Designated according to The Construction Products (Amendment etc.) (EU Exit) Regulations 2020 (as amended 2022)

UK Technical Assessment	UKTA-0836-25/7472 of 25/7472
Technical Assessment Body issuing the UK Technical Assessment:	British Board of Agrément
Trade name of the construction product:	EWI Pro MW EWI System to Sheathing, Park Home & Timber Frame
Product family to which the construction product belongs:	EWIS with renderings for the use on timber frame buildings 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):	EWI Pro Insulation Systems Ltd Unit 1&2 King Georges Trading Estate Davis Road, Chessington KT9 1TT
This UK Technical Assessment contains:	55 pages including 4 Annexes which form an integral part of this assessment.
This UK Technical Assessment is issued in accordance with The Construction Products (Amendment etc.) (EU Exit) Regulations 2020 (as amended 2022) on the basis of:	UKAD 040089-00-0404 “ETICS with renderings for the use on timber frame buildings”

1. Technical description of the product

1.1 Composition of the product (kit)

Table 1

Use and variant	Component	Coverage [kg.m^{-2}]	Thickness [mm]
External board 1	**Plywood in accordance with EN 636** - mounted on a timber frame - density: 570 ± 10 % kg.m^{-3}	N/A	20 – 25
External board 2	**Fiber-cement flat sheets in accordance with EN 12467+A2** - class of strength: 4 - mechanical resistance: min 18 MPa - mounted on a timber frame - density: 1220 ± 10 % kg.m^{-3}	N/A	12 – 12.5
External board 3	**OSB boards in accordance with EN 300** - mounted on a timber frame - density: 610 ± 10 % kg.m^{-3}	N/A	12.5 – 25
Primer for external boards	**EWI-310 Universal Primer** Ready-to-use primer to increase adhesion of the adhesive to the external boards Use optionally with external boards 1 – 3	0.25 – 0.5 (liquid)	< 1.0
Adhesive 1	**EWI-225 Premium Basecoat** Powder requiring addition of water 0.24 – 0.26 l.kg^{-1}	3 − 5 (dry powder)	2 – 40
Thermal insulation product 1	**MW BOARD (TR10)** Factory made mineral wool (MW) in accordance with EN 13162 See Annex No. 2	N/A	40 – 300
Mechanical fixing device 1	**RAWLPLUG R-WW-T** Metal screw for wooden substrate To be used with plastic **RAWLPLUG KC** insulation washer (only for surface use) See Annex No. 3	N/A	N/A
Mechanical fixing device 2	**Wkret-met Klimas KDH** Hardened countersunk flat head metal screw with partial thread To be used with plastic **Klimas TD-060** or **TDP-060** washer See Annex No. 3		
Mechanical fixing device 3	**RAWLPLUG WX-T** Metal screw for wooden substrate To be used with plastic **RAWLPLUG KC** insulation washer (only for surface use) or **RAWLPLUG KCX-105** insulation washer (for countersunk use) See Annex No. 3		
Mechanical fixing device 4	**Wkret-met Klimas KMWHT** Hardened countersunk flat head metal screw with partial thread To be used with plastic **Klimas TD-060** or **TDP-060** washer See Annex No. 3		

Use and variant	Component	Coverage [kg.m^{-2}]	Thickness [mm]
Mechanical fixing device 5	**Ejot TKR 4.8** Case-hardened steel screw for wooden substrate To be used with plastic **Ejot SBH-T 65/25** insulation washer (only for surface use) See Annex No. 3	N/A	N/A
Mechanical fixing device 6	**Ejotherm STR H** Mechanical fastener made of metal case hardened steel with plastic washer for wooden substrate See Annex No. 3		
Base coat 1	**EWI-225 Premium Basecoat** Powder requiring addition of water 0.24 – 0.26 l.kg^{-1}	6 – 8 (dry powder)	4 – 6 For 1 layer of mesh 6 – 10 For 2 layers of mesh
Reinforcement 1	**EWI Pro Fibreglass Mesh FGM – 165** Standard glass fibre mesh, one or two layers Embedded in base coat See Annex No. 4	0.16 – 0.18 (per layer)	< 1.0 (per layer)
Reinforcement 2	**EWI Pro Fibreglass Mesh – (160g) Masternet Classic (960)** or **MASTERNET CLASSIC 160** Standard glass fibre mesh, one or two layers Embedded in base coat See Annex No. 4	0.16 – 0.18 (per layer)	< 1.0 (per layer)
Reinforcement 3	**EWI Pro Fibreglass Mesh – (165g) Masternet Pro (965)** Standard glass fibre mesh, one or two layers Embedded in base coat See Annex No. 4	0.15 – 0.18 (per layer)	< 1.0 (per layer)
Reinforcement 4	**EWI Pro - VERTEX R267 – (316g)** Reinforced glass fibre mesh, one layer Embedded in the base coat in addition to one layer of Reinforcement 1, 2 or 3 See Annex No. 4	0.3 – 0.4 (per layer)	< 1.0 (per layer)
Reinforcement 5	**EWI Pro Panzer Fibreglass Mesh (Eurowek) – (330g)** Reinforced glass fibre mesh, one layer Embedded in the base coat in addition to one layer of Reinforcement 1, 2 or 3 See Annex No. 4	0.3 – 0.4 (per layer)	< 1.0 (per layer)
Key coat 1	**EWI-333 Topcoat Primer** Use mandatorily with finishing coat 3 – 6	0.2 – 0.3 (liquid)	< 0.2
Key coat 2	**EWI-334 Brick Effect Primer** Use mandatorily with finishing coats 11 – 14	0.2 – 0.3 (liquid)	< 0.2
Finishing coat 1	**EWI Pro Dash Receiver** Powder requiring addition of water 0.19 – 0.20 l.kg^{-1} Trowelled on and sprinkled with decorative pebble dash aggregate Sizing of aggregate: 3 – 8 mm	Approx. 1.6 kg per mm thickness (dry powder)	~ 8.0
Finishing coat 2	**EWI-077-1.0 Nano Drex Silicone Render** Silicone based finishing coat Trowelled on and plastic floated for a textured finish Maximum particle size 1.0 mm	1.9 – 2.1 (paste)	~ 1.0

Use and variant	Component	Coverage [kg.m^{-2}]	Thickness [mm]
Finishing coat 3	**EWI-077-1.5 Nano Drex Silicone Render** Silicone based finishing coat Trowelled on and plastic floated for a textured finish Maximum particle size 1.5 mm	2.4 – 3.1 (paste)	~ 1.5
Finishing coat 4	**EWI-077-2.0 Nano Drex Silicone Render** Silicone based finishing coat Trowelled on and plastic floated for a textured finish Maximum particle size 2.0 mm	3.1 – 3.6 (paste)	~ 2.0
Finishing coat 5	**EWI-077-3.0 Nano Drex Silicone Render** Silicone based finishing coat Trowelled on and plastic floated for a textured finish Maximum particle size 3.0 mm	4.0 – 4.5 (paste)	~ 3.0
Finishing coat 6	**EWI-078-1.0 Brick Effect Stencil Render** Silicone based finishing coat Trowelled on and plastic floated for a textured finish Brick effect finish made with self-adhesive stencil (removed after the finishing coat is applied) Max. particle size 1.0 mm	1.9 – 2.1 (paste)	~ 1.0
Finishing coat 7	**EWI-078-1.5 Brick Effect Stencil Render** Silicone based finishing coat Trowelled on and plastic floated for a textured finish Brick effect finish made with self-adhesive stencil (removed after the finishing coat is applied) Max. particle size 1.5 mm	2.4 – 3.1 (paste)	~ 1.5
Finishing coat 8	**EWI-078-2.0 Brick Effect Stencil Render** Silicone based finishing coat Trowelled on and plastic floated for a textured finish Brick effect finish made with self-adhesive stencil (removed after the finishing coat is applied) Max. particle size 2.0 mm	3.1 – 3.6 (paste)	~ 2.0
Finishing coat 9	**EWI-078-3.0 Brick Effect Stencil Render** Silicone based finishing coat Trowelled on and plastic floated for a textured finish Brick effect finish made with self-adhesive stencil (removed after the finishing coat is applied) Max. particle size 3.0 mm	4.0 – 4.5 (paste)	~ 3.0
Ancillary materials	Remain under the manufacturer's responsibility		

Types of the EWIS can be distinguished, depending on the fixing method of thermal insulation:

Table 2

Component	Type of EWIS
	Mechanically fixed EWIS with anchors with supplementary adhesive
External board	External board 1 or External board 2 or External board 3
Adhesive	**EWI-225 Premium Basecoat** Minimum 30 % area covered by adhesive
Thermal insulation product	Thermal insulation product 1
Mechanical fixing device	See 0

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

This product is an External Wall Insulation System (EWIS) with renderings for the use on timber framed buildings. The surface for the application of EWIS is a board substrate (see Table 1). The product is a kit, comprising from number of components.

The EWIS may include special fittings (eg base profiles, corner profiles) to treat details of EWIS (connections, apertures, corners, parapets, sills). Special fittings are not listed nor assessed in this UKTA.

The EWIS is installed in accordance with the manufacturer´s installation instructions.

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

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

The EWIS is not intended to ensure the airtightness of the building structure. The timber framed building wall has to be sufficiently airtight to reduce the thermal transmittance of the wall and to avoid interstitial condensation due to convection.

The EWIS provides additional thermal insulation and protection from effect of weathering.

The provisions made in this UKTA are based on an assumed intended working life of at least 25 years, provided that the EWIS is installed and maintained properly. The indications given as to the working life of the construction product cannot be interpreted as a guarantee, but are regarded as means for expressing the expected economically reasonable working life of the product.

Concerning product packaging, transport, storage, maintenance, replacement and repair, it is the responsibility of the manufacturer to undertake the appropriate measures and to advise clients on the transport, storage, maintenance, replacement and repair of the product as considered necessary.

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

Table 3

Essential characteristic	Assessment method (UKAD clause)	Performance
EWIS: Reaction to fire of EWIS	Cl. 2.2.1.1	See Cl. 3.2.1
EWIS: Water absorption	Cl. 2.2.2.1	See Cl. 3.3.1
EWIS: Water tightness: Hygrothermal behaviour	Cl. 2.2.2.2	See Cl. 3.3.3
EWIS: Water tightness: Freeze-thaw behaviour	Cl. 2.2.2.3	See Cl. 3.3.3
EWIS: Water tightness: Moisture content and gradient	Cl. 2.2.2.4	No performance assessed
EWIS: Water tightness: Water penetration	Cl. 2.2.2.5	No performance assessed
EWIS: Water vapour permeability	Cl. 2.2.2.6	See Cl. 3.3.4
EWIS: Bond strength between: base coat and insulation product (mortar or paste)	Cl. 2.2.3.1	See Cl. 3.4.1
EWIS: Bond strength between: adhesive and substrate (external board)	Cl. 2.2.3.2	See Cl. 3.4.2
EWIS: Bond strength between: adhesive and insulation product	Cl. 2.2.3.3	See Cl. 3.4.3
EWIS: Fixing strength (transverse displacement)	Cl. 2.2.3.5	No performance assessed
EWIS: Wind load resistance: - **pull-through tests of fixings**	Cl. 2.2.3.6.1	See Cl. 3.4.4
EWIS: Wind load resistance: - **static foam block**	Cl. 2.2.3.6.2	No performance assessed
EWIS: Wind load resistance: - **dynamic wind uplift test**	Cl. 2.2.3.6.3	No performance assessed
EWIS: Wind load resistance: - **resistance to soft body impact**	Cl. 2.2.3.6.4	No performance assessed
EWIS: Impact resistance	Cl. 2.2.3.19	See Cl. 3.4.5
EWIS: Bond strength after ageing	Cl. 2.2.3.20 and Cl. 2.2.3.21	See Cl. 3.4.6 and See Cl. 3.4.7
EWIS: Airborne sound insulation	Cl. 2.2.4.1	No performance assessed
EWIS: Thermal resistance and thermal transmittance	Cl. 2.2.5.1	See Cl. 3.4.11
Insulation product: Reaction to fire	Cl. 2.2.1.3	No performance assessed (See Annex No. 2 for component characteristic)
Insulation product: Water absorption	Cl. 2.2.2.7	No performance assessed (See Annex No. 2 for component characteristic)
Insulation product: Water permeability	Cl. 2.2.2.8	No performance assessed (See Annex No. 2 for component characteristic)
Insulation product: Tensile test	Cl. 2.2.3.7 and Cl. 2.2.3.8	No performance assessed (See Annex No. 2 for component characteristic)
Insulation product: Shear strength and shear modulus of elasticity test	Cl. 2.2.3.9	No performance assessed (See Annex No. 2 for component characteristic)
Insulation product: Bending strength	Cl. 2.2.3.10	No performance assessed
Insulation product: Dynamic stiffness	Cl. 2.2.4.2	No performance assessed
Insulation product: Thermal resistance	Cl. 2.2.5.2	No performance assessed (See Annex No. 2 for component characteristic)
Insulation product: Air flow resistance	Cl. 2.2.5.3	No performance assessed

Essential characteristic	Assessment method (UKAD clause)	Performance
Mechanical fixings: Reaction to fire	Cl. 2.2.1.2	No performance assessed
Mechanical fixings: Pull-out strength of mechanical fixings (anchors)	Cl. 2.2.3.14	See Cl. 3.4.8
Mechanical fixings: Protection against corrosion	Cl. 2.2.3.22	No performance assessed
Base coat: performances	Cl. 2.2.3.15 and Cl. 2.2.3.16	See Cl. 3.4.9
Rendering system: tensile strength	Cl. 2.2.3.12	See Cl. 3.4.10
Reinforcement: tearing strength and elongation	Cl. 2.2.3.23 Cl. 2.2.3.24 Cl. 2.2.3.25	No performance assessed (See Annex No. 4 for component characteristic)

Tables 4 to 42 lay down assessments of essential characteristics of specific combinations of EWIS components.

