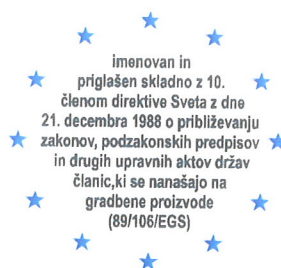


**Zavod za gradbeništvo Slovenije**  
**Slovenian National Building and Civil**  
**Engineering Institute**

**Dimičeva 12,**  
**1000 Ljubljana, Slovenija**

Tel.: +386 (0)1-280 42 50  
Fax: +386 (0)1-436 74 49  
e-mail: [info.ta@zag.si](mailto:info.ta@zag.si)  
<http://www.zag.si>



**ZAG** LJUBLJANA

član EOTA  
Member of EOTA

## **European Technical Approval      ETA-09/0393**

*[English translation prepared by ZAG Ljubljana – Original version in Slovenian language]*

**Trade name:**  
Komerzialno ime:

**JUBIZOL EPS**

**Holder of approval:**  
Imetnik soglasja:

**JUB d.o.o.**  
**Dol pri Ljubljani 28**  
**SI-1262 Dol pri Ljubljani**  
**Slovenija**

**Generic type and use of  
construction product:**

**External Thermal Insulation Composite Systems  
with rendering for the use as external insulation  
to the walls of buildings**

Tip gradbenega proizvoda in njegova  
predvidena uporaba::

Zunanji toplotnoizolacijski sestavljeni sistemi z ometom,  
namenjeni za izolacijo zunanjih zidov zgradb

**Validity**                      **from / to:**  
Veljavnost                      od / do:

**28. 06. 2013**  
**03. 02. 2015**

**Manufacturing plant:**  
Proizvodni obrat:

**Plant 1                      Plant 4**  
**Plant 2                      Plant 5**  
**Plant 3**

**Issue Nr.:**  
Izdaja št.:

**4**

**This Approval replaces:**  
To soglasje zamenjuje:

**ETA-09/0393 valid from 01.07.2010 to 03.02.2015**  
ETA-09/0393 veljavno od 01.07.2010 do 03.02.2015

**This European Technical  
Approval contains:**  
To Evropsko tehnično soglasje  
vsebuje:

**40 pages including 2 annexes**

40 strani vključno z 2 prilogama



Evropska organizacija za tehnična soglasja  
European Organisation for Technical Approvals



## I LEGAL BASES AND GENERAL CONDITIONS

1. This European Technical Approval is issued by the Slovenian National Building and Civil Engineering Institute (ZAG Ljubljana) in accordance with:
  - Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of Member States relating to construction products<sup>1</sup>, modified by the Council Directive 93/68/EEC<sup>2</sup> and Regulation (EC) no. 1882/2003 of the European Parliament and of the Council<sup>3</sup>,
  - Zakon o gradbenih proizvodih (ZGPro)<sup>4</sup>,
  - Common Procedural Rules for Requesting, Preparing and the Granting of European Technical Approvals set out in the Annex of Commission Decision 94/23/EC<sup>5</sup>,
  - Guideline for European Technical Approval of “External Thermal Insulation Composite Systems with rendering”, ETAG no. 004, edition March 2000, amended June 2008<sup>6</sup>.
2. The Slovenian National Building and Civil Engineering Institute (ZAG Ljubljana) is authorised to check whether the provisions of this European Technical Approval are met. Checking may take place in the manufacturing plant. Nevertheless, the responsibility for the conformity of the products to the European Technical Approval and for their fitness for the intended use remains with the holder of the European Technical Approval.
3. This European Technical Approval is not to be transferred to manufacturers or agents of manufacturer other than those indicated on page 1; or manufacturing plants other than those laid down in the context of this European Technical Approval.
4. This European Technical Approval may be withdrawn by the Slovenian National Building and Civil Engineering Institute (ZAG Ljubljana), in particular pursuant to information by the Commission according to Article 5(1) of the Council Directive 89/106/EEC.
5. Reproduction of this European Technical Approval including transmission by electronic means shall be in full. However, partial reproduction can be made with the written consent of the Slovenian National Building and Civil Engineering Institute (ZAG Ljubljana). In this case partial reproduction has to be designated as such. Texts and drawings of advertising brochures shall not contradict or misuse the European Technical Approval.
6. The European Technical Approval is issued by the approval body in its official language. This version corresponds fully to the version circulated within EOTA. Translations into other languages have to be designated as such.

