



European Technical Assessment

**ETA-20/0215-version 1
of 09/07/2020**

GENERAL PART

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

Centre Scientifique et Technique du Bâtiment
(CSTB)

Trade name of the construction product:

TOLL-O-THERM POWDRE NEO

**Product family to which the construction
product belongs:**

Product Area Code: 04
External Thermal Insulation Composite System
with rendering (ETICS)

Manufacturer:

CROMOLOGY SERVICES, Marque TOLLENS
71, boulevard du Général Leclerc
FR – 92593 CLICHY CEDEX

Manufacturing plant(s):

Cromology Research & Industry
71 boulevard du Général Leclerc
FR – 92583 Clichy

**This European Technical Assessment
contains:**

21 pages including 3 Annexes which form an
integral part of this assessment

Annex 4 contains confidential information and is
not included in the European Technical
Assessment when that assessment is publicly
available

**This European Technical Assessment is
issued in accordance with regulation (EU)
No 305/2011, on the basis of:**

European Technical Approval Guideline No 004
(ETAG 004), edition 2013, used as European
Assessment Document (EAD)

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

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SPECIFIC PART

1. Technical description of the product

The External Thermal Insulation Composite System “**TOLL-O-THERM POUDRE NEO**”, subject to this European Technical Assessment (hereinafter ETA) and called ETICS in the following text, is a kit designed and installed in accordance with the Manufacturer’s instructions, deposited with the CSTB. The ETICS comprises the components listed in the following table, which are factory-produced by the Manufacturer or a supplier. The ETICS is made up on site from these components.

The ETICS also includes ancillary materials which are defined in clause 3.2.2.5 of the ETAG 004¹. They shall be used in accordance with the Manufacturer’s instructions.

The ETICS is described according to its method of fixing, as defined in clause 2.2 of the ETAG 004.

Method of fixing	Component	Coverage (kg/m ²)	Thickness (mm)
Bonded ETICS (purely bonded or bonded with supplementary anchors)	Insulation products		
	Expanded polystyrene (EPS) boards, see Annex 1 (1/4) to Annex 1 (4/4)		
	- “Standard” expanded polystyrene (EPS) panels	/	20 to 300
	- “Special” expanded polystyrene (EPS) panels “Panneaux à bossage”: panels with groove on the surface to be covered by the base coat	/	60 to 300
	Adhesives		
	TOLL-O-THERM CP : white cement-based powder requiring addition of about 17% wt. water.	2.6 to 3.5 [powder]	—
	TOLL-O-THERM 3CP+ : grey cement-based powder requiring addition of 21 to 22% wt. water.	2.6 to 3.5 [powder]	—
	TOLL-O-THERM POUDRE NEO : grey cement-based powder requiring addition of about 21% wt. water.	2.6 to 3.5 [powder]	—
Mechanically fixed ETICS with anchors and supplementary adhesive	Supplementary anchors for insulation products		
	Plastic anchors, see Annex 2	—	—
	Insulation products		
	Expanded polystyrene (EPS) boards, see Annex 1 (1/4) to Annex 1 (4/4)		
	- “Standard” expanded polystyrene (EPS) panels	/	60 to 300
	- “Special” expanded polystyrene (EPS) panels “Panneaux à bossage”: panels with groove on the surface to be covered by the base coat	/	60 to 300

¹ ETAG 004 is available on the EOTA website: www.eota.eu.