Any combination of components not meeting the criteria of Tables 4 to 37 are assessed as “No performance assessed” with regards to the relevant essential characteristic.

3.1. Mechanical resistance and stability (BWR 1)

Not applicable.

3.2. Safety in case of fire (BWR 2)

3.1.1 Reaction to fire of EWIS

Table 4

Reaction to fire of EWIS:	**A2 – s1, d0**
Component	**EWIS configuration**
External board (substrate)	In accordance with Table 1
Primer for external boards	None
Adhesive	In accordance with Table 1
Thermal insulation product	Thermal insulation product 1 Maximum apparent density (EN 1602): **78 - 153** kg.m^{-3} Thickness: **≥ 40 mm** Reaction to fire class: **A1**
Mechanical fixing devices	In accordance with Table 1
Base coat	In accordance with Table 1
Reinforcement	In accordance with Table 1
Key coat	In accordance with Table 1
Finishing coat	In accordance with Table 1

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

3.3.1 Water absorption

Table 5

Water absorption of the reinforced base coat		
EWIS configuration requirements:	**After 1 h [kg.m^{-2}]**	**After 24 h [kg.m^{-2}]**
EWI-225 Premium Basecoat	**0.02**	**0.19**

Table 6

Water absorption of the complete rendering				
EWIS configuration requirements:			**After 1 h [kg.m^{-2}]**	**After 24 h [kg.m^{-2}]**
Base coat	**Finishing coat**	**Key coat**		
EWI-225 Premium Basecoat	EWI Pro Dash Receiver with pebble dash aggregate	In accordance with Table 1	**0.28**	**0.86**
	EWI-077 Nano Drex Silicone Render (all grain sizes)		**0.03**	**0.16**
	EWI-078 Brick Effect Stencil Render (all grain sizes)		**0.02**	**0.42**

3.3.2 Water tightness: Hygrothermal behaviour

Table 7

Water tightness: Hygrothermal behaviour
Hygrothermal cycles have been performed on products tested in the hygrothermal rig. The EWIS passed the test and is assessed as **resistant to hygrothermal cycles**.

3.3.3 Water tightness: Freeze thaw behaviour

Table 8

Water tightness: Freeze thaw behaviour
The EWIS is **freeze-thaw resistant**, because the water absorption of both, reinforced base coat and the rendering system, are less than 0.5 kg/m^2 after 24 hours.

3.3.4 Water vapour permeability

Table 9

Water vapour permeability of the rendering system (equivalent air thickness s_d)			
EWIS configuration requirements:			**Equivalent air thickness s_d [m]**
Base coat	**Finishing coat**	**Key coat**	
EWI-225 Premium Basecoat maximum thickness 10 mm	EWI Pro Dash Receiver with pebble dash aggregate maximum thickness 8 mm	In accordance with Table 1	**0.4**
	EWI-077 Nano Drex Silicone Render maximum thickness 3 mm		**0.4**
	EWI-078 Brick Effect Stencil Render maximum thickness 3 mm		**0.3**

3.4. Safety and accessibility in use (BWR 4)

3.4.1 Bond strength between: base coat and insulation product (mortar or paste)

Table 10

Bond strength between base coat (mortar or paste) and insulation product					
EWIS configuration requirements:		Conditioning before the test	Rupture type	Bond strength [MPa]	
Insulation product	Base coat			Minimum	Mean
Insulation product 1	EWI-225 Premium Basecoat	Initial state (dry condition)	In the insulation product	0.009	0.010
Insulation product 1	EWI-225 Premium Basecoat	After hygrothermal cycles	In between the insulation product and the base coat	0.010	0.011

3.4.2 Bond strength between: adhesive and substrate (external board) (EAD 040089-00-0404 - clause 2.2.3.2)

Table 11

Bond strength between adhesive (mortar or paste) and substrate (external boards)					
EWIS configuration requirements:		Conditioning before the test	Rupture type	Bond strength [MPa]	
Substrate	Adhesive (and tested thickness)			Minimum	Mean
Plywood according to EN 636 (20 mm)	EWI-225 Premium Basecoat (5 mm)	Initial state (dry condition)	62% in the adhesive 38% in between the substrate and the adhesive	0.384	0.449
		7 days at 23 ± 2˚C and 95 ± 5%	27% in the adhesive 73% in between the substrate and the adhesive	0.027	0.038
		7 days at 23 ± 2˚C and 95 ± 5 % and 7 days of drying at 23 ± 2˚C and 50 ± 5 %	56% in the adhesive 44% in between the substrate and the adhesive	0.410	0.447
Fiber-cement flat sheets according to EN 12467 + A2 (12 mm)	EWI-225 Premium Basecoat (5 mm)	Initial state (dry condition)	100% in between the substrate and the adhesive	0.323	0.396
		7 days at 23 ± 2˚C and 95 ± 5%	91% in the adhesive 9% in between the substrate and the adhesive	0.203	0.221
		7 days at 23 ± 2˚C and 95 ± 5% and 7 days of drying at 23 ± 2˚C and 50 ± 5%	2% in the substrate 98% in between the substrate and the adhesive	0.234	0.325

Bond strength between adhesive (mortar or paste) and substrate (external boards)					
EWIS configuration requirements:		Conditioning before the test	Rupture type	Bond strength [MPa]	
Substrate	Adhesive (and tested thickness)			Minimum	Mean
OSB boards according to EN 300 (12.5 mm) with one layer of EWI-310 Universal Primer	EWI-225 Premium Basecoat (5 mm)	Initial state (dry condition)	90% in the adhesive 10% in between the substrate and the adhesive	0.133	0.165
		7 days at 23 ± 2˚C and 95 ± 5%	64% in the adhesive 36% in between the substrate and the adhesive	0.039	0.125
		7 days at 23 ± 2˚C and 95 ± 5 % and 7 days of drying at 23 ± 2˚C and 50 ± 5 %	90% in the adhesive 10% in between the substrate and the adhesive	0.206	0.230
Concrete (40 mm)	EWI-225 Premium Basecoat (5 mm)	2 days immersion in water and 2 hours of drying at 23 ± 2˚C and 50 ± 5%	95% in the adhesive 5% in between the substrate and the adhesive	0.471	0.507

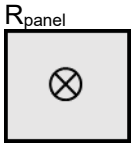
3.4.3 Bond strength between: adhesive and insulation product

Table 12

Bond strength between adhesive (mortar or paste) and insulation product					
EWIS configuration requirements:		Conditioning before the test	Rupture type	Bond strength [MPa]	
Insulation product	Adhesive (and tested thickness)			Minimum	Mean
Insulation product 1	EWI-225 Premium Basecoat (5 mm)	Initial state (dry condition)	In the thermal insulation product	0.010	0.011
		2 days immersion in water and 2 hours of drying		0.010	0.011
		2 days immersion in water and minimum 7 days of drying		0.009	0.011

3.4.4 Wind load resistance – pull-through tests of fixings
3.4.4.1 Dry conditions

Table 5

Wind load resistance of ETICS					
Assessed by means of: pull-through tests of fixings					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa	Wkret-met Klimas KDH with Wkret-met Klimas TD-060 washer (Ø 60 mm)	R_{panel} 	Dry conditions 23°C and 50% relative humidity of air	**0.323** **0.332** **0.347** **0.349** **0.363**	**0.343**
Load / displacement graph:					

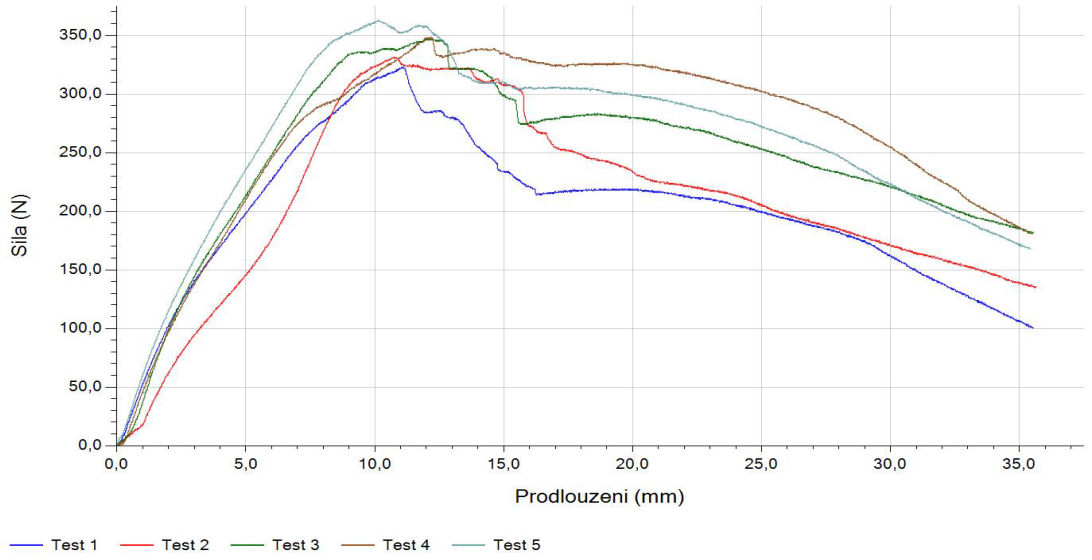
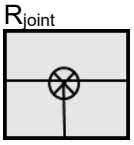


Table 6

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa	Wkret-met Klimas KDH with Wkret-met Klimas TD-060 washer (Ø 60 mm)	R_{joint} 	Dry conditions 23°C and 50% relative humidity of air	**0.412** **0.349** **0.333** **0.296** **0.422**	**0.362**
Load / displacement graph:					

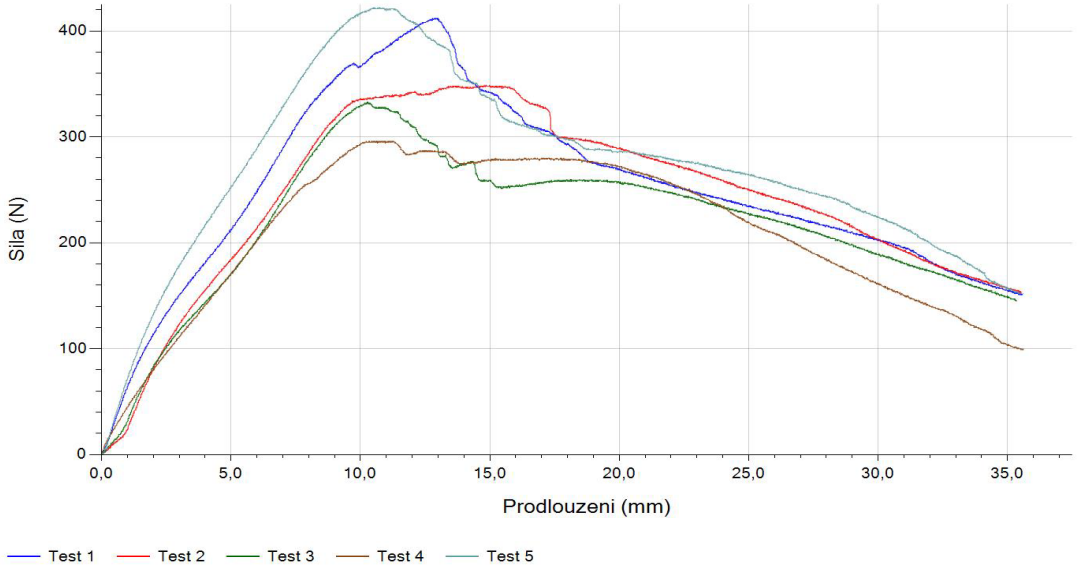
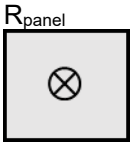


