

EPS-BASED

KABE THERM RENO



EWI (External Wall Insulation) system for providing thermal insulation and additional thermal insulation of previously EPS-insulated buildings with silicone, polysilicate and acrylic external render and wood/board effect, as well as renders for spray application from the AKORD line

MAIN ADVANTAGES

- Reduction of building heating costs
- Improved microclimate inside the building
- Wall protection against adverse weather conditions
- Protection against the growth of algae and fungi
- A wide range of types, colours and decorative effects of renders
- Opportunity to provide additional external wall insulation for buildings with existing EPS-based insulation

TECHNICAL DATA

Type of thermal insulation: EPS boards with the following code: EPS-EN

13163-T(2)-L(2)-W(2)-S(5)-P(5)-BS75-DS(N)2-DS(70,-)2-TR80

Thickness of thermal insulation: from 2 to 30 cm inclusively;

Thermal insulation fixing: bonding system with additional mechanical fixing or mechanical fixing with additional bonding;

Use of mechanical fixings: as specified in technical design;

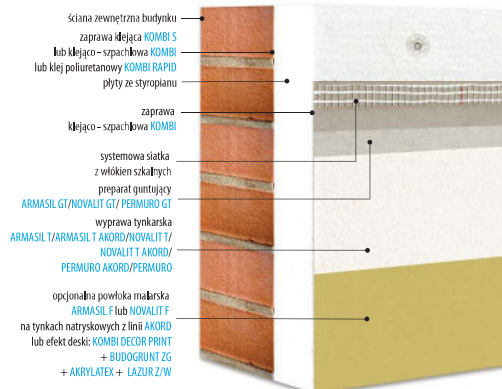
Reinforcing mesh: system reinforcing fibreglass mesh;

Fire classification: non-fire spreading system (NRO);

Colours: natural white and colours according to KABE and NCS colour charts or a sample provided (for NOVALIT T and ARMASIL T renders only in colours that can be obtained by using inorganic pigments);

Textures: solid / scraped / mixed (ARMASIL T render only in solid texture);

SYSTEM CONSTRUCTION



Grain size: 1.5 mm; 2.0 mm; 2.5 mm; 3.0 mm (for PERMURO AKORD render only grain size of 1.5 mm and 2.0 mm); ARMASIL T AKORD and NOVALIT T AKORD only grain size of 1.5 mm

Adhesion:

- to concrete ≥ 0.25 MPa;
- to EPS ≥ 0.08 MPa;

Interlayer adhesion:

Surface layer water absorption (after 24 hours):

Impact resistance for the system with render:

- PERMURO, NOVALIT T, NOVALIT T AKORD, ARMASIL T AKORD cat. II
- ARMASIL T, PERMURO AKORD, WOOD TEXTURE EFFECT cat. III

AREAS OF APPLICATION

The **KABE THERM RENO** EWI system is the most popular system of thermal insulation for external walls and for providing additional thermal insulation to walls with an existing EPS-based system*. It is applied in single- and multi-family housing construction industry, public utility and industrial buildings, to the height of up to 25 m (for the buildings erected before 1 April 1995 to the height of eleventh story, inclusive) and in frame buildings. Because of its simple installation technology and low implementation costs, it is most frequently used for the thermal upgrade of buildings constructed using old energy-consuming technologies (non-compliant with applicable thermal insulation requirements). The system can be applied on walls made of small-sized masonry elements (such as e.g. bricks, blocks, stone, etc.) or of concrete (poured on site or in the form of prefabricated slabs) or in the form of OSBs (wood-based oriented strand boards) according to PN 300 standard, with a density of not less than 780 kg/m³ and bending strength not less than 16 MPa. The OSBs are fixed with the use of **KOMBIRAPID** polyurethane adhesive and mechanical fixings. The system can be used on new walls, as well as for renovation of the existing ones. It is also possible to use it on horizontal or inclined surfaces, that are not exposed to precipitation. The external system layer can be made using **PERMURO** and **PERMURO AKORD** acrylic renders, **NOVALIT T** and **NOVALIT T AKORD** polysilicate renders or **ARMASIL T** and **ARMASIL T AKORD** silicon renders, available in a wide range of colours and textures, as well as with the wood/board effect. After wetting the **ARMASIL T** silicone render, the effect of water molecules "being repelled" by silicone resin is observed on its surface. This effect protects façades against precipitation and reduces soiling deposition.