Method of fixing	Component	Coverage (kg/m ²)	Thickness (mm)
Mechanically fixed ETICS with anchors and supplementary adhesive	Supplementary adhesives		
	TOLL-O-THERM CP : white cement-based powder requiring addition of about 17% wt. water.	2.6 to 3.5 [powder]	—
	TOLL-O-THERM 3CP+ : grey cement-based powder requiring addition of 21 to 22% wt. water.	2.6 to 3.5 [powder]	—
	TOLL-O-THERM POUDRE NEO : grey cement-based powder requiring addition of about 21% wt. water.	2.6 to 3.5 [powder]	—
	Anchors for insulation products		
	Plastic anchors, see Annex 2	—	—
Every method of fixing	Base coat		
	TOLL-O-THERM POUDRE NEO : powder requiring addition of 22 to 23 % wt. water, consisting of grey cement, a vinylic micronised copolymer, calcium carbonate and silica as particles and specific additives.	About 4.5 [powder]	Mean (dry): 3.5 Minimal (dry): 3.0
	Meshes		
	Glass fibre meshes (standard, special: "treillis à bossage" and reinforced), see Annex 3 (1/2) and (2/2)		
	Key coats		
	TOLL-O-THERM FOND : ready-to-use pigmented liquid, acrylic binder, to apply optionally before TOLL-O-THERM RIBBÉ GG IF , TOLL-O-THERM RIBBÉ GM IF , TOLL-O-THERM TALOCHÉ GM IF , TOLL-O-THERM TALOCHÉ GG IF , TOLL-O-THERM SILOXANE TALOCHÉ IF and GRANIPLAST finishing coats.	0.15 to 0.20	—
	SILICA FOND : uncoloured liquid, silicate binder requiring addition of 100% wt. SILICA PAINT to apply mandatory before silicate finishing coats.	0.10 to 0.15 [prepared]	—
	Finishing coats		
	Ready-to-use pastes – acrylic binder: - TOLL-O-THERM TALOCHÉ GM IF (particles size 1.0 mm) - TOLL-O-THERM RIBBÉ GM IF (particles size 1.6 mm) - TOLL-O-THERM TALOCHÉ GG IF (particles size 1.6 mm) - TOLL-O-THERM RIBBÉ GG IF (particles size 2.5 mm)	1.7 to 2.2 1.8 to 2.3 1.9 to 2.6 2.5 to 3.1	Regulated by particle size
	For applications between 1 and 15°C, these pastes can be mixed with 4 to 8% wt. of Accélérateur de séchage Cromology Services (powder made of hydraulic binder and mineral filler) to accelerate their drying.		

Method of fixing	Component	Coverage (kg/m ²)	Thickness (mm)
Every method of fixing	Ready-to-use paste – acrylic binder with siloxane: - TOLL-O-THERM SILOXANE TALOCHÉ IF (particles size 1.0 mm)	1.8 to 2.3	Regulated by particle size
	For applications between 1 and 15°C, this paste can be mixed with 4 to 8% wt. of Accélérateur de séchage Cromology Services (powder made of hydraulic binder and mineral filler) to accelerate its drying.		
	Ready-to-use paste – silicate binder: VISOLSILICA OT FIN (particles size 1.0 mm)	1.5 to 2.0	Regulated by particle size
	Ready-to-use paste – acrylic binder with coloured marble aggregates: GRANIPLAST (particles size 1.8 mm)	3.5 to 4.1	Regulated by particle size
	Cement-based powder associated with a decorative paint: TOLL-O-THERM POUDRE NEO with SILICA PAINT : - TOLL-O-THERM POUDRE NEO : same product as base coat - SILICA PAINT : silicate-based pigmented liquid, requiring addition of about 10 to 20% wt. SILICA FOND . This paint can also be used to cover the groove of the “Special” expanded polystyrene (EPS) panels.	About 2.0 [powder] About 0.4 [prepared]	About 1.5
Ancillary materials	Descriptions in accordance with § 3.2.2.5 of the ETAG 004. Remain under the ETA-Manufacturer responsibilities.		

The ETICS is designed to give the walls to which it is applied satisfactory thermal insulation. The minimum thermal resistance of the ETICS shall be higher than 1.0 m².K/W.

The components are protected from moisture during transport and storage by means of appropriate packaging, unless other measures are foreseen by the Manufacturer for this purpose.

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

This ETICS is intended to be used as thermal insulation of buildings' external walls made of masonry (bricks, blocks, stones, *etc.*) or concrete (cast on site or as prefabricated panels).