Table 7

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa	RAWLPLUG WX-T with RAWLPLUG KC washer (Ø 60 mm)	R_{panel} 	Dry conditions 23°C and 50% relative humidity of air	**0.347** **0.415** **0.314** **0.325** **0.311**	**0.342**
Load / displacement graph:					

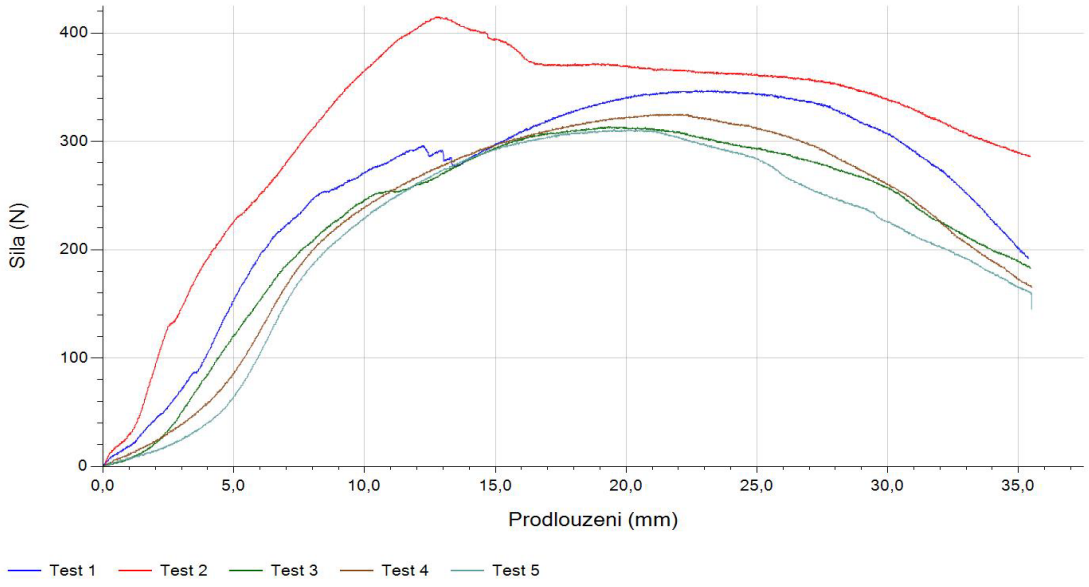
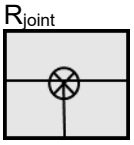


Table 8

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa	RAWLPLUG WX-T with RAWLPLUG KC washer (Ø 60 mm)	R_{joint} 	Dry conditions 23°C and 50% relative humidity of air	**0.310** **0.247** **0.308** **0.246** **0.259**	**0.274**
Load / displacement graph:					

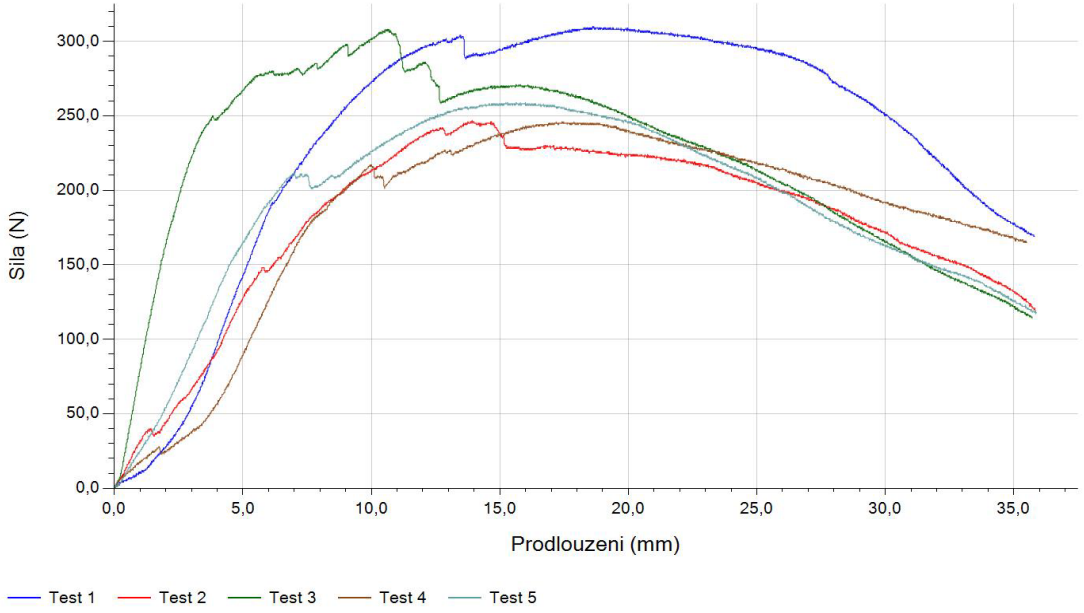
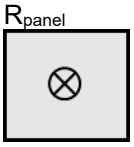


Table 9

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa	RAWLPLUG WX-T with RAWLPLUG KCX-105	R_{panel} 	Dry conditions 23°C and 50% relative humidity of air	**0.330** **0.405** **0.357** **0.389** **0.325**	**0.361**
Load / displacement graph:					

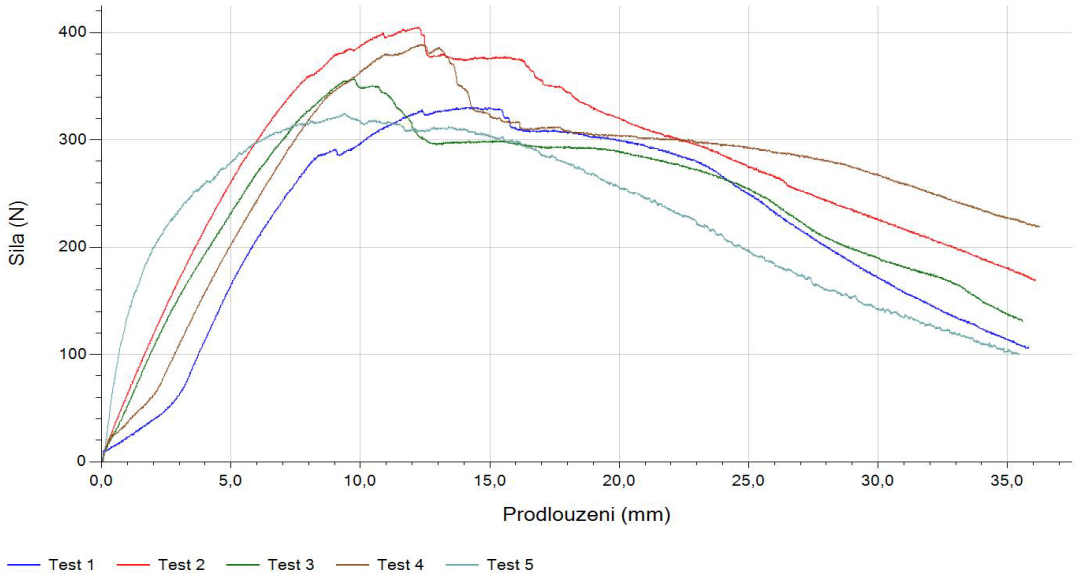
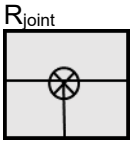


Table 10

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa	RAWLPLUG WX-T with RAWLPLUG KCX-105	R_{joint} 	Dry conditions 23°C and 50% relative humidity of air	**0.231** **0.267** **0.324** **0.213** **0.207**	**0.248**
Load / displacement graph:					

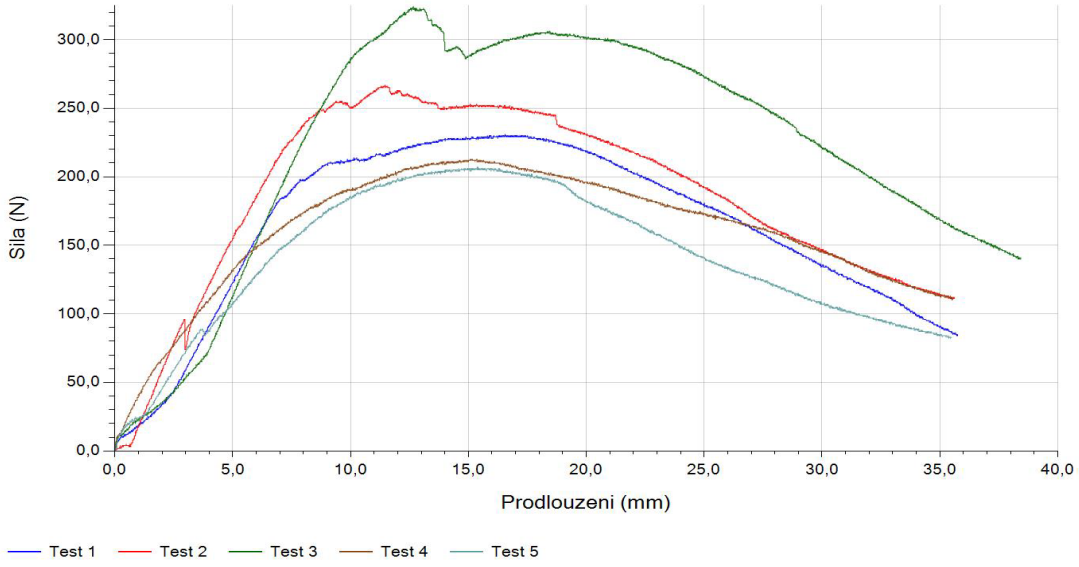


Table 11

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa	Wkret-met Klimas KMWHT with Wkret-met Klimas TD-060 washer (Ø 60 mm)	R_{panel} ⊗	Dry conditions 23°C and 50% relative humidity of air	**0.314** **0.381** **0.305** **0.257** **0.249**	**0.301**
Load / displacement graph:					

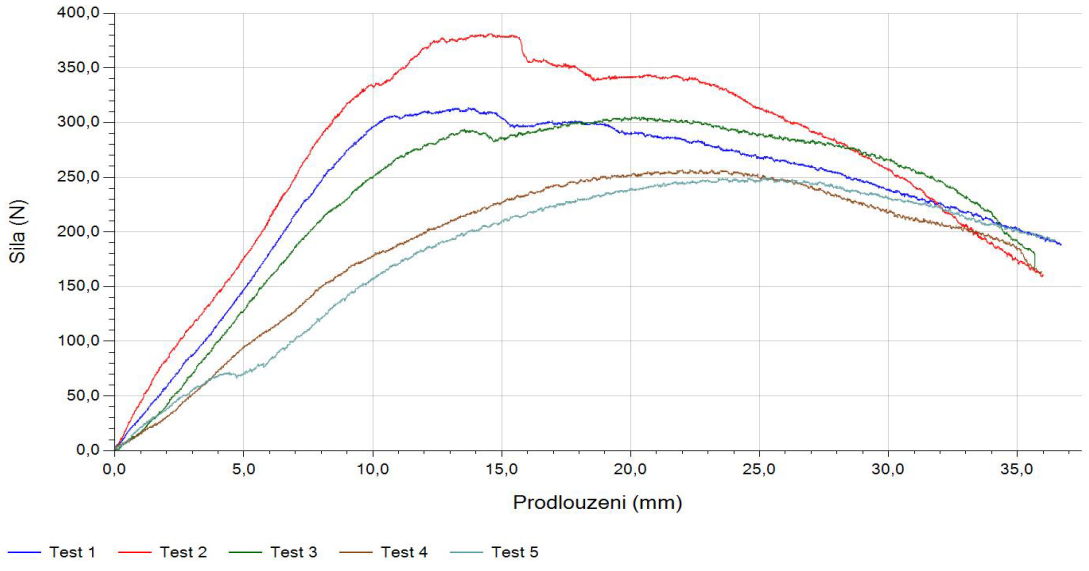
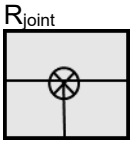


Table 12

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa	Wkret-met Klimas KMWHT with Wkret-met Klimas TD-060 washer (Ø 60 mm)	R_{joint} 	Dry conditions 23°C and 50% relative humidity of air	**0.239** **0.388** **0.289** **0.339** **0.237**	**0.298**
Load / displacement graph:					