---

<sup>1</sup> Official Journal of the European Communities no. L 40, 11.2.1989, p.12  
<sup>2</sup> Official Journal of the European Communities no. L 220, 30.8.1993, p.1  
<sup>3</sup> Official Journal of the European Union no. L 284, 31.10.2003, p.1  
<sup>4</sup> Official Gazette of the Republic of Slovenia, no. 52/00 and no. 110/02  
<sup>5</sup> Official Journal of the European Communities no. L 17, 20.1.1994, p.34  
<sup>6</sup> In this document the reference is edition 2011 of the ETAG 004





## II SPECIFIC CONDITIONS OF THE EUROPEAN TECHNICAL APPROVAL

### 1. Definition of products and intended use

The External Thermal Insulation Composite System, "JUBIZOL EPS" called ETICS in the following text, is designed and installed in accordance with the ETA-holder's design and installation instructions, deposited with ZAG Ljubljana. The ETICS comprises the following components, which are factory-produced by the ETA-holder or a supplier.

This ETICS can be sold under the trade name "JUBIZOL EPS."

#### 1.1. Definition of the construction product (kit)

	Components (see § 2.3 for further description, characteristics and performances of the components)	Coverage (kg/m <sup>2</sup> )	Thickness (mm)
Insulation materials with associated methods of fixing	<b>Bonded ETICS</b>		
	<ul style="list-style-type: none"> <li>• <b>Insulation product</b> EPS-EN 13163-T2-L2-W2-S2-P4-DS(N)2-DS(70,-)1-TR150-BS100</li> </ul>	/	to 300
	<ul style="list-style-type: none"> <li>• <b>Adhesive</b></li> </ul>		
	a) JUBIZOL ADHESIVE MORTAR – dry mix cement based adhesive requiring addition of ~20 % water	3.5 – 5.0 (powder)	/
	b) JUBIZOL ADHESIVE – dry mix cement based adhesive requiring addition of ~20 % water	3.5 – 5.0 (powder)	/
	c) EPS ADHESIVE MORTAR – powdered high-elasticity cement-based mortar, refined with polymer binder, requiring addition of 20 % water	3.5 – 5.0 (powder)	/
	d) JUBIZOL ULTRALIGHT FIX - dry mix cement-based mortar with EPS beads, refined with polymer binder, requiring addition of ~24% water.	4,8 – 9,6 (powder)	/
	e) JUBIZOL UNIWOOL ADHESIVE - dry mix cement-based mortar, refined with polymer binder, requiring addition of ~23% water	4,2 – 8,4 (powder)	/



	<p><b>Bonded ETICS with supplementary mechanical fixings</b></p> <ul style="list-style-type: none"> <li>• <b>Insulation product</b> EPS-EN 13163-T2-L2-W2-S2-P4-DS(N)2-DS(70,-)1-TR150-BS100</li> <li>• <b>Adhesive</b> <ul style="list-style-type: none"> <li>a) JUBIZOL ADHESIVE MORTAR – dry mix cement based adhesive requiring addition of ~20 % water</li> <li>b) JUBIZOL ADHESIVE – dry mix cement based adhesive requiring addition of ~20 % water</li> <li>c) EPS ADHESIVE MORTAR – powdered high-elasticity cement-based mortar, refined with polymer binder, requiring addition of 20 % water</li> <li>d) JUBIZOL ULTRALIGHT FIX - dry mix cement-based mortar with EPS beads, refined with polymer binder, requiring addition of ~24% water.</li> <li>e) JUBIZOL UNIWOOL ADHESIVE - dry mix cement-based mortar, refined with polymer binder, requiring addition of ~23% water</li> </ul> </li> <li>• <b>Anchors</b> <ul style="list-style-type: none"> <li>• Ejotharm STR-U***, SDM-T plus*, SDF-K plus*, Ejotharm NT-U*, Ejotharm NK-U*, Ejoterm NTK-U*, Ejotharm H1 Eco*, STR U 2G*</li> <li>• Hilti SX-FV*, SD-FV 8**, XI-FV*, D-FV * and D-FV T*</li> <li>• Fischer Termoz 8U**, Termoz 8N**, Termoz KS8**</li> <li>• Leskovec Plastično pritrdilo PP** and Pritrdilno sidro PSK**</li> <li>• Ranit IsoFux NDT8LZ*, ND8LZ*, ND8LZ K*, NDS8Z*, NDM8Z*, NDS90Z*, NDM90Z* and IsoFux*</li> <li>• WKRET MET LFN-8*, MET LFM-8*, MET LTX-10*, MET LMX-10*</li> <li>• Leskovec Pritrdilno sidro PPV*</li> </ul> </li> </ul> <p>Anchors are used only where necessary to provide stability until adhesive has dried.</p>	<p>/</p> <p>3.5 - 5.0 (powder)</p> <p>3.5 - 5.0 (powder)</p> <p>3.5 - 5.0 (powder)</p> <p>4,8 – 9,6 (powder)</p> <p>4,2 – 8,4 (powder)</p> <p>* to be used with EPS ≥ 60 mm</p> <p>** to be used with EPS ≥ 50 mm</p> <p>** to be used with EPS ≥ 80 mm</p>	<p>to 300</p> <p>/</p> <p>/</p> <p>/</p> <p>/</p> <p>/</p>
--	--	---	--