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

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

The ETICS is not intended to ensure the airtightness of the walls.

The provisions made in this ETA are based on an assumed working life of at least 25 years, provided that the construction works are subject to appropriate design, execution, maintenance and repair. The indications given as to the working life cannot be interpreted as a guarantee given by the Manufacturer or the Technical Assessment Body, but should only be regarded as a means for choosing the appropriate products in relation to the expected economically reasonable working life of the works.

Design, execution, maintenance and repair of the construction works shall take into account principles given in chapter 7 of the ETAG 004 and shall be done in accordance with national instructions.

3. Performances of the product and references to the methods used for their assessment

Performances of the ETICS, related to the basic requirements for construction works (hereinafter BWR), were determined according to chapters 4, 5 and 6 of the ETAG 004.

These performances, given in the following paragraphs, are valid as long as the components are the ones described in § 1 and Annexes 1 to 3 of this ETA.

3.1 Mechanical resistance and stability (BWR 1)

Not relevant.

3.2 Safety in case of fire (BWR 2)

Reaction to fire

Configuration	Declared organic content ⁽¹⁾	Declared flame retardant content ⁽¹⁾	Class according to EN 13501-1
<ul style="list-style-type: none"> Adhesives / supplementary adhesives: <ul style="list-style-type: none"> - TOLL-O-THERM CP - TOLL-O-THERM POUDRE NEO - TOLL-O-THERM 3CP+ Insulation products: EPS boards, reaction to fire Class E, thickness ≤ 300 mm, density ≤ 22 kg/m³ Base coat: TOLL-O-THERM POUDRE NEO Key coat: TOLL-O-THERM FOND Meshes: <ul style="list-style-type: none"> - SSA-1363 F+ - R 131 A 101 C+ - R 131 A 102 C+ - 03-1 C+ Finishing coat: GRANIPLAST 	<p>Base coat: 3.2%</p> <p>Key coat: 11.8%</p> <p>Finishing coat: 8.2%</p>	<p>Base coat: 0.0%</p> <p>Key coat: 0.0%</p> <p>Finishing coat: 0.0%</p>	C-s2, d0
<ul style="list-style-type: none"> Adhesives / supplementary adhesives: <ul style="list-style-type: none"> - TOLL-O-THERM CP - TOLL-O-THERM POUDRE NEO - TOLL-O-THERM 3CP+ Insulation products: EPS boards, reaction to fire Class E, thickness ≤ 300 mm, density ≤ 20 kg/m³ Base coat: TOLL-O-THERM POUDRE NEO Key coats: <ul style="list-style-type: none"> - TOLL-O-THERM FOND - SILICA FOND Meshes: <ul style="list-style-type: none"> - SSA-1363 F+ - R 131 A 101 C+ - R 131 A 102 C+ - 03-1 C+ Finishing coats: <ul style="list-style-type: none"> - TOLL-O-THERM RIBBÉ GG IF / RIBBÉ GM IF / TALOCHÉ GM IF / TALOCHÉ GG IF⁽²⁾ - TOLL-O-THERM SILOXANE TALOCHÉ IF⁽²⁾ - VISOLSILICA OT FIN - TOLL-O-THERM POUDRE NEO with SILICA FOND + SILICA PAINT 	<p>Base coat: 3.2%</p> <p>Key coats: 11.8 to 46.9%</p> <p>Finishing coats: 5.8 to 10.1%</p> <p>Except for TOLL-O-THERM POUDRE NEO (3.2%) with SILICA PAINT (11.3%)</p>	<p>Base coat: 0.0%</p> <p>Key coats: 0.0%</p> <p>Finishing coats: 0.0 to 18.3%</p>	B-s2, d0

⁽¹⁾ Percentage declared by the Manufacturer, relative to the dried weight of the component as delivered.

⁽²⁾ With or without Accélérateur de séchage Cromology Services.

