

## European Technical Assessment

**ETA-18/0944**  
**of 20/12/2018**

### General Part

**Technical Assessment Body issuing the European Technical Assessment: ICiMB**

<b>Trade name of the construction product</b>	DRYVIT ROXSULATION PRO
<b>Product family to which the construction product belongs</b>	External Thermal Insulation Composite Systems (ETICS) with Rendering
<b>Manufacturer</b>	DRYVIT SYSTEMS USA (EUROPE) Sp. z o.o Krże Duże 7 96-325 Radziejowice, POLAND
<b>Manufacturing plant</b>	DRYVIT SYSTEMS USA (EUROPE) Sp. z o.o Krże Duże 7 96-325 Radziejowice, POLAND
<b>This European Technical Assessment contains</b>	25 pages including 3 Annexes which form an integral part of this assessment.  Annex No 4 Control Plan contains confidential information and is not included in the European Technical Assessment when that assessment is publicly disseminated.
<b>This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of</b>	ETAG 004 used as EAD, 2013

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## Specific parts

### 1. Technical description of the product

This product DRYVIT ROXSULATION PRO is an ETICS (External Thermal Insulation Composite System with Rendering) - a kit comprising components which are factory-produced by the manufacturer or component suppliers. The ETICS manufacturer is ultimately responsible for all components of the ETICS specified in this ETA.

The ETICS kit comprises a prefabricated insulation product of mineral wool (MW) to be bonded or mechanically fixed onto a wall. The method of fixing and the relevant components are specified in Table 1. The insulation product is faced with a rendering system consisting of one or more layers (site applied), one of which contains reinforcement. The rendering is applied directly to the insulating panels, without any air gap or disconnecting layer.

The ETICS may include special fittings (e.g. base profiles, corner profiles) to treat details of ETICS (connections, apertures, corners, parapets, sills). Assessment and performance of these components is not addressed in this ETA, however the ETICS manufacturer is responsible for adequate compatibility and performance within the ETICS when the components are delivered as a part of the kit.

Table 1.

	Components	Coverage (kg/m <sup>2</sup> )	Thickness (mm)
	<b>Bonded ETICS; fully bonded with supplementary mechanical fixings. National application documents shall be taken into account.</b>		
<b>Insulation materials with associated methods of fixing</b>	<ul style="list-style-type: none"> <li><b>Insulation product:</b> mineral wool (MW) lamella according to EN 13162 <i>Product characteristics - see Annex No 1</i></li> </ul>	-	50 to 400
	<ul style="list-style-type: none"> <li><b>Adhesives:</b> <ul style="list-style-type: none"> <li><b>- ROXHESIVE</b> Cement based powder requiring addition of 0,22-0,24 l/kg of water</li> <li><b>- FIBERCOAT</b> Cement based powder requiring addition of 0,22-0,24 l/kg of water</li> <li><b>- GENESIS DM PLUS</b> Cement based powder requiring addition of 0,22-0,24 l/kg of water</li> </ul> </li> </ul>	3,5 to 8,0 (powder)	-
		3,5 to 8,0 (powder)	-
		3,5 to 8,0 (powder)	-
	<ul style="list-style-type: none"> <li><b>Supplementary mechanical fixings:</b> Plastic anchors covered by relevant ETA</li> </ul>	-	-



Table 1. cont.

Components		Coverage (kg/m <sup>2</sup> )	Thickness (mm)
<b>Mechanically fixed ETICS; mechanically fixed with supplementary adhesive. National application documents shall be taken into account.</b>			
<b>Insulation materials with associated methods of fixing</b>	<ul style="list-style-type: none"> <li>• <b>Insulation product:</b> mineral wool (MW) standard boards according to EN 13162 <i>Product characteristics - see Annex No 1</i></li> </ul>	-	60 do 400
	<ul style="list-style-type: none"> <li>• <b>Anchors</b> <i>Products characteristics - see Annex No 2</i></li> </ul>	-	-
	<ul style="list-style-type: none"> <li>• <b>Supplementary adhesives:</b> <ul style="list-style-type: none"> <li>- <b>ROXHESIVE</b> Cement based powder requiring addition of 0,22-0,24 l/kg of water</li> <li>- <b>FIBERCOAT</b> Cement based powder requiring addition of 0,22-0,24 l/kg of water</li> <li>- <b>GENESIS DM PLUS</b> Cement based powder requiring addition of 0,22-0,24 l/kg of water</li> </ul> </li> </ul>	3,5 to 8,0 (powder)  3,5 to 8,0 (powder)  3,5 to 8,0 (powder)	-  -  -

Table 1. cont.