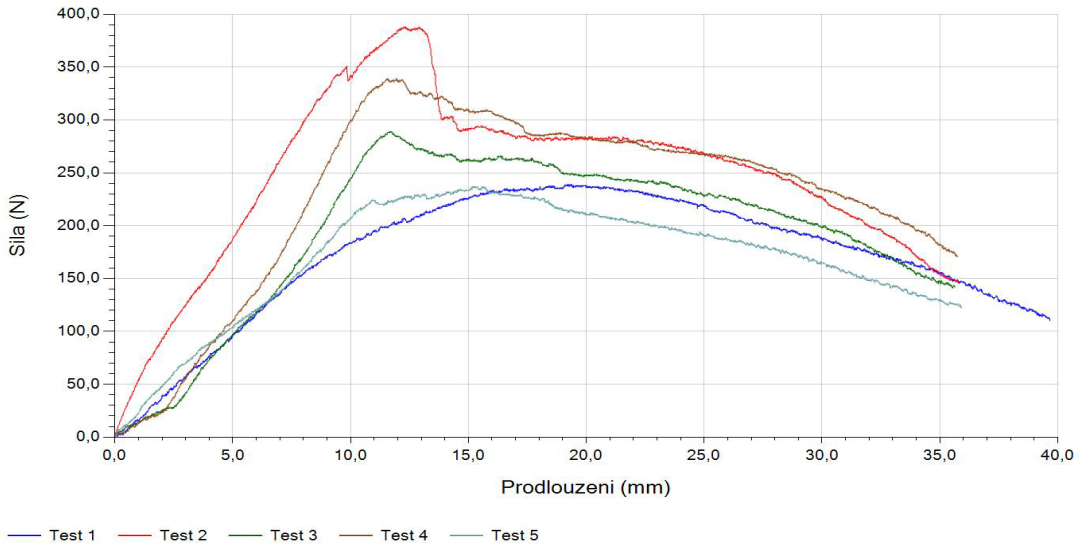
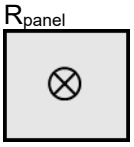


Table 13

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa	Ejot TKR 4.8 with Ejot SBV 6.5 washer	R_{panel} 	Dry conditions 23°C and 50% relative humidity of air	**0.353** **0.368** **0.417** **0.356** **0.389**	**0.377**
Load / displacement graph:					

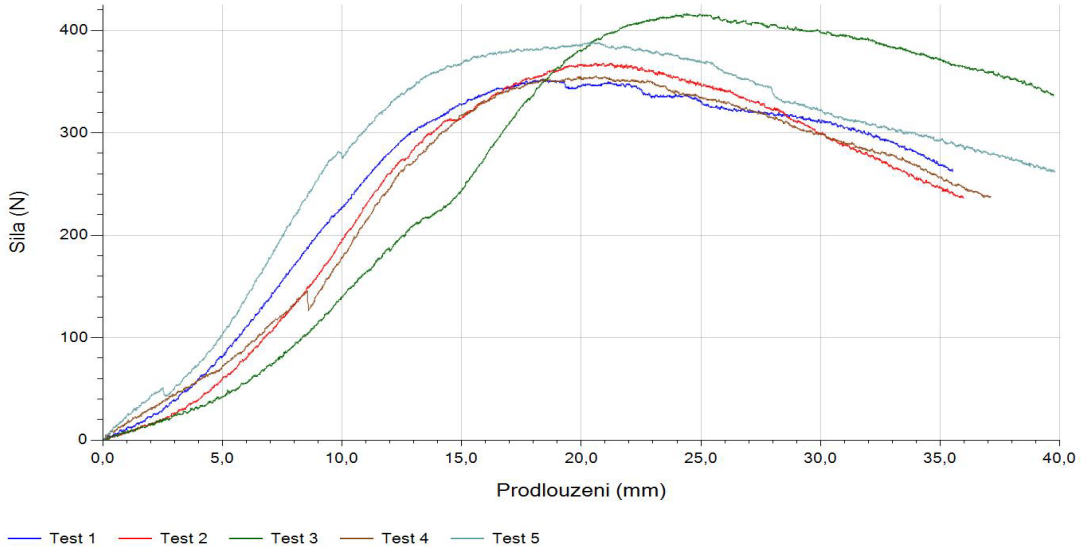
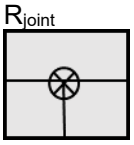


Table 14

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa	Ejot TKR 4.8 with Ejot SBV 6.5 washer	R_{joint} 	Dry conditions 23°C and 50% relative humidity of air	**0.395** **0.212** **0.228** **0.272** **0.159**	**0.253**
Load / displacement graph:					

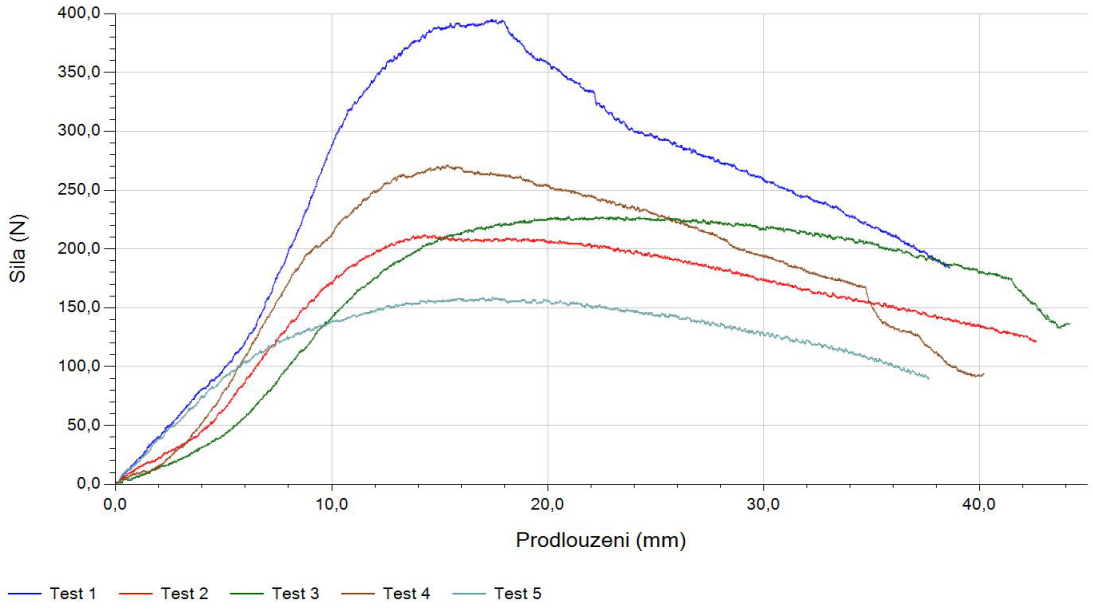
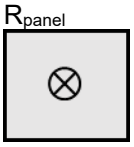


Table 15

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa	Ejotherm STR H	R_{panel} 	Dry conditions 23°C and 50% relative humidity of air	**0.240** **0.294** **0.261** **0.303** **0.222**	**0.264**
Load / displacement graph:					

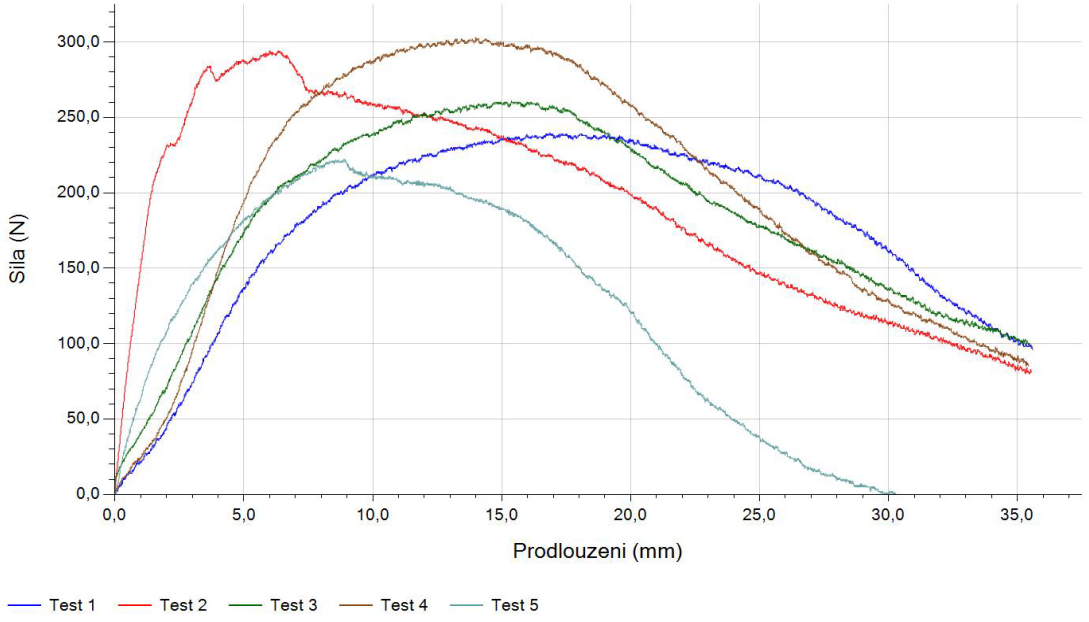
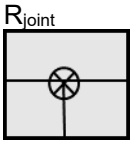
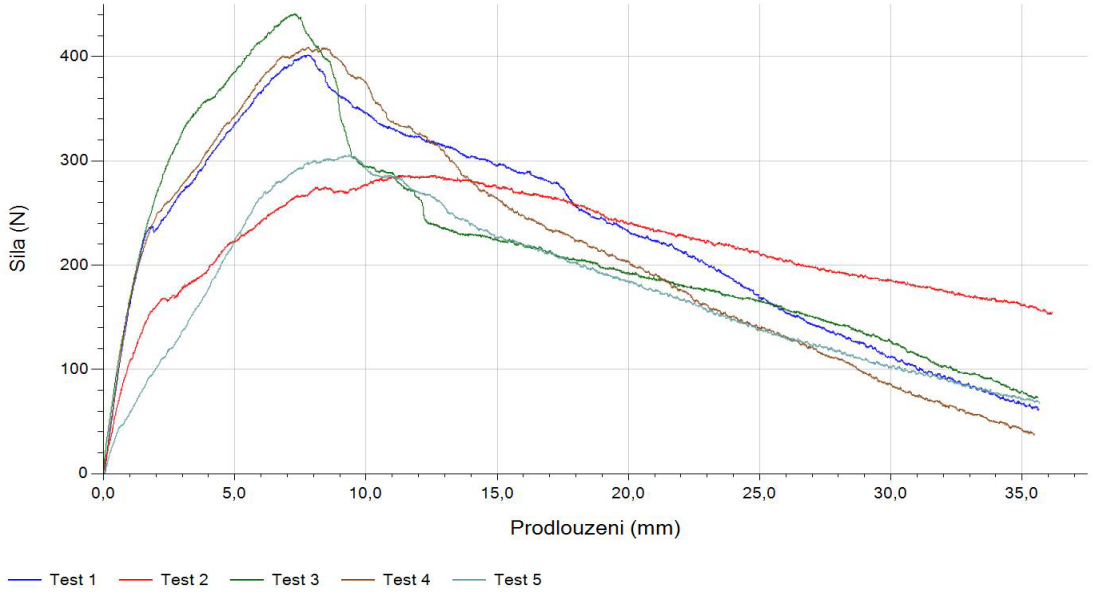


Table 16

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa	Ejotherm STR H	R_{joint} 	Dry conditions 23°C and 50% relative humidity of air	**0.402** **0.286** **0.441** **0.409** **0.306**	**0.369**
Load / displacement graph:					
					

3.4.4.2 Wet conditions

Table 17

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa Tensile strength in wet conditions after 28 days: ≥ 13.7 kPa	Wkret-met Klimas KDH with Wkret-met Klimas TD-060 washer (Ø 60 mm)	R_{panel} ⊗	Dry conditions 23°C and 50% relative humidity of air	**0.321** **0.355** **0.393** **0.364** **0.330**	**0.353**
Load / displacement graph:					

