



## TECHNICAL SHEET 11.01.12-SVN

### CONSTRUCTION ADHESIVES

# JUBIZOL MICROAIR FIX

Adhesive and base coat in JUBIZOL external wall insulation systems on EPS insulation boards

### 1. Description, Applicability

In the JUBIZOL MICROAIR external wall insulation system, the JUBIZOL MICROAIRFIX is used as an adhesive for the insulation covering (a board made of expanded polystyrene) and as a base coat. The product's colour is bright and is highly water vapour permeable. It is made of and based on cement and polymer binders. It has good strength characteristics and good adhesion to the insulation boards and to all types of mineral wall bases (unplastered brick and concrete walls, unplastered walls from porous concrete, all types of plastered walls).

### 2. Packaging Method

Paper bags, 20kg each

### 3. Technical Information

density (application-ready mortar mixture) (kg/dm <sup>3</sup> )		~1.60
time open (application-ready mortar mixture) (hours)		2 to 3
coat thickness (base plaster) (mm)		~ 3 (for double-layer application)
drying time of the adhesive after fixing insulation covering T = +20° C, rel. air humidity = 65% (hours)	for further treatment (sanding, anchoring of the insulation covering)	~ 48
drying time of the basic plaster T = +20° C, rel. air humidity = 65% (hours)	to achieve resistance against leaching with rainwater	~24
	for further treatment (application of the top plaster)	at least 24 for each mm of thickness
water vapour permeability EN ISO 7783-2	coefficient $\mu$ (-)	~25
	value $S_d$ (d = 3mm) (m)	~0.075
water absorption EN 1015-18 [ kg/m <sup>2</sup> . min 0.5]		~ 0.06
adhesion to concrete (after 28 days) (MPa)	in dry environment	>0.25
	after soaking in water (2 hours)	>0.08
	after soaking in water (7 days)	>0.25



adhesion to expanded polystyrene (after 28 days) (MPa)	in dry environment	>0.08
	after soaking in water (2 hours)	>0.03
	after soaking in water (7 days)	>0.08

Main components: cement, polymer binder, siliceous fillers, perlite, cellulose thickener

#### 4. Preparation of the Base for Fixing the Insulation Boards

With JUBIZOL MICROAIR FIX the insulation boards made of expanded polystyrene can be fixed to any base that is suitably hard, dry, and clean. The base should be level – when checking the surface with a 3m lath, the gap between the lath and the wall surface must not exceed 10mm. Larger, uneven surfaces should be levelled by plastering and not by applying a thicker level of the adhesive.

No basic coats should be used before fixing the insulation covering onto a clean brick wall surface, but all other types of construction bases do require such coats. A water-diluted ACRYLIC EMULSION (ACRYLIC EMULSION: water = 1:1) should be used for suitably coarse and normally absorbent bases. The base coat is applied with a suitable brush, with a long nap paint roller or by spraying. Fixing the insulation covering can start approximately 2 to 3 hours after applying the base coat.

The plastered facade walls are a suitable base for fixing the insulation covering only if the plaster tightly adheres to the wall surface, otherwise they should be removed completely or suitably repaired and patched. Under normal conditions (T = +20° C, rel. air humidity = 65%), newly applied plasters are dried or matured for at least 1 day for each mm of thickness. Surfaces infected with wall mould or algae must be disinfected and cleaned before fixing. Concrete bases should be cleaned with hot water or steam. Before fixing, all poorly adhering and non-adhering decorative coats and spraying should also be removed.

The indicative consumption of the base coat for medium-absorbent, finely coarse plastered wall surfaces:  
ACRYLIC EMULSION 90 – 100 g/m<sup>2</sup>

#### 5. Preparing the Surface of the Insulation Covering for Applying the Base Plaster

Two days after fixing, the insulation boards made of expanded polystyrene and any uneven insulation covering should be sanded (sand paper, no. 16). If required, the covering should be additionally anchored with two, two-part plastic nail-in anchors before applying the lower layer of the base coat.

#### 6. Preparing the Adhesive Mortar for Application

The mortar mixture is prepared by pouring the contents of the bag (20kg) during continuous mixing into approximately 4l of water. Mix in a suitable container with a handheld electric mixer or in a mixer for preparing mortar and concrete. After 10 minutes, when the mixture swells, remix it and if required add some water. The open time of the ready-to-use mixture is 2 to 3 hours.

#### 7. Fixing the Insulation Boards

The adhesive material is applied on one side – the back side of the boards – with a stainless painting trowel or a plastering trowel in continuous bands at the edge of the boards. Also, additionally apply it on 4 to 6 spots or in two stripes in the middle of the board (when fixing of insulation onto ideally level surfaces, the compound may be also applied a notched stainless steel smoothing trowel – width and depth of notches 8 to 10mm – evenly across the entire surface of the boards). The quantity of the applied adhesive should be such that it spreads to at least 40% of the board's surface when the boards are pressed onto the wall surface.