Components		Coverage (kg/m <sup>2</sup> )	Thickness (mm)
<b>Mechanically fixed ETICS; mechanically fixed with supplementary adhesive. National application documents shall be taken into account.</b>			
<b>Insulation materials with associated methods of fixing</b>	<ul style="list-style-type: none"> <li>• <b>Insulation product:</b> mineral wool (MW) dual density boards according to EN 13162 <i>Product characteristics - see Annex No 1</i></li> </ul>	-	80 to 400
	<ul style="list-style-type: none"> <li>• <b>Anchors</b> <i>Products characteristics - see Annex No 2</i></li> </ul>	-	-
	<ul style="list-style-type: none"> <li>• <b>Supplementary adhesives:</b> <ul style="list-style-type: none"> <li>- <b>ROXHESIVE</b> Cement based powder requiring addition of 0,22-0,24 l/kg of water</li> <li>- <b>FIBERCOAT</b> Cement based powder requiring addition of 0,22-0,24 l/kg of water</li> <li>- <b>GENESIS DM PLUS</b> Cement based powder requiring addition of 0,22-0,24 l/kg of water</li> </ul> </li> </ul>	3,5 to 8,0 (powder)	-
		3,5 to 8,0 (powder)	-
<b>Base coat</b>	<ul style="list-style-type: none"> <li>- <b>FIBERCOAT</b> Cement based powder requiring addition of 0,22-0,24 l/kg of water</li> </ul>	3,0 to 8,0 (powder)	3,0 to 5,0
<b>Reinforcement</b>	<ul style="list-style-type: none"> <li>• <b>Standard glass fibre meshes:</b> applied in one or two layers <ul style="list-style-type: none"> <li>- STANDARD PLUS 150</li> <li>- STANDARD PLUS 160</li> <li>- SSA-1363 F+</li> </ul> </li> </ul> <i>Products characteristics - see Annex No 3</i>	- - -	- - -

Table 1. cont.

	Components	Coverage (kg/m <sup>2</sup> )	Thickness (mm)
Key coats	<ul style="list-style-type: none"> <li>• <b>COLOR PRIME PLUS</b> Ready to use liquid to be used obligatory with acrylic (PMR, FD PMR, mosaic structure), silicone (TR), silicone-silicate (HYBRID) and siloxane (HDP) finishing coats</li> <li>• <b>DEMANDIT</b> Ready to use liquid to be used with finishing coats applied by pattern</li> <li>• <b>WOOD PRIME</b> Ready to use liquid to be used obligatory on mineral finishing coat DRYTEX WOOD together with WOOD GLAZE MATT or WOOD GLAZE decorative coats</li> </ul>	<p>0,25 to 0,30</p> <p>0,35 to 0,40</p> <p>0,20 to 0,25</p>	-
Finishing coats	<ul style="list-style-type: none"> <li>• <b>Mineral finishing coats DRYTEX</b> Cement based powders requiring addition of 0,22-0,24 l/kg of water.  <b>Sandblast</b> structure - max. particles size: floated - 1,2 mm  <b>Sandpebble</b> structure - max. particles size: floated - 1,6 mm  <b>Sandpebble 2</b> structure - max. particles size: floated - 2,0 mm  <b>Sandpebble 3</b> structure - max. particles size: floated - 3,0 mm  <b>Quarzputz</b> structure - max. particles size: ribbed - 2,0 mm  <b>Quarzputz Fine</b> structure - max. particles size: ribbed - 1,2 mm  <b>Freestyle</b> structure - max. particles size: ribbed - 0,6 mm (into any shaping)</li> <li>• <b>Mineral finishing coat DRYTEX WOOD</b> Cement based powder requiring addition of 0,22-0,24 l/kg of water. structure - max. particles size: floated - 0,5 mm</li> </ul>	<p>2,2 to 2,5</p> <p>2,6 to 2,8</p> <p>3,3 to 3,8</p> <p>4,1 to 4,3</p> <p>2,6 to 2,8</p> <p>1,1 to 1,3</p> <p>1,2 to 2,0</p> <p>4,5 to 5,0</p>	<p>Regulated by particles size</p> <p>1,2 to 2,0</p> <p>4,0 to 5,0</p>

Table 1. cont.

	Components	Coverage (kg/m <sup>2</sup> )	Thickness (mm)
Finishing coats	<ul style="list-style-type: none"> <li>• <b>Mosaic structure finishing coats</b> Ready to use pastes - acrylic binder.</li> </ul>		
	<b>Ameristone</b> particles size: 0,8 to 2,5 mm	3,9 to 4,5	Regulated by particles size
	<b>Ameristone T / TerraNeo</b> particles size: 0,8 to 2,5 mm	3,0 to 3,5	
	<b>Stonemist</b> particles size: 0,6 to 0,8 mm	2,8 to 3,5	
	<b>Stonemist T</b> particles size: 0,6 to 0,8 mm	2,6 to 3,3	
	<ul style="list-style-type: none"> <li>• <b>Acrylic finishing coats PMR</b> Ready to use pastes - acrylic binder.</li> </ul>		
	<b>Lymestone PMR</b> structure - max. particles size: ribbed - 0,6 mm	1,0 to 1,2	1,2 to 2,0
	<b>Freestyle PMR</b> structure - max. particles size: floated - 0,6 mm (into any shaping)	1,2 to 2,0	
	<b>Sandblast PMR</b> structure - max. particles size: floated - 1,2 mm	2,2 to 2,5	
	<b>Sandpebble Fine PMR</b> structure - max. particles size: floated - 1,2 mm	2,0 to 2,1	
	<b>Sandpebble PMR</b> structure - max. particles size: floated - 1,6 mm	2,6 to 2,8	Regulated by particles size
	<b>Sandpebble 2 PMR</b> structure - max. particles size: floated - 2,0 mm	3,3 to 3,8	
	<b>Quarzputz PMR</b> structure - max. particles size: ribbed - 2,0 mm	2,6 to 2,8	
	<ul style="list-style-type: none"> <li>• <b>Acrylic finishing coats FD PMR</b> Ready to use pastes - acrylic binder.</li> </ul>		
	<b>Freestyle FD PMR</b> structure - max. particles size: floated - 0,6 mm (into any shaping)	1,2 to 2,0	1,2 to 2,0
	<b>Sandblast FD PMR</b> structure - max. particles size: floated - 1,2 mm	2,2 to 2,5	
	<b>Sandpebble Fine FD PMR</b> structure - max. particles size: floated - 1,2 mm	2,0 to 2,1	
	<b>Sandpebble FD PMR</b> structure - max. particles size: floated - 1,6 mm	2,6 to 2,8	
	<b>Quarzputz FD PMR</b> structure - max. particles size: ribbed - 2,0 mm	2,6 to 2,8	Regulated by particles size



Table 1. cont.

