

TECHNICAL SHEET 24.01.09 - GRB
CONSTRUCTION ADHESIVES

MARKpro Universal adhesive

Universal construction adhesive in the EPS façade system

1. Description, Application

MARKpro Universal adhesive is a refined cement mixture in the form of powder with polymer binders intended for fixing insulation boards made of expanded polystyrene and for preparation of reinforced coat of thermal insulation before applying MARKpro decorative render finish. It adheres well to expanded polystyrene and on all types of mineral substrates (unplastered brick and concrete walls, lime-cement and cement mortars, etc.).

2. Packaging

Paper bags holding 25 kg

3. Technical data

density (mixture ready for application) (kg/dm ³)		~1,60
Open time (ready to use mortar compound) (hours)		2 to 3
Coat thickness (mm)		<2 (za pojedinačni sloj) <3 (za dvoslojno nanošenje)
Drying time of the adhesive after fixing of insulation coating T = +20°C, relative air humidity = 65 % (hours)	For further treatment (polishing, anchoring of the insulation coating)	24 to 48
Drying time of the base coat T = 20 °C, relative air humidity = 65 % (hours)	Resistance of the surface to being washed out by drainage water is achieved	~24
	For further treatment (application of the final render finish)	Najmanje 24 za svaki mm debljine
Adhesion to concrete (MPa)	dry	> 1,00
	wet	> 0,50
Adhesion to expanded polystyrene (MPa)	dry	> 0,08
	wet	> 0,08
Water vapour permeability (EN 1015-19)	μ coefficient	< 20
Water absorption (EN 1015-18) (kg/m ² h ^{0,5})		≤ 0,2 W2
Reaction to fire (EN 13501)	class	F
Thermal conductivity (EN 1745)		0,83, P=50%

Main ingredients: cement, binder, quartz fillers, additives

4. Surface Preparation

a) Fixing of insulation boards made of expanded polystyrene and other light and porous wall linings to mineral substrates. Using **MARKpro Universal adhesive**, insulation boards made of expanded polystyrene can be fixed onto any mineral substrate which is solid enough, dry and clean. The surface should be level – when checking the levelness with a 3-metre long moulding, the cleft between the control moulding and the wall surface should not exceed 10 mm. Level larger uneven parts by plastering and not by a thicker application of the adhesive.

Do not apply any primers prior to fixing of insulation coating on clean brick wall surfaces. However, as far as other types

of construction surfaces are concerned, such coats are obligatory. In case of suitably rough and normally absorbent surfaces use water-diluted AKRIL Emulsion (AKRIL Emulsion : water = 1 : 1). Apply the primer with a suitable brush, a long-fibre paint roller or spray it. Fixing of insulation coating may begin approximately 2 to 3 hours after the application of a primer.

Plastered façade walls make a suitable substrate for fixing of insulation coating only if render finishes are well-adhered. Otherwise, remove them completely or process them appropriately and mend them. In normal conditions (T = +20 °C, relative air humidity = 65 %), let the newly applied renders dry or mature for at least 1 day for each mm of their thickness. It is obligatory to disinfect and clean surfaces infected with wall mould or algae prior to fixing. Clean concrete surfaces with hot water or steam. Prior to fixing, remove all badly-adhered and non-adhered decorative coats and slurries from the surface.

Approximate consumption of primer for finely coarse rendered wall surfaces of medium absorption:

AKRIL Emulsion 90 –100 g/m²

b) Preparation of Insulation Coating Surface for Application of Base Coat

Sand (sandpaper no. 16) any uneven parts of the insulation coating two days after fixing of insulation boards made of expanded or extruded polystyrene. If necessary, additionally anchor the coating with two-part plastic nail-in anchors prior to the application of the lower coat of the base coat.

5. Preparation of Adhesive Mortar for Application

Prepare the mortar compound by pouring the content of a bag (25 kilos) into approximately 5.5 litres of water during constant stirring. Stir the compound in a suitable container with an electric mixer or in a mixer used for the preparation of mortars and concrete. After 10 minutes, stir it again, and, if necessary, add a little water. Open time of the prepared compound is 2 to 3 hours.

6. Application of Mortar Compound

a) Fixing of Insulation Boards:

Apply adhesive compound on one side –the back side of boards –with a stainless painting trowel in continuous bands at the edge of boards and additionally on 4 to 6 spots or in two stripes in the middle (in the case of fixing of insulation lining onto ideally level substrates, compound may be applied with a notched stainless steel smoothing trowel –width and dept of notches 8 to 10 mm –evenly across the entire surface of boards). The quantity of the applied adhesive should be such so as to spread across at least 40% of the surface of boards when they are pressed onto the surface.