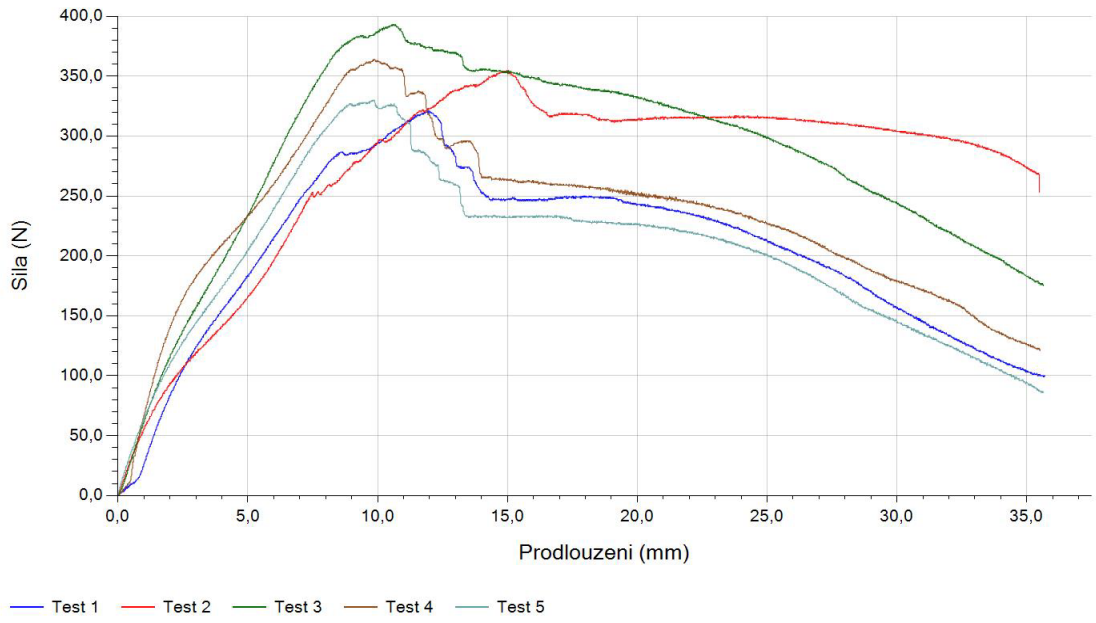
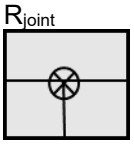


Table 18

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa Tensile strength in wet conditions after 28 days: ≥ 13.7 kPa	Wkret-met Klimas KDH with Wkret-met Klimas TD-060 washer (Ø 60 mm)	R_{joint} 	Dry conditions 23°C and 50% relative humidity of air	**0.289** **0.293** **0.311** **0.224** **0.268**	**0.277**
Load / displacement graph:					

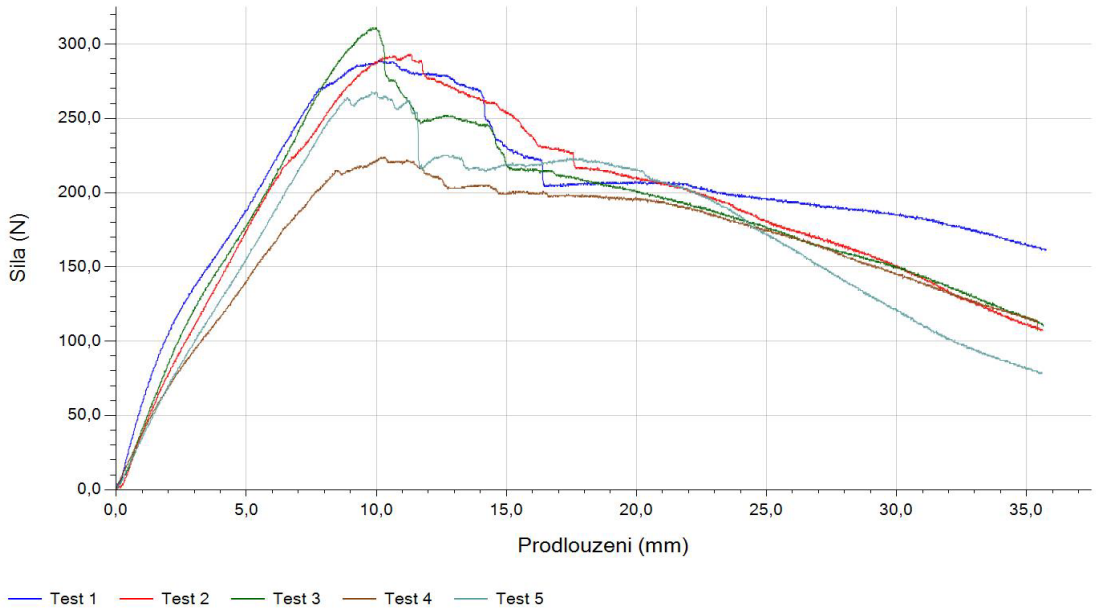


Table 19

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa Tensile strength in wet conditions after 28 days: ≥ 13.7 kPa	RAWLPLUG WX-T with RAWLPLUG KC washer (Ø 60 mm)	R_{panel} ⊗	Dry conditions 23°C and 50% relative humidity of air	**0.421** **0.367** **0.333** **0.379** **0.292**	**0.358**
Load / displacement graph:					

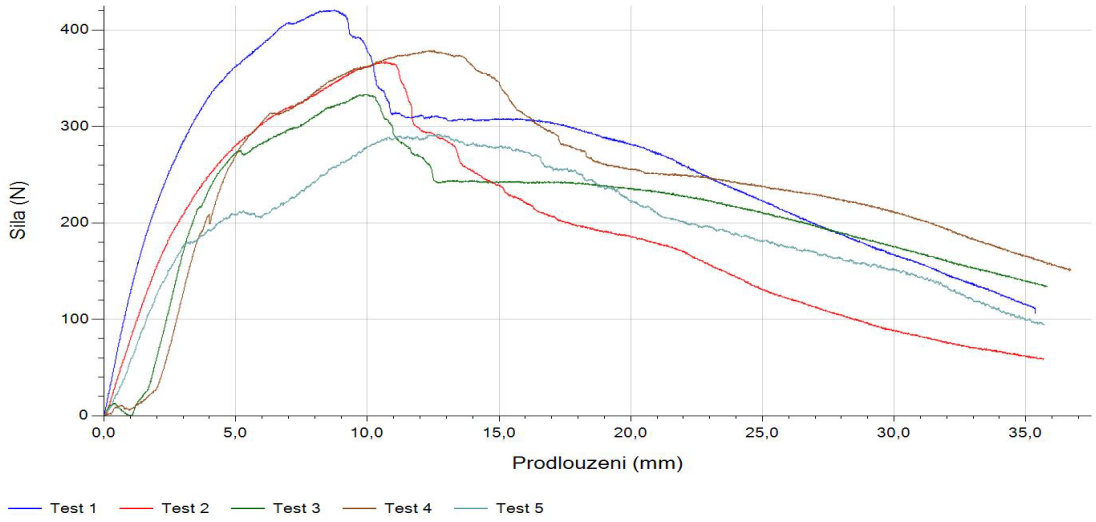
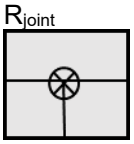


Table 20

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa Tensile strength in wet conditions after 28 days: ≥ 13.7 kPa	RAWLPLUG WX-T with RAWLPLUG KC washer (Ø 60 mm)	R_{joint} 	Dry conditions 23°C and 50% relative humidity of air	**0.310** **0.286** **0.329** **0.321** **0.363**	**0.322**
Load / displacement graph:					

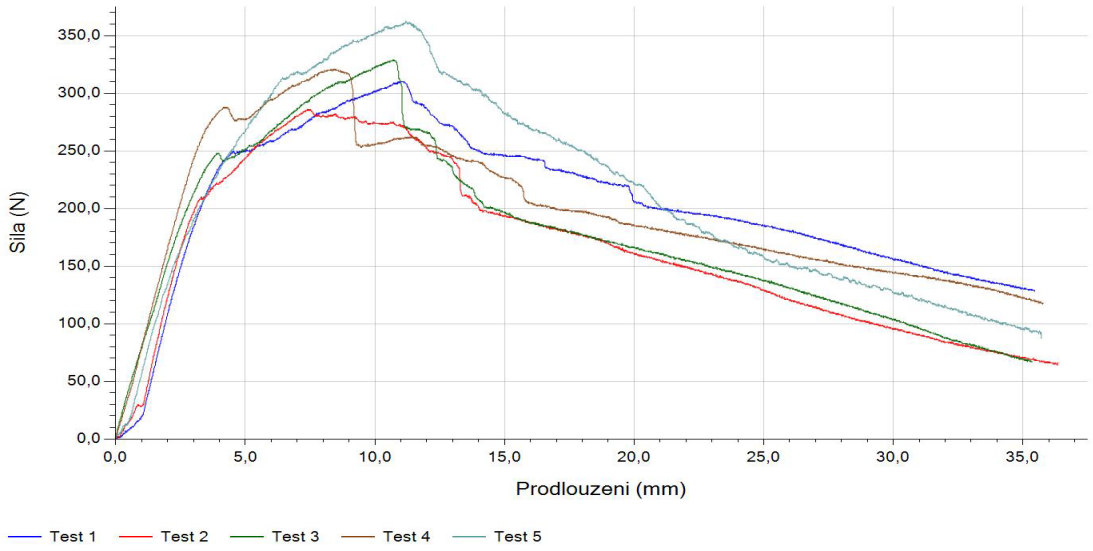


Table 21

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa Tensile strength in wet conditions after 28 days: ≥ 13.7 kPa	RAWLPLUG WX-T with RAWLPLUG KCX-105	R_{panel} ⊗	Dry conditions 23°C and 50% relative humidity of air	**0.369** **0.245** **0.227** **0.302** **0.285**	**0.286**
Load / displacement graph:					

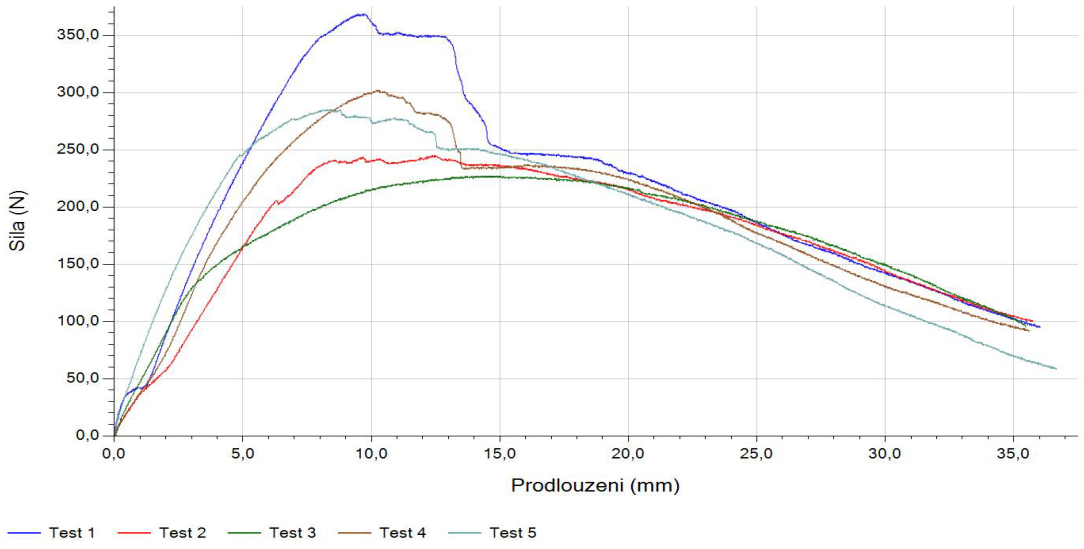


Table 22

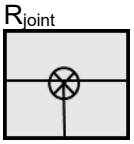
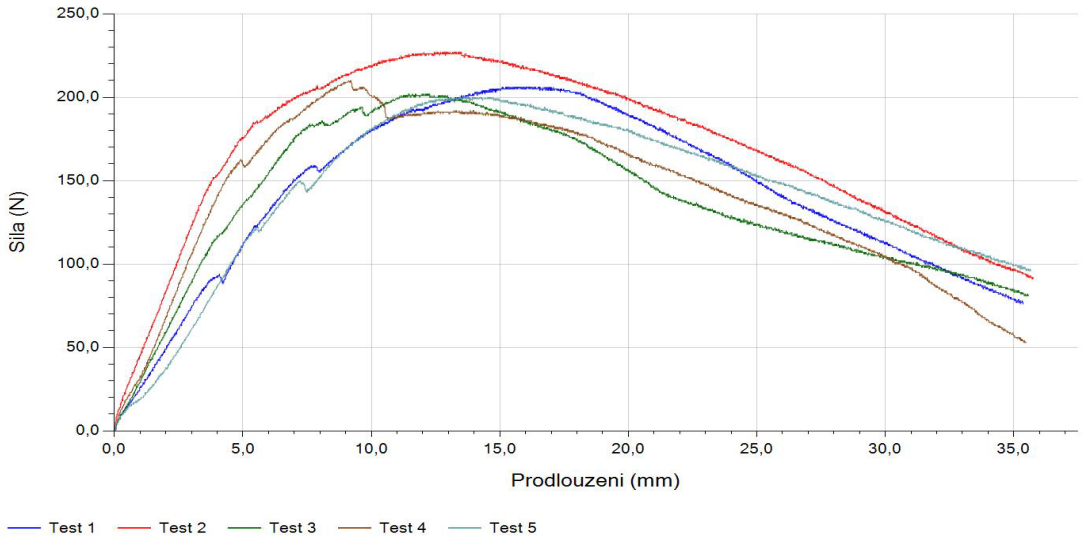
Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa Tensile strength in wet conditions after 28 days: ≥ 13.7 kPa	RAWLPLUG WX-T with RAWLPLUG KCX-105	R_{joint} 	Dry conditions 23°C and 50% relative humidity of air	**0.206** **0.227** **0.202** **0.210** **0.200**	**0.209**
Load / displacement graph:					
					