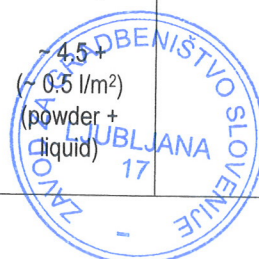


	Components (see § 2.3 for further description, characteristics and performances of the components)	Coverage (kg/m <sup>2</sup> )	Thickness (mm)
	<b>Mechanically fixed ETICS with anchors and supplementary adhesive (see § 2.2.8.3.a) for possible associations EPS/anchors)</b> <ul style="list-style-type: none"> <li>• <b>Insulation product</b> EPS-EN 13163-T2-L2-W2-S2-P4-DS(N)2-DS(70,-)1-TR150-BS100</li> <li>• <b>Adhesive</b> <ul style="list-style-type: none"> <li>a) JUBIZOL ADHESIVE MORTAR – dry mix cement based adhesive requiring addition of ~20 % water</li> <li>b) JUBIZOL ADHESIVE – dry mix cement based adhesive requiring addition of ~20 % water</li> <li>c) EPS ADHESIVE MORTAR – powdered high-elasticity cement-based mortar, refined with polymer binder, requiring addition of 20 % water</li> <li>d) JUBIZOL ULTRALIGHT FIX - dry mix cement-based mortar with EPS beads, refined with polymer binder, requiring addition of ~24% water.</li> <li>e) JUBIZOL UNIWOOL ADHESIVE - dry mix cement-based mortar, refined with polymer binder, requiring addition of ~23% water</li> </ul> </li> <li>• <b>Anchors</b> <ul style="list-style-type: none"> <li>- Ejotharm STR-U***, SDM-T plus*, SDF-K plus*, Ejotharm NT-U*, Ejotharm NK-U*, Ejotharm NTK-U*, Ejotharm H1 Eco*, STR U 2G*</li> <li>- Hilti SX-FV*, SD-FV 8**, XI-FV*, D-FV * and D-FV T*</li> <li>- Fischer Termoz 8U**, Termoz 8N**, Termoz KS8**</li> <li>- Leskovec Plastično pritrdilo PP** and Pritrdilno sidro PSK**</li> <li>- Ranit IsoFux NDT8LZ*, ND8LZ*, ND8LZ K*, NDS8Z*, NDM8Z*, NDS90Z*, NDM90Z* and IsoFux*</li> <li>- WKRET MET LFN-8*, MET LFM-8*, MET LTX-10*, MET LMX-10*</li> <li>- Leskovec Pritrdilno sidro PPV*</li> </ul> </li> </ul>	 /  3.5 - 5.0 (powder) 3.5 - 5.0 (powder) 3.5 - 5.0 (powder)  4,8 – 9,6 (powder) 4,2 – 8,4 (powder)   * to be used with EPS ≥ 60 mm ** to be used with EPS ≥ 50 mm *** to be used with EPS ≥ 80 mm	 to 300  / / / / / /   
Base coat	<ul style="list-style-type: none"> <li>a) JUBIZOL ADHESIVE MORTAR – dry mix cement base coat powder requiring addition of 20 % water. JUBIZOL ADHESIVE MORTAR consists of aggregates, cement, dispersion powder, special additives</li> <li>b) JUBIZOL CEMENT FREE BASE COAT – polymer based adhesive, paste form. JUBIZOL CEMENT FREE BASE COAT consists of aggregates, polymer, binders, special additives</li> <li>c) EPS ADHESIVE MORTAR – powdered high-elasticity cement-based mortar, refined with polymer binder, requiring addition of 20 % water. EPS ADHESIVE MORTAR consists of aggregates, cement, polymer binders, special additives.</li> <li>d) JUBIZOL ULTRALIGHT FIX - dry mix cement-based mortar with EPS beads, refined with polymer binder, requiring addition of ~24% water.</li> <li>e) JUBIZOL UNIWOOL ADHESIVE - dry mix cement-based mortar, refined with polymer binder, requiring addition of ~23% water</li> </ul>	4.2 – 8.4 (powder)  3.8 – 4.5 (paste)  4.2 – 5.6 (powder)  4,8 – 9,6 (powder)  4,2 – 8,4 (powder)	maximal (dry): 6 minimal (dry): 3  maximal (dry): 3 minimal (dry): 2.5  maximal (dry): 4 minimal (dry): 3  maximal (dry): 6  minimal (dry): 3  maximal (dry): 6 minimal (dry): 3