Note: a European reference fire scenario has not been laid down for façades. In some Member States, the classification of ETICS according to EN 13501-1 might not be sufficient for the use in façades. An additional assessment of ETICS according to national provisions (e.g., on the basis of a large scale test) might be necessary to comply with Member States regulations, until the existing European classification system has been completed.

3.3 Hygiene, health and the environment (BWR 3)

3.3.1 Water absorption – capillarity test

3.3.1.1 Water absorption of the base coat

- After 1 hour: water absorption < 1 kg/m²
- After 24 hours: water absorption < 0.5 kg/m²

3.3.1.2 Water absorption of the rendering system

Rendering system: Base coat +finishing coat indicated below	Water absorption after 24 hours	
	< 0.5 kg/m ²	≥ 0.5 kg/m ²
With or without TOLL-O-THERM FOND: - TOLL-O-THERM TALOCHÉ GM IF ⁽¹⁾ - TOLL-O-THERM RIBBÉ GM IF ⁽¹⁾ - TOLL-O-THERM TALOCHÉ GG IF ⁽¹⁾ - TOLL-O-THERM RIBBÉ GG IF ⁽¹⁾	X	
With or without TOLL-O-THERM FOND: TOLL-O-THERM SILOXANE TALOCHÉ IF ⁽¹⁾	X	
With SILICA FOND: VISOLSILICA OT FIN	X	
With or without TOLL-O-THERM FOND: GRANIPLAST	X	
TOLL-O-THERM POUDRE NEO with SILICA FOND + SILICA PAINT		X

⁽¹⁾ With or without Accélérateur de séchage Cromology Services.

3.3.2 Watertightness

3.3.2.1 Hygrothermal behaviour

Heat-rain and heat-cold cycles have been performed on a rig. The ETICS is assessed as resistant to hygrothermal cycles.

3.3.2.2 Freeze-thaw behaviour

Rendering system with finishing coat TOLL-O-THERM POUDRE NEO with SILICA FOND and SILICA PAINT: freeze / thaw cycles were not performed.

Rendering systems with the other finishing coats: water absorptions of both the base coat and the rendering systems are less than 0.5 kg/m² after 24 hours and the ETICS is therefore assessed as freeze/thaw resistant.

3.3.3 Impact resistance

Rendering system: Base coat + finishing coat indicated below	Use category		
	single standard mesh	double standard mesh	reinforced mesh + standard mesh
With or without TOLL-O-THERM FOND: - TOLL-O-THERM TALOCHÉ GM IF ⁽¹⁾ - TOLL-O-THERM RIBBÉ GM IF ⁽¹⁾ - TOLL-O-THERM TALOCHÉ GG IF ⁽¹⁾ - TOLL-O-THERM RIBBÉ GG IF ⁽¹⁾	Category III		Category I
With or without TOLL-O-THERM FOND: TOLL-O-THERM SILOXANE TALOCHÉ IF ⁽¹⁾	Category III	Category II	
With SILICA FOND: VISOLSILICA OT FIN	Category III		Category I
With or without TOLL-O-THERM FOND: GRANIPLAST	Category III	Category II	Category I
TOLL-O-THERM POUDRE NEO with SILICA FOND + SILICA PAINT	Category III		

⁽¹⁾ With or without Accélérateur de séchage Cromology Services.

