Deutsches Institut für Bautechnik

Public-law institution jointly founded by the federal states and the Federation

European Technical Assessment Body for construction products

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European Technical Assessment ETA-10/0436 of 25 February 2025

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the European Technical Assessment:	Deutsches Institut für Bautechnik
Trade name of the construction product	Capatect WDVS "A" mit Unterputz Capatect ArmaReno 700, Unterputz Capatect Klebe- und Armierungsmasse 133 Leicht und Unterputz Capatect Klebe- und Armierungsmasse 186 M
Product family to which the construction product belongs	Product area code: 4 External Thermal Insulation Composite System with rendering on mineral wool intended for use on building walls
Manufacturer	CAPAROL Farben Lacke Bautenschutz GmbH Roßdörfer Straße 50 64372 Ober-Ramstadt DEUTSCHLAND
Manufacturing plant	CAPAROL Farben Lacke Bautenschutz GmbH Roßdörfer Straße 50 64372 Ober-Ramstadt DEUTSCHLAND
This European Technical Assessment contains	45 pages including 6 annexes which form an integral part of this assessment
This European Technical Assessment is issued in accordance with Regulation (EU) No. 305/2011, on the basis of	040083-00-0404
This version replaces	ETA-10/0436 issued on 11 June 2024

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Specific Part

1 Technical description of the product

This product is an ETICS (External Thermal Insulation Composite System) with rendering - a kit comprising components which are factory-produced by the manufacturer or component suppliers. It's made up on site from these. The ETICS manufacturer is ultimately responsible for the ETICS.

The ETICS kit comprises a prefabricated insulation product of mineral wool (MW) to be bonded and if necessary additional mechanically fixed onto a wall. The methods of fixing and the relevant components are specified in annex 1.

The insulation product is faced with a rendering system consisting of one base and finishing coat (site applied), the base coat contains reinforcement. The rendering system is applied directly to the insulating panels, without any air gap or disconnecting layer.

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

2 Specification of the intended use in accordance with the applicable European assessment Document

The performances in Section 3 can only be assumed if the ETICS is used in accordance with the specifications and under the boundary conditions specified in Annexes 2 to 6.

The verifications and assessment methods on which this ETA is based lead to the assumption of a working life of the ETICS "Capatect WDVS "A" mit Unterputz Capatect ArmaReno 700, Unterputz Capatect Klebe- und Armierungsmasse 133 Leicht und Unterputz Capatect Klebe- und Armierungsmasse 186 M" of at least 25 years. The indications given on the working life cannot be interpreted as a guarantee given by the manufacturer, but are to be regarded only as a means for choosing the right products in relation to the assumed economically reasonable working life of the works.

For use, maintenance and repair, the finishing coat shall normally be maintained in order to fully preserve the ETICS performance. Maintenance includes at least:

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

Necessary repairs are to be carried out as soon as the need has been identified.

The information on use, maintenance and repair is given in the manufacturer’s technical documentation.

It is the responsibility of the manufacturer 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

3.1 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire of the ETICS	(see annex 2) Class according to EN 13501-1
Reaction to fire of the MW insulation product - Cross heat of combustion for the MW insulation product EN ISO 1716 - Apparent density EN 1602 [kg/m³]	(see annex 2) Class A1 according EN 13501-1 Value [MJ/kg] Value [kg/m^3]
Facade fire performance	no performance assessed
Propensity to undergo continuous smouldering of ETICS	no performance assessed

3.2 Hygiene, health and environment (BWR 3)

Essential characteristic	Performance
Release of dangerous substances	no performance assessed
Water absorption Base coat after 1 hour after 24 hours Rendering system after 1 hour after 24 hours MW insulation product after 24 hours	(see annex 3.1) Average [kg/m²] Average [kg/m²] Average [kg/m²] Average [kg/m²] Maximum value 3.0 kg/m²
Water-tightness of the ETICS: Hygrothermal behaviour on the test wall	Pass without defects
Water-tightness of the ETICS: Freeze/thaw behaviour	The water absorption of the rendering system with all finishing coats - except "Capatect Fassadenputz Fein" and "Capatect Sylitol Fassadenputz K/R" each with the base coat “Capatect Klebe- und Armierungsmasse 186 M” and “Capatect ArmaReno 700” with finishing coat "Capatect Fassadenputz K" - is less than 0.5 kg/m² after 24 hours. The ETICS with the base coat "Capatect Klebe- und Armierungsmasse 186 M" and the finishing coats "Capatect Fassadenputz Fein" and "Capatect Sylitol Fassadenputz K/R" as well as the base coat "Capatect ArmaReno 700" with the finishing coat "Capatect Fassadenputz K" has been assessed as freeze/thaw resistant according to the simulated method.
Impact resistance	(see annex 3.3) Category

Essential characteristic	Performance	
Water vapour permeability - Rendering system	(see annex 3.4) s_d value [m]	
- MW insulation product	μ = 1	Thickness of the insulation product 400 mm

3.3 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Bond strength between base coat and MW insulation product	(see annex 4.1) - Minimal value/ average [kPa], - Minimal value/ average [kPa],
between adhesive and substrate	(see annex 4.2) - Minimal value [kPa] Initial state (dry conditions) - Minimal value/ average [kPa] after 2 d immersion in water, 2 h drying - Minimal value/ average [kPa] after 2 d immersion in water, 7 d drying
between adhesive and MW insulation	(see annex 4.3) - Minimal value [kPa] Initial state (dry conditions) - Minimal value/ average [kPa] after 2 d immersion in water, 2 h drying - Minimal value/ average [kPa] after 2 d immersion in water, 7 d drying
Fixing strength (displacement test)	Test not required therefore no limitation of ETICS length required.
Wind load resistance of ETICS pull-through test of fixing static foam block test	(see annex 4.4) - R_{panel} [kN/fixing], - R_{joint} [kN/fixing], - Plate diameter of anchor ≥ 60 mm, ≥ 90 mm res. ≥ 140 mm - plate stiffness ≥ 0.3 kN/mm² - load resistance of the anchor plate ≥ 1.0 kN
Tensile strength perpendicular to the faces	
in dry conditions	
MW panel	$\sigma_{mt} \geq 14$ kPa
MW panel	$\sigma_{mt} \geq 5$ kPa
MW lamella	$\sigma_{mt} \geq 80$ kPa
in wet conditions	
- series 2	≥ 33 % of average value in dry conditions
- series 3	≥ 50 % of average value in dry conditions

Essential characteristic	Performance
shear strength of the ETICS MW panel $\sigma_{mt} \geq 14$ kPa, MW lamella MW panel $\sigma_{mt} \geq 5$ kPa	 $20 \leq f_{\tau k} \leq 100$ kPa $6 \leq f_{\tau k} \leq 100$ kPa
shear modulus of the ETICS MW panel $\sigma_{mt} \geq 14$ MPa, MW lamella MW panel $\sigma_{mt} \geq 5$ MPa	 $1.0 \leq G_m \leq 2.0$ MPa $0.1 \leq G_m \leq 2.0$ MPa
Render strip tensile test	(see annex 4.5) crack width w_{rk} [mm]
Bond strength after ageing finishing coat tested on the rig finishing coat not tested on the rig	(see annex 4.6) Minimal value/ average [kPa] Minimal value/ average [kPa]
Tensile strength of the glass fibre mesh in the as-delivered state	(see annex 4.7) Average [N/mm]
Residual tensile strength of the glass fibre mesh after aging	(see annex 4.7) Average [N/mm]
Relative residual tensile strength of the glass fibre mesh after aging	(see annex 4.7) Average [%]
Elongation of the glass fibre mesh in the as-delivered state	(see annex 4.7) Average [%]
Elongation of the glass fibre mesh after aging	(see annex 4.7) Average [%]

3.4 Protection against noise (BWR 5)

Essential characteristic	Performance
Airborne sound insulation of ETICS	no performance assessed
Dynamic stiffness of the MW insulation product	no performance assessed
Air flow resistance of the MW insulation product	no performance assessed

3.5 Energy economy and heat retention (BWR 6)

Essential characteristic	Performance
Thermal resistance of ETICS	(see annex 5) Calculated value or measurement value R [(m² ·K)/W]
Thermal transmittance of ETICS	(see annex 5) Calculated value or measurement value U [W/(m² ·K)]

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

In accordance with EAD No. 040083-00-0404 the applicable European legal act is: 97/556/EC changed by 2001/596/EC.

The systems to be applied are:

Product	Intended use	Levels or classes (Reaction to fire)	Systems
"Capatect WDVS "A" mit Unterputz Capatect ArmaReno 700, Capatect Klebe- und Armierungsmasse 133 Leicht und Capatect Klebe- und Armierungsmasse 186 M"	ETICS in external wall subject to fire regulations	A1 (1), A2 (1), B (1), C (1)	1
		A1 (2), A2 (2), B (2), C (2), D, E, (A1 to E) (3), F	2+
	ETICS 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 European Assessment Document

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at Deutsches Institut für Bautechnik.

Issued in Berlin on 25 February 2025 Deutsches Institut für Bautechnik.

Anja Rogsch
Head of section

beglaubigt:
Klette

Annex 1

Composition of the ETICS

	Components National application documents shall be taken into account	**Coverage [kg/m²]**	**Thickness [mm]**
Insulation material with associated method of fixing	**Bonded ETICS:** • **Insulation product** factory-prefabricated mineral wool (MW) product* – MW lamella	–	≤ 400
	• **Adhesives** – **Capatect Klebe- und Armierungsmasse 186 M** (cement based powder requiring addition of 22 – 26 % of water)	3.5 to 4.5 (powder)	–
	– **Capatect Klebe- und Armierungsmasse 133 Leicht** (cement based powder requiring addition of 36 – 40 % of water)	3.5 to 4.5 (powder)	–
	– **Capatect Klebe- und Spachtelmasse 190** (cement based powder requiring addition of 20 – 24 % of water)	about 4.0 (powder)	–
	– **Capatect Dämmkleber 185** (cement based powder requiring addition of about 20 % of water)	4.0 to 5.0 (powder)	–
	– **Capatect ArmaReno 700** (cement based powder requiring addition of 20 – 25 % of water)	4.0 to 5.0 (powder)	–
	– **Capatect Klebe- und Armierungsmasse 131 SL** (cement based powder requiring addition of 40 – 43 % of water)	3.0 to 4.5 (powder)	–
	– **Capatect Klebe- und Armierungsmasse 186 M Sprinter** (cement based powder requiring addition of about 22 % of water)	3.0 bis 5.0 (powder)	–
	Mechanically fixed ETICS with profiles and supplementary adhesive: • **Insulation product** factory-prefabricated mineral wool (MW) product* – MW panel, $\sigma_{mt} \geq 14$ kPa****	–	60 to 200
	• **Supplementary adhesive** (equal to bonded ETICS)		
	• **Profiles (Annex 6)** – Capatect-Halteleiste ALU – Capatect-Verbindungsleiste ALU Aluminium (AL) – profiles EN AW-6060 T66 nach EN 755-2:2008		
	• **Anchors for profiles** – WS 8 L – ejotherm SDK U – SDF-K plus – ejotherm NK U		
	• **Anchors for insulation product if necessary** (equal to mechanically fixed ETICS with anchors and supplementary adhesive, see below)		

	Components National application documents shall be taken into account	**Coverage [kg/m²]**	**Thickness [mm]**
Insulation material with associated method of fixing	**Mechanically fixed ETICS with anchors and supplementary adhesive:** • **Insulation product** factory-prefabricated mineral wool (MW) product* – MW panel – MW lamella • **Supplementary adhesive** (equal to bonded ETICS) • **Anchors for insulation product** all anchors with ETA according to EAD330196-01-0604[1]	 – – 	 50 to 340 60 to 200
Base coat	**Capatect ArmaReno 700** **Capatect Klebe- und Armierungsmasse 133 Leicht** **Capatect Klebe- und Armierungsmasse 186 M** Identical with the equally named adhesives given above.	6.0 to 10.5 5.5 to 11.0 6.0 to 7.5	4.0 to 7.0 5.0 to 11.0 4.0 to 5.0
Glass fibre mesh	**Capatect Gewebe 650** Alkali- and slide-resistant glass fibre mesh with mass per unit area of about 160 g/m² and mesh size of about 4.0 mm x 4.0 mm **Capatect Gewebe 666** Alkali- and slide-resistant glass fibre mesh with mass per unit area of about 160 g/m² and mesh size of about 6.0 mm x 6.0 mm **Capatect Panzergewebe 652** (implemented in addition to the standard mesh to improve the impact resistance) Alkali- and slide-resistant glass fibre mesh with mass per unit area of about 330 g/m² and mesh size of about 6.0 mm x 6.0 mm	– – –	– – –
Key coat	Ready to use pigmented liquid - styrol acrylate binder **Putzgrund 610** For the compatibility with the finishing coats see below.	about 0.20 l/m²	–
Finishing coat	**All finishing coats to use with key coat "Putzgrund 610" if applicable:***** **<u>Applicable with all base coats</u>** • Cement based powder requiring addition of 28 – 44 % of water: **Capatect Mineral-Leichtputz R**** (particle size 2.0 to 3.0 mm) **Capatect Mineral-Leichtputz K**** (particle size 1.0 to 5.0 mm)	 2.3 to 4.5 2.0 to 4.0	 regulated by particle size

[1] EAD330196-01-0604 Plastic anchors made of virgin or non-virgin material for fixing of external thermal insulation composite systems with rendering (and previous versions)