	Components	Coverage (kg/m <sup>2</sup> )	Thickness (mm)
Finishing coats	<ul style="list-style-type: none"> <li>• <b>Silicone finishing coats TR</b> Ready to use pastes - silicone and acrylic binder.</li> </ul>		
	<b>Limestone TR</b> structure - max. particles size: ribbed - 0,6 mm	1,0 to 1,2	Regulated by particles size
	<b>Freestyle TR</b> structure - max. particles size: floated - 0,6 mm (into any shaping)	1,2 to 2,0	1,2 to 2,0
	<b>Sandblast TR</b> structure - max. particles size: floated - 1,2 mm	2,2 to 2,5	
	<b>Sandpebble Fine TR</b> structure - max. particles size: floated - 1,2 mm	2,0 to 2,1	
	<b>Sandpebble TR</b> structure - max. particles size: floated - 1,6 mm	2,6 to 2,8	Regulated by particles size
	<b>Sandpebble 2 TR</b> structure - max. particles size: floated - 2,0 mm	3,3 to 3,8	
	<b>Quarzputz TR</b> structure - max. particles size: ribbed - 2,0 mm	2,6 to 2,8	
	<ul style="list-style-type: none"> <li>• <b>Siloxane finishing coats HDP</b> Ready to use pastes - siloxane and acrylic binder.</li> </ul>		
	<b>Limestone HDP</b> structure - max. particles size: ribbed - 0,6 mm	1,0 to 1,2	
	<b>Freestyle HDP</b> structure - max. particles size: floated - 0,6 mm (into any shaping)	1,2 to 2,0	1,2 to 2,0
	<b>Sandblast HDP</b> structure - max. particles size: floated - 1,2 mm	2,3 to 2,5	
	<b>Sandpebble Fine HDP</b> structure - max. particles size: floated - 1,2 mm	2,0 to 2,1	
	<b>Sandpebble HDP</b> structure - max. particles size: floated - 1,6 mm	2,6 to 2,8	Regulated by particles size
	<b>Quarzputz HDP</b> structure - max. particles size: ribbed - 2,0 mm	2,6 to 2,8	

Table 1. cont.

	Components	Coverage (kg/m <sup>2</sup> )	Thickness (mm)
Finishing coats	<ul style="list-style-type: none"> <li>• <b>Silicone-silicate finishing coats HYBRID</b> Ready to use pastes – silicate-silicone-acrylic binder.</li> </ul>		
	<b>Limestone HYBRID</b> structure - max. particles size: ribbed - 0,6 mm	1,0 to 1,2	Regulated by particles size
	<b>Freestyle HYBRID</b> structure - max. particles size: floated - 0,6 mm (into any shaping)	1,2 to 2,0	1,2 to 2,0
	<b>Sandblast HYBRID</b> structure - max. particles size: floated - 1,2 mm	2,2 to 2,5	
	<b>Sandpebble Fine HYBRID</b> structure - max. particles size: floated - 1,2 mm	2,0 to 2,1	
	<b>Sandpebble HYBRID</b> structure - max. particles size: floated - 1,5 mm	2,2 to 2,4	Regulated by particles size
	<b>Sandpebble 2 HYBRID</b> structure - max. particles size: floated - 2,0 mm	3,3 to 3,8	
	<b>Quarzputz Fine HYBRID</b> structure - max. particles size: ribbed - 1,2 mm	1,1 to 1,3	
	<ul style="list-style-type: none"> <li>• <b>Mosaic structure finishing coats applied by pattern</b> Ready to use pastes - acrylic binder.</li> </ul>		
	<b>Ameristone</b> particles size: 0,8 to 2,5 mm	3,9 to 4,5	
	<b>Ameristone T / TerraNeo</b> particles size: 0,8 to 2,5 mm	3,0 to 3,5	
	<b>Stonemist</b> particles size: 0,6 to 0,8 mm	2,8 to 3,5	
	<b>Stonemist T</b> particles size: 0,6 to 0,8 mm	2,6 to 3,3	
	<ul style="list-style-type: none"> <li>• <b>Acrylic finishing coat applied by pattern</b> Ready to use paste - acrylic binder.</li> </ul>		
	<b>Custom Brick</b> structure - max. particles size: floated - 0,6 mm	1,0 to 1,2	1,0 to 1,2



Table 1. cont.

