



## Designated according to The Construction Products (Amendment etc.) (EU Exit) Regulations 2020

UK Technical Assessment	UKTA-0836-22/6375 of 27/10/2022
Technical Assessment Body issuing the UK Technical Assessment:	British Board of Agrément
Trade name of the construction product:	TURBO-W, TURBO-WSA, TURBO-WSO, TURBO-WSO PROTECT, TURBO-WSISI, TURBO-W MAX PROTECT, TURBO-W ECO PROTECT
Product family to which the construction product belongs:	Product Area Code: 04  External Wall Insulation Systems (EWIS) with rendering insulation product – mineral wool (MW)
Manufacturer:	EWI Pro Insulation Systems Ltd Unit 1&2 King Georges Trading Estate Davis Road Chessington KT9 1TT
Manufacturing plant(s):	Ul. Sz. Szeregów 23, 60-462 Poznań, Poland  Ul. Bory 41a, 42-504 Bedzin, Poland  Ul. 11 listopada 29, 97-225 Ujazd, Poland  Kaliska 141, 87-840 Lubień Kujawski Poland
This UK Technical Assessment contains:	49 pages including 10 Annexes
This UK Technical Assessment is issued in accordance with The Construction Products (Amendment etc.) (EU Exit) Regulations 2020 on the basis of:	UKAD 040083-00-0404: <i>External thermal insulation composite systems (ETICS) with renderings</i>

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## 1 Technical description of the product

TURBO-W, TURBO-WSA, TURBO-WSO, TURBO-WSO PROTECT, TURBO-WSISI, TURBO-W MAX PROTECT, TURBO-W ECO PROTECT is an EWIS (External Wall Insulation System) with rendering - a kit comprising components which are factory-produced by the manufacturer or component suppliers. The EWIS manufacturer is ultimately responsible for all components of the EWIS specified in this UKTA.

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

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

**Table 1 Composition of the EWIS**

	Components	Coverage (kg/m <sup>2</sup> )	Thickness (mm)
<b>Fully bonded EWIS with supplementary anchors. National application documents shall be taken into account.</b>			
Insulation materials with associated methods of fixing	<ul style="list-style-type: none"> <li>• Insulation product: MW according to EN 13162 see Annex No. 1 Insulation product characteristics for bonded EWIS with additional mechanical fixing – MW lamella (TR80) for product characteristics</li> </ul>	/	50 to 250
	<ul style="list-style-type: none"> <li>• Adhesives: min. bonded surface: 100 %               <ul style="list-style-type: none"> <li>- LEPSTYR-W 230/LEPSTYR-W 230 EXTRA cement based powder requiring addition of water - 0.25 l/kg)</li> <li>- STYRLEP-W 240/STYRLEP-W 240 EXTRA cement based powder requiring addition of water – 0.25 l/kg)</li> <li>- STYRLEP-B 225 cement based powder requiring addition of water – 0.28 l/kg)</li> </ul> </li> </ul>	5.0 - 6.0 of dry matter	/

	Components	Coverage (kg/m <sup>2</sup> )	Thickness (mm)
	<b>Mechanically fixed EWIS with anchors and supplementary adhesive (see Cl. Error! Reference source not found. and Annex No. 9 for possible associations MW/anchors).</b>		
	<b>National application documents shall be taken into account.</b>		
Insulation materials with associated methods of fixing	<ul style="list-style-type: none"> <li>• Insulation product: MW according to EN 13162 see Annex No. 2 to 8 for product characteristics</li> </ul>	/	50 to 300
	<ul style="list-style-type: none"> <li>• Supplementary adhesives: min. bonded surface: 30 % <ul style="list-style-type: none"> <li>- LEPSTYR-W 230/LEPSTYR-W 230 EXTRA cement based powder requiring addition of water - 0.25 l/kg)</li> <li>- STYRLEP-W 240/STYRLEP-W 240 EXTRA cement based powder requiring addition of water – 0.25 l/kg)</li> <li>- STYRLEP-B 225 cement based powder requiring addition of water – 0.28 l/kg)</li> </ul> </li> </ul>	3.0 to 4.0 of dry matter	/
	<ul style="list-style-type: none"> <li>• Anchors, see Annex No. 9 for individual product characteristics. In addition to the following list, other anchors can be used provided that they comply with the requirements introduced in the Annex No. 9. <ul style="list-style-type: none"> <li>- Ejotherm NT U plastic nailed-in anchors</li> <li>- Ejotherm STR U, STR U 2G plastic screw-in anchors</li> <li>- Ejotherm NTK U plastic nailed-in anchors</li> <li>- EJOT H1 eco, EJOT H4 eco plastic nailed-in anchors</li> <li>- EJOT H3 plastic nailed-in anchors</li> <li>- KOELNER KI-10, KI-10PA, KI-10M plastic nailed-in anchors</li> <li>- KOELNER KI-10N, KI-10NS plastic nailed-in anchors</li> <li>- KOELNER TFIX-8M plastic nailed-in anchors</li> <li>- KOELNER TFIX-8S a TFIX-8ST plastic screw-in anchors</li> <li>- KOELNER TFIX-8P plastic nailed-in anchors</li> </ul> </li> </ul>	<p>ETA-05/0009</p> <p>ETA-04/0023</p> <p>ETA-07/0026</p> <p>ETA-11/0192</p> <p>ETA-14/0130</p> <p>ETA-07/0291</p> <p>ETA 07/0221</p> <p>ETA-07/0336</p> <p>ETA-11/0144</p> <p>ETA-13/0845</p>	

	<b>Components</b>	<b>Coverage (kg/m<sup>2</sup>)</b>	<b>Thickness (mm)</b>
Insulation materials with associated methods of fixing	- WKRET-MET LFN ø 10, LFM ø 10 plastic nailed-in anchors	ETA-06/0105	
	- WKRET - MET LFN ø 8, LFM ø 8 plastic nailed-in anchors	ETA-06/0080	
	- WKRET-MET LTX ø 10, LMX ø 10 plastic nailed-in anchors	ETA-08/0172	
	- WKRET-MET LTX ø 8, LMX ø 8 plastic nailed-in anchors	ETA-09/0001	
	- FIXPLUG ø 8, FIXPLUG ø 10 plastic nailed-in anchors	ETA-11/0231	
	- WKTHERM ø 8 plastic screw-in anchors	ETA-11/0232	
	- Klimas Wkret-med screw-in plug eco-drive plastic screw-in anchors	ETA-13/0107	
	- WKTHERM S plastic nailed-in anchors	ETA-13/0724	
	- KEW TSD 8 plastic nailed-in anchors	ETA-04/0030	
	- KEW TSBD 8 plastic screw-in anchors	ETA-08/0314	
	- KEW TSD-V plastic nailed-in anchors	ETA-08/0315	
	- KEW TSDL-V plastic nailed-in anchors	ETA-12/0148	
	- KEW TSD-V KN plastic nailed-in anchors	ETA-13/0075	
	- fischer TERMOZ 8U, 8UZ plastic screw-in anchors	ETA-02/0019	
	- fischer TERMOZ 8N, 8NZ plastic screw-in anchors	ETA-03/0019	
	- Hilti-Dämmstoff-Befestigungselement XI-FV plastic gun-nailed anchors	ETA-03/0004	
	- Hilti SX-FV plastic screw-in anchors	ETA-03/0005	
	- Hilti SD-FV8 plastic nailed-in anchors	ETA-03/0028	
	- Hilti WDVS-Schlagdübel SDK-FV 8 plastic nailed-in anchors	ETA-07/0302	
	- Hilti WDVS- Schraubdübel D-FV, D-FV T plastic screw-in anchors	ETA-05/0039	

	Components	Coverage (kg/m <sup>2</sup> )	Thickness (mm)
Base coat	- STYRLEP-W 240/STYRLEP-W 240 EXTRA	5.0 – 6.0 of dry matter	3 – 5
	- cement based powder requiring addition of water 0.25 l/kg)		
	- STYRLEP-B 225	for double reinforcement: 7.0 – 8.0	for double reinforcement: 5
	- cement based powder requiring addition of water 0.28 l/kg	of dry matter	
Reinforcement	<ul style="list-style-type: none"> <li>Standard mesh applied in a single layer or in two layers see Annex No. 10 for product characteristics:</li> </ul>		
	- R 117 A101 / AKE 145	/	/
	- R 131 A101 / AKE 160	/	/
	- R 167 A101	/	/
	- SSA-1363-4 SM	/	/
	<ul style="list-style-type: none"> <li>Reinforced mesh applied in a one layer see Annex No. 10 for product characteristics:</li> </ul>		
- REDNET CB330 NOVA	/	/	
Key coat	<ul style="list-style-type: none"> <li>Key coats shall always be used with STYRLEP-W 240/ STYRLEP-W 240 EXTRA</li> <li>For STYRLEP-B 225 is use of the key coat voluntary.</li> </ul>		
	- TYNKOLIT-T 330		
	- to be used with mineral and acrylic binder finishing coats		
	- pigmented ready to use liquid		
	- TYNKOLIT-SA 331		
	- to be used with silicate binder finishing coats		
	- pigmented ready to use liquid		
	- TYNKOLIT-SO 332		
	- to be used with silicone binder finishing coats	0.2 – 0.3	/
	- pigmented ready to use liquid		
	- TYNKOLIT-SISI 333		
	- to be used with silicate-silicone binder finishing coats		
	- pigmented ready to use liquid		
- TYNKOLIT -U 340			
- to be used with all finishing coats stated in this ETA			
- pigmented ready to use liquid			

