

TECHNICAL SHEET 11.31.01-ENG
CONSTRUCTION ADHESIVES


JUBIZOL ADHESIVE MORTAR WINTER

Adhesive and base coat in JUBIZOL façade External Thermal Insulation Composite Systems (ETICS)

1. Description, Application

JUBIZOL ADHESIVE MORTAR WINTER is used in the External Wall Insulation (EWI) systems JUBIZOL EPS, JUBIZOL XPS and JUBIZOL S70 as an adhesive for insulation coatings (boards made of expanded and extruded polystyrene) and as a base coat on insulation coatings at temperatures up to -10°C. The product is based on cement and polymeric binders. It is micro-reinforced, which assures it exceptional elasticity, high water vapour permeability and good adhesion to insulation boards as well as to all types of wall surfaces (unplastered brick and concrete walls, unplastered walls made of porous concrete, all types of plastered walls, fibre-cement boards) in addition to good strength characteristics.

2. Packaging

Paper bags containing 20 kilos

3. Technical Data

Density (ready-to-use adhesive compound) (kg/dm ³)		~1.60
Open time (ready-to-use adhesive compound) (hours)		30
Total coat thickness for base coat (mm)		~3
Dry to recoat after fixing of insulation lining T = +20 °C, relative air humidity = 65 % (hours)	For further treatment (polishing, anchoring of insulation lining)	~ 72
Dry to recoat 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 render finish)	At least 24 hours for each mm
Water-vapour permeability EN 1015-19	μ coefficient (-)	~20
	S _d value (d = 3 mm) (m)	~0.06
Thermal conductivity λ EN 1745 - GP (W/mK)		~0.45 (tab. mean value; P=50 %)
Water absorption EN 1015-18 [kg / m ² . min 0.5]		<0.1 (class W2)



Adhesion to concrete (after 28 days) (MPa)	In dry	>0.60
	After being soaked in water (2 hours)	>0.30
	After being soaked in water (7 days)	>1.60
Adhesion to expanded and extruded polystyrene (after 28 days) (MPa)	In dry	>0.08
	After being soaked in water (2 hours)	>0.03
	After being soaked in water (7 days)	>0.08

Main ingredients: cement, polymeric binder, silicate fillers, perlite, microfibers, cellulose thickening agent

4. Preparation of Surface for Fixing Insulation Boards

Insulation boards made of expanded or extruded polystyrene can be fixed with JUBIZOL ADHESIVE MORTAR WINTER onto any surface that is solid enough, dry and clean and which should not be frozen (with temperature above 0°C). The surface should be level – when checking the levelness with a 3-metre long batten, a slit between the control batten 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 on clean brick wall surfaces before fixing the insulation lining. However, as far as other types of construction surfaces are concerned, such coats are necessary. Use water-diluted AKRIL EMULSION (AKRIL EMULSION : water = 1 : 1) for suitably rough and normally absorbent surfaces. Apply the primer with a suitable brush, a long-bristle painting roller or spray it. Fixing of insulation lining may begin approximately 2 to 3 hours after priming.

Plastered façade walls make a suitable surface for fixing of insulation lining only if render finishes are well-adhered to the wall surface. 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 render finishes 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 the primer for fairly absorbent finely rough plastered wall surfaces:
AKRIL EMULSION 90 – 100 g/m²

5. Preparation of Insulation Lining Surface for Application of Base Coat

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

6. Preparation of Adhesive Mortar for Application

Prior to preparation, keep bags with the product in a dry place and in a way that the material doesn't freeze. Prepare the mortar compound by pouring the content of a bag (20 kilos) into approximately 4.4 litres of warm water (warmed up to app. 25°C) during constant stirring. Stir the compound in a suitable container with manual electric mixer or in a mixer used for the preparation of mortars and concrete. After 10 minutes, when the compound has swollen up, stir it again, and, if necessary, add a little water. Open time of the prepared compound is app. 30 minutes.

7. 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 surfaces, compound may be applied with a notched stainless steel smoothing trowel – width and depth 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 to 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 suitably 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 at least 3 days after fixing or when the adhesive has completely hardened.

The surface to which the product is applied should not be frozen. Perform the works only in suitable weather or microclimate conditions: the temperature of the air should not be lower than -10 °C and not higher than +10 °C and the relative air humidity should not exceed 80 %. The temperature of the air should not drop below -10°C even during the time of adhesive binding which lasts approximately 8 hours after application. 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 coating at least 3 days after fixing or when the adhesive has completely hardened.

Approximate or average consumption: JUBIZOL ADHESIVE MORTAR WINTER	3.5 to 5 kg/m ² , depending on the quality of the surface
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8. Application of Adhesive Mortar into ETICS Base Coat

Apply the mortar compound onto the insulation coating manually or mechanically in two, only in specific cases (parts of buildings built into the ground, and in cases of façade surfaces, which are “extremely exposed to damages,” of buildings bordering children and school playgrounds), in three coats. Thickness of the lower coat on the coating made of expanded polystyrene is ~2 mm. Immediately after the application of the JUBIZOL WINTER ADHESIVE MORTAR, imprint JUBIZOL vinyl-covered glass fibre mesh into it. After the surface has dried for at least 3 days, apply the upper coat of the base coat in thickness of ~1 mm. Then level and smooth the facade surface to the maximum possible degree. The final processing of façade may begin when the humidity in the base coat drops below 5 %.