	Components National application documents shall be taken into account	**Coverage [kg/m²]**	**Thickness [mm]**
Finishing coat	• Cement based powder requiring addition of 20 – 24 % of water:		
	Capatect Mineralputz R** (particle size 2.0 to 3.0 mm)	about 3.0	regulated by particle size
	Capatect Mineralputz K** (particle size 2.0 to 3.0 mm)	about 3.0	
	Capatect Feinspachtel 195	4.0 to 6.0	2.0 to 3.0
	Only applicable with base coat "Capatect ArmaReno 700" • Cement based powder requiring addition of 20 – 25 % of water:		
	Capatect ArmaReno 700 (particle size 2,0 bis 3,0 mm)	3,0 to 4,5	regulated by particle size
	• Ready to use pastes – acrylate binder:		
	Capatect Fassadenputz K** (particle size 1.5 mm)	about 2,5	
	Only applicable with base coats "Capatect Klebe- und Armierungsmasse 133 Leicht" and "Capatect Klebe- und Armierungsmasse 186 M" • Cement based powder requiring addition of about 40 % of water:		
	Capatect Modellier- und Spachtelputz 134	1.6 to 4.0	2.0 to 5.0
	Only applicable with base coats "Capatect Klebe- und Armierungsmasse 133 Leicht" • Cement based powder requiring addition of about 40 % of water		
	Capatect-Edelkratzputz	13.0 to 16.0	6.0 to 12.0
	Only applicable with base coat "Capatect Klebe- und Armierungsmasse 186 M"		
	• Ready to use pastes – acrylate binder:		
	Capatect Fassadenputz R** (particle size 1.5 to 3.0 mm)	2.8 to 3.6	regulated by particle size
	Capatect Fassadenputz K** (particle size 1.5 to 3.0 mm)	2.7 to 4.3	
	• Ready to use pastes – acrylate/silicone resin emulsion:		
	Capatect AmphiSilan Fassadenputz R** (particle size 2.0 to 3.0 mm)	2.5 to 3,5	
	Capatect AmphiSilan Fassadenputz K** (particle size 1.5 to 3.0 mm)	2.5 to 4.1	
	• Ready to use paste – vinyl acetate ethylene binder:		
	Capatect Fassadenputz Fein	3.0 to 6.0	2.0 to 4.0
	• Ready to use pastes – silicate/styrol acrylate binder:		
	Capatect Sylitol Fassadenputz R** (particle size 2.0 to 3.0 mm)	2.5 to 4.0	regulated by particle size
	Capatect Sylitol Fassadenputz K** (particle size 1.5 to 3.0 mm)	2.5 to 4.0	
	• Ready to use pastes – silicate/organic hybrid dispersion:		
	Capatect ThermoSan Fassadenputz NQG K** (particle size 1.0 to 4.0 mm)	1.3 to 3.2	1.0 to 4.0

	Components National application documents shall be taken into account	**Coverage [kg/m²]**	**Thickness [mm]**
Finishing coat	• Ready to use pastes – polymer dispersion binder: **Capatect Putz 622 W SilaCryl** (particle size 1.5 mm)	2.5 to 3.5	1.3 to 1.7
	• Ready to use pastes – styrol acrylate/ vinylic binder: **Capatect AmphiSilan Fassadenputz FEIN** **(**particle size 1.0 mm**)**	1.4 to 2.0	1.0 to 1.5
	• Ready to use pastes – styrol acrylate/ vinylic binder: **Capatect AmphiSilan Fassadenputz K10** (particle size 1.0 mm)	1.4 to 2.0	1.0 to 1.5
	• Ready to use pastes – styrol acrylate binder **Capatect Taloché T15** (particle size 1,5 mm)	about 2.5	1.5
	• Ready to use pastes – synthetic resin dispersion **Capatect AmphiSilan Fassadenputz K12** (particle size 1,2 mm)	1.8 to 2.0	1.2
	• Ready to use paste – styrol acrylate binder – associated with synthetic briquettes: **Original Meldorfer with** **Meldorfer Ansatzmörtel 080**	4.0 to 5.0 3.0 to 4.0	≤ 6.0 1.0 to 4.0
Ancillary material	Remain under the manufacturer's responsibility.		

* Factory-prefabricated panels and lamella made of mineral wool (MW) to EN 13162 with the following designation code shall be used, provided that the manufacturer and the trade name of the MW are deposited with the DIBt
MW – EN 13162 – T5 – DS(T+) – WS – WL(P) – MU1

** K / R indicates different structures of the finishing coats.

*** The instruction to the installer concerning the use of a key coat remains the responsibility of the manufacturer.

**** Thermal insulation materials for mechanically fixed ETICS with profiles must circumferentially at the edges, 24 mm from the inner surface, get an approx. 3 mm wide and 13 to 18 mm deep groove cut-in at the factory

Deutsches Institut für Bautechnik DIBt

Annex 2

Safety in case of fire (BWR 2)

2.1 Reaction to fire

Configurations	Organic content	Flame retardant content	Class according to EN 13501-1
all base coats	max. 3.9 %	no flame retardant	A2 - s1,d0
mineral wool	Class A1 according to EN 13501-1	no flame retardant	
profile	-	-	
anchors	-	-	
Rendering system Base coat with finishing coat and compatible key coat indicated in annex 1:			
Capatect Mineral-Leichtputz R	max. 3.7 %	no flame retardant	
Capatect Mineral-Leichtputz K			
Capatect Mineralputz R			
Capatect Mineraputz K			
Capatect Feinspachtel 195			

Configurations	Organic content	Flame retardant content	Class according to EN 13501-1
Base coat "Capatect ArmaReno 700"	max. 2.9 %	no flame retardant	A2 - s1,d0
mineral wool	Class A1 according to EN 13501-1	no flame retardant	
profile	-	-	
anchors	-	-	
Rendering system Base coat with finishing coat and compatible key coat indicated in annex 1:			
Capatect ArmaReno 700	max. 2,9 %	no flame retardant	
Capatect Fassadenputz K	max. 8.0 %		

Configurations	Organic content	Flame retardant content	Class according to EN 13501-1
Base coat "Capatect Klebe- und Armierungsmasse 133 Leicht"	max. 3.9 %	no flame retardant	A2 - s1,d0
mineral wool	Class A1 according to EN 13501-1	no flame retardant	
profile	-	-	
anchors	-	-	
Rendering system Base coat with finishing coat and compatible key coat indicated in annex 1:			
Capatect Modellier- und Spachtelputz 134	max. 3.7 %	no flame retardant	
Capatect Edelkratzputz			

Configurations	Organic content	Flame retardant content	Class according to EN 13501-1
Base coat "Capatect Klebe- und Armierungsmasse 186 M"	max. 2.3 %	no flame retardant	A2 - s1,d0
mineral wool	Class A1 according to EN 13501-1	no flame retardant	
profile	-	-	
anchors	-	-	
Rendering system Base coat with finishing coat and compatible key coat indicated in annex 1:			
Capatect Fassadenputz R	max. 8.9 %	no flame retardant	
Capatect Fassadenputz K			
Capatect Fassadenputz Fein			
Capatect AmphiSilan Fassadenputz R			
Capatect AmphiSilan Fassadenputz K	max. 8.4 %	min. 3.0 %	
Capatect AmphiSilan Fassadenputz K12	max. 8.9 %	no flame retardant	
Capatect ThermoSan Fassadenputz NQG K			
Capatect Sylitol Fassadenputz R	max. 6.2 %		
Capatect Sylitol Fassadenputz K			
Capatect Putz 622 W SilaCryl	max. 8.7 %		
Capatect AmphiSilan Fassadenputz FEIN			
Capatect AmphiSilan Fassadenputz K10			
Capatect Modellier- und Spachtelputz 134	max. 3.7 %		
Capatect Taloché T15	max. 4,3 %		
Original Meldorfer with Meldorfer Ansatzmörtel 080	max. 9.2 % max. 9.9 %	min. 9.0 % no flame retardant	

2.2 Cross heat of combustion for the MW insulation product EN ISO 1716

PCS ≤ 1.4 MJ/kg

2.3 Apparent density EN 1602

Description and characteristics	MW panel	MW panel			MW lamella
		All other MW panel	"Knauf Insulation Putzträgerplatte MW 035 Light"	"Ecorock Duo"	
Tensile strength perpendicular to the faces [kPa]; EN 1607 - in dry conditions*	$\sigma_{mt} \geq 14$	$\sigma_{mt} \geq 5$	$\sigma_{mt} \geq 7.5$	$\sigma_{mt} \geq 7.5$	$\sigma_{mt} \geq 80$
Apparent density [kg/m³]; EN 1602	$120 \leq \rho_a \leq 150$	$100 \leq \rho_a \leq 150$	$85 \leq \rho_a \leq 150$	$68 \leq \rho_a \leq 100$ (TOP layer (always 20 mm) = 120 kg/m³; BOTTOM layer = 70 kg/m³ and 75 kg/m³ when panel thickness is ≥ 180 mm)	$80 \leq \rho_a \leq 150$

* Minimal value of all single values

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Annex 3

Hygiene, health and environment (BWR 3)

3.1 Water absorption (capillarity test)

Base coat:

Base coat	Thickness	Average water absorption [kg/m²]	
		after 1 h	after 24 h
Capatect ArmaReno 700	3 mm	0.02	0.19
	7 mm	0.03	0.32
Capatect Klebe- und Armierungsmasse 133 Leicht	8 mm	0.07	0.24
	10 mm	0.09	0.28
Capatect Klebe- und Armierungsmasse 186 M	4 mm	0.05	0.23

Rendering system:

Finishing coats with base coat "Capatect Klebe- und Armierungsmasse 186 M" indicated hereafter:	Thickness (base coat t = 4 mm + finishing coat indicated hereafter)	Average water absorption [kg/m²]	
		after 1 h	after 24 h
Capatect Mineral-Leichtputz R/K	3 mm	0.14	0.33
Capatect Mineralputz R/K	3 mm	0.11	0.49
Capatect Feinspachtel 195	4 mm	0.09	0.40
Capatect Modellier- und Spachtelputz 134	4 mm	0.07	0.33
Capatect Fassadenputz R/K	3 mm	0.20	0.40
Capatect AmphiSilan Fassadenputz R/K	3 mm	0.10	0.40
Capatect Fassadenputz Fein	4 mm	0.10	0.80
Capatect Sylitol Fassadenputz R/K	3 mm	0.30	0.80
Capatect ThermoSan Fassadenputz NQG K	4 mm	0.10	0.40
Capatect Putz 622 W SilaCryl	1.5 mm	0.10	0.30
Capatect AmphiSilan Fassadenputz FEIN	1 mm	0.00	0.30
Capatect AmphiSilan Fassadenputz K10	1 mm	0.00	0.30
Capatect Taloché T15	1,5 mm	0,03	0,29
Original Meldorfer with Meldorfer Ansatzmörtel 080	6-8 mm	0.00	0.30

Finishing coats with base coat "Capatect Klebe- und Armierungsmasse 186 M" indicated hereafter:	Thickness (base coat t = 5 mm + finishing coat indicated hereafter)	Average water absorption [kg/m²]	
		after 1 h	after 24 h
Capatect AmphiSilan Fassadenputz K12	1,2 mm	0.02	0.21

Finishing coats with base coat "Capatect Klebe- und Armierungsmasse 133 Leicht" indicated hereafter:	**Thickness**	**Average water absorption [kg/m²]**	
		after 1 h	**after 24 h**
Capatect Mineral-Leichtputz K	3 mm (base coat t = 10 mm)	0.32	0.46
Capatect Mineral-Leichtputz R	3 mm (base coat t = 10 mm)	0.32	0.46
Capatect Mineralputz K	3 mm (base coat t = 10 mm)	0.09	0.38
Capatect Mineralputz R	3 mm (base coat t = 10 mm)	0.09	0.38
Capatect Feinspachtel 195	4 mm (base coat t = 10 mm)	0.09	0.38
Capatect Modellier- und Spachtelputz 134	4 mm (base coat t = 11 mm)	0.07	0.35
Capatect Edelkratzputz	12 mm (base coat t = 11 mm)	0.12	0.49

Finishing coats with base coat "Capatect ArmaReno 700" indicated hereafter:	**Thickness** (base coat t = 7 mm + finishing coat indicated hereafter)	**Average water absorption [kg/m²]**	
		after 1 h	**after 24 h**
Capatect Mineral-Leichtputz R	4 mm	0.09	0.28
Capatect Mineral-Leichtputz K	4 mm	0.09	0.27
Capatect Mineralputz R	2 mm	0.09	0.34
Capatect Mineraputz K	3 mm	0.09	0.33
Capatect Feinspachtel 195	2 mm	0.08	0.33
Capatect ArmaReno 700	3 mm	0,05	0,22
Capatect Fassadenputz K	1,5 mm	0,06	0,61

3.2 Freeze/thaw behaviour

The ETICS is frost/thaw resistant if none of the following defects have occurred on the reinforced base coat and the rendering system during the test:

- blistering or peeling of any finishing coat/base coat/rendering system
- failure or cracking associated with joints between thermal insulation product boards or profiles fitted with ETICS
- detachment of the finishing coat/base coat/rendering system
- width of cracks bigger than 0.2 mm allowing water penetration to the insulating layer

3.3 Impact resistance

Rendering system: Base coat with finishing coat indicated hereafter	**Single standard mesh "Capatect-Gewebe 650"**		
	"Capatect ArmaReno 700" (t = 4 mm)	**"Capatect Klebe- und Armierungsmasse 133 Leicht" (t < 10 mm)**	**"Capatect Klebe- und Armierungs-masse 133 Leicht" (t = 10 mm)**
Capatect Mineral-Leichtputz R	category II	category III	category II
Capatect Mineral-Leichtputz K			
Capatect Mineralputz R			
Capatect Mineralputz K			
Capatect Feinspachtel 195			
Capatect Modellier- und Spachtelputz 134	not applicable in compliance with Annex 1		
Capatect Edelkratzputz		category I	category I
Capatect ArmaReno 700	category III	not applicable in compliance with Annex 1	
Capatect Fassadenputz K	no performance assessed	not applicable in compliance with Annex 1	

Rendering system: Base coat "Capatect-Klebe- und Armierungsmasse 186 M" with finishing coat indicated hereafter	**Single mesh "Capatect Gewebe 650"**	**Single mesh "Capatect Gewebe 650" with "Capatect Panzergewebe 652"**
Capatect Fassadenputz R	category III	category I
Capatect Fassadenputz K	category II	category I
Capatect AmphiSilan Fassadenputz R/K	category II	category II
Capatect Fassadenputz Fein	category II*	category II
Original Meldorfer with Meldorfer Ansatzmörtel 080	category I	category I
Capatect Putz 622 W SilaCryl	category III	category II
Capatect AmphiSilan Fassadenputz FEIN	category II*	category II
Capatect AmphiSilan Fassadenputz K10		
Capatect Sylitol Fassadenputz K/R	category II	category II
Capatect ThermoSan Fassadenputz NQG K	category II	category I
Capatect Mineral-Leichtputz R/K	category II	no performance assessed
Capatect Mineralputz R/K	category II	no performance assessed
Capatect Feinspachtel 195		
Capatect Modellier- und Spachtelputz 134		
Capatect AmphiSilan Fassadenputz K12	no performance assessed	no performance assessed
Capatect Taloché T15	category III	no performance assessed

* The Category II also applies to double-layer use of the single mesh "Capatect Gewebe 650".