	<b>Components</b>	<b>Coverage (kg/m<sup>2</sup>)</b>	<b>Thickness (mm)</b>
Finishing coats	<ul style="list-style-type: none"> <li>• Cement based powder requiring addition of water 0.25 l/kg – mineral binder               <ul style="list-style-type: none"> <li>- POZTYNK-SZ 062 Kornputz (particle size 1.0; 1.5; 2.0; 3.0 mm)</li> <li>- POZTYNK-SZ 061 Kratzputz (particle size 1.5; 2.0; 2.5 mm)</li> </ul> </li> </ul>	2.1 – 4.3 Regulated by particle size 2.0 – 4.1 Regulated by particle size	1.0 – 3.0 Regulated by particle size
	<ul style="list-style-type: none"> <li>• Ready to use paste - silicone binder:               <ul style="list-style-type: none"> <li>- SILIKOTYNK 030 Kornputz (particle size 1.5; 2.0; 3.0 mm)</li> <li>- SILIKOTYNK 030 Kratzputz (particle size 1.5; 2.0; 3.0 mm)</li> <li>- SILIKON Protect 031 Kornputz (particle size 1.5; 2.0; 3.0 mm)</li> <li>- SILIKON Protect 031 Kratzputz (particle size 1.5; 2.0; 3.0 mm)</li> </ul> </li> </ul>	2.4 – 5.0 Regulated by particle size 1.7 – 3.7 Regulated by particle size 2.4 – 5.0 Regulated by particle size 1.7 – 3.7 Regulated by particle size	1.5 – 3.0 Regulated by particle size
	<ul style="list-style-type: none"> <li>• Ready to use paste - silicate binder:               <ul style="list-style-type: none"> <li>- SILIKATYNK 020 Kornputz (particle size 0.5; 1.5; 2.0; 3.0 mm)</li> <li>- SILIKATYNK 020 Kratzputz (particle size 1.5; 2.0; 3.0 mm)</li> </ul> </li> </ul>	0.9 – 5.0 Regulated by particle size 1.7 – 3.7 Regulated by particle size	0.5 – 3.0 Regulated by particle size
	<ul style="list-style-type: none"> <li>• Ready to use paste – silicate and silicone binder:               <ul style="list-style-type: none"> <li>- SISITYNK 040 Kornputz/ SISITYNK 040 California Kornputz (particle size 1.5; 2.0; 2.5 mm)</li> <li>- SISITYNK 040 Kratzputz/ SISITYNK 040 California Kratzputz (particle size 1.5; 2.0; 2.5 mm)</li> <li>- ECO TYNK 022 ECO PROTECT Kornputz/ ECO TYNK 022 ECO PROTECT California Kornputz (particle size 1.5; 2.0; 2.5 mm)</li> <li>- ECO TYNK 022 ECO PROTECT Kratzputz/ ECO TYNK 022 ECO PROTECT California Kratzputz (particle size 1.5; 2.0; 2.5 mm)</li> </ul> </li> </ul>	2.4 – 5.0 Regulated by particle size 1.7 – 3.7 Regulated by particle size 2.4 – 5.0 Regulated by particle size 1.7 – 3.7 Regulated by particle size	1.5 – 3.0 Regulated by particle size

	Components	Coverage (kg/m <sup>2</sup> )	Thickness (mm)
	<ul style="list-style-type: none"> <li>Ready to use paste – silicone - polyurethane binder: <ul style="list-style-type: none"> <li>- MAX PROTECT 042 Kornputz (particle size 0.5; 1.0; 1.5; 2.0; 3.0 mm)</li> <li>- MAX PROTECT 042 Kratzputz (particle size 0.5; 1.0; 1.5; 2.0; 3.0 mm)</li> </ul> </li> </ul>	0.9 – 5.0 Regulated by particle size 0.9 – 3.7 Regulated by particle size	0.5 – 3.0 Regulated by particle size
Protection coats for mineral finishing coats	<ul style="list-style-type: none"> <li>One of the protection coats shall always be used with mineral binder finishing coats (POZTYNK SZ) <ul style="list-style-type: none"> <li>- FARBA SILIKATOWA 002 ready to use liquid</li> <li>- FARBA SILIKONOWA 003/ FARBA SILIKONOWA 003 California/ FARBA NANOTECH 006/ BIOFARBA 008 ready to use liquid</li> <li>- FARBA SISI 004 ready to use liquid</li> <li>- FARBA ECO 009 ready to use liquid</li> <li>- FARBA EGALIZACYJNA 005 ready to use liquid</li> </ul> </li> </ul>	0.15 – 0.25 l/m <sup>2</sup> regulated by particle size	/
Ancillary materials	Remain under the manufacturer's responsibility		

## 2 Specification of the intended use(s) in accordance with the applicable UK Assessment Document (hereinafter UKAD)

### 2.1 Intended use

This EWIS is intended for use as external insulation of buildings' walls. The walls are constructed of masonry (bricks, blocks, stones) or concrete (cast on site or as prefabricated panels). The characteristics of the walls shall be verified prior to use of the EWIS, especially regarding conditions for reaction to fire classification and for fixing of the EWIS either by bonding or mechanically. The EWIS is designed to give the wall to which it is applied satisfactory thermal insulation.

The EWIS is made of non-loadbearing 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 EWIS 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 EWIS is not intended to ensure the airtightness of the building structure.

The choice of the method of fixing depends on the characteristics of the substrate, which may need preparation and shall be done in accordance with the national instructions.

The EWIS belong to Category S/W2, according to EOTA Technical Report No 034.

### 2.2. Design and installation

The installation instructions including special installation techniques and provisions for the qualification of the personnel are given in the manufacturer's technical documentation.

Design, installation and execution of EWIS are to be in conformity with national documents.

The assessment and declaration of performance are done taking into account general assumptions introduced in UKAD 040083-00-0404, which summarize how information introduced in the UKTA and related documents is intended to be used in the construction process and gives advice to all parties interested when normative documents are missing.

### 2.3 Packaging, transport and storage

The information on packaging, transport and storage is given in the manufacturer's technical documentation. It is the responsibility of the manufacturer(s) to ensure that this information is made known to the concerned people.

### 2.4 Use, maintenance and repair

The finishing coat shall normally be maintained to fully preserve the EWIS performance. Maintenance includes at least:

- visual inspection of the EWIS,
- repairing of localized damaged areas due to accidents,
- the aspect maintenance with products adapted and compatible with the EWIS (possibly after washing or ad hoc preparation).

Necessary repairs should be performed as soon as the need has been identified.

It is important to be able to carry out maintenance as far as possible using readily available products and equipment, without spoiling appearance. Only products which are compatible with the EWIS shall be used.

The information on use, maintenance and repair is given in the manufacturer's technical documentation. It is the responsibility of the manufacturer(s) to ensure that this information is made known to the concerned people.

## 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 1 - 4.

### 3.1 Mechanical resistance and stability (BWR 1)

Refer to BWR3

### 3.2 Safety in case of fire (BWR 2)

**Table 1: Reaction to Fire**

Configuration	Organic content / Heat of combustion	Flame retardant content	Euroclass according to EN 13501-1
Adhesive	max 0.61 MJ/kg	No flame retardant	
Boards of expanded polystyrene EPS Maximal density of 18 kg/m <sup>3</sup>	In quantity ensuring Euroclass A1 or A2 according to 13501-1	-	
Base coat render	max 0.61 MJ/kg		A2 – s1, d0
Glass fibre mesh	max 8.48 MJ/kg		
Finishing coats	max 2.27MJ/kg	No flame retardant	
Protection coat for the mineral finishing coats	max 5.34MJ/kg		

### 3.3 Health, hygiene and the environment (BWR 3)

#### 3.3.1 Water absorption

- Base coats STYRLEP W 240 / STYRLEP W 240 EXTRA / STYRLEP B 225:  
Water absorption after 1 hour: < 1 kg/m<sup>2</sup>  
Water absorption after 24 hours: < 0.5 kg/m<sup>2</sup>



- Rendering system:

**Table 2 Water absorption**

		Water absorption after 24 hours	
		< 0.5 kg/m <sup>2</sup>	≥ 0.5 kg/m <sup>2</sup>
	FARBA AKRYLOWA 001		
	FARBA SILIKATOWA 002		
	POZTYNK - FARBA SILIKONOWA 003/ SZ 062		
	Kornputz FARBA SILIKONOWA 003 California/ FARBA NANOTECH 006/		X
	POZTYNK - BIOFARBA 008 SZ 061		
	Kratzputz FARBA SISI 004 FARBA ECO 009		
	FARBA EGALIZACYJNA 005		
Rendering system:			
Base coat	SILIKOTYNK 030 Kornputz		X
STYRLEP W240/ STYRLEP W240 EXTRA / STYRLEP B225 +	SILIKOTYNK 030 Kratzputz		
	SILIKON Protect 031 Kornputz		X
	SILIKON Protect 031 Kratzputz		
	SILIKATYNK 020 Kornputz		X
	SILIKATYNK 020 Kratzputz		
finishing coats as indicated here with adequate key coat:	SISITYNK 040 Kornputz/ SISITYNK 040 California Kornputz		X
	SISITYNK 040 Kratzputz/ SISITYNK 040 California Kratzputz		
	ECO TYNK 022 ECO PROTECT Kornputz/ ECO TYNK 022 ECO PROTECT California Kornputz		X
	ECO TYNK 022 ECO PROTECT Kratzputz/ ECO TYNK 022 ECO PROTECT California Kratzputz		
	MAX PROTECT 042 Kornputz		X
	MAX PROTECT 042 Kratzputz		