The boards should be fixed closely together, so that the adhesive does not seep into the joints. Throughout the fixing process, straightness of the outer surface of the covering is checked with a suitably long lath. Boards on adjacent rows are indented in accordance with brick connection rules, whereby the indent of vertical joints should be at least 15cm. Brick connection rules should also be taken into account 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 by at least a few centimetres. The 'cross bond' should be implemented in the corner. The excess part of the boards should be cut off at the corners in a



straight line, but only 2 to 3 days after fixing the boards.

Works should only be performed 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%. Facade surfaces should be protected from the sun, wind, and rainfall by protective scaffold nettings; however, do not conduct any work in rain, fog, or strong winds ( $\geq 30$  km/h) despite such protection.

Any required additional anchoring of the insulation covering should be performed 2 to 3 days after fixing the boards (when the adhesive has hardened completely).

Indicative or average consumption:  
JUBIZOL MICROAIR FIX 3.5 to 5 kg/m<sup>2</sup>, depending on the quality of the surface

## 8. Application of Adhesive Mortar into the Thermal Insulation System Base Coat

Mortar compound is applied onto the insulation covering manually or by a machine in two, and only in special cases (dug-in parts of the building and where the facade surfaces of buildings bordering on children's and school playgrounds are "very exposed to damage") in three coats. The thickness of the lower layer on the covering made of expanded polystyrene should be ~2mm. Immediately after applying JUBIZOL MICROAIR FIX, the JUBIZOL vinyl-covered glass fibre mesh should be pressed into it. After drying for at least 2 to 3 days, the upper layer of the base coat with a thickness of ~1mm should be applied and the facade surface should be levelled and smoothed as much as possible. The final treatment of facade may begin when the base coat is completely dry, namely 1 to 2 days after applying the upper layer.

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Indicative or average consumption:  
JUBIZOL MICROAIR FIX ~1.5 kg/m<sup>2</sup> for each millimetre of thickness (depending on the type of insulation covering and the method of final treatment of the facade)

## 9. Tools Cleaning, Waste Management

The tools should be washed with water immediately after use; dried stains cannot be removed later.

Store the unused dry mixture for later use. Mix the unused remains of the mixture with water and deposit them dry at a construction dump (classification waste number: 17 09 04).

Cleaned packaging is suitable for recycling.

## 10. Safety at Work


Apart from general instructions and regulations on construction or plastering and painting works, take into account that the product contains cement and is thus classified as a dangerous preparation "Xi IRRITANT." Chromium content (Cr 6<sup>+</sup>) is lower than 2 ppm.

Protection of the respiratory system: use a protection mask in the event of a strong formation of dust. Hands and body protection: overalls, preventive protection with a protection cream and the use of protective gloves are recommended in the case of prolonged exposure of hands. Eye protection: protective eyewear or a face shield when spraying.

FIRST AID:

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



Warning signs on the packaging	<p style="text-align: center;">Xi</p>  <p style="text-align: center;">IRRITANT!</p> <p>Hazardous contents that have to be labelled: Contains: Cement</p>
Special measures, warnings, and observations required for operation	<p>R36/38 Irritating to respiratory system and skin. R41 Risk of serious damage to eyes. R43 May cause sensitization by skin contact.</p> <p>S2 Keep out of reach of children. S24/25 Avoid contact with skin and eyes. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28 After contact with skin, wash immediately with plenty of water. S37/39 Wear suitable gloves and eye/face protection. S46 If swallowed, seek medical advice immediately and show this container or label.</p>

## 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 6 months.

## 12. Quality Control

The product's quality characteristics are determined by the internal manufacturing specifications, as well as by Slovenian, European, and other standards. At JUB, compliance with the declared or prescribed quality level is ensured by the ISO 9001 system for total quality management and control. This is comprised of daily quality checks in its own laboratories, and occasionally at the Slovenian National Building and Civil Engineering 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 suitability of JUBIZOL MICROAIR FIX for fixing the insulation covering made of expanded polystyrene and for making base coats in JUB's external wall insulation systems was confirmed with the European Technical Assessment ETA – tests in accordance with the ETAG 004/2000 guidelines were performed at the Slovenian National Building and Civil Engineering Institute in Ljubljana.



<b>1404-CPD-1531</b> <b>1404-CPD-1332</b>
<b>ETA 09/0393</b> <b>ETA 08/0236</b>
<b>ETAG 004</b>
<b>JUBIZOL EPS/S70</b>

### 13. Other Information

The technical instructions in this brochure are provided based on JUB's experience and as a guideline for achieving optimum results. JUB does not assume any responsibility for any damage caused due to incorrect selection of a product, incorrect use, or unprofessional work.

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

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The product has been made in an organisation that holds the following certificates: ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007.