	Components	Coverage (kg/m <sup>2</sup> )	Thickness (mm)
Decorative coats	<ul style="list-style-type: none"> <li>• <b>DEMANDIT</b> Ready to use pigmented liquid to be used obligatory with mineral finishing coats DRYTEX</li> </ul>	0,35 to 0,40	-
	<ul style="list-style-type: none"> <li>• <b>SILSTAR / SILSTAR PRO</b> Ready to use pigmented liquid to be used obligatory with mineral finishing coats DRYTEX</li> </ul>	0,35 to 0,40	-
	<ul style="list-style-type: none"> <li>• <b>HYDROPHOBIC</b> Ready to use pigmented liquid to be used obligatory with mineral finishing coats DRYTEX</li> </ul>	0,35 to 0,40	-
	<ul style="list-style-type: none"> <li>• <b>WOOD GLAZE</b> Ready to use pigmented liquid to be used obligatory with mineral finishing coat DRYTEX WOOD</li> </ul>	0,10 to 0,20	-
	<ul style="list-style-type: none"> <li>• <b>WOOD GLAZE MATT</b> Ready to use pigmented liquid to be used obligatory with mineral finishing coat DRYTEX WOOD</li> </ul>	0,10 to 0,20	-
Ancillary materials	<ul style="list-style-type: none"> <li>• Patterns Covered with glue cardboard forms for single use, ready to use to obtain brick or stone design effect, providing joint of 10 mm width and joints surface area less than 30% per 1 m<sup>2</sup></li> <li>• According to ETAG 004 Remain under the manufacturer's responsibility</li> </ul>		

**2. Specification of the intended use in accordance with the applicable European Assessment Document (hereinafter EAD)**

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).

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 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 is not intended to ensure the airtightness of the building structure.

The provisions made in this European Technical Assessment are based on an assumed working life of the ETICS of at least 25 years, provided that the requirements for the packaging, transport, storage, installation as well as appropriate use, maintenance and repair are met. The indication given on the working life cannot be interpreted as a guarantee given by the manufacturer or the Technical Assessment 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.

Design, installation, maintenance and repair of ETICS shall be done in accordance with principles introduced in chapter 7 of ETAG 004, used as EAD, and shall be in conformity with Member States' legislation requirements.

The instructions regarding packaging, transport, storage and installation of ETICS are specified in the manufacturer's technical documentation.

### 3. Performance of the product and references to the methods used for its assessment

The performances of the kit as described in this chapter are valid provided that the components of the kit comply with Annexes No 1÷3.

#### 3.1. Safety in case of fire (BWR 2)

##### 3.1.1. Reaction to fire (ETAG 004: clause 5.1.2.1, EN 13501-1)

Table 2.

Configuration	Max. heat of combustion [MJ/kg]	Flame retardant content	Euroclass acc. to EN 13501-1
DRYVIT ROXSULATION PRO excluding: <ul style="list-style-type: none"> <li>- Acrylic finishing coats FD PMR,</li> <li>- Limestone HDP,</li> <li>- Freestyle HDP,</li> <li>- Sandblast HDP,</li> <li>- Sandpebble Fine HDP,</li> <li>- Quarzputz HDP.</li> </ul>			
Adhesive	0,75	No flame retardant	A2 – s1, d0
MW boards* <i>density ≤ 160 kg/m<sup>3</sup></i>	-		
Base coat	0,67		
Glass fibre mesh	6,76		
Key coat	8,20		
Finishing coat	2,84		
Decorative coat	28,10		
Remaining configurations	-	-	No performance assessed
*organic content in quantity ensuring Euroclass A1 according to EN 13501-1			

Note: European reference fire scenario has not been laid down for facades. In some Member States, the classification of ETICS according to EN 13501-1 might not be sufficient for the use in facades. An additional assessment of ETICS according to national provisions might be necessary to comply with Member State regulations, until the existing European classification system has been completed.

#### 3.2. Hygiene, health and environment (BWR 3)

##### 3.2.1. Water absorption (ETAG 004: clause 5.1.3.1)

- Base coat FIBERCOAT:
  - Water absorption after 1 hour < 1 kg/m<sup>2</sup>;
  - Water absorption after 24 hours < 0,5 kg/m<sup>2</sup>.
- Rendering systems: Table 3



Table 3.

		Water absorption after 24 hours	
		<0,5 kg/m <sup>2</sup>	≥0,5 kg/m <sup>2</sup>
<b>Rendering system:</b>  Base coat <u>FIBERCOAT</u> + relevant key coat (if used) + finishing coat indicated hereafter + decorative coat (if used):	Mineral finishing coats DRYTEX: + DEMANDIT + SILSTAR / SILSTAR PRO + HYDROPHOBIC	x x x	- - -
	Mineral finishing coat DRYTEX WOOD + WOOD PRIME: + WOOD GLAZE + WOOD GLAZE MATT	x x	- -
	COLOR PRIME PLUS + Mosaic structure finishing coats	x	-
	COLOR PRIME PLUS + Acrylic finishing coats PMR	x	-
	COLOR PRIME PLUS + Acrylic finishing coats FD PMR	x	-
	COLOR PRIME PLUS + Silicone finishing coats TR	x	-
	COLOR PRIME PLUS + Siloxane finishing coats HDP	x	-
	COLOR PRIME PLUS + Silicone-silicate finishing coats HYBRID	x	-
<b>Rendering system:</b>  Base coat <u>FIBERCOAT</u> + relevant key coat + finishing coat applied by pattern indicated hereafter:	DEMANDIT + Mosaic structure finishing coats	x	-
	DEMANDIT + Custom Brick	x	-

### 3.2.2. Watertightness (ETAG 004: clause 5.1.3.2)

#### 3.2.2.1. Hygrothermal behaviour (ETAG 004: clause 5.1.3.2.1)

Pass (without defects).