- Base coat STYRLEP-B 225
- Rendering system: See Table 4

**Table 4 Water absorption**

		Water absorption after 24 hours	
		< 0.5 kg/m <sup>2</sup>	≥ 0.5 kg/m <sup>2</sup>
	FARBA AKRYLOWA 001		
	FARBA SILIKATOWA 002		
	POZTYNK - FARBA SILIKONOWA 003/		
	SZ 062		
	Kornputz		
	FARBA SILIKONOWA 003 California/		
	FARBA NANOTECH 006		X
	POZTYNK - BIOFARBA 008		
	SZ 061		
	Kratzputz		
	FARBA SISI 004		
	FARBA ECO 009		
	FARBA EGALIZACYJNA 005		
Rendering system:	SILIKOTYNK 030 Kornputz		X
Base coat	SILIKOTYNK 030 Kratzputz		X
STYRLEP-B 225	SILIKON Protect 031 Kornputz		X
+	SILIKON Protect 031 Kratzputz		X
finishing coats as	SILIKATYNK 020 Kornputz		X
indicated here with or	SILIKATYNK 020 Kratzputz		X
without adequate key	SISITYNK 040 Kornputz/		
coat:	SISITYNK 040 California Kornputz		X
	SISITYNK 040 Kratzputz/		
	SISITYNK 040 California Kratzputz		
	ECO TYNK 022 ECO PROTECT Kornputz/		
	ECO TYNK 022 ECO PROTECT California Kornputz		X
	ECO TYNK 022 ECO PROTECT Kratzputz/		
	ECO TYNK 022 ECO PROTECT California Kratzputz		
	MAX PROTECT 042 Kornputz		X
	MAX PROTECT 042 Kratzputz		X

### 3.3.2 Watertightness

#### 3.3.2.1 Hygrothermal behaviour

Pass (without defects).

#### 3.3.2.2 Freeze–thaw behaviour

Finishing coats that proved to have water absorption value, in accordance with the water absorption test, after 24 hours lower than 0.5 kg/m<sup>2</sup> were assessed as freeze-thaw resistant.

Finishing coats that proved to have water absorption value, in accordance with water absorption test, after 24 hours higher than 0.5 kg/m<sup>2</sup> were subjected to the freeze-thaw test and are assessed as freeze-thaw resistant.

Pass (without defects, satisfactory bond strength).

### 3.3.3 Impact resistance

**Table 3 Impact resistance**

Render coating: base coat STYRLEP W240 / STYRLEP W240 EXTRA, STYRLEP-B 225 + reinforcement and finishing coats listed hereafter:	Single standard mesh	Double standard mesh	Single armour layer
POZTYNK - SZ 062 Kornputz + all kinds of protection coats POZTYNK - SZ 061 Kratzputz + all kinds of protection coats	Category III	Category I	Category II
SILIKOTYNK 030 Kornputz SILIKOTYNK 030 Kratzputz	Category II	Category I	Category I
SILIKON Protect 031 Kornputz SILIKON Protect 031 Kratzputz			
SILIKATYNK 020 Kornputz SILIKATYNK 020 Kratzputz	Category III	Category II	Category I
SISITYNK 040 Kornputz/ SISITYNK 040 California Kornputz SISITYNK 040 Kratzputz/ SISITYNK 040 California Kratzputz	Category II	Category I	Category I
ECO TYNK 022 ECO PROTECT Kornputz/ ECO TYNK 022 ECO PROTECT California Kornputz ECO TYNK 022 ECO PROTECT Kratzputz/ ECO TYNK 022 ECO PROTECT California Kratzputz	Category II	Category I	Category I
MAX PROTECT 042 Kornputz MAX PROTECT 042 Kratzputz	Category II	Category I	Category I

### 3.3.4 Water vapour permeability

**Table 4 Water vapour permeability**

<b>Rendering system: base coat STYRLEP W 240/ STYRLEP W 240 EXTRA + reinforcement and finishing coats with adequate key coats indicated hereafter</b>	<b>Equivalent air layer thickness <math>s_d</math></b>	
	<b>Single standard mesh</b>	<b>Double standard mesh or single armour mesh</b>
POZTYNK - SZ 062 Kornputz + all kinds of protection coats	≤ 0.40 m	≤ 0.40 m
POZTYNK - SZ 061 Kratzputz + all kinds of protection coats		
SILIKOTYNK 030 Kornputz	≤ 0.40 m	≤ 0.41 m
SILIKOTYNK 030 Kratzputz		
SILIKON Protect 031 Kornputz	≤ 0.29 m	≤ 0.31 m
SILIKON Protect 031 Kratzputz		
SILIKATYNK 020 Kornputz	≤ 0.30 m	≤ 0.30 m
SILIKATYNK 020 Kratzputz		
SISITYNK 040 Kornputz/ SISITYNK 040 California Kornputz	≤ 0.40 m	≤ 0.40 m
SISITYNK 040 Kratzputz/ SISITYNK 040 California Kratzputz		
ECO TYNK 022 ECO PROTECT Kornputz/ ECO TYNK 022 ECO PROTECT California Kornputz	≤ 0.40 m	≤ 0.40 m
ECO TYNK 022 ECO PROTECT Kratzputz/ ECO TYNK 022 ECO PROTECT California Kratzputz		
MAX PROTECT 042 Kornputz	≤ 0.25 m	≤ 0.38 m
MAX PROTECT 042 Kratzputz		

**Table 5 Water vapour permeability**

<b>Rendering system: base coat STYRLEP-B 225 + reinforcement and finishing coats with adequate key coats indicated hereafter</b>	<b>Equivalent air layer thickness <math>s_d</math></b>	
	<b>Single standard mesh</b>	<b>Double standard mesh or single armour mesh</b>
POZTYNK - SZ 062 Kornputz + all kinds of protection coats	≤ 0.27 m	≤ 0.27 m
POZTYNK - SZ 061 Kratzputz + all kinds of protection coats		
SILIKOTYNK 030 Kornputz	≤ 0.38 m	≤ 0.46 m
SILIKOTYNK 030 Kratzputz		
SILIKON Protect 031 Kornputz	≤ 0.23 m	≤ 0.27 m
SILIKON Protect 031 Kratzputz		
SILIKATYNK 020 Kornputz	≤ 0.27 m	≤ 0.29 m
SILIKATYNK 020 Kratzputz		
SISITYNK 040 Kornputz/ SISITYNK 040 California Kornputz	≤ 0.35 m	≤ 0.38 m
SISITYNK 040 Kratzputz/ SISITYNK 040 California Kratzputz		
ECO TYNK 022 ECO PROTECT Kornputz/ ECO TYNK 022 ECO PROTECT California Kornputz	≤ 0.35 m	≤ 0.38 m
ECO TYNK 022 ECO PROTECT Kratzputz/ ECO TYNK 022 ECO PROTECT California Kratzputz		
MAX PROTECT 042 Kornputz	≤ 0.41 m	≤ 0.42 m
MAX PROTECT 042 Kratzputz		

**Table 6 Water vapour permeability**

<b>Rendering system: base coat STYRLEP-B 225 + reinforcement and finishing coats without key coats indicated hereafter</b>	<b>Equivalent air layer thickness <math>s_d</math></b>	
	<b>Single standard mesh</b>	<b>Double standard mesh or single armour mesh</b>
POZTYNK - SZ 062 Kornputz + all kinds of protection coats	≤ 0.22 m	≤ 0.22 m
POZTYNK - SZ 061 Kratzputz + all kinds of protection coats		
SILIKOTYNK 030 Kornputz	≤ 0.35 m	≤ 0.45 m
SILIKOTYNK 030 Kratzputz		
SILIKON Protect 031 Kornputz	≤ 0.22 m	≤ 0.27 m
SILIKON Protect 031 Kratzputz		
SILIKATYNK 020 Kornputz	≤ 0.26 m	≤ 0.27 m
SILIKATYNK 020 Kratzputz		
SISITYNK 040 Kornputz/ SISITYNK 040 California Kornputz	≤ 0.27 m	≤ 0.29 m
SISITYNK 040 Kratzputz/ SISITYNK 040 California Kratzputz		
ECO TYNK 022 ECO PROTECT Kornputz/ ECO TYNK 022 ECO PROTECT California Kornputz	≤ 0.27 m	≤ 0.29 m
ECO TYNK 022 ECO PROTECT Kratzputz/ ECO TYNK 022 ECO PROTECT California Kratzputz		
MAX PROTECT 042 Kornputz	≤ 0.36 m	≤ 0.38 m
MAX PROTECT 042 Kratzputz		

**3.3.5 Release of dangerous substances**

Kit not assessed according to EOTA TR 034.