Table 23

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa Tensile strength in wet conditions after 28 days: ≥ 13.7 kPa	Wkret-met Klimas KMWHT with Wkret-met Klimas TD-060 washer (Ø 60 mm)	R_{panel} ⊗	Dry conditions 23°C and 50% relative humidity of air	**0.278** **0.331** **0.213** **0.198** **0.238**	**0.252**
Load / displacement graph:					

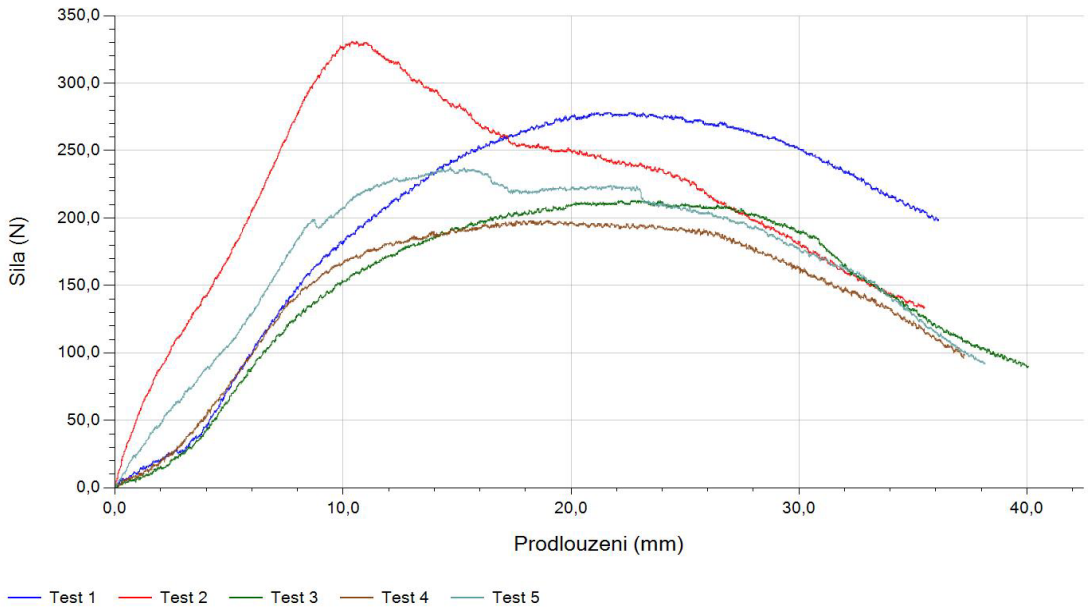
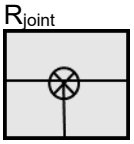


Table 24

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa Tensile strength in wet conditions after 28 days: ≥ 13.7 kPa	Wkret-met Klimas KMWHT with Wkret-met Klimas TD-060 washer (Ø 60 mm)	R_{joint} 	Dry conditions 23°C and 50% relative humidity of air	**0.190** **0.192** **0.195** **0.204** **0.204**	**0.197**
Load / displacement graph:					

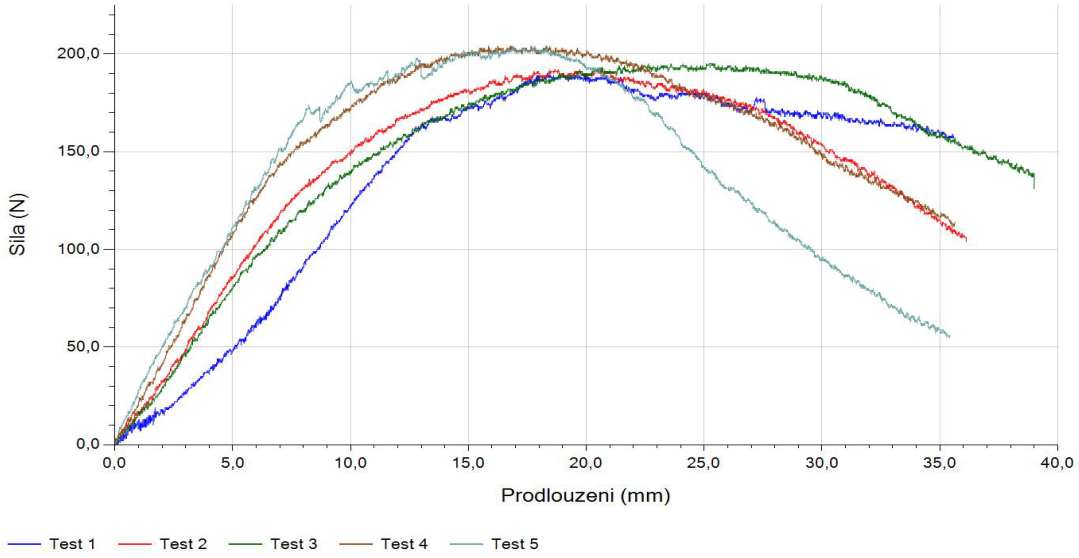
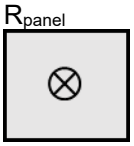


Table 25

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa Tensile strength in wet conditions after 28 days: ≥ 13.7 kPa	Ejot TKR 4.8 with Ejot SBV 6.5 washer	R_{panel} 	Dry conditions 23°C and 50% relative humidity of air	**0.483** **0.225** **0.241** **0.454** **0.231**	**0.327**
Load / displacement graph:					

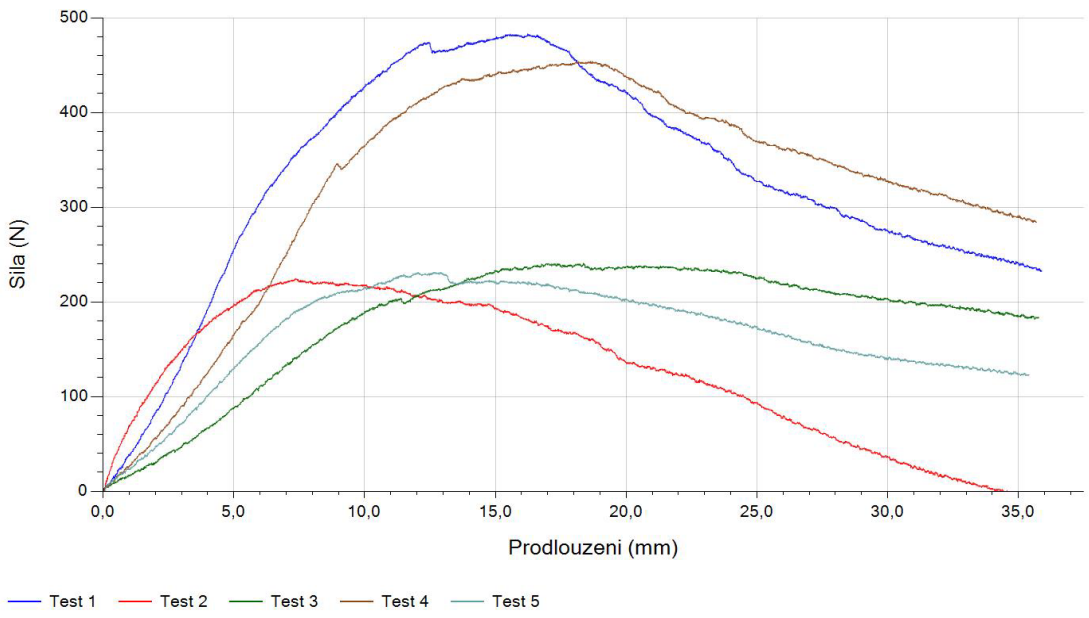
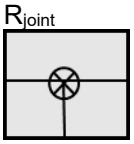


Table 26

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa Tensile strength in wet conditions after 28 days: ≥ 13.7 kPa	Ejot TKR 4.8 with Ejot SBV 6.5 washer	R_{joint} 	Dry conditions 23°C and 50% relative humidity of air	**0.545** **0.494** **0.385** **0.410** **0.358**	**0.438**
Load / displacement graph:					

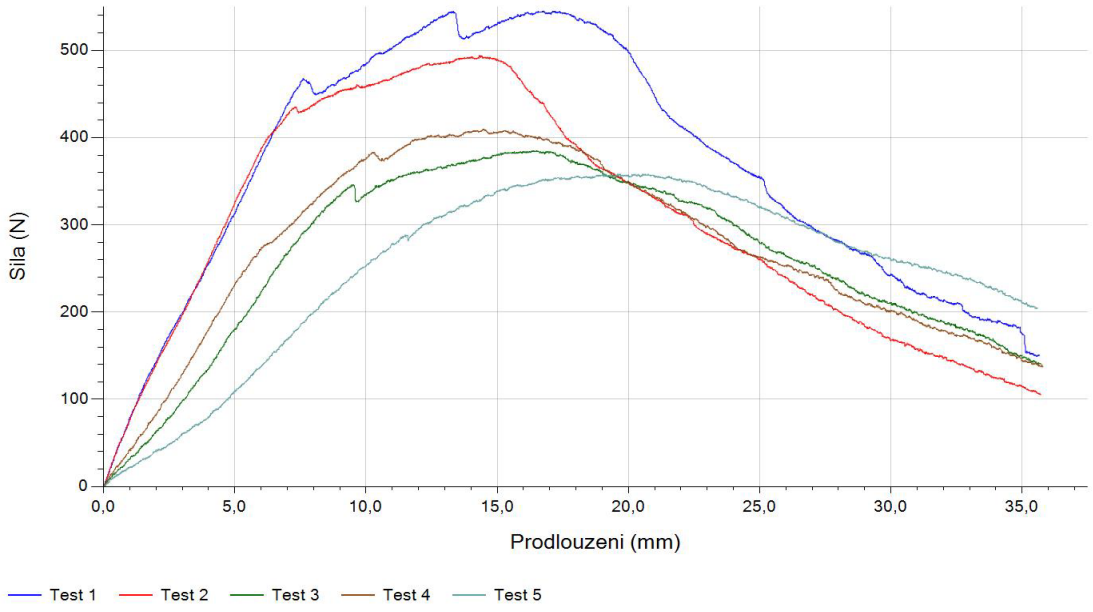
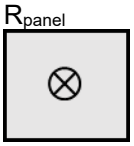


Table 27

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa Tensile strength in wet conditions after 28 days: ≥ 13.7 kPa	Ejotherm STR H	R_{panel} 	Dry conditions 23°C and 50% relative humidity of air	**0.266** **0.302** **0.319** **0.262** **0.273**	**0.284**
Load / displacement graph:					

