto the substrate (with the thickness of approx. 3–4 mm), covering the whole width of the reinforcing mesh. Spread the coat layer with a notched trowel and immediately embed the fibreglass reinforcing mesh into it. The reinforcing mesh should be evenly stretched and completely immersed in the coat. After embedding the mesh, the entire layer surface should be carefully levelled, using an additional portion of render, if necessary. The neighbouring mesh stripes must be glued with an overlap of at least 10 cm. Any marks left after levelling should be sanded down with a sandpaper. The thickness of the coat reinforced with one mesh layer should range from 3 to 5 mm.

DRYING: The drying time for the reinforced layer is min. 3 days (drying at +20°C and at a relative air humidity of 65%). After this period, you can apply a primer and once its curing is completed, a render. **Note:** At low temperatures and high air humidity, the render drying time may be longer.

USEFUL HINTS: In order to avoid cracks and unevenness, it is necessary to complete a single application to any architectural element in one working cycle. The adhesive/base coat should be applied and dried on dry days at temperatures between +5°C and +25°C. Wash tools with water immediately after finishing work. Avoid working on surfaces directly exposed to sunlight, as well as in strong winds and at high air humidity. In order to protect the undried reinforced layer against severe weather conditions, it is recommended to use appropriate protective meshes or tarpaulins on scaffolds. **Note:** The product is alkaline, therefore, it is necessary to protect eyes and skin. Safety clothing must be worn while carrying out any work. In case of contact with eyes, immediately rinse them thoroughly with plenty of water. If irritation develops, seek medical assistance.

* if the product is used in an EWI system, the manufacturer provides a warranty only when all components of a given system are used: **KABE THERM RENO, KABE THERM EPS, KABE THERM AVANT, KABE THERM MARMURIT / MOZAIKER, KABE THERM MARMURIT COLORATO / MOZAIKER COLORATO, KABE THERM ELASTO, KABE THERM EPS ELASTOLITH / HAAKSBERGEN, KABE THERM DECOR EFFECT, KABE THERM CK, KABE THERM WHITE.**

** EPS boards used in the EWI system should meet the technical requirements specified in the National or European Technical Assessment for the specific system.