<b>Glass fibres meshes</b>	<b>Standard meshes</b> (glass fibres meshes with mesh size between 3.5 and 4.7 mm): <ul style="list-style-type: none"> <li><b>JUBIZOL GLASS FIBRE MESH</b> Where: - JUBIZOL GLASS FIBRE MESH = ETA- holder own designation</li> </ul>	/	/
<b>Key coat</b>	<ul style="list-style-type: none"> <li><b>UNIGRUND</b> – liquid, water based acrylic slurry primer intended as a key coat for all finishing coats (except mineral based finishing coats Mineral Trowelled Render, Mineral Smooth Render and Nivellin D + Revitalcolor AG)</li> <li><b>AKRIL EMULSION</b> - liquid, water based acrylic primer intended as a key coat for the acrylic and mineral based finishing coats</li> <li><b>ACRYLCOLOR</b> - liquid exterior acrylic waterborne facade paint as a key coat for the acrylic and mineral based finishing coats</li> <li><b>JUBOSIL GX</b> - liquid, water based silicate primer intended as a key coat for the silicate based finishing coats</li> <li><b>JUBOSIL G</b> - liquid, water based silicone primer intended as a key coat for the silicone based finishing coats</li> </ul>	0.15 - 0.20  about 0.1 about 0.1 l/m <sup>2</sup> about 0.1 l/m <sup>2</sup> about 0.1 l/m <sup>2</sup>	/  / / / /

	<b>Components</b> (see § 2.3 for further description, characteristics and performances of the components)	<b>Coverage</b> (kg/m <sup>2</sup> )	<b>Thickness</b> (mm)
<b>Finishing coats</b>	<ul style="list-style-type: none"> <li><b>Mineral Trowelled Render 2.0 / 2.5</b> – ready-mixed lime-cement based mortar requiring addition of water 20-23 %, based on lime, cement, aggregates, additives (in combination with all base coats except <b>CEMENT FREE BASE COAT</b>)</li> <li><b>Mineral Smooth Render 1.5 / 2.5</b> – ready-mixed lime-cement based mortar requiring addition of water 20-23 %, based on lime, cement, aggregates, additives (in combination with all base coats except <b>CEMENT FREE BASE COAT</b>)</li> <li>Ready to use paste – <b>Silicate Trowelled Render 2.0 / 2.5</b> - based on potassium silicate and water-based acrylic binder, aggregates, additives. (in combination with all base coats except <b>CEMENT FREE BASE COAT</b>)</li> <li>Ready to use paste – <b>Silicate Smooth Render 1.5 / 2.0 / 2.5</b> - based on potassium silicate and water-based acrylic binder, aggregates, additives (in combination with all base coats except <b>CEMENT FREE BASE COAT</b>)</li> <li>Ready to use paste – <b>Silicone Trowelled Render 2.0 / 2.5</b> - based on silicone emulsion and water-based acrylic binder, aggregates, additives (in combination with all base coats)</li> <li>Ready to use paste – <b>Silicone Smooth Render 1.5 / 2.0 / 2.5</b> - based on silicone emulsion and water-based acrylic binder, aggregates, additives (in combination with all base coats)</li> <li>Ready to use paste – <b>Acrylic Trowelled Render 2.0 / 2.5</b> - based on water-based acrylic binder, aggregates, additives (in combination with all base coats)</li> <li>Ready to use paste – <b>Acrylic Smooth Render 1.5 / 2.0 / 2.5</b> - based on water-based acrylic binder, aggregates, additives (in combination with all base coats)</li> <li><b>Nivellin D + Revitalcolor AG*</b> – ready-mixed polymer based mortar requiring addition of water ~ 30 %, based on polymer, lime, cement, aggregates, additives + liquid exterior micro reinforced acrylic waterborne anti-mildew paint (only in combination with JUBIZOL ADHESIVE MORTAR base coat)</li> </ul>	2.6 to 3.1 (powder)  2.6 to 3.6 (powder)  2.5 to 3.2 (paste)  3.0 to 5.5 (paste)  2.8 to 3.5 (paste)  2.4 to 4.7 (paste)  2.5 to 3.2 (paste)  2.5 to 5.0 (paste)  ~ 4.5 + (~ 0.5 l/m <sup>2</sup> ) (powder + liquid)	Regulated by particles size