3.3.4 Water vapour permeability – resistance to water vapour diffusion

Rendering system: Base coat + finishing coat indicated below	Equivalent air thickness s_d (m)
With or without TOLL-O-THERM FOND: - TOLL-O-THERM TALOCHÉ GM IF ⁽¹⁾ - TOLL-O-THERM RIBBÉ GM IF ⁽¹⁾ - TOLL-O-THERM TALOCHÉ GG IF ⁽¹⁾ - TOLL-O-THERM RIBBÉ GG IF ⁽¹⁾	≤ 1.0 (Test result obtained with: TOLL-O-THERM RIBBÉ GG IF: 0.7 TOLL-O-THERM Fond + TOLL-O-THERM RIBBÉ GG IF: 0.8)
With or without TOLL-O-THERM FOND: TOLL-O-THERM SILOXANE TALOCHÉ IF ⁽¹⁾	≤ 1.0 (Test result obtained with: TOLL-O-THERM SILOXANE TALOCHÉ IF: 0.4 TOLL-O-THERM Fond + TOLL-O-THERM SILOXANE TALOCHÉ IF: 0.5)
With SILICA FOND: VISOLSILICA OT FIN	≤ 1.0 (Test result obtained: 0.2)
With or without TOLL-O-THERM FOND: GRANIPLAST	≤ 1.0 (Test result obtained: 0.5)
TOLL-O-THERM POUDRE NEO with SILICA FOND + SILICA PAINT	≤ 1.0 (Test result obtained: 0.1)

⁽¹⁾ With or without Accélérateur de séchage Cromology Services.

3.3.5 Release of dangerous substances

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

A written declaration was submitted by the Manufacturer.

In addition to the specific clauses relating to dangerous substances contained in this ETA, there may be other requirements applicable to the ETICS falling within its scope (e.g., transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Regulation (EU) No 305/2011, these requirements need also to be complied with, when and where they apply.

3.4 Safety and accessibility in use (BWR 4)

3.4.1 Bond strength

3.4.1.1 Bond strength of the base coat onto insulation product

- Initial state: bond strength ≥ 0.08 MPa
- After hygrothermal cycles: bond strength ≥ 0.08 MPa
- After freeze-thaw cycles: test not performed (see § 3.3.2.2 of this ETA)

3.4.1.2 Bond strength of the adhesives onto substrate and insulation product

TOLL-O-THERM CP, TOLL-O-THERM 3CP+ and TOLL-O-THERM POUDRE NEO:

	Bond strength (MPa) after:		
	Initial state	48 h immersion water + 2 h at 23°C-50% RH	48 h immersion water + 7 days at 23°C-50% RH
Concrete	≥ 0.25	≥ 0.08	≥ 0.25
Insulation product	≥ 0.08	≥ 0.03	≥ 0.08

The ETICS can so be installed on the substrate with application of the adhesive on the following minimal surfaces:

	Tensile strength perpendicular to the faces of EPS		
	≥ 100 kPa	≥ 120 kPa	≥ 150 kPa
TOLL-O-THERM CP TOLL-O-THERM 3CP+ TOLL-O-THERM POUDRE NEO	30%	25%	20%

3.4.2 Fixing strength (transverse displacement)

Test not required because the ETICS fulfils the following criteria:

$$E.d < 50,000 \text{ N/mm}$$

E modulus of elasticity of the base coat without mesh (MPa)

d mean dried thickness of the base coat (mm)

3.4.3 Resistance to wind load

3.4.3.1 Resistance to wind load of mechanically-fixed ETICS using anchors

Anchors	Plate diameter (mm)	≥ 60		
	Plate stiffness (kN/mm)	≥ 0.3		
Insulation product	Type	EPS boards		
	Tensile strength perpendicular to the face (kPa)	≥ 120		
	Thickness (mm)	≥ 60	≥ 80	≥ 100
Maximum load (Pull-through test)	Anchors not placed at the panel joints: R_{panel} (N)	Minimal: 506	Minimal: 649	Minimal: 658
		Average: 512	Average: 657	Average: 688
	Anchors placed at the panel joints: R_{joint} (N)	Minimal: 429	Minimal: 554	Minimal: 611
		Average: 455	Average: 570	Average: 616

Anchors	Plate diameter (mm)	≥ 60		
	Plate stiffness (kN/mm)	≥ 0.6		
Insulation product	Type	EPS boards		
	Tensile strength perpendicular to the face (kPa)	≥ 120		
	Thickness (mm)	≥ 60	≥ 80	≥ 100
Maximum load (Pull-through test)	Anchors not placed at the panel joints: R_{panel} (N)	Minimal: 509	Minimal: 707	Minimal: 949
		Average: 520	Average: 720	Average: 968
	Anchors placed at the panel joints: R_{joint} (N)	Minimal: 433	Minimal: 610	Minimal: 806
		Average: 464	Average: 617	Average: 821

For the use of anchors mounted countersunk, the above indicated values apply for insulation thickness greater or equal to 80 mm and plate diameter equal to 60 mm.