### 3.4 Safety and accessibility in use (BWR 4)

#### 3.4.1 Bond strength between base coat and insulation product

- STYRLEP-W 240/STYRLEP-W 240 EXTRA
- STYRLEP-B 225
- Initial state: bond strength  $\geq 0.005$  MPa but cohesive failure in the insulation product
- After hygrothermal cycles: bond strength  $\geq 0.003$  MPa but cohesive failure in the insulation product
- After freeze-thaw cycles: bond strength  $\geq 0.003$  MPa but cohesive failure in the insulation product

#### 3.4.2 Bond strength between adhesive and substrate / insulation product

**Table 9 Bond strength between adhesive and substrate / insulation product**

		Initial state	48 hrs. immersion in water + 2 hrs. 23°C/50% RH	48 hrs. immersion in water + 7 days 23°C/50% RH
LEPSTYR 210/ LEPSTYR 210 EXTRA/ LEPSTYR ELASTYCZNY 210	Concrete	$\geq 0.25$ MPa	$\geq 0.08$ MPa	$\geq 0.25$ MPa
STYRLEP-B 225, STYRLEP 220 / STYRLEP 220 EXTRA / STYRLEP ELASTYCZNY 220	Expanded polystyrene (EPS)	$\geq 0.08$ MPa	$\geq 0.03$ MPa	$\geq 0.08$ MPa

#### 3.4.3 Bond strength after ageing

- After ageing: bond strength  $\geq 0.003$  MPa but cohesive failure in the insulation product
- After freeze-thaw cycles:  $\geq 0.003$  MPa but cohesive failure in insulation product

#### 3.4.4 Fixing strength

Test not required (no limitation of EWIS length).

### 3.4.5 Wind load resistance

- Insulation product MW board (TR15)

**Table No 7 Wind load resistance**

Anchor description	Trade name	See Annex No. 9		
	Assembly method	Surface assembly	Countersunk assembly	
	Plate diameter (mm)	60 or more		
MW board characteristics (TR15)	Thickness (mm)	≥ 50	≥ 100	
	Tensile strength (kPa)	≥ 15		
Maximal load	Anchors placed at the body of the insulation product	$R_{\text{panel}}$ in dry conditions	min. value: 0.45 kN	min. value: 0.50 kN
			mean value: 0.49 kN	mean value: 0.52 kN
		$R_{\text{panel}}$ in wet conditions	min. value: 0.37 kN	min. value: 0.43 kN
			mean value: 0.39 kN	mean value: 0.45 kN
	Anchors placed at joints of the insulation product	$R_{\text{joint}}$ in dry conditions	min. value: 0.36 kN	min. value: 0.43 kN
			mean value: 0.38 kN	mean value: 0.47 kN
		$R_{\text{joint}}$ in wet conditions	min. value: 0.28 kN	min. value: 0.33 kN
			mean value: 0.31 kN	mean value: 0.35 kN



- Insulation product MW double density panel Frontrock MAX E (TR10)

**Table No 8 Wind load resistance**

Anchor description	Trade name	See Annex No. 9				
		Plate stiffness $\geq 0.6$		Plate stiffness $\geq 0.5 < 0.6$		
	Assembly method	Surface assembly				
	Plate diameter (mm)	60 or more				
MW board characteristics Frontrock MAX E (TR10)	Thickness (mm)	$\geq 80$	$\geq 100$	$\geq 80$	$\geq 100$	
	Tensile strength (kPa)	$\geq 10$				
Maximal load	Anchors placed at the body of the insulation product	$R_{\text{panel}}$ in dry conditions	min. value: 0.47 kN mean value: 0.51 kN	min. value: 0.42 kN mean value: 0.49 kN	min. value: 0.38 kN mean value: 0.41 kN	min. value: 0.38 kN mean value: 0.41 kN
		$R_{\text{panel}}$ in wet conditions	min. value: 0.26 kN mean value: 0.29 kN No performance assessed.			
	Anchors placed at joints of the insulation product	$R_{\text{joint}}$ in dry conditions	min. value: 0.34 kN mean value: 0.39 kN	min. value: 0.40 kN mean value: 0.43 kN	min. value: 0.32 kN mean value: 0.37 kN	min. value: 0.28 kN mean value: 0.32 kN
		$R_{\text{joint}}$ in wet conditions	min. value: 0.20 kN mean value: 0.22 kN No performance assessed.			

Table No. 9

Anchor description	Trade name		EJOT anchors with plate EJOT VT 90
	Assembly method		Surface assembly
	Plate diameter (mm)		90
MW board characteristics Frontrock MAX E (TR10)	Thickness (mm)		≥ 80
	Tensile strength (kPa)		≥ 10
Maximal load	Anchors placed at the body of the insulation product	$R_{\text{panel}}$ in dry conditions	min. value: 0.59 kN
			mean value: 0.66 kN
	Anchors placed at joints of the insulation product	$R_{\text{joint}}$ in dry conditions	min. value: 0.48 kN
			mean value: 0.51 kN

Table No. 10

Anchor description	Trade name		Ejotherm anchors STR U 2G, KOELNER TFIX- 8ST
	Assembly method		Countersunk assembly
	Plate diameter (mm)		60
MW panel characteristics Frontrock MAX E (TR10)	Thickness (mm)		≥ 100
	Tensile strength (kPa)		≥ 10
Maximal load	Anchors placed at the body of the insulation product	$R_{\text{panel}}$ in dry conditions	min. value: 0.31 kN
			mean value: 0.36 kN
	Anchors placed at joints of the insulation product	$R_{\text{joint}}$ in dry conditions	min. value: 0.33 kN
			mean value: 0.37 kN

Table No. 11

Anchor description	Trade name		<b>Anchors ejothem STR U 2G with additional plate VT 2G</b>
	Assembly method		Countersunk assembly
	Plate diameter (mm)		112.5
<b>MW board characteristics</b>	Thickness (mm)		≥ 100
	Tensile strength (kPa)		≥ 10
<b>Frontrock MAX E (TR10)</b>	Anchors placed at the body of the insulation product	$R_{panel}$ in dry conditions	min. value: 0.80 kN
			mean value: 0.84 kN
	Anchors placed at joints of the insulation product	$R_{joint}$ in dry conditions	min. value: 0.82 kN
			mean value: 0.86 kN

- Insulation product MW board FKD S Thermal (TR10)

**Table No. 12**

<b>Anchor description</b>	Trade name	<b>See Annex No. 9</b>	<b>EJOT anchors see Annex No. 9</b>	
	Assembly method	Surface assembly		
	Plate diameter (mm)	60 or more		
<b>MW board characteristics FKD S Thermal (TR10)</b>	Thickness (mm)	≥ 60	≥ 100	
	Tensile strength (kPa)	≥ 10		
Maximal load	Anchors placed at the body of the insulation product	$R_{\text{panel}}$ in dry conditions	min. value: 0.36 kN mean value: 0.37 kN	min. value: 0.40 kN mean value: 0.44 kN
		$R_{\text{panel}}$ in wet conditions	min. value: 0.18 kN mean value: 0.21 kN	No performance assessed.
		$R_{\text{joint}}$ in dry conditions	min. value: 0.26 kN mean value: 0.30 kN	min. value: 0.30 kN mean value: 0.37 kN
			$R_{\text{joint}}$ in wet conditions	min. value: 0.17 kN mean value: 0.19 kN

Table No. 13

		<b>Anchors</b>		
		<b>See Annex No. 9</b>	<b>ejothem STR U 2G with additional plate VT 2G Annex No. 9</b>	
<b>Anchor description</b>	Trade name			
	Assembly method	Countersunk assembly		
	Plate diameter (mm)	≥ 60	112.5	
<b>MW board characteristics</b>	Thickness (mm)	≥ 100		
<b>Nobasil FKD S/ FKD S Thermal (TR10)</b>	Tensile strength (kPa)	≥ 10		
<b>Maximal load</b>	Anchors placed at the body of the insulation product	$R_{\text{panel}}$ in dry conditions	min. value: 0.36 kN mean value: 0.37 kN	min. value: 0.77 kN mean value: 0.91 kN
		$R_{\text{panel}}$ in wet conditions	min. value: 0.18 kN mean value: 0.21 kN	No performance assessed.
		$R_{\text{joint}}$ in dry conditions	min. value: 0.26 kN mean value: 0.30 kN	min. value: 0.60 kN mean value: 0.70 kN
		$R_{\text{joint}}$ in wet conditions	min. value: 0.17 kN mean value: 0.19 kN	No performance assessed.

