

EPS BASED

KABE THERM RENO



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

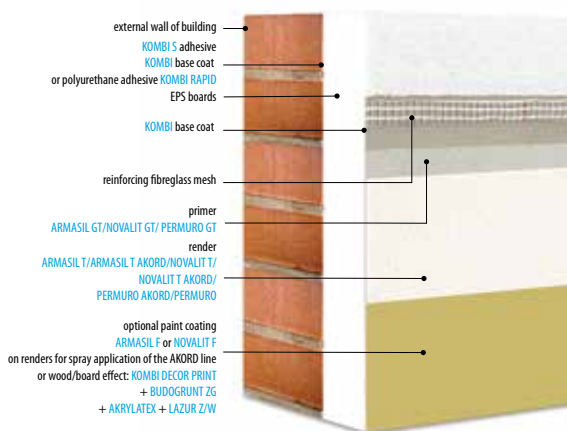
MAIN ADVANTAGES

- Reduction of heating costs
- Interior micro-climate improvement
- Protection of walls against the impact of adverse atmospheric conditions
- Anti-fungal and algae protection
- 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 SPECIFICATION

Type of thermal insulation: EPS boards with the following codes: EPS-EN 13163-T(2)-L(2)-W(2)-S(5)-P(5)-B575-DS(N)2-DS (70,-)2-TR80 - MU20;
Thickness of thermal insulation: from 2 to 30 cm inclusively;
Thermal insulation fixing: bonding or bonding and mechanical fixing;
Use of mechanical fixings: optional (as specified in technical design);
Reinforcing mesh: reinforcing fibreglass mesh;
Fire classification: non-fire spreading system (NRO);
Colours: natural white and colours according to KABE chart, NCS or a sample provided (for NOVALIT T and ARMASIL T renders only in colours that can be obtained by using non-organic pigments);
Textures: solid/ scratched/mixed texture (ARMASIL T render only solid/grained 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: ≥ 0.08 MPa;
Water absorption of the surface layer (after 24 hours): < 0.5 kg/m²;
Impact resistance for the system with render:
 • PERMURO, NOVALIT T, NOVALIT T AKORD, ARMASIL T AKORD cat. II
 • ARMASIL T, PERMURO AKORD, WOOD EFFECT/BOARD EFFECT cat. III

AREAS OF APPLICATIONS

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. Because of its simple installation technology and low implementation costs it is most frequently used for the thermal upgrade of buildings constructed in 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 from concrete (poured on site or in the form of prefabricated panels) or in the form of OSB wood-based panels according to PN 300 with a density of not less than 780 kg/m³ and bending strength not less than 16 MPa. The OSB boards fixing with the use of KOMBI RAPID 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 by using PERMURO, PERMURO AKORD, acrylic renders, NOVALIT T, NOVALIT T AKORD polysilicate renders or ARMASIL T, ARMASIL T AKORD silicone renders available in a wide range of colours and textures and in the wood/board effect. After wetting the silicone ARMASIL T render, the effect of water molecules 'being repelled' by silicone resin is observed on its surface. It means that water absorption is greatly reduced and the facade is protected against dirt/dust due to its self-cleaning properties.

Layer type	Name and description of the product	Average coverage
ADHESIVE LAYER	KOMBI S adhesive or KOMBI base coat (required for thermal insulation of the existing thermal insulation system) or polyurethane adhesive KOMBI RAPID (required when applying bonding to OSB boards)	ca. 4.0 kg/m ² *** ca. 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)-B575-DS(N)2-DS (70,-)2-TR80 - MU20 – cured EPS thermal insulation boards	1.0 ÷ 1.10 m ² /m ²
	Mechanical fixings (optionally) – pins for fixing thermal insulation to the substrate	Type, quantity and layout as per technical plan
REINFORCING COAT	KOMBI base coat – for applying reinforcing layer	ca. 4.0 kg/m ²
	Reinforcing fibreglass mesh: KABE 145, KABE 150 / KABE AVANT 150, KABE 160, KABE 165 / KABE AVANT 165 – anti-alkali impregnated mesh, completely immersed in KOMBI base coat	1.10 m ² /m ² of thermal insulation
FINISH COAT	Primer/dedicated under the same type of render: ARMASIL GT, NOVALIT GT, PERMURO GT – a product that improves adhesion and limits the substrate water absorbercy	ca. 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/grained texture grain size 1.5 mm – 2.3 ÷ 2.5*** kg/m ² - scratched 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: - KOMBI DECOR PRINT 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 giving an attractive colour	from 0.36 l/m ² (when applied twice and depending on the render grain size)

* When installing an additional thermal insulation to the system of thermal insulation with the outer top coat, the total thickness of existing and newly made thermal insulation cannot exceed 30 cm. If the mortar is removed along with the reinforcing coat, 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 KOMBI base coat is 4.50 kg/m².

*** Depending on the render type and texture.
 Note: Due to the excessive heating of dark-coloured facades, it is not recommended to use colours featuring a low light reflection coefficient (Y<20%). The manufacturer provides a guarantee only when used with a complete EWI system (all components) in accordance with the 'Guarantee card for EWI systems'.