Layer type	Name and description of the product	Average coverage
ADHESIVE LAYER	The KOMBIS adhesive or KOMBIS adhesive/base coat (required for thermal insulation of the existing thermal insulation systems) or KOMBIRAPID polyurethane adhesive (required when bonding to oriented strand boards (OSBs))	approx. 4.0 kg/m ² ** approx. 1/6 pack/m ²
THERMAL INSULATION	White or graphite EPS boards with the code EPS-EN 13163-T(2)-L(2)-W(2)-S(5)-P(5)-BS75-DS(N)2-DS(70,-)2-TR80 – cured EPS thermal insulation boards	1.0-1.10 m ² /m ²
	Mechanical fixings – pins for fixing thermal insulation to the substrate	Type, quantity and layout as per technical design
REINFORCING LAYER	KOMBIS adhesive/base coat – for applying reinforcing layer	approx. 4.0 kg/m ²
	System fibreglass mesh: KABE 145 , KABE 150 / KABE AVANT 150 , KABE 160 , KABE 165 / KABE AVANT 165 – anti-alkali impregnated mesh, completely immersed in KOMBIS base coat	1.10 m ² /m ² of thermal insulation
FINISH COAT	Primer (dedicated for the same type of render): ARMASIL GT , NOVALIT GT , PERMURO GT – a product that improves adhesion and limits the substrate water absorbency	approx. 0.20 l/m ²
	External coat of render: ARMASIL T , ARMASIL T AKORD , NOVALIT T , NOVALIT T AKORD , PERMURO , PERMURO AKORD – protective and decorative layer that protects the system against adverse weather conditions and mechanical damage; texture and colour of the render to be chosen	grain size 1.5 mm – 2.4-2.5*** kg/m ² – solid grain size 1.5 mm – 2.3-2.5*** kg/m ² – scraped grain size 2.0 mm – 3.0 kg/m ² grain size 2.5 mm – 3.7 kg/m ² grain size 3.0 mm – 4.5 kg/m ²
	The wood/board effect is made using the following set of products: – the KOMBIDECORPRINT mineral mortar, BUDOGRUNT ZG primer, AKRYLATEX undercoat, LAZUR Z/W lazure paint – a protective and decorative layer that protects the system against external factors and gives an attractive texture and colour of the wood/board (AKRYLATEX and LAZUR Z/W paints), according to the Farby KABE wood/board effect chart	4.0-4.5 kg/m ² 0.2 l/m ² 0.14-0.20 l/m ² 0.1 l/m ²
OPTIONAL PAINT COAT ON RENDERS FOR SPRAY APPLICATION	ARMASIL F , NOVALIT F paint coating – protective and decorative layer protecting against adverse weather conditions and providing an attractive colour.	from 0.36 l/m ² (when applied twice and depending on the render grain size)

** When installing additional thermal insulation to an insulation system with a render top coat, the total thickness of the existing and newly installed thermal insulation layer cannot exceed 30 cm. If the render is removed along with the reinforcing layer, the total thickness of thermal insulation cannot exceed 25 cm.

*** If additional thermal insulation is added to the existing thermal insulation system, the average coverage of **KOMBIS** adhesive/base coat is 4.50 kg/m².

**** Depending on the render type.

Note: Due to the excessive heating of dark-coloured façades, it is not recommended to use colours featuring a low light reflection coefficient (Y < 20%). The manufacturer grants a warranty only when a complete EWI system is used (all components) in accordance with the "Guarantee card for EWI systems".