- Insulation product MW board Isover TF PROFI (TR10)

**Table No. 14**

<b>Anchor description</b>	Trade name	<b>see Annex No. 9</b>	
	Assembly method	Surface assembly	
	Plate diameter (mm)	60 or more	
<b>MW board characteristics Isover TF PROFI (TR10)</b>	Thickness (mm)	≥ 50	
	Tensile strength (kPa)	≥ 10	
Maximal load	Anchors placed at the body of the insulation product	$R_{\text{panel}}$ in dry conditions	min. value: 0.48 kN mean value: 0.55 kN
		$R_{\text{panel}}$ in wet conditions	min. value: 0.37 kN mean value: 0.38 kN
	Anchors placed at joints of the insulation product	$R_{\text{joint}}$ in dry conditions	min. value: 0.39 kN mean value: 0.43 kN
		$R_{\text{joint}}$ in wet conditions	min. value: 0.29 kN mean value: 0.31 kN

**Table No. 15**

<b>Anchor description</b>	Trade name	<b>Annex No. 9</b>	<b>Anchors</b>	
	<b>ejothem STR U 2G with additional plate VT 2G</b>			
	Assembly method	Countersunk assembly		
	Plate diameter (mm)	60 or more	112.5	
<b>MW panel characteristics</b>	Thickness (mm)		≥ 100	
<b>Isover TF PROFI (TR10)</b>	Tensile strength (kPa)		≥ 10	
Maximal load	Anchors placed at the body of the insulation product	$R_{\text{panel}}$ in dry conditions	min. value: 0.48 kN mean value: 0.55 kN	min. value: 0.91 kN mean value: 1.07 kN
		$R_{\text{panel}}$ in wet conditions	min. value: 0.37 kN mean value: 0.38 kN	No performance assessed
		$R_{\text{joint}}$ in dry conditions	min. value: 0.39 kN mean value: 0.43 kN	min. value: 0.66 kN mean value: 0.74 kN
	Anchors placed at joints of the insulation product	$R_{\text{joint}}$ in wet conditions	min. value: 0.29 kN mean value: 0.31 kN	No performance assessed

- Insulation product MW board PAROC LINIO 10 (TR10)

**Table No. 16**

<b>Anchor description</b>	Trade name	<b>See Annex No. 9</b>	
	Assembly method	Surface assembly	Countersunk assembly
	Plate diameter (mm)	60 or more	
<b>MW board characteristics</b>	Thickness (mm)	≥ 50	≥ 100
<b>PAROC LINIO 10 (TR10)</b>	Tensile strength (kPa)	≥ 10	
Maximal load	Anchors placed at the body of the insulation product	$R_{\text{panel}}$ in dry conditions	min. value: 0.29 kN
			mean value: 0.31 kN
		$R_{\text{panel}}$ in wet conditions	min. value: 0.26 kN
			mean value: 0.27 kN
	Anchors placed at joints of the insulation product	$R_{\text{joint}}$ in dry conditions	min. value: 0.27 kN
			mean value: 0.29 kN
		$R_{\text{joint}}$ in wet conditions	min. value: 0.25 kN
			mean value: 0.26 kN



- Insulation product MW board FASCROCK MAX (TR7.5)

**Table No. 17**

<b>Anchor description</b>	Trade name		<b>See Annex No. 9</b>	
	Assembly method		Surface assembly	Countersunk assembly
	Plate diameter (mm)		60 or more	
<b>MW board characteristics</b>	Thickness (mm)		≥ 80	≥ 130
<b>FASCROCK MAX (TR7.5)</b>	Tensile strength (kPa)		≥ 7.5	
Maximal load	Anchors placed at the body of the insulation product	$R_{panel}$ in dry conditions		min. value: 0.39 kN
				mean value: 0.43 kN
		$R_{panel}$ in wet conditions		min. value: 0.32 kN
				mean value: 0.34 kN
		$R_{joint}$ in dry conditions		min. value: 0.35 kN
				mean value: 0.38 kN
	Anchors placed at joints of the insulation product	$R_{joint}$ in wet conditions		min. value: 0.26 kN
				mean value: 0.28 kN

- Insulation product MW board Heralan-PTP-035 (TR5)

**Table No. 18**

Anchor description	Trade name	See Annex No. 9	
	Assembly method	Surface assembly	Countersunk assembly
	Plate diameter (mm)	60 or more	
<b>MW board characteristics</b>	Thickness (mm)	≥ 50	≥ 100
<b>Heralan-PTP-035 (TR5)</b>	Tensile strength (kPa)	≥ 5	
Maximal load	Anchors placed at the body of the insulation product	$R_{\text{panel}}$ in dry conditions	min. value: 0.25 kN
			mean value: 0.26 kN
		$R_{\text{panel}}$ in wet conditions	min. value: 0.13 kN
			mean value: 0.14 kN
		$R_{\text{joint}}$ in dry conditions	min. value: 0.21 kN
			mean value: 0.23 kN
	Anchors placed at joints of the insulation product	$R_{\text{joint}}$ in wet conditions	min. value: 0.08 kN
			mean value: <b>0.09</b> N

### 3.4.6 Render strip tensile test

- Base coat **STYRLEP-W 240/STYRLEP-W 240 EXTRA**

No performance assessed for glass fibre mesh **SSA-1363-4 SM**

**Table No. 19**

Glass fibre mesh <b>R 117 A101 / AKE 145</b> (manufacturer: SAINT-GOBAIN ADFORS CZ s.r.o.)					
<b>Crack width <math>W_{typ}</math> [mm]/ number of cracks at relative elongation <math>\epsilon</math></b>					
<b>Load direction</b>	<b><math>\epsilon = 0.3 \%</math></b>	<b><math>\epsilon = 0.5 \%</math></b>	<b><math>\epsilon = 0.8 \%</math></b>	<b><math>\epsilon = 1.0 \%</math></b>	<b><math>\epsilon = 2.0 \%</math></b>
Sample No. 1	-	$\leq 0.05/1$	$\leq 0.05/2$	$\leq 0.10/5$	$\leq 0.15/10$
Warp Sample No. 2	-	-	$\leq 0.05/1$	$\leq 0.10/6$	$\leq 0.15/11$
Sample No. 3	-	-	$\leq 0.10/2$	$\leq 0.15/4$	$\leq 0.20/9$
Sample No. 1	-	-	$\leq 0.05/3$	$\leq 0.10/5$	$\leq 0.15/9$
Weft Sample No. 2	-	$\leq 0.05/1$	$\leq 0.10/1$	$\leq 0.15/4$	$\leq 0.20/7$
Sample No. 3	-	-	$\leq 0.05/2$	$\leq 0.10/4$	$\leq 0.10/10$

**Table No. 20**

Glass fibre mesh <b>R 131 A101 / AKE 160</b> (manufacturer: SAINT-GOBAIN ADFORS CZ s.r.o.)					
<b>Crack width <math>W_{typ}</math> [mm]/ number of cracks at relative elongation <math>\epsilon</math></b>					
<b>Load direction</b>	<b><math>\epsilon = 0.3 \%</math></b>	<b><math>\epsilon = 0.5 \%</math></b>	<b><math>\epsilon = 0.8 \%</math></b>	<b><math>\epsilon = 1.0 \%</math></b>	<b><math>\epsilon = 2.0 \%</math></b>
Sample No. 1	-	-	$\leq 0.05/6$	$\leq 0.05/9$	$\leq 0.10/11$
Warp Sample No. 2	-	-	$\leq 0.05/4$	$\leq 0.10/8$	$\leq 0.15/11$
Sample No. 3	-	-	$\leq 0.05/5$	$\leq 0.05/10$	$\leq 0.10/12$
Sample No. 1	-	$\leq 0.05/1$	$\leq 0.10/4$	$\leq 0.15/7$	$\leq 0.15/12$
Weft Sample No. 2	-	$\leq 0.05/1$	$\leq 0.05/5$	$\leq 0.10/8$	$\leq 0.15/13$
Sample No. 3	-	-	$\leq 0.05/5$	$\leq 0.10/8$	$\leq 0.20/10$

**Table No. 21**

Glass fibre mesh <b>R 167 A101</b> (manufacturer: SAINT-GOBAIN ADFORS CZ s.r.o.)					
<b>Crack width <math>W_{typ}</math> [mm]/ number of cracks at relative elongation <math>\epsilon</math></b>					
<b>Load direction</b>	<b><math>\epsilon = 0.3 \%</math></b>	<b><math>\epsilon = 0.5 \%</math></b>	<b><math>\epsilon = 0.8 \%</math></b>	<b><math>\epsilon = 1.0 \%</math></b>	<b><math>\epsilon = 2.0 \%</math></b>
Sample No. 1	-	-	$\leq 0.05/5$	$\leq 0.10/9$	$\leq 0.15/13$
Warp Sample No. 2	-	-	$\leq 0.05/3$	$\leq 0.05/8$	$\leq 0.10/12$
Sample No. 3	-	-	$\leq 0.05/3$	$\leq 0.10/8$	$\leq 0.15/13$
Sample No. 1	-	-	-	$\leq 0.05/6$	$\leq 0.10/11$
Weft Sample No. 2	-	-	-	$\leq 0.05/4$	$\leq 0.10/8$
Sample No. 3	-	-	-	$\leq 0.05/3$	$\leq 0.10/8$

**Table No. 22**

Glass fibre mesh <b>REDNET CB330 NOVA</b> (manufacturer: ASGLATEX Ohorn GmbH)						
<b>Crack width <math>W_{typ}</math> [mm]/ number of cracks at relative elongation <math>\epsilon</math></b>						
<b>Load direction</b>	<b><math>\epsilon = 0.3 \%</math></b>	<b><math>\epsilon = 0.5 \%</math></b>	<b><math>\epsilon = 0.8 \%</math></b>	<b><math>\epsilon = 1.0 \%</math></b>	<b><math>\epsilon = 1.5 \%</math></b>	<b><math>\epsilon = 2.0 \%</math></b>
Sample No. 1	-	-	-	$\leq 0.05/1$	$\leq 0.05/5$	$\leq 0.05/6$ $\leq 0.10/1$
Warp Sample No. 2	-	-	-	$\leq 0.05/1$	$\leq 0.05/5$	$\leq 0.05/5$ $\leq 0.10/2$
Sample No. 3	-	-	-	$\leq 0.05/1$	$\leq 0.05/6$	$\leq 0.05/6$ $\leq 0.10/2$
Sample No. 1	-	-	-	-	$\leq 0.05/2$	$\leq 0.05/7$ $\leq 0.10/1$
Weft Sample No. 2	-	-	-	-	$\leq 0.05/1$	$\leq 0.05/4$
Sample No. 3	-	-	-	-	$\leq 0.05/3$	$\leq 0.05/5$ $\leq 0.10/1$

The characteristic crack width  $W_{rk}$  [mm] at a render strain value of 0.8%, determined with simple Method II as per UKAD.