Perform the works only in suitable weather or microclimate conditions: the temperature of the air should not be lower than -10 °C and not higher than +10 °C and the relative air humidity should not exceed 80 %. The temperature of the air should not drop below -10°C even during the time of adhesive binding which lasts approximately 8 hours after application. 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.

Fluctuations in the product's colour shades among different production dates and batches is a consequence of using natural raw materials and it doesn't affect final physical and chemical characteristics of dried and hardened material!

Approximate or average consumption: JUBIZOL ADHESIVE MORTAR WINTER	~1.5 kg/m ² for each mm of thickness (depending on type of insulation lining and method of surface final processing)
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9. Tool Cleaning, Waste Management

Thoroughly clean the tools with water immediately after use. Dried stains cannot be removed.

Keep the unused dry compound for potential later use. Useless remains should be mixed with water and when hardened deposited onto the dumping grounds of construction waste (waste classification number: 17 09 04). Cleaned packaging can be recycled.

10. Safety at Work

Apart from general instructions and regulations for construction and painting works, please consider that the product contains cement and is therefore classified among dangerous preparations labelled as dangerous. The content of chromium (Cr 6⁺) is lower than 2 ppm.

Protection of the respiratory system: the use of a safety mask in case a lot of dust is raised. Protection of hands and body: work clothing, preventive protection with a protection cream and the use of protective gloves are recommended in the case of prolonged exposure of hands. Protection of eyes: protective glasses or a safety mask during spraying.



Description of first aid measures:

- **In case of inhalation:**

Sufficient inflow of fresh air and for protection purpose seek medical advice.

If unconscious, place and transport in stable lateral recumbent position.

- **In case of contact with skin:** Rinse immediately with water and soap and wash out well.

- **In case of contact with eyes:**

Immediately widen the eyelids, rinse thoroughly with clean water for a few minutes. Seek medical advice.

- **In case of ingestion:** If problems persist, seek medical advice.

<p>Warning signs on the packaging</p>	<div style="text-align: center;">  GHS05 </div> <div style="text-align: center;">  GHS07 </div> <p>Hazard word: Dangerous Components which define dangers and should be labelled: cement, Portland</p>
<p>Special measures, warnings and observations required for safe work</p>	<ul style="list-style-type: none"> · Hazard Statements H315 Causes skin irritation. H318 Causes serious eye damage. H317 May cause an allergic skin reaction. H335 May cause respiratory irritation. · Precautionary Statements P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read label before use. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER/doctor/. P321 Specific treatment (see on this label). P405 Store locked up. P501 Dispose of contents/container according to local /regional/national/international regulations.

11. Storage, Transport Conditions and Durability

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

Shelf life when stored in an originally sealed and undamaged packaging: at least 12 months.



12. Quality Control

The product's quality characteristics are determined by the internal manufacturing specifications as well as by the Slovenian, European and other standards. JUB ensures achieving of the declared or set quality level by the ISO 9001 system for total quality management and control, which has been implemented at JUB for many years and which comprises daily quality checks in its own laboratories, and occasionally at the Construction Institute in Ljubljana and at other independent expert institutions in Slovenia and abroad. During the manufacturing process, JUB strictly complies with the Slovenian and European standards for protection of the environment and for ensuring security and health at work, which is confirmed by the ISO 14001 and OHSAS 18001 certificates.

The adequacy of the **JUBIZOL ADHESIVE MORTAR WINTER** for fixing of the insulation coating and for the manufacture of base coats in the JUB's EWI systems has been approved by the European Technical Approval (ETA). In accordance with the ETAG 004 guidelines, the testing was performed at the ZAG Construction Institute in Ljubljana.

 ZAG 1404	
JUB d.o.o. Dol pri Ljubljani 28 SI – 1262 Dol pri Ljubljani 15 Identification code of type of product: 01-11-31 Declaration of performance number: 001/15-Jubizol adhesive mortar WINTER	
JUBIZOL EPS, ETA-09/0393 ETAG 004 Cement mortar compound for fixing EPS thermal insulation and for manufacturing base coat in external thermal insulation composite system (ETISC)	
Initial stage adhesion between base coat and EPS	≥0.08MPa
Adhesion after hygrothermal cycles between base coat and EPS	≥0.08MPa
Initial stage adhesion between adhesive mortar and concrete	≥0.25MPa
Adhesion after ageing (2h of drying) between adhesive mortar and concrete	≥0.08MPa
Adhesion after ageing (7h of drying) between adhesive mortar and concrete	≥0.25MPa
Initial stage adhesion between adhesive mortar and EPS	≥0.08MPa



Adhesion after ageing (2h of drying) between adhesive mortar and EPS	≥0.03MPa
Adhesion after ageing (7h of drying) between adhesive mortar adhesive and EPS	≥0.08MPa
Water absorption after 1 hour	<0.5kgm²
Water absorption after 24 hours	<0.5kgm²
Water vapour permeability coefficient μ	<50

13. Other Information

The technical instructions contained in this brochure are provided on the basis of JUB's experience and are given as a guideline to achieve the optimum results. JUB cannot accept any responsibility for damage caused by incorrect selection of a product, incorrect use or unprofessional work.

This technical sheet supplements and replaces all preceding editions. JUB reserves the right to change and supplement data in the future.

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The product is made by the holder of ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007 certificates.