#### 3.2.2.2. Freeze-thaw behaviour (ETAG 004: clause 5.1.3.2.2)

ETICS is frost resistant according to water absorption test.

### 3.2.3. Impact resistance (ETAG 004: clause 5.1.3.3)

Table 4.

		Single layer of standard mesh
<b>MW board acc. to Annex No 1</b>		
<b>Rendering system:</b>  Base coat <u>FIBERCOAT</u> + relevant key coat (if used) + finishing coat indicated hereafter + decorative coat (if used):	Mineral finishing coats DRYTEX: + DEMANDIT + SILSTAR / SILSTAR PRO + HYDROPHOBIC	Category I Category I Category I
	Mineral finishing coat DRYTEX WOOD + WOOD PRIME: + WOOD GLAZE + WOOD GLAZE MATT	Category II Category II
	COLOR PRIME PLUS + Mosaic structure finishing coats	Category I
	COLOR PRIME PLUS + Acrylic finishing coats PMR	Category I
	COLOR PRIME PLUS + Acrylic finishing coats FD PMR	Category II
	COLOR PRIME PLUS + Silicone finishing coats TR	Category II
	COLOR PRIME PLUS + Siloxane finishing coats HDP	Category I
	COLOR PRIME PLUS + Silicone-silicate finishing coats HYBRID	Category I
<b>MW dual density board acc. to Annex No 1</b>		
<b>Rendering system:</b>  Base coat <u>FIBERCOAT</u> + relevant key coat (if used) + finishing coat indicated hereafter + decorative coat (if used):	Mineral finishing coats DRYTEX: + DEMANDIT + SILSTAR / SILSTAR PRO + HYDROPHOBIC	Category I Category I Category I
	Mineral finishing coat DRYTEX WOOD + WOOD PRIME: + WOOD GLAZE + WOOD GLAZE MATT	Category II Category II
	COLOR PRIME PLUS + Mosaic structure finishing coats	Category I
	COLOR PRIME PLUS + Acrylic finishing coats PMR	Category II
	COLOR PRIME PLUS + Acrylic finishing coats FD PMR	Category III
	COLOR PRIME PLUS + Silicone finishing coats TR	Category II
	COLOR PRIME PLUS + Siloxane finishing coats HDP	Category II
	COLOR PRIME PLUS + Silicone-silicate finishing coats HYBRID	Category II

Table 4. cont.

		Single layer of standard mesh
<b>MW lamella acc. to Annex No 1</b>		
<b>Rendering system:</b>  Base coat <u>FIBERCOAT</u> + relevant key coat (if used) + finishing coat indicated hereafter + decorative coat (if used):	Mineral finishing coats DRYTEX: + DEMANDIT + SILSTAR / SILSTAR PRO + HYDROPHOBIC	Category I Category I Category I
	Mineral finishing coat DRYTEX WOOD + WOOD PRIME: + WOOD GLAZE + WOOD GLAZE MATT	Category II Category II
	COLOR PRIME PLUS + Mosaic structure finishing coats	Category II
	COLOR PRIME PLUS + Acrylic finishing coats PMR	Category II
	COLOR PRIME PLUS + Acrylic finishing coats FD PMR	Category II
	COLOR PRIME PLUS + Silicone finishing coats TR	Category II
	COLOR PRIME PLUS + Siloxane finishing coats HDP	Category I
	COLOR PRIME PLUS + Silicone-silicate finishing coats HYBRID	Category I

Table 5.

		Single layer of standard mesh
<b>MW board acc. to Annex No 1</b>		
<b>Rendering system:</b>  Base coat <u>FIBERCOAT</u> + relevant key coat + finishing coat applied by pattern indicated hereafter:	DEMANDIT + Mosaic structure finishing coats	Category I
	DEMANDIT + Custom Brick	Category II
<b>MW dual density board acc. to Annex No 1</b>		
<b>Rendering system:</b>  Base coat <u>FIBERCOAT</u> + relevant key coat + finishing coat applied by pattern indicated hereafter:	DEMANDIT + Mosaic structure finishing coats	Category I
	DEMANDIT + Custom Brick	Category II
<b>MW lamella acc. to Annex No 1</b>		
<b>Rendering system:</b>  Base coat <u>FIBERCOAT</u> + relevant key coat + finishing coat applied by pattern indicated hereafter:	DEMANDIT + Mosaic structure finishing coats	Category I
	DEMANDIT + Custom Brick	Category II



### 3.2.4. Water vapour permeability (ETAG 004: clause 5.1.3.4)

Table 6.