**Table No. 23**

	Characteristic width of cracks $W_{rk}$ [mm] at render strain value of 0.8%	
	Warp direction	Weft direction
R 117 A101 / AKE 145	0.156	0.123
R 131 A101 / AKE 160	0.000	0.138
R 167 A101	0.050	0.000
REDNET CB330 NOVA	0.000	0.000

The width of cracks in reinforced base coat at 2% elongation is equal or lower than 0.20 mm.

- Base coat **STYRLEP-B 225**

No performance assessed for glass fibre mesh **SSA-1363-4 SM**

**Table No. 24**

Glass fibre mesh <b>R 117 A101 / AKE 145</b> (manufacturer: SAINT-GOBAIN ADFORS CZ s.r.o.)					
Crack width $W_{typ}$ [mm]/ number of cracks at relative elongation $\epsilon$					
Load direction	$\epsilon = 0.3 \%$	$\epsilon = 0.5 \%$	$\epsilon = 0.8 \%$	$\epsilon = 1.0 \%$	$\epsilon = 2.0 \%$
Sample No. 1	-	-	$\leq 0.05/4$	$\leq 0.10/6$	$\leq 0.15/8$
Warp Sample No. 2	-	-	$\leq 0.05/5$	$\leq 0.10/6$	$\leq 0.15/10$
Sample No. 3	-	-	$\leq 0.05/3$	$\leq 0.10/5$	$\leq 0.15/9$
Sample No. 1	-	$\leq 0.05/3$	$\leq 0.10/6$	$\leq 0.15/9$	$\leq 0.20/12$
Weft Sample No. 2	-	$\leq 0.05/3$	$\leq 0.10/7$	$\leq 0.15/8$	$\leq 0.20/13$
Sample No. 3	-	$\leq 0.05/3$	$\leq 0.10/6$	$\leq 0.15/9$	$\leq 0.20/12$

**Table No. 25**

		Glass fibre mesh <b>R 131 A101 / AKE 160</b> (manufacturer: SAINT-GOBAIN ADFORS CZ s.r.o.)				
		<b>Crack width <math>W_{typ}</math> [mm]/ number of cracks at relative elongation <math>\epsilon</math></b>				
<b>Load direction</b>		<b><math>\epsilon = 0.3 \%</math></b>	<b><math>\epsilon = 0.5 \%</math></b>	<b><math>\epsilon = 0.8 \%</math></b>	<b><math>\epsilon = 1.0 \%</math></b>	<b><math>\epsilon = 2.0 \%</math></b>
Warp	Sample No. 1	-	-	$\leq 0.05/4$	$\leq 0.10/8$	$\leq 0.15/12$
	Sample No. 2	-	-	$\leq 0.05/3$	$\leq 0.10/9$	$\leq 0.15/14$
	Sample No. 3	-	-	$\leq 0.05/3$	$\leq 0.10/7$	$\leq 0.15/12$
Weft	Sample No. 1	-	-	$\leq 0.05/5$	$\leq 0.10/8$	$\leq 0.15/11$
	Sample No. 2	-	-	$\leq 0.05/5$	$\leq 0.10/9$	$\leq 0.15/14$
	Sample No. 3	-	-	$\leq 0.05/4$	$\leq 0.10/9$	$\leq 0.15/13$

**Table No. 26**

		Glass fibre mesh <b>R 167 A101</b> (manufacturer: SAINT-GOBAIN ADFORS CZ s.r.o.)				
		<b>Crack width <math>W_{typ}</math> [mm]/ number of cracks at relative elongation <math>\epsilon</math></b>				
<b>Load direction</b>		<b><math>\epsilon = 0.3 \%</math></b>	<b><math>\epsilon = 0.5 \%</math></b>	<b><math>\epsilon = 0.8 \%</math></b>	<b><math>\epsilon = 1.0 \%</math></b>	<b><math>\epsilon = 2.0 \%</math></b>
	Sample No. 1	-	-	-	$\leq 0.05/7$	$\leq 0.10/10$
Warp	Sample No. 2	-	-	-	$\leq 0.05/9$	$\leq 0.10/12$
	Sample No. 3	-	-	-	$\leq 0.05/8$	$\leq 0.10/11$
	Sample No. 1	-	-	-	$\leq 0.05/7$	$\leq 0.10/13$
Weft	Sample No. 2	-	-	-	$\leq 0.05/6$	$\leq 0.10/15$
	Sample No. 3	-	-	-	$\leq 0.05/9$	$\leq 0.10/14$

**Table No. 27**

		Glass fibre mesh <b>REDNET CB330 NOVA</b> (manufacturer: ASGLATEX Ohorn GmbH)					
		<b>Crack width <math>W_{typ}</math> [mm]/ number of cracks at relative elongation <math>\epsilon</math></b>					
<b>Load direction</b>		$\epsilon = 0.3 \%$	$\epsilon = 0.5 \%$	$\epsilon = 0.8 \%$	$\epsilon = 1.0 \%$	$\epsilon = 1.5 \%$	$\epsilon = 2.0 \%$
Warp	Sample No. 1	-	-	-	$\leq 0.05/1$	$\leq 0.05/4$	$\leq 0.05/4$ $\leq 0.10/1$
	Sample No. 2	-	-	-	-	$\leq 0.05/3$	$\leq 0.05/5$
	Sample No. 3	-	-	-	$\leq 0.05/1$	$\leq 0.05/4$	$\leq 0.05/5$ $\leq 0.10/1$
Weft	Sample No. 1	-	-	-	-	-	$\leq 0.05/3$
	Sample No. 2	-	-	-	-	-	$\leq 0.05/2$
	Sample No. 3	-	-	-	-	-	$\leq 0.05/3$

The characteristic crack width  $W_{rk}$  [mm] at a render strain value of 0.8%, determined with simple Method II pursuant to UKAD.

**Table No. 28**

	<b>Characteristic width of cracks <math>W_{rk}</math> [mm] at render strain value of 0.8%</b>	
	<b>Warp direction</b>	<b>Weft direction</b>
R 117 A101 / AKE 145	0.050	0.100
R 131 A101 / AKE 160	0.050	0.050
R 167 A101	0.000	0.000
REDNET CB330 NOVA	0.000	0.000

The width of cracks in reinforced base.

### 3.5 Protection against noise (BWR 5)

No performance assessed.

### 3.6 Energy economy and heat retention (BWR 6)

#### 3.6.1 Thermal resistance

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

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

Where:

- $\chi_p \times n$  has only to be considered 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 considered 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  
( $\chi_p \times n$  negligible for  $n < 20$ )  
= 0.004 W/K for anchors with a galvanized steel screw with the head covered by a plastic material ( $\chi_p \times n$  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:

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

Where:

- $R_i$  thermal resistance of the insulation product (according to declaration in reference to EN 13163) in (m<sup>2</sup>.K)/W
- $R_{render}$  thermal resistance of the rendering system (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 EWIS.



### 3.7 Sustainable use of natural resources (BWR 7)

No performance assessed.

### 4 Assessment and verification of constancy of performance (hereinafter AVCP) system applied

According to UKAD 040083-00-0404 and Annex V of the Construction Products Regulation (Regulation (EU) 305/2011 as bought into UK law and amended, the system of assessment and verification of constancy of performance 1 and 2+ applies (see Table 22).

Table 29

Product(s)	Intended use(s)	Level(s) or class(es) (Reaction to fire)	System(s)
External thermal insulation composite systems/kits (EWIS) 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+

(1) 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)

(2) Products/materials not covered by footnote (1)

(3) 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 UKAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with the British Board of Agrément and made available to the UK Approved Bodies involved in the conformity attestation process.

#### 5.1 UKCA marking for the product/ system must contain the following information:

- Identification number of the Approved Body
- Name/address of the manufacturer of the product/ system
- Marking with intention of clarification of intended use
- Date of marking
- Number of certificate of constancy of performance
- UKTA number.

On behalf of the British Board of Agrément



Date of Issue: 27 October 2022

**Hardy Giesler**  
Chief Executive Officer



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## ANNEXES

Those annexes apply to the product described in the main body of the UK Technical Assessment.