The impact resistance of all other configurations of the ETICS is not determined.

3.4 Water vapour permeability

Rendering system: Base coat with finishing coat indicated hereafter	**Equivalent air thickness s_d [m]**	
	Capatect ArmaReno 700	**Capatect Klebe- und Armierungsmasse 133 Leicht**
Capatect Mineral-Leichtputz R	≤ 1.0 m (Test result obtained with layer thickness t = 3 mm: 0.1 m)	≤ 1.0 m (Test result obtained with layer thickness t = 3 mm: 0.1 m)
Capatect Mineral-Leichtputz K	≤ 1.0 m (Test result obtained with layer thickness t = 3 mm: 0.1 m)	≤ 1.0 m (Test result obtained with layer thickness t = 3 mm: 0.1 m)
Capatect Mineralputz R	≤ 1.0 m (Test result obtained with layer thickness t = 3 mm: 0.1 m)	≤ 1.0 m (Test result obtained with layer thickness t = 3 mm: 0.2 m)
Capatect Mineralputz K	≤ 1.0 m (Test result obtained with layer thickness t = 3 mm: 0.1 m)	≤ 1.0 m (Test result obtained with layer thickness t = 3 mm: 0.2 m)
Capatect Feinspachtel 195	≤ 1.0 m (Test result obtained with layer thickness t = 4 mm: 0.1 m)	≤ 1.0 m (Test result obtained with layer thickness t = 4 mm: 0.2 m)
Capatect Modellier- und Spachtelputz 134	not applicable in compliance with Annex 1	≤ 1.0 m (Test result obtained with layer thickness t = 4 mm: 0.1 m)
Capatect Edelkratzputz	not applicable in compliance with Annex 1	≤ 1.0 m (Test result obtained with layer thickness t = 10 mm: 0.2 m)
Capatect ArmaReno 700	≤ 1.0 m (Test result obtained with layer thickness t = 3 mm: 0.20 m)	not applicable in compliance with Annex 1
Capatect Fassadenputz K	≤ 1.0 m (Test result obtained with layer thickness t = 1,5 mm: 0.50 m)	not applicable in compliance with Annex 1

Rendering system: base coat "Capatect Klebe- und Armierungsmasse 186 M" finishing coat and compatible key coat indicated hereafter	**Equivalent air thickness s_d [m]**
Capatect Fassadenputz R/K	≤ 1.0 m (Test result obtained with layer thickness t = 3 mm: 0.82 m)
Capatect AmphiSilan Fassadenputz R/K	≤ 1.0 m (Test result obtained with layer thickness t = 3 mm: 0.93 m)
Capatect AmphiSilan Fassadenputz K12	≤ 1.0 m (Test result obtained with layer thickness t = 1,2 mm: 0.80 m)
Capatect Fassadenputz Fein	≤ 1.0 m (Test result obtained with layer thickness t = 4 mm: 0.95 m)
Original Meldorfer with Meldorfer Ansatzmörtel 080	≤ 1.0 m (Test result obtained with layer thickness t = 6-8 mm: 0.93 m)
Capatect Putz 622 W SilaCryl	≤ 1.0 m (Test result obtained with layer thickness t = 1,5 mm: 0.95 m)
Capatect AmphiSilan Fassadenputz FEIN	≤ 1.0 m (Test result obtained with layer thickness t = 1 mm: 0.95 m)
Capatect AmphiSilan Fassadenputz K10	≤ 1.0 m (Test result obtained with layer thickness t = 1 mm: 0.95 m)
Capatect Sylitol Fassadenputz K/R	≤ 1.0 m (Test result obtained with layer thickness t = 3 mm: 0.64 m)
Capatect ThermoSan Fassadenputz NQG K	≤ 1.0 m (Test result obtained with layer thickness t = 4 mm: 0.62 m)
Capatect Mineral-Leichtputz R/K	≤ 1.0 m (Test result obtained with layer thickness t = 3 mm: 0.10 m)
Capatect Mineralputz R/K	≤ 1.0 m (Test result obtained with layer thickness t = 3 mm: 0.06 m)
Capatect Feinspachtel 195	≤ 1.0 m (Test result obtained with layer thickness t = 4 mm: 0.10 m)
Capatect Modellier- und Spachtelputz 134	≤ 1.0 m (Test result obtained with layer thickness t = 4 mm: 0.10 m)
Capatect Taloché T15	≤ 1.0 m (Test result obtained with layer thickness t = 1,5 mm: 0.60 m)

Annex 4

Safety and accessibility in use (BWR 4)

4.1 Bond strength between base coat and MW lamella

		Conditioning		
		Initial state [kPa]	**After hygrothermal cycles [kPa]**	**After freeze/thaw test**
Capatect ArmaReno 700	Average	110	100	Test not required because freeze/thaw cycles not necessary
	Minimal value	90	60	
Capatect Klebe- und Armierungsmasse 133 Leicht	Average	120	100	
	Minimal value	110	90	
Capatect Klebe- und Armierungsmasse 186 M	Average	145	133	
	Minimal value	127	110	

4.2 Bond strength between adhesive and substrate

Substrate: concrete		**Conditioning**		
		Initial state [kPa]	**2 d immersion in water and 2 h drying [kPa]**	**2 d immersion in water and 7 d drying [kPa]**
Capatect Klebe- und Armierungs-masse 186 M	Average	820	452	894
	Minimal value	790	410	870
Capatect Klebe- und Armierungs-masse 133 Leicht	Average	658	465	704
	Minimal value	586	419	677
Capatect Klebe- und Spachtel-masse 190	Average	950	406	932
	Minimal value	910	390	890
Capatect Dämmkleber 185	Average	1852	1735	1771
	Minimal value	1350	1620	1595
Capatect ArmaReno 700	Average	980	730	1090
	Minimal value	860	630	950
Capatect Klebe- und Armierungs-masse 131 SL	Average	535	367	629
	Minimal value	496	328	435
Capatect Klebe- und Armierungs-masse 186 M Sprinter	Average	920	420	550
	Minimal value	800	330	490

4.3 Bond strength between adhesive and MW lamella

		Conditioning		
		Initial state [kPa]	**2 d immersion in water and 2 h drying [kPa]**	**2 d immersion in water and 7 d drying [kPa]**
Capatect Klebe- und Armierungs-masse 186 M	Average	130	90	120
	Minimal value	90	70	90
Capatect Klebe- und Armierungs-masse 133 Leicht	Average	120	100	70*
	Minimal value	110	90	60*
Capatect Klebe- und Spachtel-masse 190	Average	110	60	100
	Minimal value	90	50	90
Capatect Dämmkleber 185	Average	150	130	140
	Minimal value	130	90	110
Capatect ArmaReno 700	Average	110	100	110
	Minimal value	90	60	80
Capatect Klebe- und Armierungs-masse 131 SL	Average	115	110	121
	Minimal value	102	105	112
Capatect Klebe- und Armierungs-masse 186 M Sprinter	Average	150	120	150
	Minimal value	140	110	140
* < 0.08 MPa, but failure in the insulation product				

Minimal bonded surface area

S [%] = 0.03 N/mm² x 100 / 0.08 N/mm²

S = 37.5 %

The minimal bonded surface S of bonded ETICS is 50 % (systemic).

4.4 Wind load resistance

The following failure loads only apply to the listed combination of component characteristics and the characteristics of the insulation product.

4.4.1 Safety in use of mechanically fixed ETICS using profiles

Failure loads – table 1

Characteristics of the **MW panels**	Dimensions	625 mm x 800 mm
	Thickness	≥ 60 mm
	Tensile strength perpendicular to the faces	**≥ 14 kPa**
Failure load [kN/panel] (Static Foam Block Test)	Horizontal profiles with a vertical distance of 625 mm, fixed every 30 cm and vertical connection profiles **No additional anchors in MW panel**	Minimal: 1.20 Average: 1.25

Failure loads – table 2

Characteristics of the **MW panels**	Dimensions	625 mm x 800 mm
	Thickness	≥ 60 mm
	Tensile strength perpendicular to the faces	**≥ 14 kPa**
Failure load [kN/panel] (Static Foam Block Test)	Horizontal profiles with a vertical distance of 625 mm, fixed every 30 cm and vertical connection profiles **Two additional anchors per MW panel,** plate diameter ≥ 60 mm, mounted on the MW panel surface	Minimal: 2.20 Average: 2.40

4.4.2 Safety in use of mechanically fixed ETICS using anchors

Failure loads – table 1

Apply to all anchors listed in the annex 1 mounted on the insulation panels surface			
Characteristics of the **MW panels**	Thickness		≥ 60 mm
	Tensile strength perpendicular to the faces		**≥ 14 kPa**
Plate diameter of anchor			≥ ∅ 60 mm
Failure load [kN]	Anchors not placed at the panel joints (Static Foam Block Test)	R_{panel}	Minimal: 0.65 Average: 0.74
	Anchors placed at the panel joints (Static Foam Block Test)	R_{joint}	Minimal: 0.59 Average: 0.61
	Anchors not placed at the panel joints (Pull-through test, dry conditions)	R_{panel}	Minimal: 0.64 Average: 0.69
	Anchors not placed at the panel joints (Pull-through test, wet conditions) - series 2* - series 3*	R_{panel}	Minimal: 0.36 Average: 0.39 Minimal: 0.41 Average: 0.45
* according to EAD 040083-00-0404 clause 2.2.14.2			

Failure loads – table 2

Apply to all anchors listed in the annex 1 mounted on the insulation panels surface				
Characteristics of the **MW panels**	Thickness		≥ 80 mm	
	Tensile strength perpendicular to the faces		**≥ 5 kPa**	
Plate diameter of anchor			≥ ∅ 90 mm	≥ ∅ 140 mm
Failure load [kN]	Anchors not placed at the panel joints (Static Foam Block Test)	R_{panel}	Minimal: 0.48 Average: 0.49	Minimal: 0.56 Average: 0.69
	Anchors placed at the panel joints (Static Foam Block Test)	R_{joint}	Minimal: 0.38 Average: 0.39	Minimal: 0.44 Average: 0.54
	Anchors not placed at the panel joints (Pull-through test, dry conditions)	R_{panel}	Minimal: 0.54 Average: 0.61	no performance assessed
	Anchors not placed at the panel joints (Pull-through test, wet conditions) - series 2*	R_{panel}	Minimal: 0.40 Average: 0.46	no performance assessed
* according to EAD 040083-00-0404 clause 2.2.14.2				

Failure loads – table 3

Apply to all anchors listed in the annex 1 mounted on the insulation panels surface			
Characteristics of the **MW lamella**	Thickness		≥ 60 mm
	Tensile strength perpendicular to the faces		**≥ 80 kPa**
Plate diameter of anchor			≥ ∅ 140 mm
Failure load [kN]	Anchors placed at the panel joints (Pull-through test, dry condition)	R_{joint}	Minimal: 0.62 Average: 0.66
	Anchors placed at the panel joints (Pull-through test, wet condition)	R_{joint}	Minimal: 0.51 Average: 0.57
	Anchors placed at the panel joints (Static Foam Block Test)	R_{joint}	Minimal: 0.71

Failure loads – table 4 (for "Knauf Insulation Putzträgerplatte MW 035 Light")

Apply to all anchors listed in annex 1 mounted on the insulation panels surface						
Characteristics of the **MW panels**	Thickness		60 ≤ t < 80	80 ≤ t < 120	120 ≤ t ≤ 200	> 200
	Tensile strength perpendicular to the faces		**≥ 7.5 kPa**			
Plate diameter of anchor			≥ ∅ 90 mm			
Failure load [kN]	Anchors not placed at the panel joints (Static Foam Block Test, dry conditions)	R_{panel}	Minimal: 0.45 Average: 0.48	Minimal: 0.54 Average: 0.57 (see figure 4.1)	Minimal: 0.73 Average: 0.82 (see figure 4.4)	Minimal: 0.73 Average: 0.82 (see figure 4.4)
	Anchors placed at the panel joints (Static Foam Block Test)	R_{joint}	no per-formance assessed	Minimal: 0.36 Average: 0.38	Minimal: 0.49 Average: 0.55	Minimal: 0.49 Average: 0.55
	Anchors not placed at the panel joints (Pull-through test, dry conditions)	R_{panel}	Minimal.: 0.50 Average: 0.56	Minimal: 0.85 Average: 0.86 (see figure 4.2)	Minimal: 0.98 Average: 1.02 (see figure 4.5)	Minimal: 0.98 Average: 1.02 (see figure 4.5)
	Anchors not placed at the panel joints (Pull-through test, wet conditions) - series 2*	R_{panel}	no per-formance assessed	Minimal: 0.42 Average: 0.46 (see figure 4.3)	Minimal:0.56 Average: 0.59 (see figure 4.6)	Minimal: 0.56 Average: 0.59 (see figure 4.6)
* according to EAD 040083-00-0404 clause 2.2.14.2						

Figure 4.1: anchors not placed at the panel joints (Static Foam Block Test, dry conditions, with 6 anchors/m²)

