

**TECHNICAL SHEET 11.01.01-SVN**  
**CONSTRUCTION ADHESIVES**


# JUBIZOL STRONG FIX

Adhesive and base coat in JUBIZOL STRONG external thermal insulation system

## 1. Description, Applicability

The product is used in thermal insulation systems that are exposed to larger strains to achieve greater resistance against damage due to hail (the JUBIZOL STRONG system), greater resistance to impact and perforation, etc. JUBIZOL STRONG FIX is used **as an adhesive for the insulation covering - boards made of expanded polystyrene (fixing boards made of extruded polystyrene and boards and lamellas made of mineral wool are also possible), and as a base coat on the insulation covering.** It is made of and based on cement and polymer binders, and is micro-reinforced which, **besides good strength characteristics**, also ensures exceptional elasticity, high vapour permeability, and good adhesion to insulation boards as well as all types of masonry substrates (unplastered brick and concrete walls, unplastered walls from porous concrete, all types of plastered walls, fibre-cement boards).

## 2. Packaging Method

Paper bags, 20 kg each

## 3. Technical Information

|  |  |                                      |
|--|--|--------------------------------------|
| density (application-ready mortar mixture)<br>(kg/dm <sup>3</sup> )  |  | ~1.60                                |
| time open (application-ready mortar mixture)<br>(hours)  |  | 2 to 3                               |
| coat thickness<br>(mm)   |  | ~ 6                                  |
| drying time of the adhesive after<br>fixing<br>insulation covering<br>T = +20° C, rel. air humidity = 65%<br>(hours) | for further treatment<br>(sanding, anchoring of the<br>insulation<br>covering) | 24 to 48                             |
| drying time of the basic plaster<br>T = +20° C, rel. air humidity = 65%<br>(hours)                                   | to achieve resistance against<br>leaching with rainwater                       | ~24                                  |
|  | for further treatment<br>(application of the top<br>plaster)                   | at least 24 for each mm of thickness |
| water vapour permeability<br>SIST EN 1015-19   | coefficient $\mu$<br>(-)   | <50                                  |
|  | value $S_d$ (d = 3mm)<br>(m)   | <0.15                                |
| water absorption $w_{24}$<br>SIST EN 1015-18<br>(kg/m <sup>2</sup> min <sup>0.5</sup> )                              |  | <0.20                                |
| adhesion to concrete (after 28<br>days)<br>(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 and extruded polystyrene and lamellas made of mineral wool (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                      |
| adhesion to plates made of mineral wool (after 28 days) (MPa)   | in dry environment               | (fracture in mineral wool) |
|   | after soaking in water (2 hours) | (fracture in mineral wool) |
|   | after soaking in water (7 days)  | (fracture in mineral wool) |

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

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

With JUBIZOL STRONG FIX insulation boards made of expanded or extruded polystyrene, as well as solid boards and lamellas made of mineral wool, 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%), new 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 or extruded polystyrene; 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.

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

#### 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 4.4l 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

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



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 the adhesive 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 10 mm – 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, the level condition 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 and the 'cross bond' should be implemented in the corner. The excess part of boards should be cut off at the corners in a straight line, but only 2 to 3 days after fixing the boards.

Boards made of mineral wool should be additionally strengthened during the stage of fixing them into the wall surface with four, two-, three-, or multi-part, plastic nail-in anchors. Any additional anchoring of the insulation covering made of expanded or extruded polystyrene should be performed 2 to 3 days after fixing (when the adhesive hardens completely).

#### FIXING LAMELLAS MADE OF MINERAL WOOL:

The adhesive material is applied on one side – the back side of the lamella – with a stainless steel smoothing trowel (width and depth of notches 8 to 10mm) evenly across the entire surface of the lamella. If the lamellas have a factory applied spraying, the adhesive material can be applied to the wall surface instead of on the lamella in the same manner. In this case, and especially on larger wall surfaces, machine application (by spraying) of the adhesive compound onto the wall surface in the shape of "spiral sausages" has also proven to be economical. Regardless of the adhesive application method, the lamellas should be fixed closely together so that the adhesive does not seep into the joints. Throughout the fixing process, the level condition of the outer surface of the covering is checked with a suitably long lath. Lamellas 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 lamellas stretch over the outer surface of the covering of the neighbouring wall surface by at least a few centimetres and the 'cross bond' should be implemented in the corner. The excess part of lamellas should be cut off at the corners in a straight line, but only 2 to 3 days after fixing.

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.

Indicative or average consumption:  
JUBIZOL STRONG 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 three layers. The thickness of the lower and middle layer on the covering made of expanded polystyrene should be 2.5mm and 1mm for the top layer (the total thickness of the base plaster is thus 6mm). JUBIZOL vinyl-covered glass fibre mesh (160 g) should be pressed into the first and second layer immediately after application; and each subsequent layer of the adhesive mortar should only be applied after the previous layer has hardened (after 2 or 3 days under normal conditions) and should be "levelled" as much as possible. After drying for at least 1 day for each mm of thickness, the upper layer of the base coat should be applied with a thickness of ~1 mm, and the facade surface should be levelled and smoothed as much as possible. The final treatment of the facade may begin after 1 to 2 days.

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.

Indicative or average consumption:  
JUBIZOL STRONG FIX ~4.5 - 7 kg/m<sup>2</sup> (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 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!<br/>PRODUCT CONTAINS CEMENT!</p>   |
| Special measures, warnings, & observations for safe work | <p>R 36/38 Irritating to eyes and skin.<br/>R 41 Risk of serious damage to eyes.</p> <p>S 2 Keep out of reach of children.<br/>S24/25 Avoid contact with skin and eyes.<br/>S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.<br/>S28 After contact with skin, wash immediately with plenty of water.<br/>S37/39 Wear suitable gloves and eye protection.<br/>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 12 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, the 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 Slovenian and European standards for protection of the environment, and for ensuring security and health at work, which are confirmed by the ISO 14001 and OHSAS 18001 certificates.

The suitability of JUBIZOL STRONG FIX for fixing the insulation covering and for making base coats in JUB's external 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.

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| <b>ETA 09/0393</b><br><b>ETA 10/0334</b><br><b>ETA 07/0028</b>                                   |
| <b>ETAG 004</b>  |
| <b>JUBIZOL EPS/MW/XPS</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.