		Equivalent air thickness $s_d$
<b>Rendering system:</b>  Base coat <u>FIBERCOAT</u> + relevant key coat (if used) + finishing coat indicated hereafter + decorative coat (if used):	Mineral finishing coats DRYTEX: + DEMANDIT + SILSTAR / SILSTAR PRO + HYDROPHOBIC	$\leq 1$ m, result: 0,4 m $\leq 1$ m, result: 0,4 m $\leq 1$ m, result: 0,4 m
	Mineral finishing coat DRYTEX WOOD + WOOD PRIME: + WOOD GLAZE + WOOD GLAZE MATT	$\leq 1$ m, result: 0,4 m $\leq 1$ m, result: 0,4 m
	COLOR PRIME PLUS + Mosaic structure finishing coats	$\leq 1$ m, result: 0,5 m
	COLOR PRIME PLUS + Acrylic finishing coats PMR	$\leq 1$ m, result: 0,5 m
	COLOR PRIME PLUS + Acrylic finishing coats FD PMR	$\leq 1$ m, result: 0,3 m
	COLOR PRIME PLUS + Silicone finishing coats TR	$\leq 1$ m, result: 0,5 m
	COLOR PRIME PLUS + Siloxane finishing coats HDP	$\leq 1$ m, result: 0,4 m
	COLOR PRIME PLUS + Silicone-silicate finishing coats HYBRID	$\leq 1$ m, result: 0,5 m
<b>Rendering system:</b>  Base coat <u>FIBERCOAT</u> + relevant key coat + finishing coat applied by pattern indicated hereafter:	DEMANDIT + Mosaic structure finishing coats	$\leq 1$ m, result: 0,3 m
	DEMANDIT + Custom Brick	$\leq 1$ m, result: 0,3 m

### 3.2.5. Release of dangerous substances (ETAG 004: clause 5.1.3.5, EOTA TR034)

No performance assessed.

Note: There may be requirements applicable to the ETICS falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Regulation (EU) No 305/2011, these requirements need to be complied with, when and where they apply.

### 3.3. Safety and accessibility in use (BWR 4)

#### 3.3.1. Bond strength between base coat and insulation product (ETAG 004: clause 5.1.4.1.1)

Base coat FIBERCOAT:

- Initial state:  
≥ 0,08 MPa or failure into mineral wool
- After hygrothermal cycles:  
≥ 0,08 MPa or failure into mineral wool

#### 3.3.2. Bond strength between adhesive and substrate (ETAG 004: clause 5.1.4.1.2)

Table 7.

	Initial state	48 h immersion in water + 2 hours 23°C/50% RH	48 h immersion in water + 7 days 23°C/50% RH
ROXHESIVE	≥ 0,25 MPa	≥ 0,08 MPa	≥ 0,25 MPa
FIBERCOAT	≥ 0,25 MPa	≥ 0,08 MPa	≥ 0,25 MPa
GENESIS DM PLUS	≥ 0,25 MPa	≥ 0,08 MPa	≥ 0,25 MPa

#### 3.3.3. Bond strength between adhesive and insulation product (ETAG 004: clause 5.1.4.1.3)

Table 8.

	Initial state	48 h immersion in water + 2 hours 23°C/50% RH	48 h immersion in water + 7 days 23°C/50% RH
ROXHESIVE	≥ 0,08 MPa	≥ 0,03 MPa	≥ 0,08 MPa
FIBERCOAT	≥ 0,08 MPa	≥ 0,03 MPa	≥ 0,08 MPa
GENESIS DM PLUS	≥ 0,08 MPa	≥ 0,03 MPa	≥ 0,08 MPa

### 3.3.4. Bond strength after ageing (ETAG 004: clause 5.1.7.1)

Table 9.

		After hygrothermal cycles
<b>Rendering system:</b>  Base coat <u>FIBERCOAT</u> + relevant key coat (if used) + finishing coat indicated hereafter + decorative coat (if used):	Mineral finishing coats DRYTEX: + DEMANDIT + SILSTAR / SILSTAR PRO + HYDROPHOBIC	≥ 0,08 MPa or failure into mineral wool
	Mineral finishing coat DRYTEX WOOD + WOOD PRIME: + WOOD GLAZE + WOOD GLAZE MATT	
	COLOR PRIME PLUS + Mosaic structure finishing coats	
	COLOR PRIME PLUS + Acrylic finishing coats PMR	
	COLOR PRIME PLUS + Acrylic finishing coats FD PMR	
	COLOR PRIME PLUS + Silicone finishing coats TR	
	COLOR PRIME PLUS + Siloxane finishing coats HDP	
	COLOR PRIME PLUS + Silicone-silicate finishing coats HYBRID	
<b>Rendering system:</b>  Base coat <u>FIBERCOAT</u> + relevant key coat + finishing coat applied by pattern indicated hereafter:	DEMANDIT + Mosaic structure finishing coats	
	DEMANDIT + Custom Brick	

### 3.3.5. Fixing strength (ETAG 004, clause 5.1.4.2)

Test not required. ETICS fulfils the criteria  $E \cdot d \leq 50\,000 \text{ N/mm}$ .



### 3.3.6. Wind load resistance (ETAG 004, clause 5.1.4.3)

Table 10.

Anchors for which the following failure loads apply		Anchors according to Annex No 2	
		Plate diameter (mm)	≥ 60
Characteristics of the <b>MW boards</b> for which the following failure loads apply		Thickness (mm)	≥ 60
		Tensile strength perpendicular to the faces (kPa)	≥ 10
Failure loads (N)	Anchors not placed at the panel joints ( <i>Pull-through test</i> ) dry conditions	R <sub>panel</sub>	Minimum: 440 Average: 460
	Anchors not placed at the panel joints ( <i>Pull-through test</i> ) wet conditions	R <sub>panel</sub>	Minimum: 400 Average: 420
	Anchors placed at the panel joints ( <i>Static foam block test</i> )	R <sub>joint</sub>	Minimum: 380 Average: 410

Table 11.