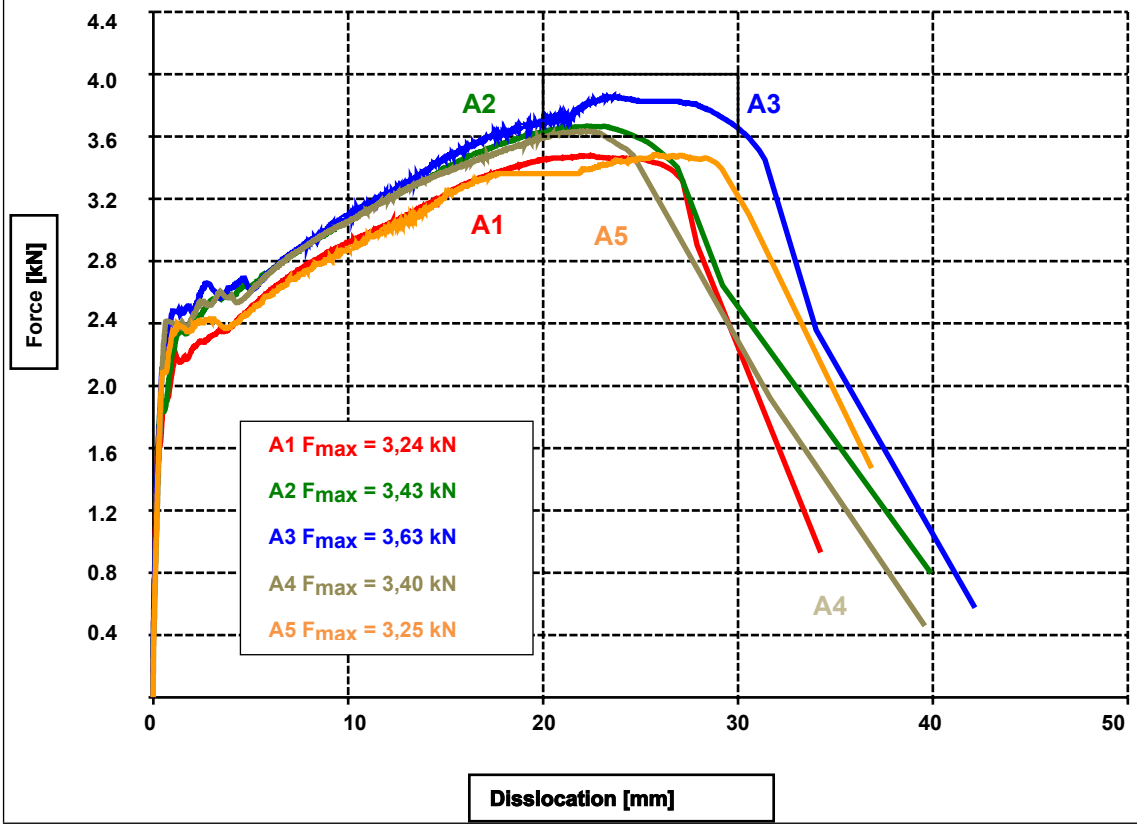

Figure 4.2: anchors not placed at the panel joints (Pull-through test, dry conditions)

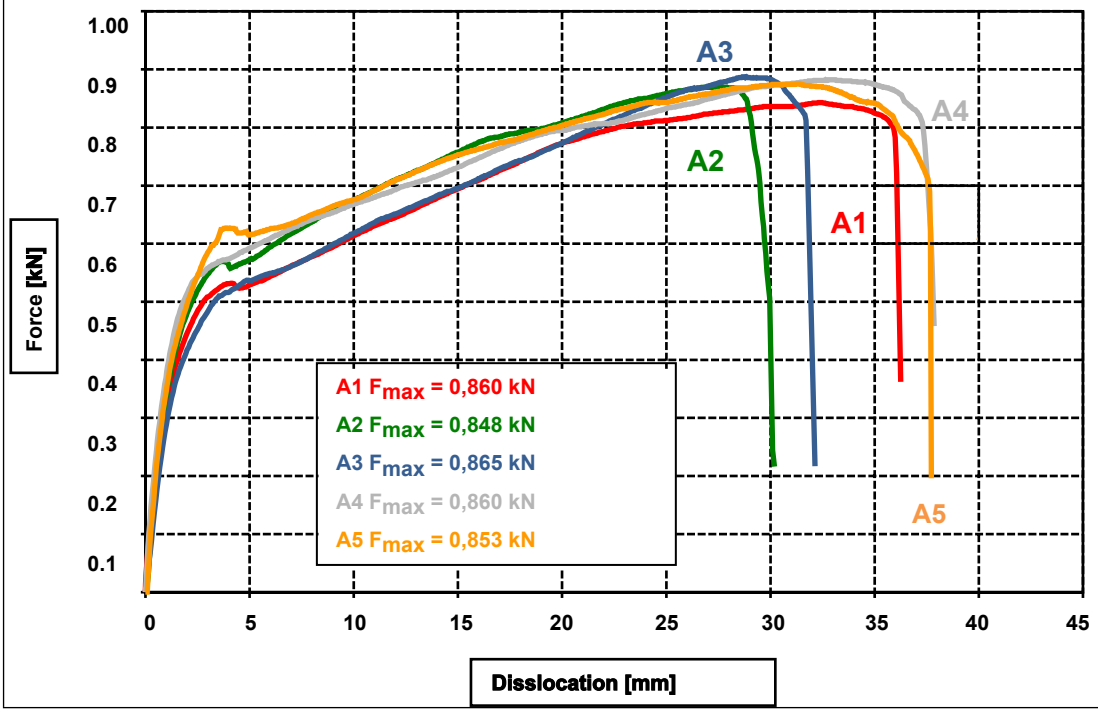

Figure 4.3: anchors not placed at the panel joints (Pull-through test, wet conditions)

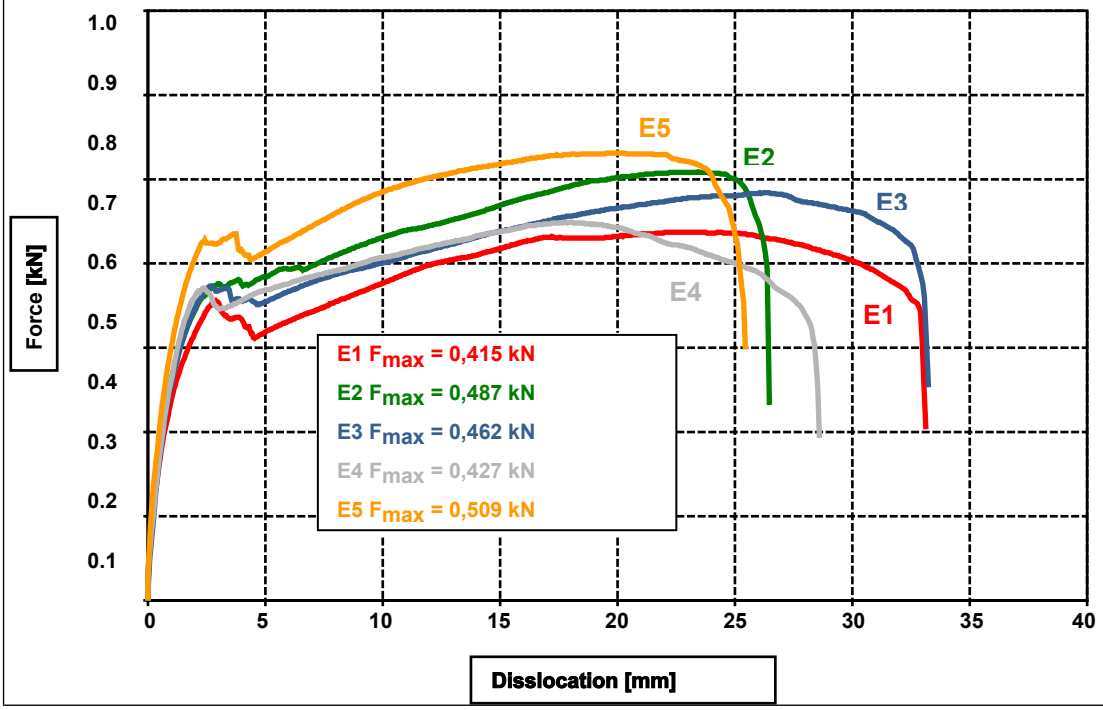

Figure 4.4: anchors not placed at the panel joints (Static Foam Block Test, dry conditions, with 4 anchors/m²)

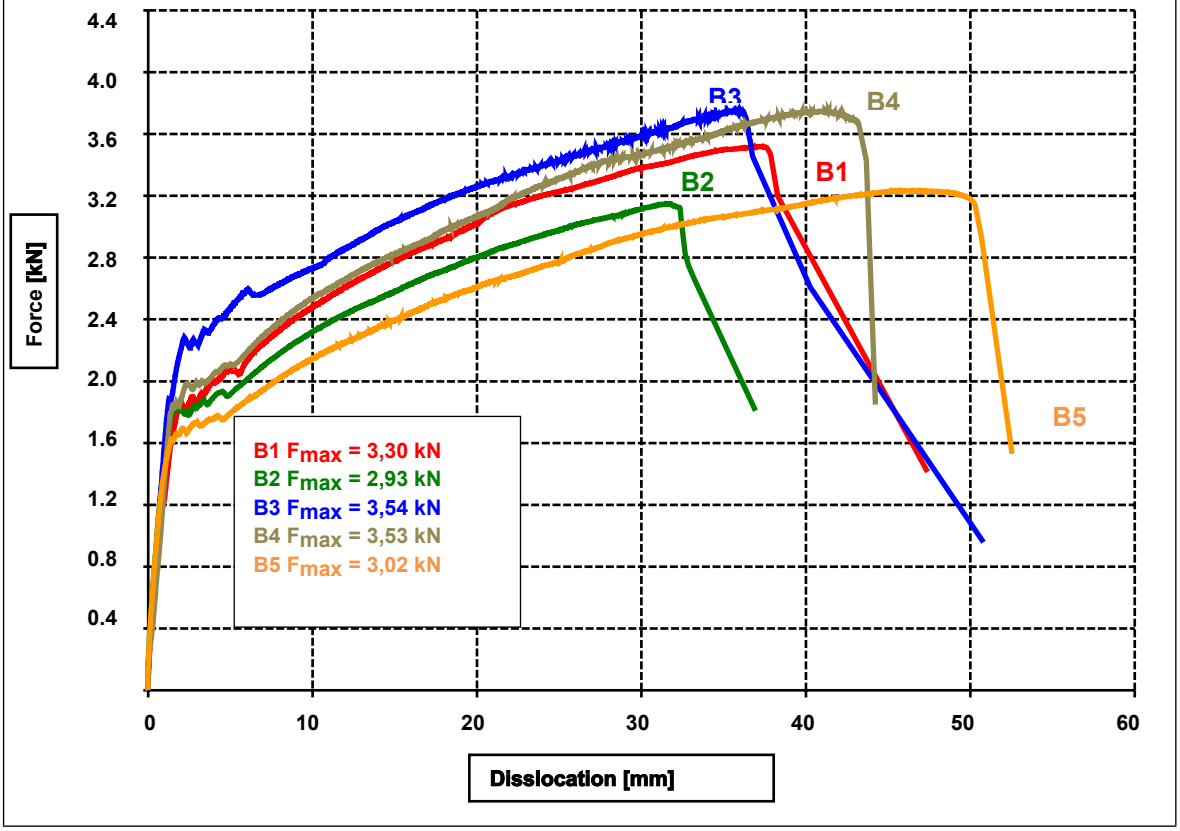

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Figure 4.5: anchors not placed at the panel joints (Pull-through test, dry conditions)

