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TECHNICAL SHEET 11.01.01-GBR
CONSTRUCTION ADHESIVES

CE

JUBIZOL ADHESIVE MORTAR

Adhesive and base coat in JUBIZOL ETIC systems

1. Description, Application

JUBIZOL ADHESIVE MORTAR is used in JUBIZOL External Thermal Insulation Composite (ETIC) systems as **an adhesive for insulation coating (boards made of expanded and extruded polystyrene, solid boards and lamellas made of mineral wool) and as a base coat on insulation coating**. However, in ETIC systems (where insulation boards made of expanded polystyrene as well as solid boards and lamellas made of mineral wool are fixed with the adhesive JUBIZOL LEPILO), JUBIZOL ADHESIVE MORTAR is **used only as a base coat**. The mortar is based on cement and polymeric binders. It is micro-reinforced, which assures its **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, OSB boards, chipboards and similar) **in addition to good strength characteristics**.

2. Packaging

Paper bags containing 20 kilos

3. Technical Data

Density (ready-to-use mortar compound) (kg/dm^3)		~1.60
Open time (ready-to-use mortar compound) (hours)		2 to 3
Coat thickness (mm)		<4 (for an individual coat) <6 (for a two-coat application)
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)	At least 24 for each mm of its thickness
Water-vapour permeability EN ISO 7783-2	μ coefficient (-)	<50
	S_d value (t = 3 mm) (m)	<0.14 Class I (high water-vapour permeability)

Water absorption w_{24} EN 1062-3 ($kg/m^2h^{0,5}$)		<0.10 Class III (low water absorption)
Adhesion to concrete (after 28 days) (MPa)	In dry	>0.60
	After soaking in water (2 hours)	>0.30
	After soaking in water (7 days)	>1.60
Adhesion to expanded and extruded polystyrene and lamellas made of mineral wool (after 28 days) (MPa)	In dry	>0.08
	After soaking in water (2 hours)	>0.03
	After soaking in water (7 days)	>0.08
Adhesion to boards made of mineral wool (after 28 days) (MPa)	In dry	<0.08 (fracture in mineral wool)
	After soaking in water (2 hours)	<0.03 (fracture in mineral wool)
	After soaking in water (7 days)	<0.08 (fracture in mineral wool)

Main ingredients: cement, polymeric binder, silicate fillers, perlite, micro-fibres, cellulose thickening agent

4. Preparation of Surface for Fixing of Insulation Boards

Insulation boards made of expanded or extruded polystyrene and also solid boards and lamellas made of mineral wool can be fixed with the JUBIZOL ADHESIVE MORTAR onto any surface, 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 ºC, 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/m^2

5. 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.

No special preparation of insulation coatings made of mineral wool (solid boards made of mineral wool, lamellas made of mineral wool) is necessary.

6. Preparation of Adhesive Mortar for Application

Prepare the mortar compound by pouring the content of a bag (20 kilos), during constant stirring, into approximately 4 litres of water. 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, when the compound has swollen up, stir again, and, if necessary, add a little water. Open time of the prepared compound is 2 to 3 hours.

7. Fixing of Insulation Boards

FIXING OF BOARDS MADE OF EXPANDED OR EXTRUDED POLYSTYRENE AND SOLID BOARDS MADE OF MINERAL WOOL

Apply adhesive mortar on one side – the back side of boards – with a stainless paint trowel in continuous bands at the edge of boards and additionally at 4 to 6 spots or in two stripes in the middle (in the case of fixing of insulation coating onto ideally level surfaces, the mortar 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). Quantity of the applied adhesive should be such as to be 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 contact joints. Throughout fixing, check straightness of the outer surface of the covering with a suitably long moulding. Indent boards in adjacent rows under brick connection rules, 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 covering of the neighbouring wall surface for at least a few centimetres and perform the so called cross bond in the corner.

Additionally strengthen boards made of mineral wool into the wall surface already in the fixing phase with four two-, three- or multi-part plastic nail-in anchors. And perform potentially necessary additional anchoring of the insulation coating made of expanded or extruded polystyrene 2 to 3 days after fixing (when the adhesive has completely hardened).

FIXING OF LAMELLAS MADE OF MINERAL WOOL:

Apply adhesive mortar on one side – onto the back of a lamella – with a notched stainless steel smoothing trowel (width and depth of notches 8 to 10 mm) evenly across the entire surface. In the case of lamellas with factory applied slurry, the adhesive compound can be applied onto the wall surface instead on the lamella in the same manner. In this case and especially on larger wall surfaces, spraying, where the adhesive compound is applied onto the wall surface in the form of “spiral sausages”, has also proven to be economical. Irrespective of the manner of adhesive application, fix lamellas closely together so that the adhesive does not dribble into contact joints. Throughout fixing, check straightness of the outer surface of the covering with a suitably long moulding. Indent lamellas in adjacent rows under brick connection rules, the indent of vertical joints being at least 15 cm. Comply with brick connection rules also as far as corners are concerned, where lamellas should stretch over the outer surface of the covering of the neighbouring wall surface for at least a few centimetres and perform the so called cross bond in the corner. Cut off the excess part of lamellas in corners in a straight line, but no sooner than 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 +5ºC and +35ºC and the relative air humidity should be below 80 %. Protect facade 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:	
JUBIZOL ADHESIVE MORTAR	3.5 to 5 kg/m^2, depending on surface quality

8. Application of Adhesive Mortar into Base Coat of EWI Systems

Apply mortar compound onto the insulation coating manually or mechanically in two, only in specific cases (parts of buildings built into the ground if insulation coating is made of expanded polystyrene and in cases of façade surfaces, which are “extremely exposed to damages,” of buildings bordering playgrounds), in three coats. Thickness of the lower coat of the coating made of expanded or extruded polystyrene is ~2 mm, and that on the coating made of mineral wool ~3 to 4 mm. Immediately after the application of JUBIZOL ADHESIVE MORTAR, imprint JUBIZOL vinyl-covered glass fibre mesh into it. After the surface has dried for at least 1 day for each mm of its thickness, apply the upper coat of the base coat in thickness of ~1 mm (up to 2 mm in the case of coatings made of mineral wool). Then level and smooth the facade surface to the maximum possible degree. Final processing of the façade may begin 1 to 2 days after levelling and smoothing.