Annex No. 1 Insulation product characteristics for bonded EWIS with additional mechanical fixing – MW lamella (TR80)

Annex No. 2 Insulation product characteristics for mechanically fixed EWIS with additional bonding – MW board (TR15)

Annex No. 3 Insulation product characteristics for mechanically fixed EWIS with additional bonding – MW board Frontrock MAX E (double density, TR10)

Annex No. 4 Insulation product characteristics for mechanically fixed EWIS with additional bonding – MW board Nobasil FKD S/ FKD S Thermal (TR10)

Annex No. 5 Insulation product characteristics for mechanically fixed EWIS with additional bonding – MW board Isover TF PROFI (TR10)

Annex No. 6 Insulation product characteristics for mechanically fixed EWIS with additional bonding – MW board ISOPANEL (TR10)

Annex No. 7 Insulation product characteristics for mechanically fixed EWIS with additional bonding – MW double density board ISOPANEL FASROCK MAX (TR7,5)

Annex No. 8 Insulation product characteristics for mechanically fixed EWIS with additional bonding – MW board Heralan-PTP-035 (TR5)

Annex No. 9 Anchors, description of individual product characteristics contained in the UKTA

Annex No. 10 Description of the glass fibre meshes

**Annex No. 1      Insulation product characteristics for bonded EWIS with additional mechanical fixing – MW lamella (TR80)**

Description and characteristics		Regulation	Declared characteristics MW lamella (TR80)	
			Class, level according to EN 13162	Value
Reaction to fire		EN 13501 -1+A1:2009	A1	Apparent density ≤ 150 kg/m <sup>3</sup>
Thermal resistance			Defined in CE mark in accordance with EN 13162	
Thickness		EN 823	T5	-1 % or -1 mm*, +3 mm
Length		EN 822	---	± 2 %
Width			---	± 1.5 %
Squareness		EN 824	---	≤ 5 mm/m
Flatness		EN 825	---	≤ 6 mm
Surface		ETAG 004	No additional treatment (homogenous, without coating)	
Dimensional stability under defined temperature and humidity		EN 1604	DS(70,90)	1 %
Water absorption	Short term water absorption	EN 1609	WS	≤ 1.0 kg/m <sup>2</sup>
	Long term water absorption	EN 12087	WL(P)	≤ 3.0 kg/m <sup>2</sup>
Diffusion factor (μ)		EN 12086 - EN 13162	MU1	max. 1
Tensile strength perpendicular to the faces of insulation product in dry conditions		EN 1607	TR80	≥ 80 kPa
Tensile strength perpendicular to the faces of insulation product in wet conditions		ETAG 004	---	≥ 50 kPa
Shear strength		EN 12090	---	≥ 20 kPa
Shear modulus of elasticity		EN 12090	---	≥ 1000 kPa

\* - highest value applies

**Note:** Classes and levels for individual characteristics comply with EN 13162+A1:2015.

**Annex No. 2      Insulation product characteristics for mechanically fixed EWIS with additional bonding – MW board (TR15)**

Description and characteristics		Regulation	Declared characteristics MW board (TR15)	
			Class, level according to EN 13162	Value
Reaction to fire		EN 13501 -1+A1:2009	A1	Apparent density ≤ 150 kg/m <sup>3</sup>
Thermal resistance			Defined in CE mark in accordance with EN 13162	
Thickness		EN 823	T5	-1 % or -1 mm*, +3 mm
Length		EN 822	---	± 2 %
Width			---	± 1.5 %
Squareness		EN 824	---	≤ 5 mm/m
Flatness		EN 825	---	≤ 6 mm
Surface		ETAG 004	No additional treatment (homogenous, without coating)	
Dimensional stability under defined temperature and humidity		EN 1604	DS(70,90)	1 %
Water absorption	Short term water absorption	EN 1609	WS	≤ 1.0 kg/m <sup>2</sup>
	Long term water absorption	EN 12087	WL(P)	≤ 3.0 kg/m <sup>2</sup>
Diffusion factor (μ)		EN 12086 - EN 13162	MU1	max. 1
Tensile strength perpendicular to the faces of insulation product in dry conditions		EN 1607	TR15	≥ 15 kPa
Tensile strength perpendicular to the faces of insulation product in wet conditions		ETAG 004	---	≥ 6 kPa
Shear strength		EN 12090	---	---
Shear modulus of elasticity		EN 12090	---	---

\* - highest value applies

**Note:** Classes and levels for individual characteristics comply with EN 13162+A1:2015.

**Annex No. 3      Insulation product characteristics for mechanically fixed EWIS with additional bonding – MW board Frontrock MAX E (double density, TR10)**

Description and characteristics		Regulation	Declared characteristics MW panel Frontrock MAX E (double density, TR10)	
			Class, level according to EN 13162	Value
Reaction to fire		EN 13501 -1+A1:2009	A1	Apparent density ≤ 150 kg/m <sup>3</sup>
Thermal resistance			Defined in CE mark in accordance with EN 13162	
Thickness		EN 823	T5	-1 % or -1 mm*, +3 mm
Length		EN 822	---	± 2 %
Width			---	± 1.5 %
Squareness		EN 824	---	≤ 5 mm/m
Flatness		EN 825	---	≤ 6 mm
Surface		ETAG 004	No additional treatment (homogenous, without coating)	
Dimensional stability under defined temperature and humidity		EN 1604	DS(70,90)	1 %
Water absorption	Short term water absorption	EN 1609	WS	≤ 1.0 kg/m <sup>2</sup>
	Long term water absorption	EN 12087	WL(P)	≤ 3.0 kg/m <sup>2</sup>
Diffusion factor (μ)		EN 12086 - EN 13162	MU1	max. 1
Tensile strength perpendicular to the faces of insulation product in dry conditions		EN 1607	TR10	≥ 10 kPa
Tensile strength perpendicular to the faces of insulation product in wet conditions		ETAG 004	---	≥ 5 kPa
Shear strength		EN 12090	---	---
Shear modulus of elasticity		EN 12090	---	---

\* - highest value applies

**Note:** Classes and levels for individual characteristics comply with EN 13162+A1:2015.

**Annex No. 4      Insulation product characteristics for mechanically fixed EWIS with additional bonding – MW board FKD S Thermal (TR10)**

Description and characteristics		Regulation	Declared characteristics MW board FKD S Thermal (TR10)	
			Class, level according to EN 13162	Value
Reaction to fire		EN 13501 -1+A1:2009	A1	Apparent density ≤ 150 kg/m <sup>3</sup>
Thermal resistance			Defined in CE mark in accordance with EN 13162	
Thickness		EN 823	T5	-1 % or -1 mm*, +3 mm
Length		EN 822	---	± 2 %
Width			---	± 1.5 %
Squareness		EN 824	---	≤ 5 mm/m
Flatness		EN 825	---	≤ 6 mm
Surface		ETAG 004	No additional treatment (homogenous, without coating)	
Dimensional stability under defined temperature and humidity		EN 1604	DS(70,90)	1 %
Water absorption	Short term water absorption	EN 1609	WS	≤ 1.0 kg/m <sup>2</sup>
	Long term water absorption	EN 12087	WL(P)	≤ 3.0 kg/m <sup>2</sup>
Diffusion factor (μ)		EN 12086 - EN 13162	MU1	max. 1
Tensile strength perpendicular to the faces of insulation product in dry conditions		EN 1607	TR10	≥ 10 kPa
Tensile strength perpendicular to the faces of insulation product in wet conditions		ETAG 004	---	≥ 5 kPa
Shear strength		EN 12090	---	---
Shear modulus of elasticity		EN 12090	---	---

\* - highest value applies

**Note:** Classes and levels for individual characteristics comply with EN 13162+A1:2015.

**Annex No. 5      Insulation product characteristics for mechanically fixed EWIS with additional bonding – MW board Isover TF PROFI (TR10)**

Description and characteristics		Regulation	Declared characteristics MW board Isover TF PROFI (TR10)	
			Class, level according to EN 13162	Value
Reaction to fire		EN 13501 -1+A1:2009	A1	Apparent density ≤ 150 kg/m <sup>3</sup>
Thermal resistance			Defined in CE mark in accordance with EN 13162	
Thickness		EN 823	T5	-1 % or -1 mm*, +3 mm
Length		EN 822	---	± 2 %
Width			---	± 1.5 %
Squareness		EN 824	---	≤ 5 mm/m
Flatness		EN 825	---	≤ 6 mm
Surface		ETAG 004	No additional treatment (homogenous, without coating)	
Dimensional stability under defined temperature and humidity		EN 1604	DS(70,90)	1 %
Water absorption	Short term water absorption	EN 1609	WS	≤ 1.0 kg/m <sup>2</sup>
	Long term water absorption	EN 12087	WL(P)	≤ 3.0 kg/m <sup>2</sup>
Diffusion factor (μ)		EN 12086 - EN 13162	MU1	max. 1
Tensile strength perpendicular to the faces of insulation product in dry conditions		EN 1607	TR10	≥ 10 kPa
Tensile strength perpendicular to the faces of insulation product in wet conditions		ETAG 004	---	≥ 5 kPa
Shear strength		EN 12090	---	---
Shear modulus of elasticity		EN 12090	---	---

\* - highest value applies

**Note:** Classes and levels for individual characteristics comply with EN 13162+A1:2015.



**Annex No. 6      Insulation product characteristics for mechanically fixed EWIS with additional bonding – MW board ISOPANEL (TR10)**

Description and characteristics		Regulation	Declared characteristics MW board ISOPANEL (TR10)	
			Class, level according to EN 13162	Value
Reaction to fire		EN 13501 -1+A1:2009	A1	Apparent density ≤ 150 kg/m <sup>3</sup>
Thermal resistance			Defined in CE mark in accordance with EN 13162	
Thickness		EN 823	T5	-1 % or -1 mm*, +3 mm
Length		EN 822	---	± 2 %
Width			---	± 1.5 %
Squareness		EN 824	---	≤ 5 mm/m
Flatness		EN 825	---	≤ 6 mm
Surface		ETAG 004	No additional treatment (homogenous, without coating)	
Dimensional stability under defined temperature and humidity		EN 1604	DS(70,90)	1 %
Water absorption	Short term water absorption	EN 1609	WS	≤ 1.0 kg/m <sup>2</sup>
	Long term water absorption	EN 12087	WL(P)	≤ 3.0 kg/m <sup>2</sup>
Diffusion factor (μ)		EN 12086 - EN 13162	MU1	max. 1
Tensile strength perpendicular to the faces of insulation product in dry conditions		EN 1607	TR10	≥ 10 kPa
Tensile strength perpendicular to the faces of insulation product in wet conditions		ETAG 004	---	≥ 5 kPa
Shear strength		EN 12090	---	---
Shear modulus of elasticity		EN 12090	---	---