Fix boards closely together so that the adhesive does not dribble into joints. Throughout fixing, check straightness of the outer surface of the lining with a suitable long lath. Indent boards in adjacent rows in accordance with brick connection rules with the indent of vertical joints being at least 15 cm. Comply with brick connection rules also as far as corners are concerned, where boards of one wall surface should stretch over the outer surface of the lining of the neighbouring wall surface for at least a few centimetres and perform the so-called crossing in the corner. Cut off the excess part of boards in corners in a straight line, but only 2 to 3 days after fixing.

Perform the works only in suitable weather or microclimate conditions: the temperature of the air and the wall surface should be between +5°C and +35°C and the relative air humidity should not exceed 80 %. Protect façade surfaces from sun, wind and rainfall using protective scaffold nettings; however, do not conduct any work in rain, fog or strong wind (≥30 km/h) despite such protection.

Perform potentially necessary additional anchoring of the insulation lining 2 to 3 days after fixing (when the adhesive has completely hardened).

Approximate or average consumption:

MARKpro Universal adhesive 3.5 to 5 kg/m², depending on the substrate quality

b) Application of mortar compound into thermal insulation system basecoat

Treatment of corner and reveal edges, installation of drip profile, installation of dilatation profiles:

Install corner fittings made of hard plastic or perforated and alkaline-protected aluminium steel sheet on corner and reveal edges; similarly to dilatation and drip profiles, imprint them into a thin application of adhesive mortar together with a reinforcement glass fibre mesh.

Reinforcement of corners of facade openings:

Apply diagonal reinforcement-pieces of vinyl-covered glass fibre mesh (approximately 50 cm x 50 cm) into corners of facade openings; imprint the mesh into a thin application of adhesive mortar so that threads form an angle of 45 ° with the horizontal or the vertical.

Base coat:

Apply mortar compound onto the insulation lining manually or mechanically in two coats. Thickness of the lower coat of the lining made of expanded polystyrene is ~2 mm. Immediately after the application of MARKpro Universal adhesive, imprint vinyl-covered glass fibre mesh into it. After the surface has dried for at least 2 to 3 days, apply the upper coat of the undercoat

in thickness of ~1 mm. Then level and smooth the facade surface as much as possible. Façade final treatment may begin when the undercoat is completely dry, namely 1 to 2 days after the application of the upper coat.

Perform the works only in suitable weather or microclimate conditions: the temperature of the air and the wall surface should be between +5°C and +35°C and the relative air humidity should not exceed 80 %. Protect façade surfaces from sun, wind and rainfall using protective scaffold nettings; however, do not conduct any work in rain, fog or strong wind (≥ 30 km/h) despite such protection.

Approximate or average consumption (for a 3-mm thick application):

MARKpro Universal adhesive ~4.5 kg/m²

7. Safety at Work

Detailed instructions related to product handling, use of personal protective equipment, waste management, tool cleaning, first aid measures, signs and warning words, hazardous components, hazard and safety statements are found in the product safety data sheet available on the JUB website. When applying the product, follow the instructions and regulations for protection in construction, facade and painting works.

8. Storage, Transportation Conditions and Durability

During transportation, protect the product against moistening. Store in dry and airy places!

Shelf life when stored in an originally sealed and undamaged packaging: 9 months

9. Quality Control

Product quality characteristics are determined by internal manufacturing specifications according to local, European and other standards. Achieving the declared or prescribed level of quality has been ensured at JUB for several years by a system of comprehensive monitoring and quality control ISO 9001, which includes daily quality checks in its own laboratories, as well as in other independent professional institutions in the country and abroad. During the manufacturing process, we strictly comply with local and European standards in the field of environmental protection and ensuring safety and health at work, which we prove with the ISO 14001 certificate.

10. Other Information

The technical instructions in this document were created based on our experience and are given as a guideline for achieving optimal results when using the product. JUB cannot accept any responsibility for damage caused by incorrect product selection, improper use or poor quality work.

This technical sheet supplements and replaces all previous editions, we reserve the right to make possible later changes and additions.

Denomination and date of publishing: **MUL3-GRB-01/23**, 18.01.2023.

JUB d.o.o. Šimanovci

Dositejeva 5
22310 Šimanovci
Srbija

T: +381 22 40 99 99

F: +381 22 40 99 95

E: jub@jub.rs

www.jub.eu