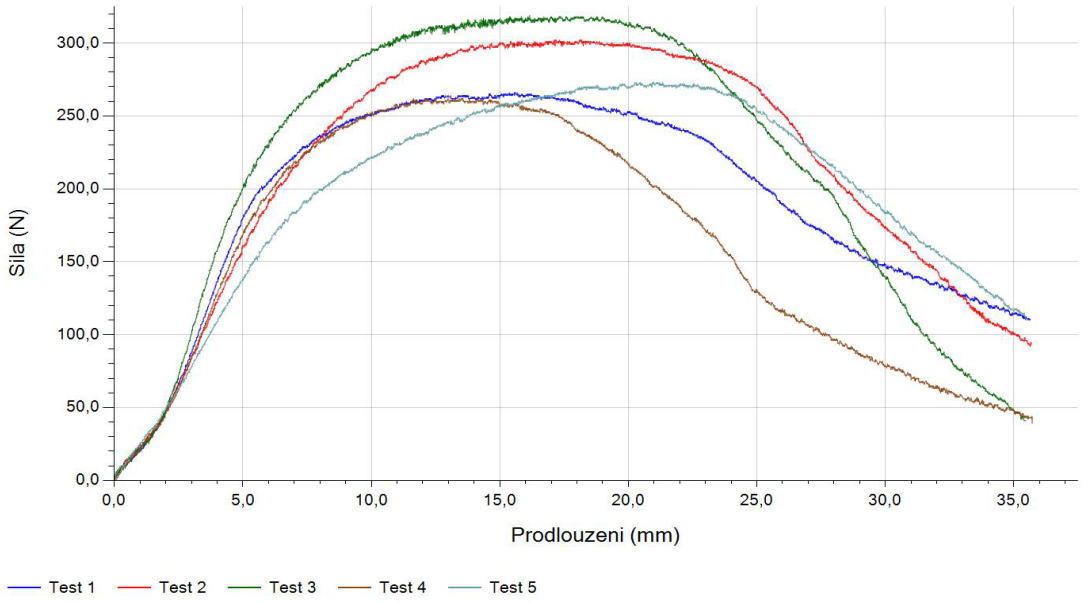
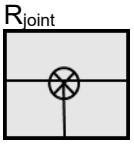
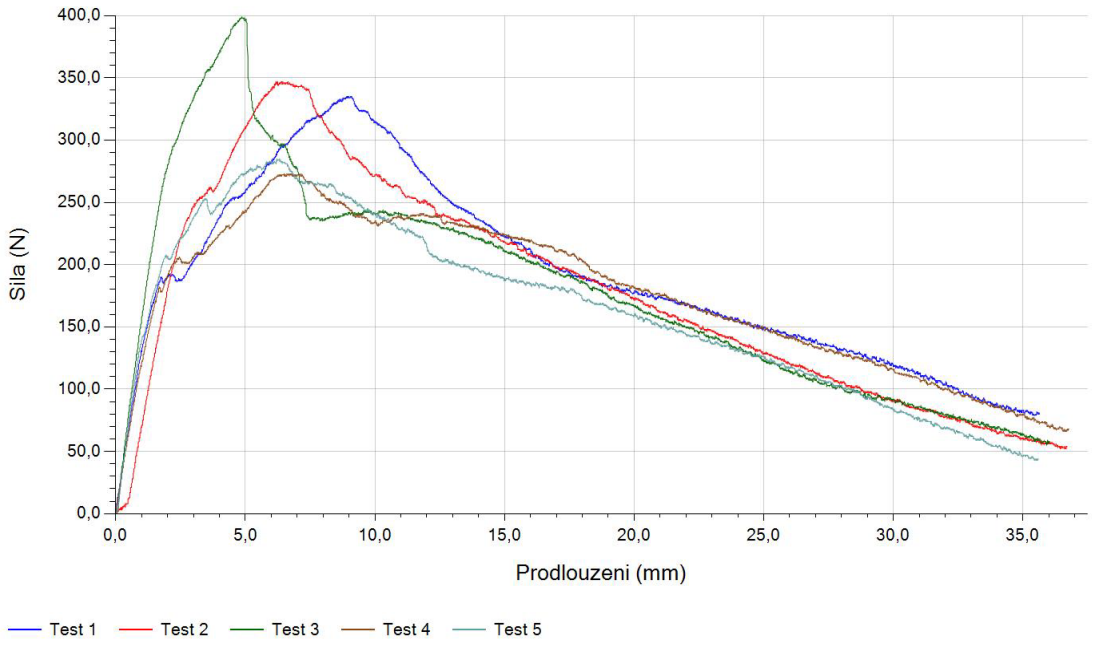


Table 28

Wind load resistance of ETICS					
Assessed by means of: **pull-through tests of fixings**					
ETICS configuration requirements:		**Tested position**	**Test conditions**	**Failure load per fixing [kN]**	
Insulation product	**Fixing**			**Individual**	**Mean**
Insulation product 1 (MW) Thickness: ≥ 40 mm Tensile strength in dry conditions: ≥ 14.8 kPa Tensile strength in wet conditions after 28 days: ≥ 13.7 kPa	Ejotherm STR H	R_{joint} 	Dry conditions 23°C and 50% relative humidity of air	**0.335** **0.347** **0.399** **0.273** **0.285**	**0.328**
Load / displacement graph:					



3.4.5 Impact resistance

Table 37

Impact resistance (products tested after hygrothermal cycles on the rig)				
EWIS configuration requirements:			Cracks	Maximum impact diameter [mm]
Base coat	Finishing coat	Reinforcement and key coat		
EWI-225 Premium Basecoat (4 mm)	EWI Pro Dash Receiver with pebble dash aggregate	Reinforcement: all of Table 1 in one layer Key coat and decorative coat in accordance with Table 1	No – 3 J No – 10 J	None – 3 J None – 10 J
	EWI-077 Nano Drex Silicone Render (all grain sizes)		Yes – 3 J Yes – 10 J	24 – 3 J 40 – 10 J
	EWI-078 Brick Effect Stencil Render (all grain sizes)		Yes – 3 J Yes – 10 J	None – 3 J 70 – 10 J
EWI-225 Premium Basecoat (6 mm)	EWI Pro Dash Receiver with pebble dash aggregate	Reinforcement 1, 2 or 3 in two layers Key coat in accordance with Table 1	No – 3 J No – 10 J	None – 3 J None – 10 J
	EWI-077 Nano Drex Silicone Render (all grain sizes)		No – 3 J Yes – 10 J	None – 3 J 28 – 10 J
	EWI-078 Brick Effect Stencil Render (all grain sizes)		No – 3 J Yes – 10 J	None – 3 J 33 – 10 J
EWI-225 Premium Basecoat (6 mm)	EWI Pro Dash Receiver with pebble dash aggregate	Reinforcement 1, 2 or 3 in one layer and one additional layer of Reinforcement 4 or 5 Key coat in accordance with Table 1	No – 3 J No – 10 J	None – 3 J None – 10 J
	EWI-077 Nano Drex Silicone Render (all grain sizes)		No – 3 J Yes – 10 J	None – 3 J 30 – 10 J
	EWI-078 Brick Effect Stencil Render (all grain sizes)		No – 3 J Yes – 10 J	None – 3 J 32 – 10 J

3.4.6 Bond strength after ageing of finishing coat not tested in the rig

Table 38

Bond strength after ageing of finishing coat tested in the rig						
EWIS configuration requirements:				Rupture type	Bond strength [MPa]	
Insulation product	**Base coat**	**Finishing coat**	**Reinforcement and key coat**		**Individual**	**Mean**
Insulation product 1	EWI-225 Premium Basecoat	EWI Pro Dash Receiver with pebble dash aggregate	In accordance with Table 1	In the insulation product	0.009	0.011
				In the insulation product	0.011	
				In the insulation product	0.012	
				In the insulation product	0.011	
				In the insulation product	0.011	
		EWI-077 Nano Drex Silicone Render (all grain sizes)	In accordance with Table 1	In the insulation product	0.009	0.010
				In the insulation product	0.011	
				In the insulation product	0.009	
				In the insulation product	0.011	
				In the insulation product	0.010	
		EWI-078 Brick Effect Stencil Render (all grain sizes)	In accordance with Table 1	In the insulation product	0.008	0.010
				In the insulation product	0.009	
				In the insulation product	0.011	
				In the insulation product	0.008	
				In the insulation product	0.012	

Table 29

Bond strength of finishing coat after freeze-thaw cycles						
ETICS configuration requirements:				**Rupture type**	**Bond strength [MPa]**	
Insulation product	**Base coat**	**Finishing coat**	**Reinforcement and key coat**		**Individual**	**Mean**
Insulation product 1	EWI-225 Premium Basecoat	EWI Pro Dash Receiver with pebble dash aggregate	In accordance with Table 1	In the insulation product	**0.013**	**0.011**
				In the insulation product	**0.010**	
				In the insulation product	**0.009**	
				In the insulation product	**0.011**	
				In the insulation product	**0.010**	

3.4.7 Pull-out strength of mechanical fixings

Table 30

Pull-out strength of screws			
Type of board substrate	**Type of screw**	**Maximum pull-out force [N]**	**Pull-out parameter (by EN 1382) [MPa]**
		Mean	**Mean**
Plywood according to EN 636 (≥ 20 mm)	Wkret-met Klimas KDH 6.0 × 140 mm	**3122**	**26.0**
	RAWLPLUG WX-48T 4.8 × 140 mm	**3218**	**33.5**
	Wkret-met Klimas KMWHT 6.0 × 140 mm	**2763**	**23.0**
	Ejot TKR 4.8 × 120 mm	**3043**	**31.7**
	Ejotherm STR H 6.0 × 140 mm	**2776**	**23.1**
Fiber-cement flat sheets according to EN 12467 + A2 (≥ 12.5 mm)	Wkret-met Klimas KDH 6.0 × 140 mm	**778**	**10.4**
	RAWLPLUG WX-48T 4.8 × 140 mm	**669**	**11.2**
	Wkret-met Klimas KMWHT 6.0 × 140 mm	**574**	**7.7**
	Ejot TKR 4.8 × 120 mm	**685**	**11.4**
	Ejotherm STR H 6.0 × 140 mm	**818**	**10.9**
OSB boards according to EN 300 (≥ 12.5 mm)	Wkret-met Klimas KDH 6.0 × 140 mm	**1152**	**15.4**
	RAWLPLUG WX-48T 4.8 × 140 mm	**985**	**16.4**
	Wkret-met Klimas KMWHT 6.0 × 140 mm	**700**	**9.3**
	Ejot TKR 4.8 × 120 mm	**1013**	**16.9**
	Ejotherm STR H 6.0 × 140 mm	**1091**	**14.6**

3.4.8 Base coat: performances

Table 41

Hardened base coat: Static modulus of elasticity, tensile strength and elongation at break				
EWIS configuration requirements:	Conditioning before the test	Static modulus of elasticity [MPa]	Tensile strength [MPa]	Elongation at break [%]
Base coat		Mean	Mean	Mean
EWI-225 Premium Basecoat	Initial state (dry condition)	1584	1.15	0.07
	After hygrothermal cycles	2310	2.35	0.10

3.4.9 Rendering system: tensile strength

Table 42

Render strip tensile test					
EWIS configuration requirements:		w_{rk} of the patterned side of the test specimen [mm]		w_{rk} of the flat side of the test specimen [mm]	
Base coat	Reinforcement	Warp direction	Weft direction	Warp direction	Weft direction
EWI-225 Premium Basecoat	1 × EWI Pro Fibreglass Mesh FGM-165	0.14	0.18	0.18	0.19
	EWI Pro Fibreglass Mesh – (160g) Masternet Classic (960) or MASTERNET CLASSIC 160	0.08	0.05	0.12	0.12
	EWI Pro Fibreglass Mesh – (165g) Masternet Pro (965)	0.05	0.10	0.11	0.13

3.5. Protection against noise (BWR 5)

Not applicable.

3.6. Energy economy and heat retention (BWR 6)

See Annex 1.

3.7. Sustainable use of natural resources (BWR 7)

No performance assessed.

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

4.1. System of assessment and verification of constancy of performance

According to UKAD No. 040089-00-0404 and Annex V of the Construction Products (Amendment etc.) (EU Exit) Regulations 2020 (as amended 2022) 305/2011 as brought into UK law and amended, the system of assessment and verification of constancy of performance (AVCP) 2+ applies for any use except for uses subject to regulations on reaction to fire.

For uses subject to regulations on reaction to fire the applicable AVCP systems regarding reaction to fire are 1 or 2+ depending on the conditions defined hereafter.

According to the Decision 97/556/EC as amended by Decision 2001/596/EC of the European Commission the systems of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) given in the following table apply.

Table 31

Product	Intended uses	Class(es) (reaction to fire)	Systems of assessment and verification of constancy of performance
External thermal insulation composite system/kits with rendering (EWIS)	in external wall subject to fire regulations	**A**[(1)] **– B**[(1)] **– C**[(1)]	**1**
		A[(2)] **– B**[(2)] **– C**[(2)] **A** (without testing) **D – E – F**	**2+**
	in external wall not subject to fire regulations	any	**2+**

(1) Materials for which the reaction to fire performance is susceptible to change during the production process

(2) Materials for which the reaction to fire performance is not susceptible to change during the production process

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/ registered address of the manufacturer of the product/ system
- Marking including date of Marking and the intended use as stated in the Designated technical specification
- Unique identification code of the product type
- The reference number of the Declaration of Performance
- The level or class of the performance declared
- The reference to the Designated technical specification applied
- UKTA number.