Anchors which can be used are described in Annex 2 of this ETA.

Anchors	Trade name	termoz SV II ecotwist
	Helix dimensions (mm)	Diameter: 66 Height: 27
Insulation product	Type	EPS boards
	Tensile strength perpendicular to the face (kPa)	≥ 120
	Thickness (mm)	≥ 100
Maximum load (Pull-through test)	Anchors not placed at the panel joints: R_{panel} (N)	Minimal: 570
		Average: 590
	Anchors placed at the panel joints: R_{joint} (N)	Minimal: 350
		Average: 440

Anchor termoz SV II ecotwist can only be used as mounted countersunk.

The design wind load resistance of the ETICS fixed with anchors is determined as follows:

$$R_d = \frac{R_{\text{panel}} \cdot n_{\text{panel}} + R_{\text{joint}} \cdot n_{\text{joint}}}{\gamma}$$

n_{panel} number of anchors not placed at the panel joints, per m²
 n_{joint} number of anchors placed at the panel joints, per m²
 γ national safety factor

3.4.4 Width of crack – Render Strip Tensile Test

No performance was determined for the ETICS.

3.5 Protection against noise (BWR 5)

No performance was determined for the ETICS.

3.6 Energy economy and heat retention (BWR 6)

Thermal resistance and thermal transmittance are defined in clause 5.1.6 of the ETAG 004.

3.7 Sustainable use of natural resources (BWR 7)

No performance was determined for the ETICS.

3.8 Aspects of durability and serviceability

Bond strength after ageing:

Rendering system: Base coat + finishing coat indicated below	Bond strength (MPa)
With or without TOLL-O-THERM FOND: - TOLL-O-THERM TALOCHÉ GM IF ⁽¹⁾ - TOLL-O-THERM RIBBÉ GM IF ⁽¹⁾ - TOLL-O-THERM TALOCHÉ GG IF ⁽¹⁾ - TOLL-O-THERM RIBBÉ GG IF ⁽¹⁾	≥ 0.08
With or without TOLL-O-THERM FOND: TOLL-O-THERM SILOXANE TALOCHÉ IF ⁽¹⁾	
With SILICA FOND: VISOLSILICA OT FIN	
With or without TOLL-O-THERM FOND: GRANIPLAST	
TOLL-O-THERM POUDRE NEO with SILICA FOND + SILICA PAINT	

⁽¹⁾ With or without Accélérateur de séchage Cromology Services.

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

According to Decision 97/556/EC (Decision of the Commission of 14 July 1997, L 229 of 20.8.1997, p. 15), as amended by Decision 2001/596/EC (Decision of the Commission of 8 January 2001, L 209 of 2.8.2001, p. 33)², the systems of AVCP given in the following table apply:

Product	Intended use	Levels or classes (Reaction to fire)	System
External Thermal Insulation Composite Systems with rendering	in external walls subject to fire regulation	A1 ⁽¹⁾ , A2 ⁽¹⁾ , B ⁽¹⁾ or C ⁽¹⁾	1
		- A1 ⁽²⁾ , A2 ⁽²⁾ , B ⁽²⁾ , C ⁽²⁾ - D, E, F - (A1 to E) ⁽³⁾	2+
	in external walls not subject to fire regulation	any	2+

⁽¹⁾ Products/materials for which as 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).

The systems of AVCP are described in Annex V of Regulation (EU) No 305/2011, as amended by Delegated Regulation (EU) No 568/2014.

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

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at the CSTB.