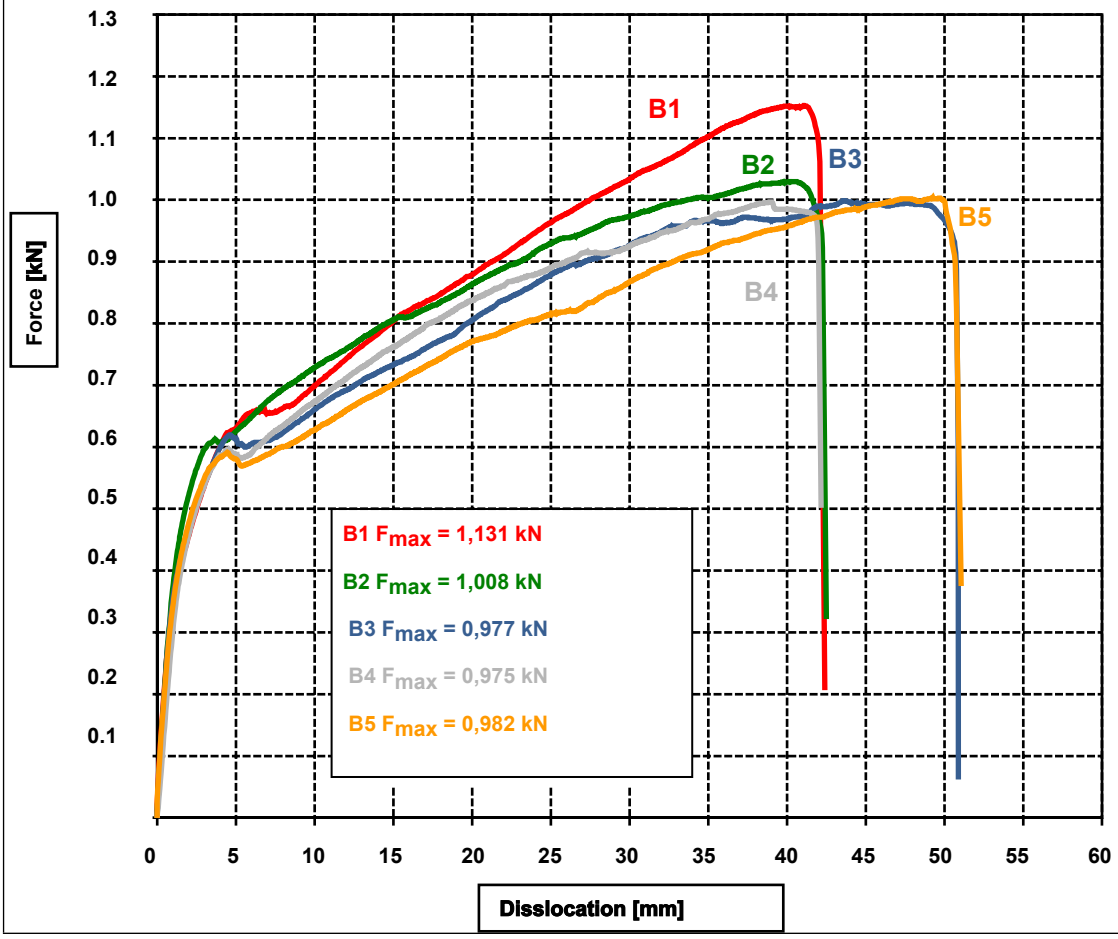
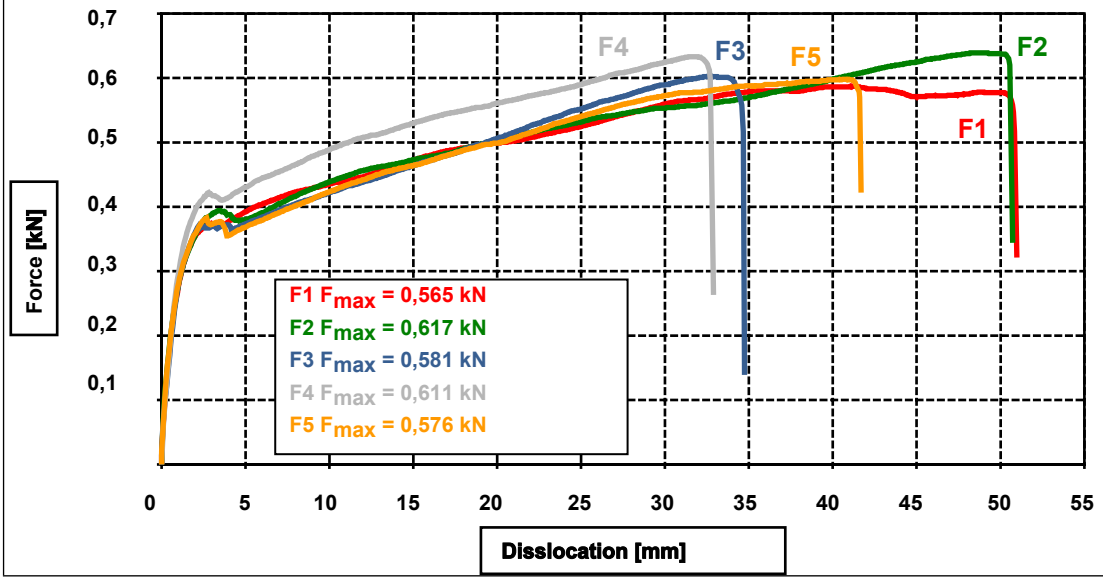


Figure 4.6: anchors not placed at the panel joints (Pull-through test, wet conditions)



Failure loads – table 5 (for "Ecorock Duo")

Apply to all anchors listed in annex 1 mounted on the insulation panels surface								
Characteristics of the **MW panels**	Thickness [mm]		50	80	120	130	160	200
	Tensile strength perpendicular to the faces		**≥ 7.5 kPa**					
Plate diameter of anchor			≥ ∅ 60 mm					
Failure load [kN]	Anchors not placed at the panel joints (Static Foam Block Test, dry conditions)	R_{panel}	no perfor-mance assessed	Minimal.: 3.893 Average: 4.058	no perfor-mance assessed	no perfor-mance assessed	no perfor-mance assessed	no perfor-mance assessed
	Anchors placed at the panel joints (Static Foam Block Test, dry conditions)	R_{joint}	no perfor-mance assessed	no perfor-mance assessed	no perfor-mance assessed	no perfor-mance assessed	no perfor-mance assessed	no perfor-mance assessed
	Anchors not placed at the panel joints (Pull-through test, dry conditions)	R_{panel}	Minimal.: 0.339 Average: 0.365 (see figure 5.1)	Minimal.: 0.348 Average: 0.410 (see figure 5.2)	Minimal.: 0.454 Average: 0.503 (see figure 5.3)	no perfor-mance assessed	Minimal.: 0.459 Average: 0.567 (see figure 5.7)	Minimal.: 0.595 Average: 0.639 (see figure 5.8)
	Anchors not placed at the panel joints (Pull-through test, wet conditions) - series 2*	R_{panel}	Minimal.: 0.198 Average: 0.229 (see figure 5.4)	no perfor-mance assessed	Minimal.: 0.368 Average: 0.406 (see figure 5.5)	Minimal.: 0.237 Average: 0.281 (see figure 5.6)	Minimal.: 0.430 Average: 0.478 (see figure 5.9)	no perfor-mance assessed
* according to EAD 040083-00-0404 clause 2.2.14.2								

Failure loads – table 6 (for "Ecorock Duo")

Apply to all anchors listed in annex 1 mounted on the insulation panels surface						
Characteristics of the **MW panels**	Thickness [mm]		80	120	160	200
	Tensile strength perpendicular to the faces		**≥ 7.5 kPa**			
Plate diameter of anchor			≥ ∅ 90 mm			
Failure load [kN]	Anchors not placed at the panel joints (Static Foam Block Test, dry conditions)	R_{panel}	no perfor-mance assessed	no perfor-mance assessed	no perfor-mance assessed	no perfor-mance assessed
	Anchors placed at the panel joints (Static Foam Block Test, dry conditions)	R_{joint}	no perfor-mance assessed	no perfor-mance assessed	no perfor-mance assessed	no perfor-mance assessed
	Anchors not placed at the panel joints (Pull-through test, dry conditions)	R_{panel}	no perfor-mance assessed	Minimal.: 0.511 Average: 0.611 (see figure 6.1)	Minimal.: 0.632 Average: 0.713 (see figure 6.2)	Minimal.: 0.737 Average: 0.811 (see figure 6.3)
	Anchors not placed at the panel joints (Pull-through test, wet conditions) - series 2*	R_{panel}	no perfor-mance assessed	no perfor-mance assessed	no perfor-mance assessed	no perfor-mance assessed

* according to EAD 040083-00-0404 clause 2.2.14.2

Figure 5.1: anchors not placed at the panel joints (Pull-through test, dry conditions)

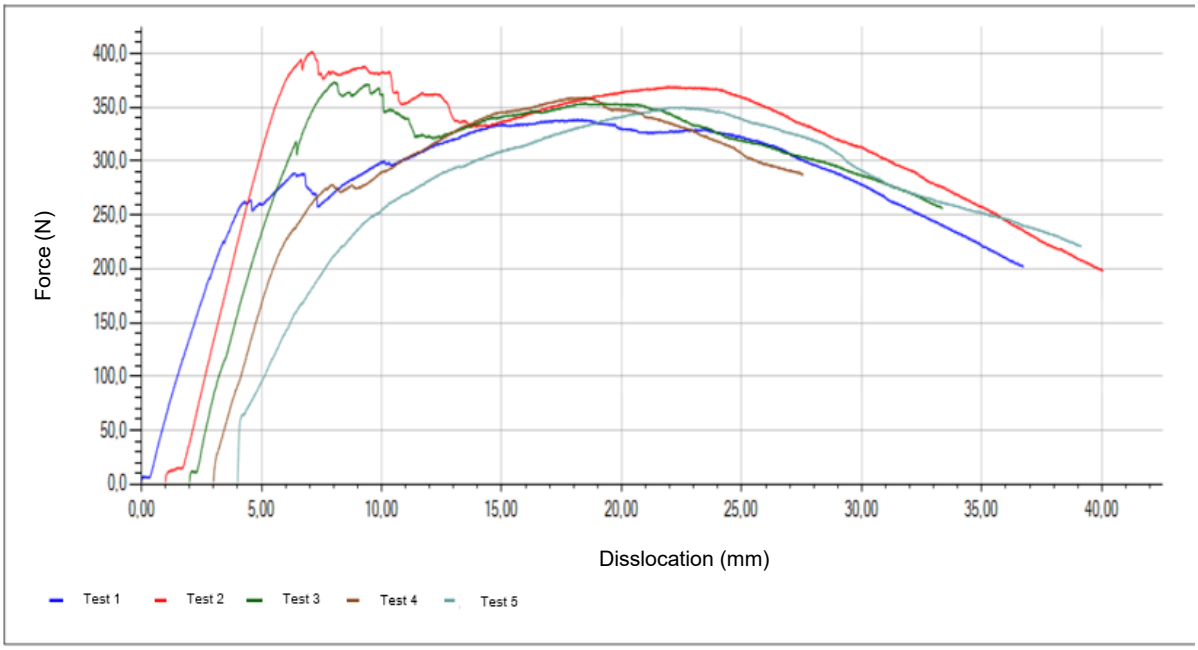


Figure 5.2: anchors not placed at the panel joints (Pull-through test, dry conditions)

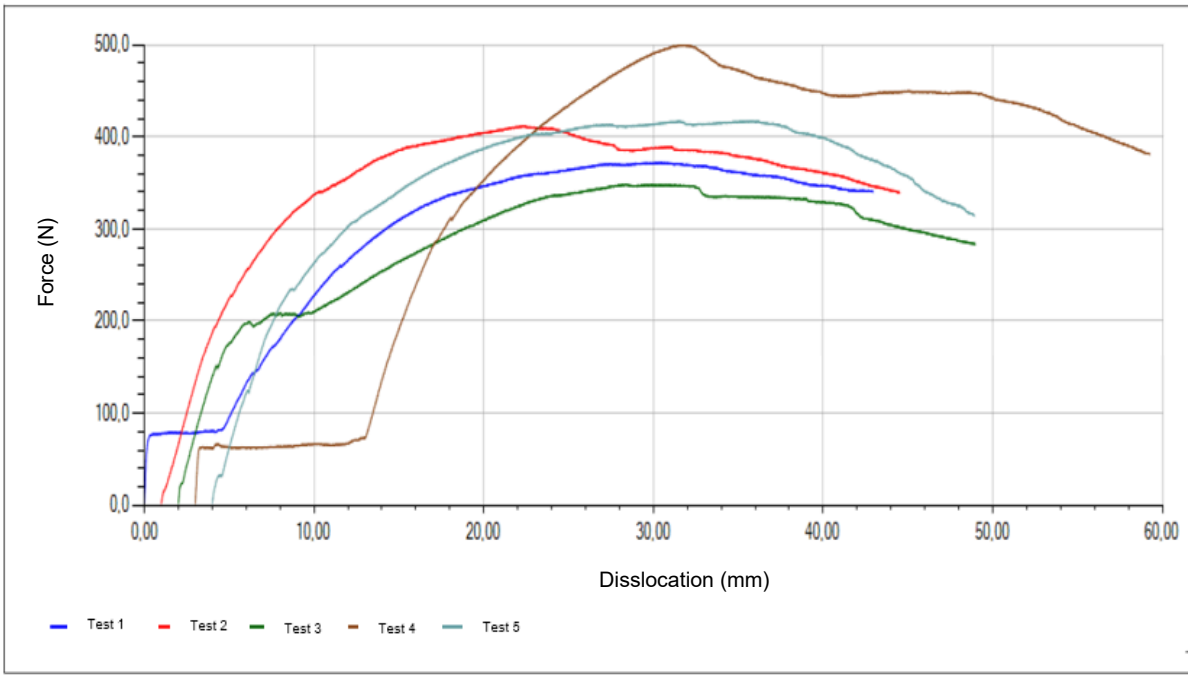


Figure 5.3: anchors not placed at the panel joints (Pull-through test, dry conditions)

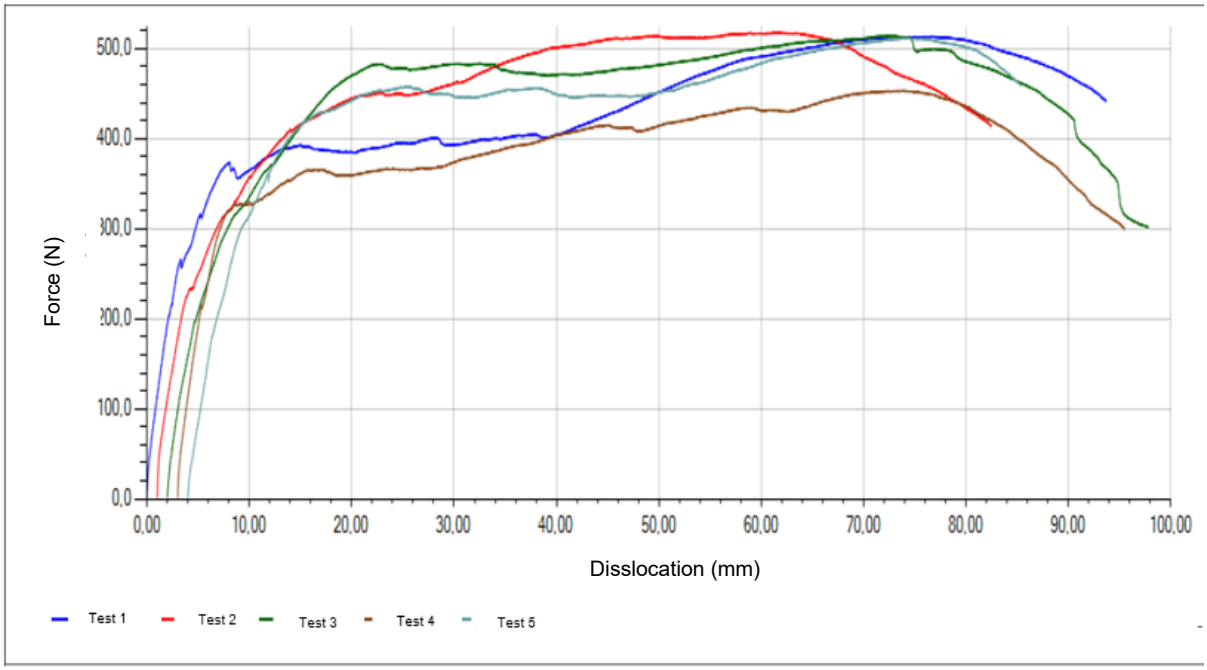


Figure 5.4: anchors not placed at the panel joints (Pull-through test, wet conditions)