Anchors for which the following failure loads apply		Anchors according to Annex No 2	
		Plate diameter (mm)	≥ 60
Characteristics of the <b>MW dual density boards</b> for which the following failure loads apply		Thickness (mm)	≥ 80
		Tensile strength perpendicular to the faces (kPa)	≥ 10
Failure loads (N)	Anchors not placed at the panel joints ( <i>Pull-through test</i> ) dry conditions	R <sub>panel</sub>	Minimum: 470 Average: 480
	Anchors not placed at the panel joints ( <i>Pull-through test</i> ) wet conditions	R <sub>panel</sub>	Minimum: 440 Average: 450
	Anchors placed at the panel joints ( <i>Static foam block test</i> )	R <sub>joint</sub>	Minimum: 400 Average: 430

The wind load resistance of the ETICS R<sub>d</sub> is calculated as follows:

$$R_d = \frac{R_{\text{panel}} \times n_{\text{panel}} + R_{\text{joint}} \times n_{\text{joint}}}{\gamma_m}$$

where:

n<sub>panel</sub>: number (per m<sup>2</sup>) of anchors not placed at the panel joints

n<sub>joint</sub>: number (per m<sup>2</sup>) of anchors placed at the panel joints

γ<sub>m</sub>: national safety factor

### 3.3.7. Render strip tensile test (ETAG 004: clause 5.5.4.1)

No performance assessed.

### 3.4. Protection against noise (BWR 5)

#### 3.4.1. Airborne sound insulation (ETAG 004: clause 5.1.5.1)

No performance assessed.

### 3.5. Energy economy and heat retention (BWR 6)

#### 3.5.1. Thermal resistance (ETAG 004: clause 5.1.6.1)

The thermal transmittance of the substrate wall covered by the ETICS is calculated in accordance with the standard EN ISO 6946:

$$U_c = U + \chi_p \cdot n$$

where:

$\chi_p \cdot n$  has only to be taken into account if it is greater than 0,04 W/(m<sup>2</sup>·K)

$U_c$ : global (corrected) thermal transmittance of the covered wall (W/ (m<sup>2</sup>·K))

$n$ : number of anchors (through insulation product) per 1 m<sup>2</sup>

$\chi_p$ : local influence of thermal bridge caused by an anchor. The values listed below can be taken into account if not specified in the anchor's ETA:

= 0,002 W/K for anchors with a stainless steel screw covered by plastic anchors and for anchors with an air gap at the head of the screw

( $\chi_p \cdot n$  negligible for  $n < 20$ )

= 0,004 W/K for anchors with a galvanized steel screw with the head covered by a plastic material ( $\chi_p \cdot n$  negligible for  $n < 10$ )

= negligible for anchors with plastic nails (reinforced or not with glass fibres)

$U$ : thermal transmittance of the current part of the covered wall (excluding thermal bridges) (W/ (m<sup>2</sup>·K)) determined as follows:

$$U = \frac{1}{R_i + R_{render} + R_{substrate} + R_{se} + R_{si}}$$

where:

$R_i$ : thermal resistance of the insulation product (according to declaration in reference to EN 13162) in (m<sup>2</sup>·K)/W

$R_{render}$ : thermal resistance of the render (about 0,02 in (m<sup>2</sup>·K)/W or determined by test according to EN 12667 or EN 12664)

$R_{substrate}$ : thermal resistance of the substrate of the building (concrete, brick) in (m<sup>2</sup>·K)/W

$R_{se}$ : external superficial thermal resistance in (m<sup>2</sup>·K)/W

$R_{si}$ : internal superficial thermal resistance in (m<sup>2</sup>·K)/W

The value of thermal resistance of each insulation product shall be given in the manufacturer's documentation along with the possible range of thicknesses. In addition, the point thermal conductivity of anchors shall be given when anchors are used in the ETICS.

**3.6. Sustainable use of natural resources (BWR 7)**

No performance assessed.



**4. Assessment and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base**

According to the European Commission decision 97/556/EC amended by the European Commission decision 2001/596/EC, the AVCP systems (further described in Annex V to Regulation (EU) No 305/2011) 1 and 2+ apply.

Table 12.

Product(s)	Intended use(s)	Level(s) or class(es) (Reaction to fire)	System(s)
External thermal insulation composite systems/kits (ETICS) with rendering	in external wall subject to fire regulations	A1 <sup>(1)</sup> , A2 <sup>(1)</sup> , B <sup>(1)</sup> , C <sup>(1)</sup>	1
		A1 <sup>(2)</sup> , A2 <sup>(2)</sup> , B <sup>(2)</sup> , C <sup>(2)</sup> , D, E, (A1 to E) <sup>(3)</sup> , F	2+
	in external wall not subject to fire regulations	any	2+

<sup>(1)</sup> Products/materials for which a clearly identifiable stage in the production process results in an improvement of the reaction to fire classification (e.g. an addition of fire retardants or a limiting of organic material)

<sup>(2)</sup> Products/materials not covered by footnote <sup>(1)</sup>

<sup>(3)</sup> Products/materials that do not require to be tested for reaction to fire (e.g. products/materials of Classes A1 according to Commission Decision 96/603/EC)

**5. Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD**

The manufacturer shall exercise permanent control of production. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures. The production control system shall ensure performance constancy of the product covered by this European Technical Assessment.