	<ul style="list-style-type: none"> <li>• Ready to use paste – <b>Unixil G - Siloxanised Acrylic Smooth Render 1.5 / 2.0 / 2.5</b> - based on water-based acrylic binders, mineral fillers, special additives (in combination with all base coats)</li> <li>• Ready to use paste – <b>Unixil Z - Siloxanised Acrylic Trowelled Render 2.0 / 2.5</b> - based on water-based acrylic binders, mineral fillers, special additives (in combination with all base coats)</li> <li>• Ready to use paste – <b>Nanoxil G - Self-cleaning Silicone Smooth Render 1,5 / 2,0 / 2,5</b> - based on water-based silicone and acrylic binders, nano structures, mineral fillers and special additives (in combination with all base coats)</li> </ul>	2.5 to 3.5 (paste)  2.5 to 5.0 (paste)  2.5 to 3.2 (paste)  2.6 to 4.7 (paste)	
<b>Ancillary materials</b>	Descriptions in accordance with § 3.2.2.5 of the ETAG 004. Remain under the ETA-holder responsibilities		

\* Note: Finishing coat **Nivellin D + Revitalcolor AG** is applied without key coat .



## 1.2. Intended use

This ETICS is intended for use as external insulation of buildings' walls. The walls are made of masonry (bricks, blocks, stones ...) or concrete (cast on site or as prefabricated panels) with a reaction to fire classification A1 or A2-s1,d0 according to SIST EN 13501-1 and a minimum density of 820 kg/m<sup>3</sup> or A1 according to the EC decision 96/603/EC as amended. The ETICS is designed to give the wall to which it is applied satisfactory thermal insulation.

The ETICS is made of non load-bearing construction elements. It does not contribute directly to the stability of the wall on which it is installed, but it can contribute to durability by providing enhanced protection from the effect of weathering.

The ETICS can be used on new or existing (retrofit) vertical walls. It can also be used on horizontal or inclined surfaces which are not exposed to precipitation.

The ETICS is not intended to ensure the air-tightness of the building structure.

The choice of the method of fixing depends on the characteristics of the substrate, which could need preparation (see § 7.2.1 of the ETAG no. 004) and shall be done in accordance with national instructions.

The provisions made in this European Technical Approval (ETA) are based on an assumed intended working life of at least 25 years, provided that the conditions laid down in sections 4.2, 5.1 and 5.2 for the packaging, transport, storage and installation as well as appropriate use, maintenance and repair are met. The indications given as to the working life cannot be interpreted as a guarantee given by the manufacturer or the Approval Body, but should only be regarded as a means for choosing the appropriate products in relation to the expected economically reasonable working life of the works.

## 2. Characteristics of product and methods of verification

### 2.1. General

The identification tests and the assessment of the fitness for use of this ETICS according to the Essential Requirements were carried out in compliance with the "ETA Guideline no. 004" concerning External Thermal Insulation Composite Systems with rendering – edition 2011 (called ETAG no. 004 in this ETA).