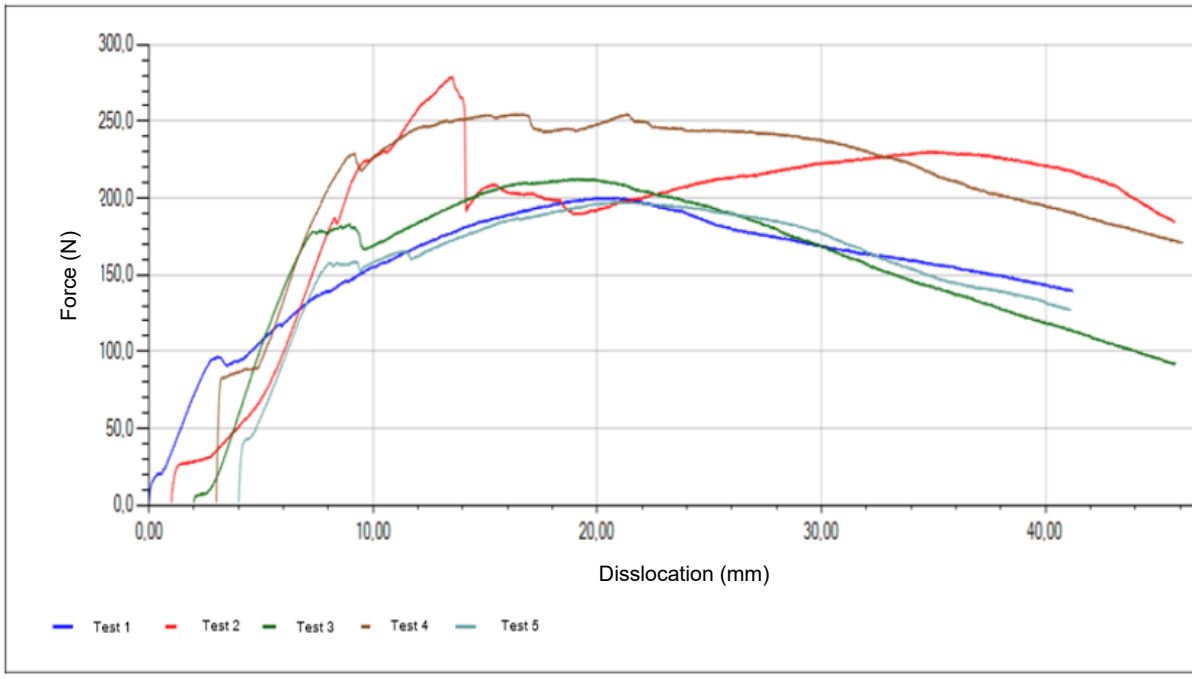


Figure 5.5: anchors not placed at the panel joints (Pull-through test, wet conditions)

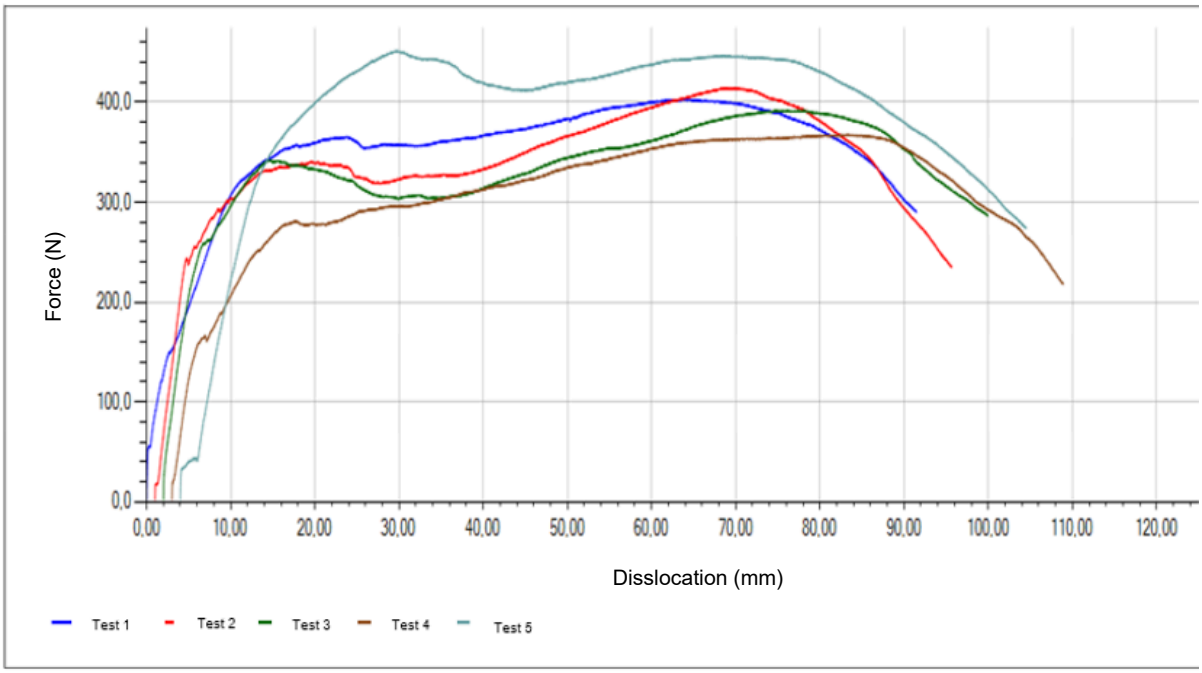


Figure 5.6: anchors not placed at the panel joints (Pull-through test, wet conditions)

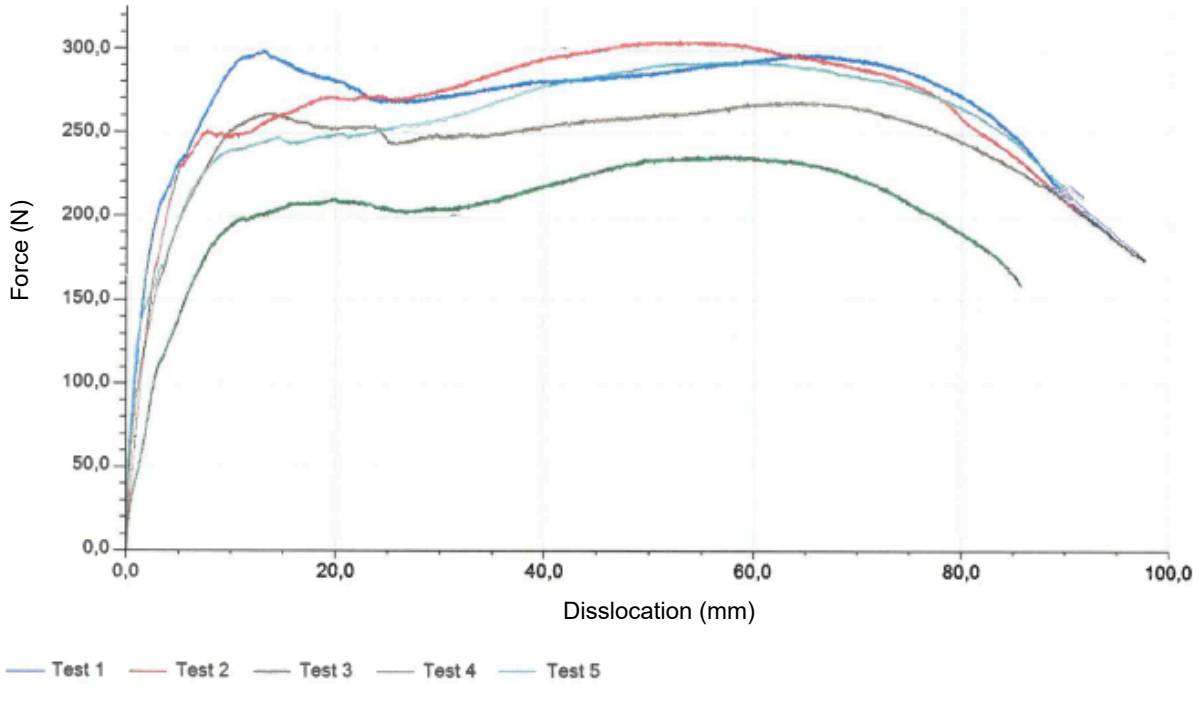


Figure 5.7: anchors not placed at the panel joints (Pull-through test, dry conditions)

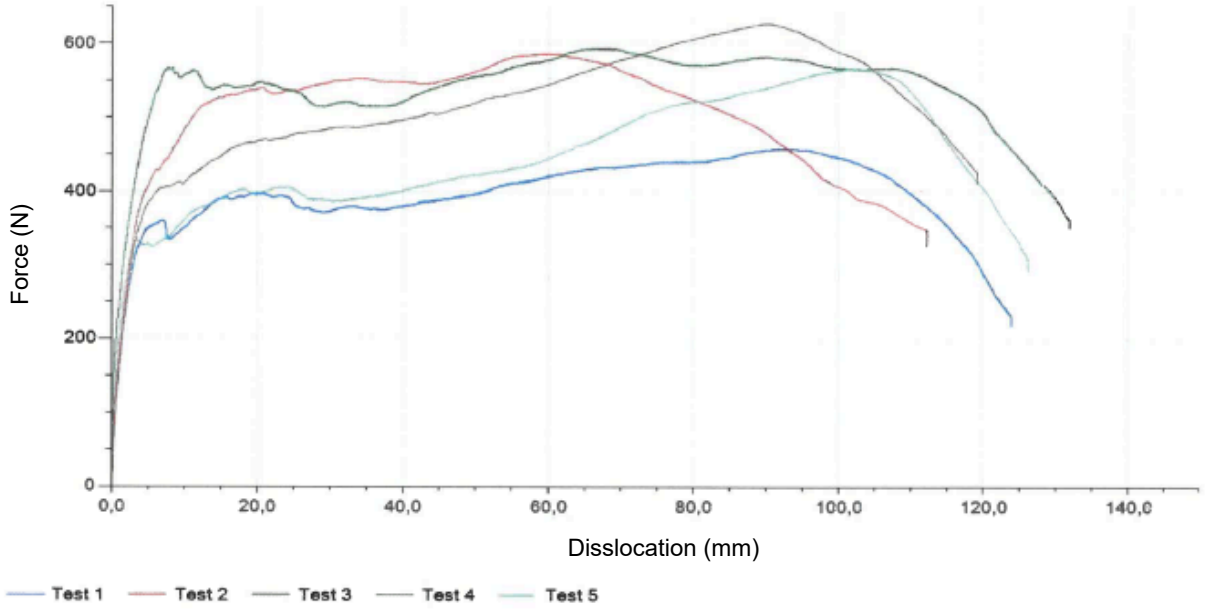


Figure 5.8: anchors not placed at the panel joints (Pull-through test, dry conditions)

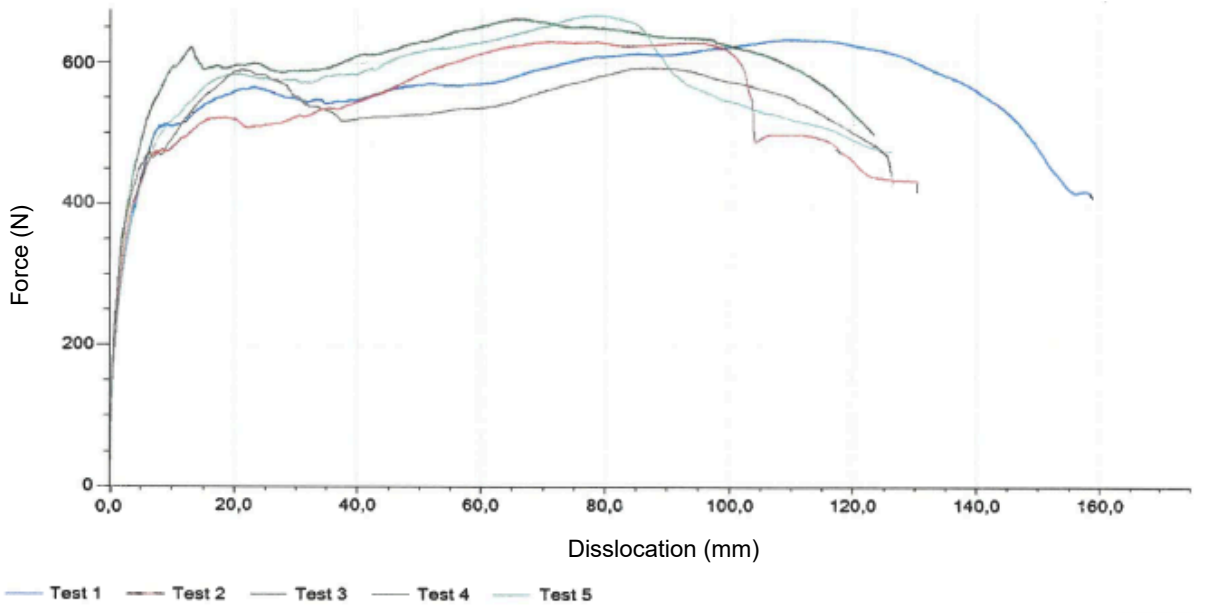


Figure 5.9: anchors not placed at the panel joints (Pull-through test, wet conditions)