The manufacturer may only use materials stated in the technical documentation of this European Technical Assessment. The factory production control shall be performed in accordance with the Control Plan which is a confidential part of the European Technical Assessment. The Control Plan was developed as a part of factory production control system.

The results of factory production control shall be recorded and evaluated in accordance with the provisions of the Control Plan.

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By



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**Annexes:**

Annex No 1 – Insulation products characteristics

Annex No 2 – Anchors characteristics

Annex No 3 – Glass fibre meshes characteristics

**Annex No 1 – Insulation products characteristics**

		<b>Factory made mineral wool (MW) products according to EN 13162</b>		
		<b>MW board</b>	<b>MW dual density board</b>	<b>MW lamella</b>
Reaction to fire / EN 13501-1		Euroclass – A1 max. density: 160 kg/m <sup>3</sup>	Euroclass – A1 max. density: 160 kg/m <sup>3</sup>	Euroclass – A1 max. density: 160 kg/m <sup>3</sup>
Thermal resistance		Defined in the CE marking in reference to EN 13162 (m <sup>2</sup> ·K)/W	Defined in the CE marking in reference to EN 13162 (m <sup>2</sup> ·K)/W	Defined in the CE marking in reference to EN 13162 (m <sup>2</sup> ·K)/W
Thickness / EN 823		- 3 % or - 3 mm + 5 % or + 5 mm [EN 13162 - T4]	- 3 % or - 3 mm + 5 % or + 5 mm [EN 13162 - T4]	-
		- 1 % or - 1 mm + 3 mm [EN 13162 - T5]	- 1 % or - 1 mm + 3 mm [EN 13162 - T5]	- 1 % or - 1 mm + 3 mm [EN 13162 - T5]
Dimensional stability under specified conditions	EN 1604	1 % [EN 13162 - DS(70,-)]	1 % [EN 13162 - DS(70,-)]	1 % [EN 13162 - DS(70,-)]
	EN 1604	-	1 % [EN 13162 - DS(70,90)]	1 % [EN 13162 - DS(70,90)]
Short-term water absorption (partial immersion) / EN 1609		EN 13162 - WS	EN 13162 - WS	EN 13162 - WS
Long-term water absorption (partial immersion) / EN 12087		EN 13162 - WL(P)	EN 13162 - WL(P)	EN 13162 - WL(P)
Water vapour diffusion resistance factor ( $\mu$ ) / EN 12086		EN 13162 - 1	EN 13162 - 1	EN 13162 - 1
Tensile strength perpendicular to the faces in dry conditions / EN 1607		≥ 10 kPa [EN 13162 – TR10]	≥ 10 kPa [EN 13162 – TR10]	≥ 80 kPa [EN 13162 – TR80]
Shear strength / EN 12090		-	-	≥ 0,02 MPa
Shear modulus / EN 12090		-	-	≥ 1,0 MPa



## Annex No 2 – Anchors characteristics

Anchor trade name	Plate stiffness (kN/mm)/ diameter (mm)	Characteristic resistance in the substrate
LMX-10	0,5 / 60	ETA-16/0509
LMX-8	0,5 / 60	ETA-16/0509
Klimas Wkret-met screw in plug eco-drive (ECO-DRIVE)	0,6 / 60	ETA-13/0107
fisher termoz CS 8	0,6 / 60	ETA-14/0372
TFIX-8S	0,6 / 60	ETA-11/0144
TFIX-8ST	0,6 / 60	ETA-11/0144
R-TFIX-8S	0,6 / 60	ETA-17/0161
R-TFIX-8M	0,7 / 60	ETA-17/0592
WK THERMØ8	0,6 / 60	ETA-11/0232
WK THERM S	0,6 / 60	ETA-13/0724
BRAVOLL® PTH-KZ 60/8	0,7 / 60	ETA-05/0055
BRAVOLL® PTH-S	0,9 / 60	ETA-08/0267
TFIX-8M	1,0 / 60	ETA-07/0336
EJOT H1 eco	0,6 / 60	ETA-11/0192
EJOT H4 eco	0,6 / 60	ETA-11/0192
ejotherm STR U	0,6 / 60	ETA-04/0023
ejotherm STR U 2G	0,6 / 60	ETA-04/0023

Additionally, anchors covered by relevant ETA can be used, provided that they meet the following requirements:

	Requirement
Plate diameter	≥ 60 mm
Plate stiffness	≥ 0,5 kN/mm
Failure loads	≥ $R_{panel}$ and $R_{joint}$ specified in Table 10 and 11

### Annex No 3 – Glass fibre meshes characteristics

Mesh trade name	Description	Alkalis resistance	
		Residual resistance after ageing (N/mm)	Relative residual resistance: % (after ageing) of the strength in the as delivered state
STANDARD PLUS 150	Mass per unit area: 150 g/m <sup>2</sup> Mesh size: 3,6 x 4,3 mm	≥ 20	≥ 50
STANDARD PLUS 160	Mass per unit area: 160 g/m <sup>2</sup> Mesh size: 3,6 x 3,8 mm	≥ 20	≥ 50
SSA-1363 F+	Mass per unit area: 160 g/m <sup>2</sup> Mesh size: 3,6 x 3,8 mm	≥ 20	≥ 50