\* - highest value applies

**Note:** Classes and levels for individual characteristics comply with EN 13162+A1:2015.

**Annex No. 7      Insulation product characteristics for mechanically fixed EWIS with additional bonding – MW double density board FASROCK MAX (TR7,5)**

Description and characteristics		Regulation	Declared characteristics MW board FASROCK MAX (TR7.5)	
			Class, level according to EN 13162	Value
Reaction to fire		EN 13501 -1+A1:2009	A1	Apparent density ≤ 150 kg/m <sup>3</sup>
Thermal resistance			Defined in CE mark in accordance with EN 13162	
Thickness		EN 823	T5	-1 % or -1 mm*, +3 mm
Length		EN 822	---	± 2 %
Width			---	± 1.5 %
Squareness		EN 824	---	≤ 5 mm/m
Flatness		EN 825	---	≤ 6 mm
Surface		ETAG 004	No additional treatment (homogenous, without coating)	
Dimensional stability under defined temperature and humidity		EN 1604	DS(70,90)	1 %
Water absorption	Short term water absorption	EN 1609	WS	≤ 1.0 kg/m <sup>2</sup>
	Long term water absorption	EN 12087	WL(P)	≤ 3.0 kg/m <sup>2</sup>
Diffusion factor (μ)		EN 12086 - EN 13162	MU1	max. 1
Tensile strength perpendicular to the faces of insulation product in dry conditions		EN 1607	TR5	≥ 7.5 kPa
Tensile strength perpendicular to the faces of insulation product in wet conditions		ETAG 004	---	≥ 3.0 kPa
Shear strength		EN 12090	---	---
Shear modulus of elasticity		EN 12090	---	---

\* - highest value applies

**Note:** Classes and levels for individual characteristics comply with EN 13162+A1:2015.

**Annex No. 8      Insulation product characteristics for mechanically fixed EWIS with additional bonding – MW board Heralan-PTP-035 (TR5)**

Description and characteristics		Regulation	Declared characteristics MW board Heralan-PTP-035 (TR5)	
			Class, level according to EN 13162	Value
Reaction to fire		EN 13501 -1+A1:2009	A1	Apparent density ≤ 150 kg/m <sup>3</sup>
Thermal resistance			Defined in CE mark in accordance with EN 13162	
Thickness		EN 823	T5	-1 % or -1 mm*, +3 mm
Length		EN 822	---	± 2 %
Width			---	± 1.5 %
Squareness		EN 824	---	≤ 5 mm/m
Flatness		EN 825	---	≤ 6 mm
Surface		ETAG 004	No additional treatment (homogenous, without coating)	
Dimensional stability under defined temperature and humidity		EN 1604	DS(70,90)	1 %
Water absorption	Short term water absorption	EN 1609	WS	≤ 1.0 kg/m <sup>2</sup>
	Long term water absorption	EN 12087	WL(P)	≤ 3.0 kg/m <sup>2</sup>
Diffusion factor (μ)		EN 12086 - EN 13162	MU1	max. 1
Tensile strength perpendicular to the faces of insulation product in dry conditions		EN 1607	TR5	≥ 5.0 kPa
Tensile strength perpendicular to the faces of insulation product in wet conditions		ETAG 004	---	≥ 2.2 kPa
Shear strength		EN 12090	---	---
Shear modulus of elasticity		EN 12090	---	---

\* - highest value applies

**Note:** Classes and levels for individual characteristics comply with EN 13162+A1:2015.

**Annex No. 9 Anchors, description of individual product characteristics contained in the UKTA**

Trade name	Plate diameter (mm)	Characteristic pull-out resistance	Plate stiffness (kN/mm)	Load at plate rupture (kN)
<b>Surface assembly</b>				
Ejotharm NT U	60	See ETA-05/0009	0.60	2.43
Ejotharm STR U. STR U 2G	60	See ETA-04/0023	0.60	2.08
Ejotharm NTK U	60	See ETA-07/0026	0.50	1.44
EJOT H1 eco. EJOT H4 eco	60	See ETA-11/0192	0.60	1.40
EJOT H3	60	See ETA-14/0130	0.60	1.25
KOELNER KI-10. KI-10PA	60	See ETA-07/0291	0.39	0.81
KOELNER KI-10M			0.45	0.85
KOELNER KI-10N. KI-10NS	60	See ETA 07/0221	0.50	1.23
KOELNER TFIX-8M	60	See ETA-07/0336	1.00	1.75
Koelner TFIX-8S a TFIX-8ST	60	See ETA-11/0144	0.60	2.04
KOELNER TFIX-8P	60	See ETA-13/0845	0.30	1.38
WKRET - MET LFN ø 10	60	See ETA-06/0105	0.70	1.36
WKRET - MET LFM ø 10			0.70	1.21
WKRET - MET LFN ø 8	60	See ETA-06/0080	0.50	1.28
WKRET - MET LFM ø 8			0.50	1.26
WKRET - MET LTX ø 10	60	See ETA-08/0172	0.40	1.64
WKRET - MET LMX ø 10				
WKRET - MET LTX ø 8	60	See ETA-09/0001	0.50	1.53
WKRET - MET LMX ø 8				
FIXPLUG ø 8	60	See ETA-11/0231	0.60	1.70
FIXPLUG ø 10			0.60	1.50
WK THERM ø 8	60	See ETA-11/0232	0.60	4.30
Klimas Wkret-med screw-in plug eco-drive	60	See ETA-13/0107	0.60	2.80
WK THERM S	60	See ETA-13/0724	0.60	4.30

Trade name	Plate diameter (mm)	Characteristic pull-out resistance	Plate stiffness (kN/mm)	Load at plate rupture (kN)
KEW TSD 8	60	See ETA-04/0030	0.60	1.60
KEW TSBD	60	See ETA-08/0314	1.60	2.22
KEW TSBDL				
KEW TSD-V	60	See ETA-08/0315	1.20	1.75
KEW TSDL-V	60	See ETA-12/0148	1.20	1.75
KEW TSD-V KN	60	See ETA-13/0075	1.20	1.75
Fischer TERMOZ 8U	60	See ETA-02/0019	0.50	2.45
Fischer TERMOZ 8UZ			0.50	0.54
Fischer TERMOZ 8N	60	See ETA-03/0019	0.50	1.34
Fischer TERMOZ 8NZ			0.50	1.43
Hilti-Dämmstoff-Befestigungselement XI-FV	60	See ETA-03/0004	0.40	1.60
Hilti SX-FV	60	See ETA-03/0005	0.70	1.73
Hilti SD-FV 8	60	See ETA-03/0028	0.30	1.55
Hilti WDVS-Schlagdübel SDK-FV 8	60	See ETA-07/0302	0.50	1.48
Hilti WDVS- Schraubdübel D-FV. D-FV T	60	See ETA-05/0039	0.80	1.93
<b>Countersunk assembly</b>				
Ejothem STR U, STR U 2G	60	See ETA - 04/0023	0.60	2.08
KOELNER TFIX-8ST	60	See ETA - 11/0144	0.60	2.04
Klimas Wkret-med screw-in plug eco-drive	60	See ETA-13/0107	0.60	2.80
Klimas Wkret-med screw-in plug eco-drive S				
KEW TSBD	60	See ETA - 08/0314	1.60	2.22
KEW TSBDL				

In addition to this list, anchors assessed in accordance with UKAD 330196-00-0604 can be used provided that such anchors meet the following requirements:

	Requirements	
Plate diameter	≥ 60 mm	
Plate stiffness	Surface assembly:	≥ 0.3 kN/mm
	Countersunk assembly:	≥ 0.6 kN/mm
Rupture force of anchor's plate	≥ Higher of figures $R_{panel}$ and $R_{joint}$ in relevant table in Cl. <b>Error! Reference source not found.</b>	

**Annex No. 10 Description of the glass fibre meshes**

	Description	Strength after ageing	
	Standard fibre mesh applied in one or two layers with aperture size	Absolute strength after ageing (N/mm)	Relative residual strength after ageing, of the strength in the as-delivered state (%)
<b>R 117 A101 / AKE 145</b>	4.0 × 4.5 mm	≥ 20	≥ 50
<b>R 131 A101 / AKE 160</b>	3.5 × 3.8 mm		
<b>R 167 A101</b>	6.0 × 7.0 mm		
<b>SSA-1363-4 SM</b>	4.0 × 5.0 mm		

	Description	Strength after ageing	
	Reinforced fibre mesh applied in one layer with aperture size	Absolute strength after ageing (N/mm)	Relative residual strength after ageing, of the strength in the as-delivered state (%)
<b>REDNET CB330 NOVA</b>	6.0 × 5.0 mm	≥ 20	≥ 40



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