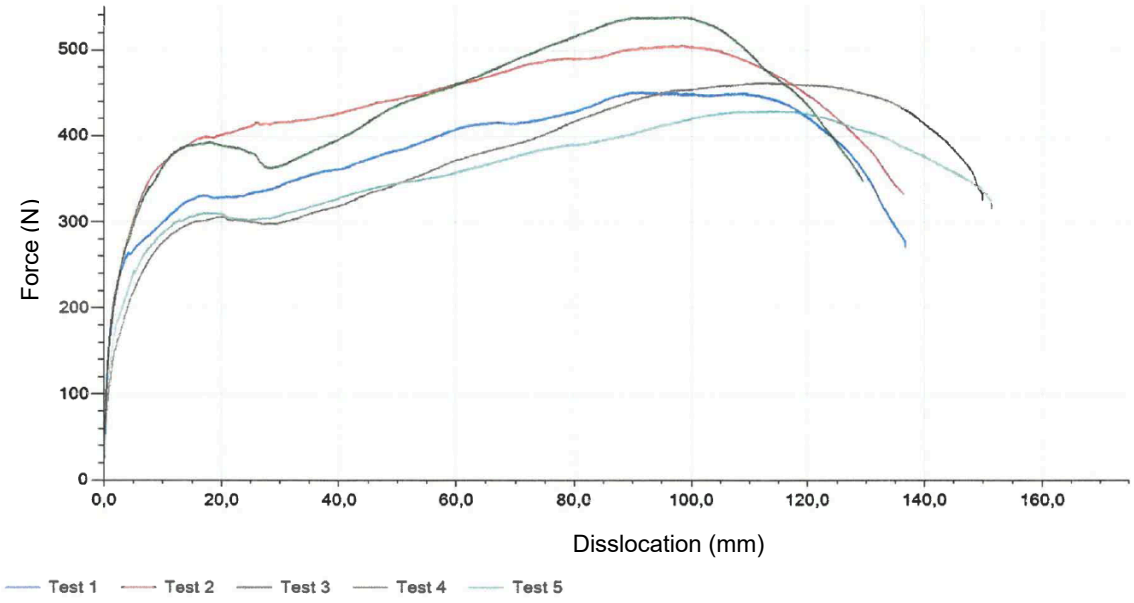


Figure 6.1: anchors not placed at the panel joints (Pull-through test, dry conditions)

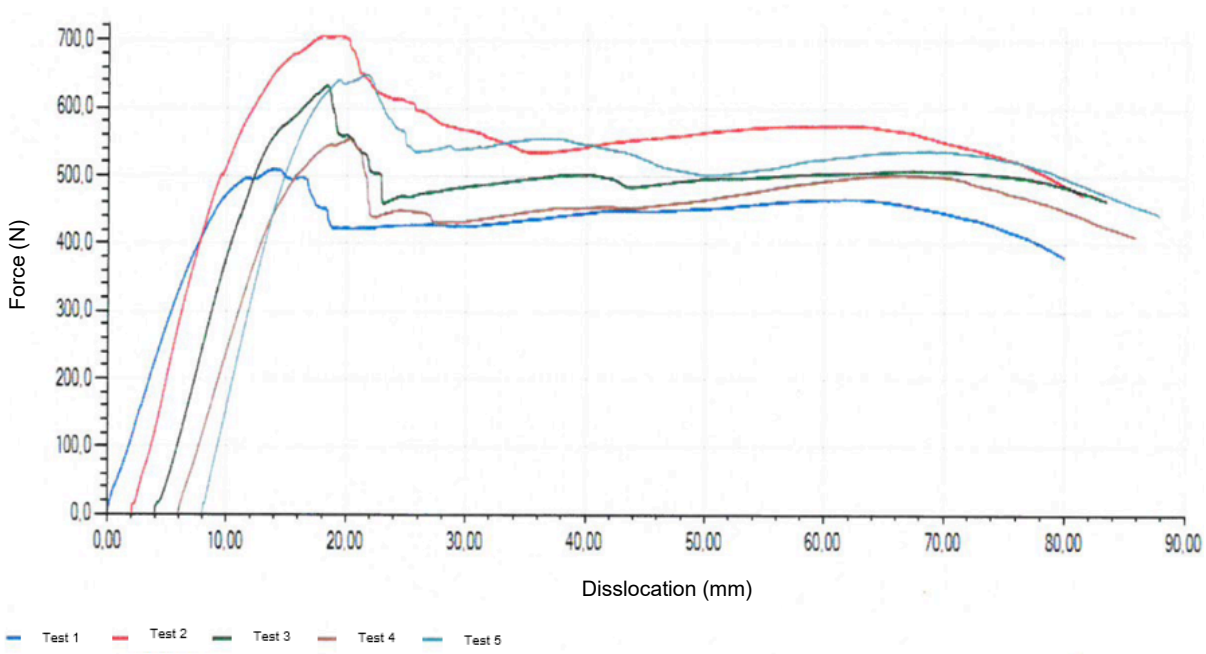


Figure 6.2 anchors not placed at the panel joints (Pull-through test, dry conditions)

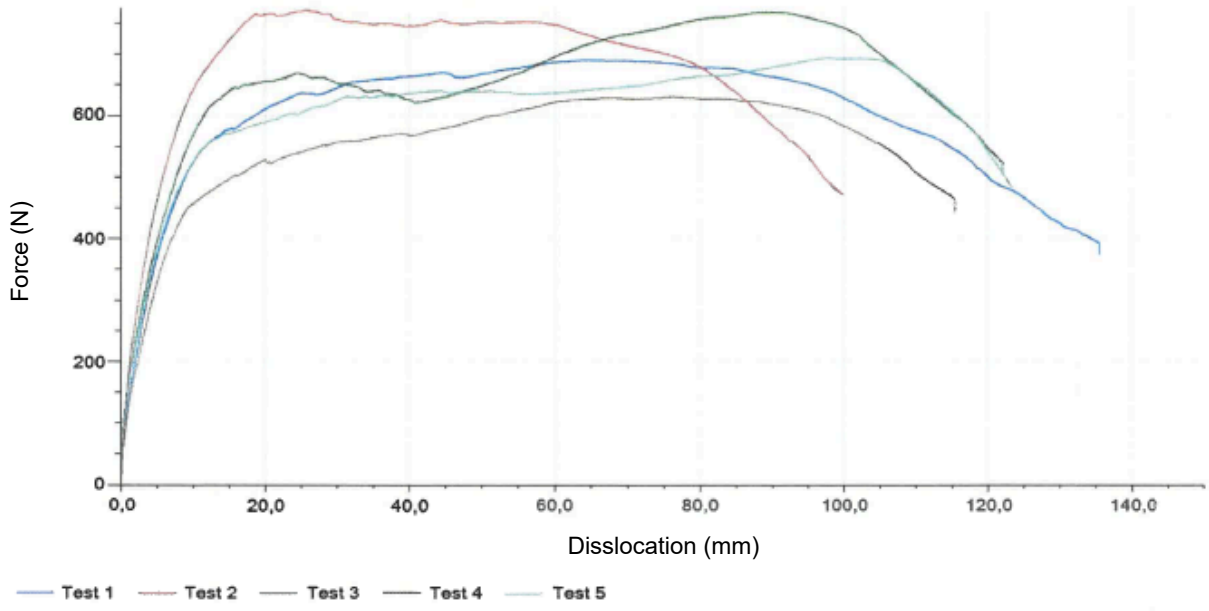
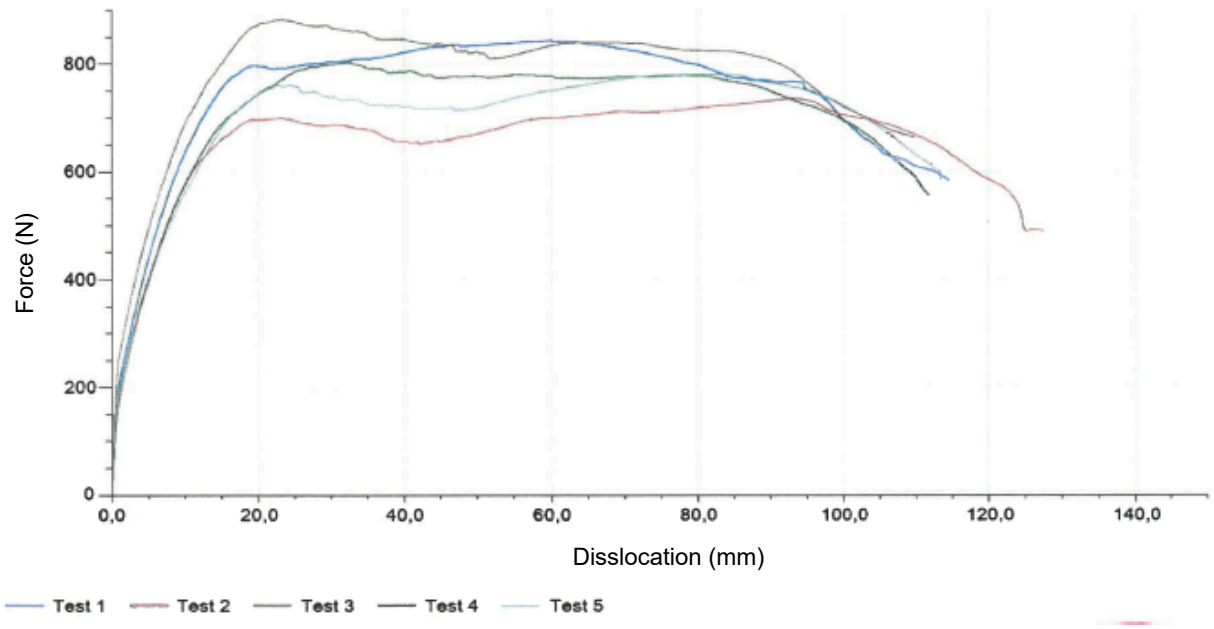


Figure 6.3 anchors not placed at the panel joints (Pull-through test, dry conditions)



Failure loads – table 7 (for "Ecorock Duo")

Apply to all anchors listed in annex 1 mounted countersunk					
Characteristics of the **MW panels**		Thickness [mm]	80	100	120
		Tensile strength perpendicular to the faces	**≥ 7.5 kPa**		
		anchors	**Ejotherm STR U 2G**	**Termoz SV II ecotwist**	**Ejotherm STR U 2G + VT 2G**
Plate diameter of anchor			≥ ∅ 60 mm	≥ ∅ 66 mm	Ejotherm STR U 2G: ≥ ∅ 60 mm VT 2G: ≥ ∅ 110 mm
Failure load [kN]	Anchors not placed at the panel joints (Pull-through test, dry conditions)	R_{panel}	Minimal: 0.172 Average: 0.193 (see figure 7.1)	Minimal: 0.357 Average: 0.413 (see figure 7.2)	Minimal: 0.699 Average: 0.838 (see figure 7.3)

Figure 7.1: anchors not placed at the panel joints (Pull-through test, dry conditions)

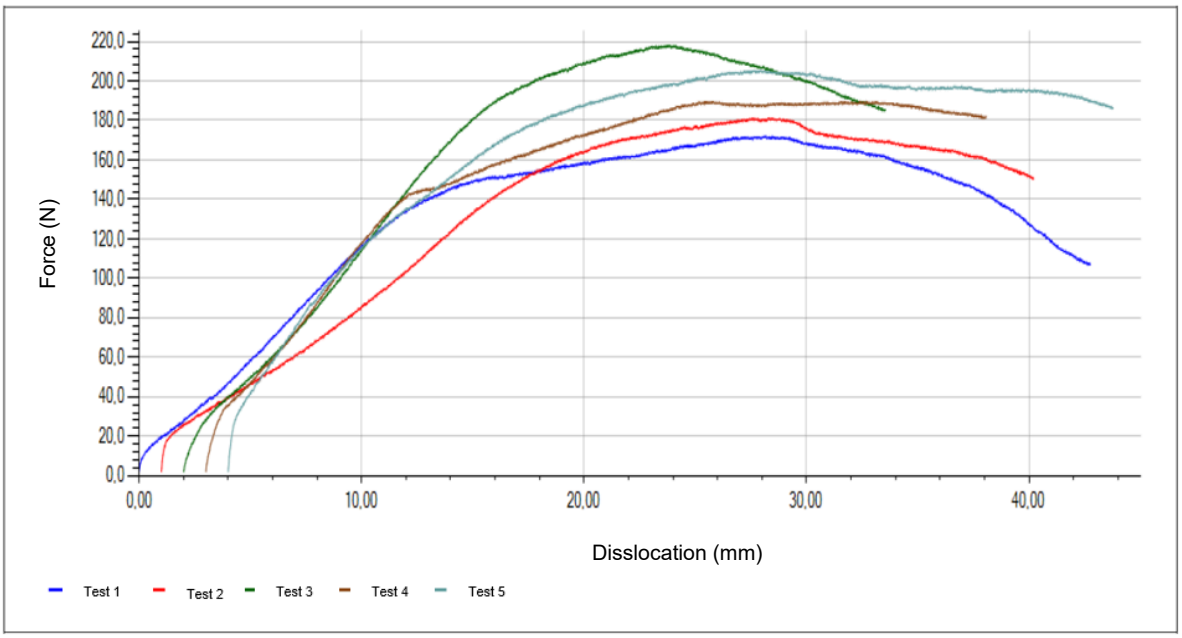


Figure 7.2: anchors not placed at the panel joints (Pull-through test, dry conditions)