On behalf of the British Board of Agrément 	
Date of Issue: 10 November 2025	**Hardy Giesler** Chief Executive Officer

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ANNEX 1
Thermal transmittance of EWIS

$$U_c = U + \Delta U \; [W/m^2 \cdot K]$$

U_c is corrected thermal transmittance of the entire wall, including thermal bridges.
U is thermal transmittance of the entire wall, including EWIS, without thermal bridges.
ΔU is correction term of the thermal transmittance for mechanical fixing devices.

$$U = \frac{1}{R_{EWIS} + R_{substrate} + R_{se} + R_{si}} \; [W/m^2 \cdot K]$$

$$R_{EWIS} = R_{insulation} + R_{render} \; [m^2 \cdot K/W]$$

Where: $R_{insulation}$ = insulation thickness / thermal conductivity coefficient [m^2·K/W]

R_{render} = 0.02 [m^2·K/W]

$R_{substrate}$ thermal resistance of the substrate wall [m^2·K/W].
R_{se} external surface thermal resistance [m^2·K/W].
R_{si} internal surface thermal resistance [m^2·K/W].

$$\Delta U = \chi_P \times n + \sum \Psi i \times l_i \; [m^2 \cdot K/W]$$

Where:

χ_P is point thermal transmittance value of the anchor [W/K]. Specified by the ETA for anchors or as follows:

0.002 [W/K] — For anchors with a plastic screw/nail, stainless steel screw/nail with the head covered by at least 15 mm plastic material, or with a minimum 15 mm air gap at the head of the screw/nail.

0.004 [W/K] — For anchors with a galvanized carbon steel screw/nail with the head covered by at least 15 mm plastic material or a minimum 15 mm air gap at the head of the screw /nail.

0.008 [W/K] — For all other anchors (the worst case).

n is number of anchors per m^2. In case n is more than 16, the U_c calculation does not apply.

Ψ_i is linear thermal transmittance value of the profile [W/m·K].

l_i is length of the profile per m^2.

The influence of thermal bridges can also be calculated as described in EN ISO 10211. If there are more than 16 pcs of anchors per m^2 the declared χ_P must not be used. The EN ISO 10211 calculation must be used in such cases.

ANNEX 2
Thermal insulation product 1 – mineral wood boards (MW)

Mineral wool (MW)	
Generic type **Fibre orientation longitudinal to the faces of the panels (boards)**	
Requirements:	
Harmonised technical specification:	EN 13162
Direction of fibres:	Longitudinal to the faces of the panel (boards)
Composite insulation product:	No
Multi-layered insulation product	No
Facing:	No
Coating:	No
Maximum thermal conductivity coefficient λ_D:	maximum 0.065 W/(m·K)
Short-term water absorption W_p:	maximum 1.0 kg.m^{-2}
Long-term water absorption W_{lp}:	maximum 3.0 kg.m^{-2}
Length:	maximum ± 2.0 %
Width:	maximum ± 1.5 %
Thickness:	T5
Squareness:	maximum 5 mm/m
Flatness:	maximum 6 mm
Dimensional stability:	DS(70,90)
Reaction to fire of thermal insulation material:	A1
Water vapour permeability of thermal insulation product (water-vapour resistance factor) μ:	MU1
Tensile test perpendicular to the faces of the thermal insulation product – in dry conditions:	minimum 10 kPa

Mineral wool (MW)	
Specific type: **ROCKWOOL EXTERNAL WALL DD SLAB**	
Requirements:	
Harmonised technical specification:	EN 13162
Direction of fibres:	Longitudinal to the faces of the panel (boards)
Composite insulation product:	No
Multi-layered insulation product	Yes
Facing:	No
Coating:	No
Maximum thermal conductivity coefficient λ_D:	maximum 0.065 W/(m·K)
Short-term water absorption W_p:	maximum 1.0 kg.m^{-2}
Long-term water absorption W_{lp}:	maximum 3.0 kg.m^{-2}
Length:	maximum ± 2.0 %
Width:	maximum ± 1.5 %
Thickness:	T5
Squareness:	maximum 5 mm/m
Flatness:	maximum 6 mm
Reaction to fire of thermal insulation material:	A1
Water vapour permeability of thermal insulation product (water-vapour resistance factor) μ:	MU1
Tensile test perpendicular to the faces of the thermal insulation product – in dry conditions:	minimum 10 kPa

Mineral wool (MW)	
Specific type: **ROCKWOOL FRONTROCK PLUS**	
Requirements:	
Harmonised technical specification:	EN 13162
Direction of fibres:	Longitudinal to the faces of the panel (boards)
Composite insulation product:	No
Multi-layered insulation product	No
Facing:	No
Coating:	No
Maximum thermal conductivity coefficient λ_D:	maximum 0.065 W/(m·K)
Short-term water absorption W_p:	maximum 1.0 $kg.m^{-2}$
Long-term water absorption W_{lp}:	maximum 3.0 $kg.m^{-2}$
Thickness:	T5
Dimensional stability:	DS(70,90)
Reaction to fire of thermal insulation material:	A1
Water vapour permeability of thermal insulation product (water-vapour resistance factor) μ:	MU1
Tensile test perpendicular to the faces of the thermal insulation product – in dry conditions:	minimum 10 kPa

Mineral wool (MW)	
Specific type: **Rocksilk(1) EWI Slab**	
Requirements:	
Harmonised technical specification:	EN 13162
Direction of fibres:	Longitudinal to the faces of the panel (boards)
Composite insulation product:	No
Multi-layered insulation product	No
Facing:	No
Coating:	No
Maximum thermal conductivity coefficient λ_D:	maximum 0.065 W/(m·K)
Short-term water absorption W_p:	maximum 1.0 kg.m^{-2}
Long-term water absorption W_{lp}:	maximum 3.0 kg.m^{-2}
Thickness:	T5
Reaction to fire of thermal insulation material:	A1
Water vapour permeability of thermal insulation product (water-vapour resistance factor) μ:	MU1
Tensile test perpendicular to the faces of the thermal insulation product – in dry conditions:	minimum 10 kPa

(1) Registered trademark

Mineral wool (MW)	
Specific type: **COVEROCK -R90**	
Requirements:	
Harmonised technical specification:	EN 13162
Direction of fibres:	Longitudinal to the faces of the panel (boards)
Composite insulation product:	No
Multi-layered insulation product	No
Facing:	No
Coating:	No
Maximum thermal conductivity coefficient λ_D:	maximum 0.065 W/(m·K)
Short-term water absorption W_p:	maximum 1.0 kg.m^{-2}
Long-term water absorption W_{lp}:	maximum 3.0 kg.m^{-2}
Thickness:	T5
Dimensional stability:	DS(70,-) DS(70,90)
Reaction to fire of thermal insulation material:	A1
Water vapour permeability of thermal insulation product (water-vapour resistance factor) μ:	MU1
Tensile test perpendicular to the faces of the thermal insulation product – in dry conditions:	minimum 10 kPa

Mineral wool (MW)	
Specific type: **BOERNER FACADE 34**	
Requirements:	
Harmonised technical specification:	EN 13162
Direction of fibres:	Longitudinal to the faces of the panel (boards)
Composite insulation product:	No
Multi-layered insulation product	No
Facing:	No
Coating:	No
Maximum thermal conductivity coefficient λ_D:	maximum 0.065 W/(m·K)
Short-term water absorption W_p:	maximum 1.0 kg/m^2
Long-term water absorption W_{lp}:	maximum 3.0 kg/m^2
Thickness:	T5
Dimensional stability:	DS(70,90)
Reaction to fire of thermal insulation material:	A1
Water vapour permeability of thermal insulation product (water-vapour resistance factor) μ:	MU1
Tensile test perpendicular to the faces of the thermal insulation product – in dry conditions:	minimum 10 kPa

Mineral wool (MW)	
Specific type: **BOERNER FACADE 35**	
Requirements:	
Harmonised technical specification:	EN 13162
Direction of fibres:	Longitudinal to the faces of the panel (boards)
Composite insulation product:	No
Multi-layered insulation product	No
Facing:	No
Coating:	No
Maximum thermal conductivity coefficient λ_D:	maximum 0.065 W/(m·K)
Short-term water absorption W_p:	maximum 1.0 kg/m^2
Long-term water absorption W_{lp}:	maximum 3.0 kg/m^2
Thickness:	T5
Dimensional stability:	DS(70,90)
Reaction to fire of thermal insulation material:	A1
Water vapour permeability of thermal insulation product (water-vapour resistance factor) μ:	MU1
Tensile test perpendicular to the faces of the thermal insulation product – in dry conditions:	minimum 10 kPa

ANNEX 3
Mechanical fixing device – screws

Metal screws for fixing external thermal insulation composite systems with rendering								
Specific type(s)								
Specification	**Name**	**Screw diameter [mm]**	**$M_{y,k}$ [N.mm]**	**$f_{ax,k}$ [MPa]**	**$f_{head,k}$ [MPa]**	**$f_{tens,k}$ [kN]**	**$f_{tor,k}$ [N.mm]**	**Additional plate**
EN 14592 : 2008 + A1 : 2012	Wkret-met Klimas KMH	≥ 6	14815	12.54	21.06	10.12	9.57	Klimas TD-060 or Klimas TDP-060

Metal screws for fixing external thermal insulation composite systems with rendering			
Specific type(s)			
Specification	**Name**	**Screw diameter [mm]**	**Additional plate**
ETA-09/0346 29/06/2018	RAWLPLUG R-WW-T	≥ 5	RAWLPLUG KC
	RAWLPLUG WX-T	≥ 5	RAWLPLUG KC or RAWLPLUG KCX-105
ETA-18/0817 07/06/2023	Wkret-met Klimas KMWHT	≥ 6	Klimas TD-060 or Klimas TDP-060
ETA-07/0013 04/04/2022	Ejot TKR 4.8	≥ 5	Ejot SBH-T 65/25
ETA-20/0670 21/03/2024	Ejotherm STR H	≥ 6	Not to be used (plate is already part of the screw)

ANNEX 4
Reinforcement – glass fibre mesh

Specific type: EWI Pro Fibreglass Mesh FGM – 165	
Requirements:	
Harmonised technical specification:	040016-00-0404 or 040016-01-0404 or superseding harmonised technical specification
Mass per unit area	0.152 to 0.168 kg.m^{-2}
Mesh size:	in warp direction: 3.5 to 5.5 mm in weft direction: 3.5 to 5.5 mm
Residual tensile strength retained after alkaline conditioning:	in warp direction: minimum 20 N/mm in weft direction: minimum 20 N/mm
Residual tensile strength after alkaline ageing	in warp direction: minimum 50% in weft direction: minimum 50%

Specific type: EWI Pro Fibreglass Mesh – (160g) Masternet Classic (960) or MASTERNET CLASSIC 160	
Requirements:	
Harmonised technical specification:	040016-00-0404 or 040016-01-0404 or superseding harmonised technical specification
Mass per unit area	0.152 to 0.168 kg.m^{-2}
Mesh size:	in warp direction: 4.6 to 5.6 mm in weft direction: 3.7 to 4.7 mm
Residual tensile strength retained after alkaline conditioning:	in warp direction: minimum 20 N/mm in weft direction: minimum 20 N/mm
Residual tensile strength after alkaline ageing	in warp direction: minimum 50% in weft direction: minimum 50%

Specific type: EWI Pro Fibreglass Mesh – (165g) Masternet Pro (965)	
Requirements:	
Harmonised technical specification:	040016-00-0404 or 040016-01-0404 or superseding harmonised technical specification
Mass per unit area	0.160 to 0.170 kg.m^{-2}
Mesh size:	in warp direction: 4.2 to 5.2 mm in weft direction: 4.2 to 5.2 mm
Residual tensile strength retained after alkaline conditioning:	in warp direction: minimum 20 N/mm in weft direction: minimum 20 N/mm
Residual tensile strength after alkaline ageing	in warp direction: minimum 50% in weft direction: minimum 50%

Specific type: **EWI Pro - VERTEX R267 – (316g)**	
Requirements:	
Harmonised technical specification:	040016-00-0404 or 040016-01-0404 or superseding harmonised technical specification
Mass per unit area	0.283 to 0.345 kg.m^{-2}
Mesh openings:	in warp direction: 7.4 to 8.4 mm in weft direction: 6.0 to 7.0 mm
Residual tensile strength retained after alkaline conditioning:	in warp direction: minimum 20 N/mm in weft direction: minimum 20 N/mm
Residual tensile strength after alkaline ageing	in warp direction: minimum 50% in weft direction: minimum 50%

Specific type: **EWI Pro Panzer Fibreglass Mesh (Eurowek) – (330g)**	
Requirements:	
Harmonised technical specification:	040016-00-0404 or 040016-01-0404 or superseding harmonised technical specification
Mass per unit area	0.313 to 0.347 $kg.m^{-2}$
Mesh size:	in warp direction: 8.0 to 10.0 mm in weft direction: 5.0 to 7.0 mm
Residual tensile strength retained after alkaline conditioning:	in warp direction: minimum 20 N/mm in weft direction: minimum 20 N/mm
Residual tensile strength after alkaline ageing	in warp direction: minimum 50% in weft direction: minimum 50%

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