Perform the works only in suitable weather or microclimate conditions: the temperature of the air and the wall surface should be between +5ºC and +35ºC and the relative air humidity should be below 80 %. Protect facade 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 use:
JUBIZOL ADHESIVE MORTAR ~4.5 kg/m^2 (polystyrene insulation boards)
JUBIZOL ADHESIVE MORTAR ~7 kg/m^2 (MW - mineral wool - insulation)

* If the final coat is not a thin-coat render finish, thickness of the base coat equals that in systems on mineral wool - In such cases, consumption increases to ~7 kg/m^2!

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 or façade and painting works, please consider that the product contains cement and is therefore classified among dangerous preparations labelled with 'DANGER'. 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 when applied by spraying.

FIRST AID:
Contact with skin: remove clothing, which has been wetted, and rinse the skin with water and soap. Contact with eyes: immediately widen the eyelids, rinse thoroughly with clean water (10 to 15 minutes), seek medical advice if necessary. Ingestion: drink a little water several times, seek medical advice immediately.

Label hazard pictograms	 GHS05 GHS07 **Signal word:** Danger **Hazard-determining components of labelling: - C**ement, Portland, chemicals
Measures, warnings, and explanations for safety at work	**Hazard statements** H314 – Causes severe skin burns and eye damage. H317 – May cause an allergic skin reaction. H318 – Causes serious eye damage. 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 or doctor/physician. P321 – Specific treatment (see … on this label). P405 – Store locked up. P501 – Dispose of contents/container in line with local/regional/national/ international regulations.

11. Storage, Transportation 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 for fixing of insulation coatings 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 004/2000 guidelines, testing was performed at the SAG Construction Institute in Ljubljana and at Österreichisches Institut für Bautechnik in Vienna.

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Decl.of Performance no.: 002/14-JLM

JUBIZOL EPS, ETA-09/0393(07.07.2015), ZAG Ljubljana 1404
JUBIZOL MW, ETA-09/0394(28.6.2013), ZAG Ljubljana 1404
JUBIZOL XPS, ETA-07/0028(03.02.2012), ZAG Ljubljana 1404
JUBIZOL PB EPS, ETA-13/0633(29.06.2013), ZAG Ljubljana 1404
JUBIZOL PB MW, ETA-13/0632(29.06.2013), ZAG Ljubljana 1404
JUBIZOL S70, ETA-08/0236(29.06.2013), ZAG Ljubljana 1404

ETAG 004

Adhesion adhesive/EPS+MW lamella +XPS at beginning	**≥ 0.08 MPa**
Adhesion adhesive/MW at beginning	**< 0.08 MPa**
Adhesion after hygrothermal cycles basecoat/EPS+XPS	**Detachment in insulation mat.**
Adhesion after hygrothermal cycles basecoat/MW	**≥ 0.08 MPa**
Adhesion after tests of resistance to freezing/dewing basecoat/MW	**< 0.08 MPa**
Adhesion adhesive/concrete at beginning	**Detachment in insulation mat.**
Adhesion adhesive/concrete after 2h of drying	**< 0.08 MPa**
Adhesion adhesive/concrete after 7h of drying	**Detachment in insulation mat.**
Adhesion adhesive/EPS+MW lamella+XPS at beginning	**≥ 0.25 MPa**
Adhesion adhesive/EPS+MW lamella+XPS after 2h of drying	**≥ 0.08 MPa**
Adhesion adhesive/EPS+MW lamella+XPS after 7h of drying	**≥ 0.25 MPa**
Adhesion adhesive/gypsum fibreboards at beginning	**≥ 0.08 MPa**
Adhesion adhesive/gypsum fibreboards after 2h of drying	**≥ 0.03 MPa**
Adhesion adhesive/gypsum fibreboards after 7h of drying	**≥ 0.08 MPa**
Adhesion adhesive/impregnated gypsum fibreboards at beginning	**≥ 0.08 MPa**
Adhesion adhesive/impregnated gypsum fibreboards after 2h of drying	**≥ 0.03 MPa**

Adhesion adhesive/impregnated gypsum fibreboards after 7h of drying	**≥ 0.08 MPa**
Adhesion adhesive/laminated strand boards (LSB-P5) at beginning	**≥ 0.08 MPa**
Adhesion adhesive/laminated strand boards (LSB-P5) after 2h of drying	**≥ 0.08 MPa**
Adhesion adhesive/laminated strand boards (LSB-P5) after 7h of drying	**≥ 0.03 MPa**
Adhesion adhesive/oriented strand boards OSB at beginning	**≥ 0.08 MPa**
Adhesion adhesive/oriented strand boards OSB after 2h of drying	**≥ 0.08 MPa**
Adhesion adhesive/oriented strand boards OSB after 7h of drying	**≥ 0.03 MPa**
Absorption of water after 1 hour	**≥ 0.08 MPa**
Absorption of water after 24 hours	**< 0.5kgm2**

13. Other Information

The technical instructions in this brochure are given based on JUB's experience and are given as a guideline for achieving optimum results. JUB cannot accept any responsibility for the 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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