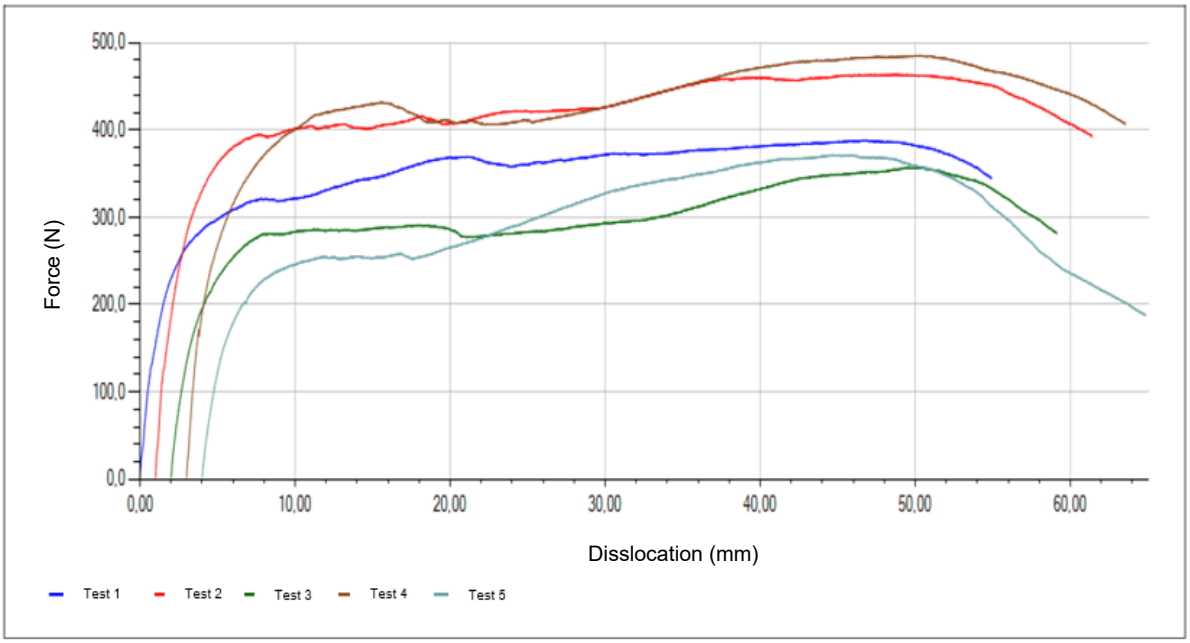
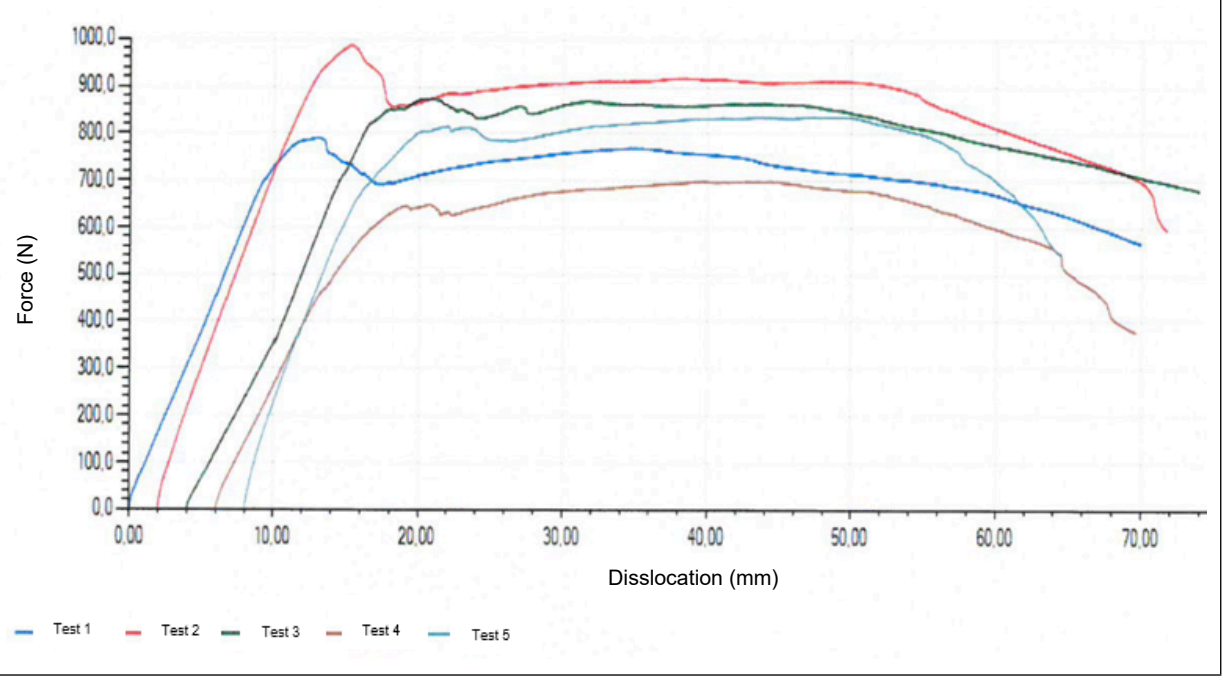


Figure 7.3: anchors not placed at the panel joints (Pull-through test, dry conditions)



The failure loads of table 2 in section 4.4.1 and table 1 in section 4.4.2 specified above with a plate diameter of anchor of 60 mm apply to the following anchors with deep mounting only under the following conditions:

Anchor	Thickness of the MW panel [t]	Conditions of installation*
ejotherm STR U, ejotherm STR U 2G (ETA-04/0023) STR Carbon (ETA-13/0009)	t ≥ 80 mm	– Maximum installation depth of the anchor plate: 15 mm (≙ thickness of insulation cover) – Cutting depth 20 mm
	t ≥ 100 mm	– Maximum installation depth of the anchor plate: 15 mm (≙ thickness of insulation cover) – Cutting depth 35 mm
TERMOZ 8 SV (ETA-06/0180)	t ≥ 80 mm	– Maximum installation depth of the anchor plate: 15 mm (≙ thickness of insulation cover)
* according to the appropriate ETA of anchor		

4.5 Render strip tensile test

The average value of crack width of the base coats reinforced with the different glass fibre meshes measured at a render strain value of 1 % is:

Base coat	Glass fibre mesh	Average value of crack width $w_{m\ (1\%)}$
Capatect Klebe- und Armierungsmasse 186 M	Capatect Gewebe 650	0.06 mm
Capatect ArmaReno 700	Capatect Gewebe 650	0.06 mm
Capatect Klebe- und Armierungsmasse 133 Leicht	Capatect Gewebe 650	0.08 mm
Capatect Klebe- und Armierungsmasse 133 Leicht	Capatect Gewebe 666	0.09 mm

For all other base coat- mesh combinations no performance was assessed for the render trip tensile test.

4.6 Bond strength after ageing

Finishing coat with base coat indicated hereafter		7 d immersion in water and 7 d drying [kPa] with base coat "Capatect Klebe- und Armierungs-masse 133 Leicht"	7 d immersion in water and 7 d drying [kPa] with base coat "Capatect ArmaReno 700"	7 d immersion in water and 7 d drying [kPa] with base coat "Capatect Klebe- und Armierungs-masse 186 M"
Capatect Mineral-Leichtputz R/K	Average	100	110	110
	Minimal value	90	100	100
Capatect Mineralputz R/K	Average	110	110	99
	Minimal value	110	100	92
Capatect Feinspachtel 195	Average	104	80	117
	Minimal value	100	80	116
Capatect Modellier- und Spachtelputz 134	Average	100	not applicable	110
	Minimal value	90		100
Capatect Edelkratzputz	Average	110	not applicable	not applicable
	Minimal value	110		
Capatect Fassadenputz R	Average	not applicable	not applicable	110
	Minimal value			100
Capatect Fassadenputz K	Average	not applicable	110	110
	Minimal value		80	100
Capatect AmphiSilan Fassadenputz R/K	Average	not applicable	not applicable	130
	Minimal value			120
Capatect AmphiSilan Fassadenputz K12	Average	not applicable	not applicable	140
	Minimal value			130
Capatect Fassadenputz Fein	Average	not applicable	not applicable	110
	Minimal value			90

Finishing coat with base coat indicated hereafter		**7 d immersion in water and 7 d drying [kPa] with base coat "Capatect Klebe- und Armierungs-masse 133 Leicht"**	**7 d immersion in water and 7 d drying [kPa] with base coat "Capatect ArmaReno 700"**	**7 d immersion in water and 7 d drying [kPa] with base coat "Capatect Klebe- und Armierungs-masse 186 M"**
Capatect Sylitol Fassadenputz R/K	Average	not applicable	not applicable	110
	Minimal value			110
Capatect ThermoSan Fassadenputz NQG K	Average	not applicable	not applicable	90
	Minimal value			80
Capatect Putz 622 W SilaCryl	Average	not applicable	not applicable	100
	Minimal value			90
Capatect AmphiSilan Fassadenputz FEIN	Average	not applicable	not applicable	120
	Minimal value			100
Capatect AmphiSilan Fassadenputz K10	Average	not applicable	not applicable	120
	Minimal value			100
Capatect ArmaReno 700	Average	not applicable	140	not applicable
	Minimal value		110	
Capatect Taloché T15	Average	no performance assessed	no performance assessed	100
	Minimal value			70[a)]
Original Meldorfer with Meldorfer Ansatzmörtel 080	Average	not applicable	not applicable	120
	Minimal value			100

[a)] Failure in the insulation material

4.7 Reinforcement (glass fibre mesh)

Capatect Gewebe 650	Average warp	Average weft
Tensile strength in as-delivered state	36.0 N / mm	36.0 N / mm
Residual tensile strength after aging	20.0 N / mm	20.0 N / mm
Relative residual tensile strength after aging	55.5 %	55.5 %
Elongation in as-delivered state	3.9 %	4.5 %
Elongation after aging	3.1 %	3.5 %

Capatect Gewebe 666	Average warp	Average weft
Tensile strength in as-delivered state	44.0 N / mm	62.0 N / mm
Residual tensile strength after aging	30.0 N / mm	42.0 N / mm
Relative residual tensile strength after aging	68.1 %	67.7 %
Elongation in as-delivered state	3.8 %	4.3 %
Elongation after aging	2.5 %	2.8 %

Capatect Panzergewebe 652	Average warp	Average weft
Tensile strength in as-delivered state	64.0 N / mm	70.0 N / mm
Residual tensile strength after aging	32.0 N / mm	35.0 N / mm
Relative residual tensile strength after aging	50.0 %	50.0 %
Elongation in as-delivered state	4.5 %	4.5 %
Elongation after aging	4.0 %	4.0 %

Annex 5

Energy economy and heat retention (BWR 6)

5.1 Thermal resistance and thermal transmittance

The nominal value of the additional thermal resistance R provided by the ETICS to the substrate wall is calculated in accordance with EN ISO 6946 from the nominal value of the insulation product's thermal resistance R_D given accompanied to the CE marking and from the thermal resistance of the rendering system R_{render} which is about 0.02 (m² ·K)/W.

$R = R_D + R_{render}$

The thermal bridges caused by mechanical fixing devices (anchors profiles) increase the thermal transmittance U. This influence had to take into account according to EN ISO 6946: 2007.

$U_c = U + \Delta U$	corrected thermal transmittance [W/(m²·K)]
$\Delta U = \Delta U_{anchor} + \Delta U_{profile}$	correction term for mechanical fixing devices (anchors, profiles)
$\Delta U_{anchor} = \chi_p \cdot n$	correction term for anchors
where: n	number of anchors per m²
χ_p	local influence of thermal bridge caused by an anchor. The values listed below can be taken into account, if not specified in the anchor's technical approval
χ_p = 0.004 W/K	for anchors with a galvanized steel screw with the head covered by a plastic material
χ_p = 0.002 W/K	for anchors with a stainless steel screw with the head covered by plastic material, and for anchors with an air gap at the head of the screw
$\Delta U_{profile}$	correction term for profiles; subject to the thickness of the insulation product and the thermal resistance of the substrate wall the following values apply:

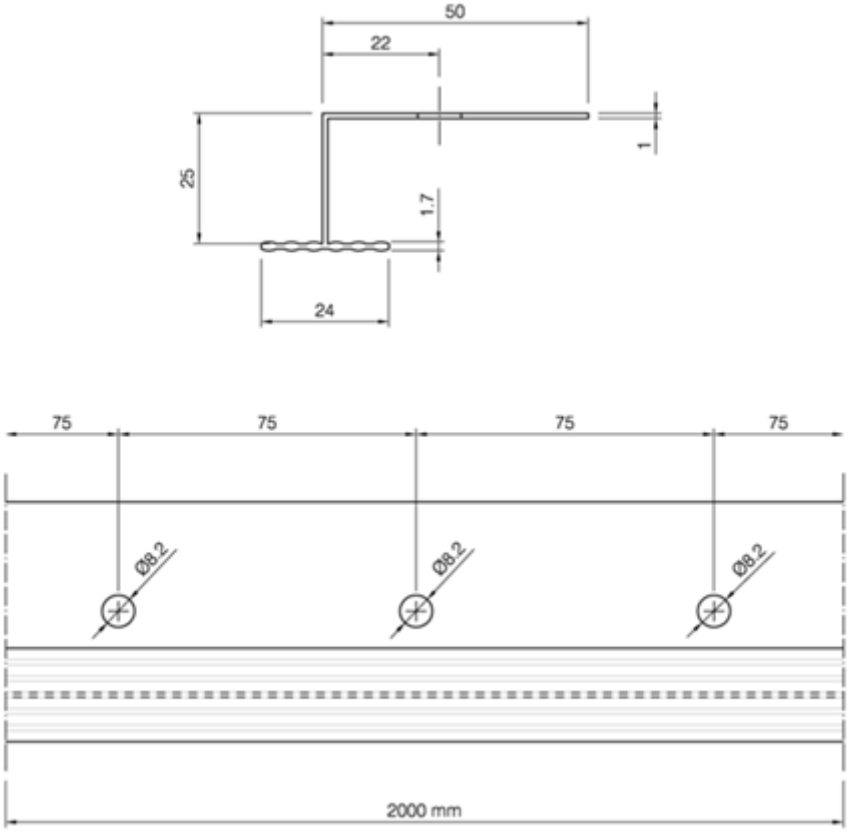
Thermal resistance of the substrate wall [(m²·K)/W]	Thickness of the insulation product [mm]	$\Delta U_{profile}$ [W/(m²·K)]
R < 0.33	60 ≤ t < 80	0.03
	80 ≤ t < 120	0.02
	t ≥ 120	0
0.33 ≤ R ≤ 1.10	60 ≤ t < 80	0.02
	80 ≤ t ≤100	0.01
	t > 100	0
R > 1.10	t ≥ 60	0

Annex 6

Profile

Aluminium (Al) profiles, EN AW-6060 T66 to EN 755-2: are to be used in the mechanically fixed ETICS with profiles. The Pull-through resistance of fixings from profiles is ≥ 500 N.

Horizontal profile – "Capatect - Halteleiste ALU"



Vertical connection profile – "Capatect – Verbindungsleiste ALU"
Length: 470 mm