The control plan is given in Annex 4. As the control plan contains confidential information, Annex 4 is not included in the published parts of this ETA.

Issued in Marne-la-Vallée on 09/07/2020 by Christine GILLIOT
Director of Department Floors and Covering

²Decisions are published in the *Official Journal of the European Union (OJEU)*, see www.new.eu-lex.europa.eu/oj/direct-access.html.

Factory-prefabricated, uncoated boards made of expanded polystyrene (EPS) according to EN 13163 and having characteristics described in the following table. The surface of the boards is homogeneous and without "skin". Coverage (kg/m²) depends on both thickness of the board and density of EPS.

Reaction to fire / EN 13501-1		Class E
Thermal resistance / EN 13163		Defined in the CE marking
Dimensional tolerances	Thickness / EN 823	± 1.0 mm [T2]
	Length / EN 822	± 2.0 mm [L2]
	Width / EN 822	± 2.0 mm [W2]
	Squareness / EN 824	± 2% [S2]
	Flatness / EN 825	≤ 5 mm [P5]
Dimensional stability	Under specified temperature and humidity / EN 1604:48 h at 70°C	≤ 1% [DS (70,-)1]
	Under specified temperature and humidity / EN 1604:48 h at 70°C and 90% RH	≤ 1% [DS(70,90)1]
	Under laboratory condition / EN 1603	± 0.2% [DS(N)2]
Water absorption (partial immersion) / EN 1609 – method A		< 1 kg/m ²
Water vapour diffusion resistance factor (μ) / EN 12086		20 to 60
Tensile strength perpendicular to the faces in dry conditions / EN 1607		≥ 100 kPa
Shear strength / EN 12090		≥ 0.02 N/mm ²
Shear modulus / EN 12090		≥ 1.0 N/mm ²
Dynamic stiffness / EN 29052-1		No performance determined
Air flow resistance / EN 29053		Not relevant

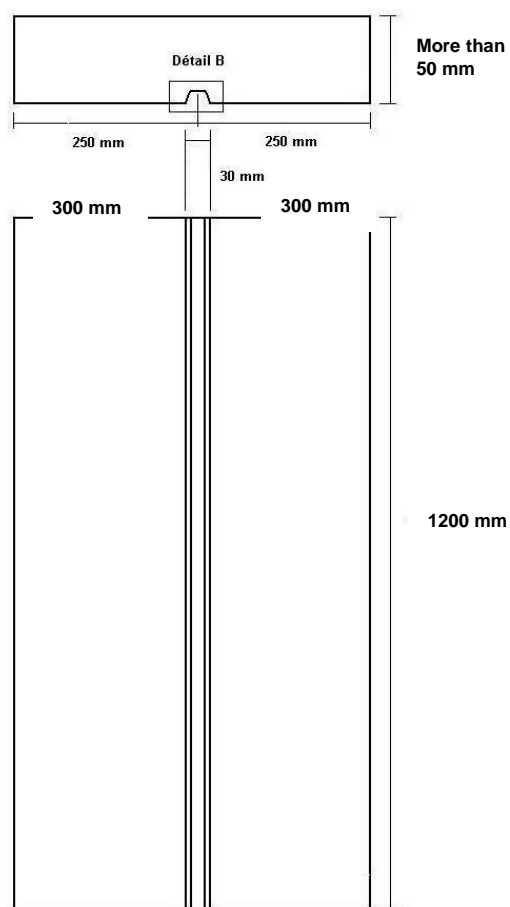
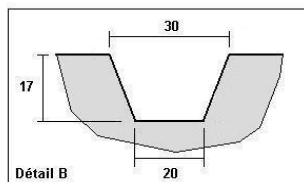
ETICS TOLL-O-THERM POWDRE NEO

Insulation products for bonded ETICS or mechanically-fixed ETICS with anchors

ANNEX 1 (1/4)
of ETA-20/0215-version 1

Dimensions in millimeters

Type 30/20/17
Type I



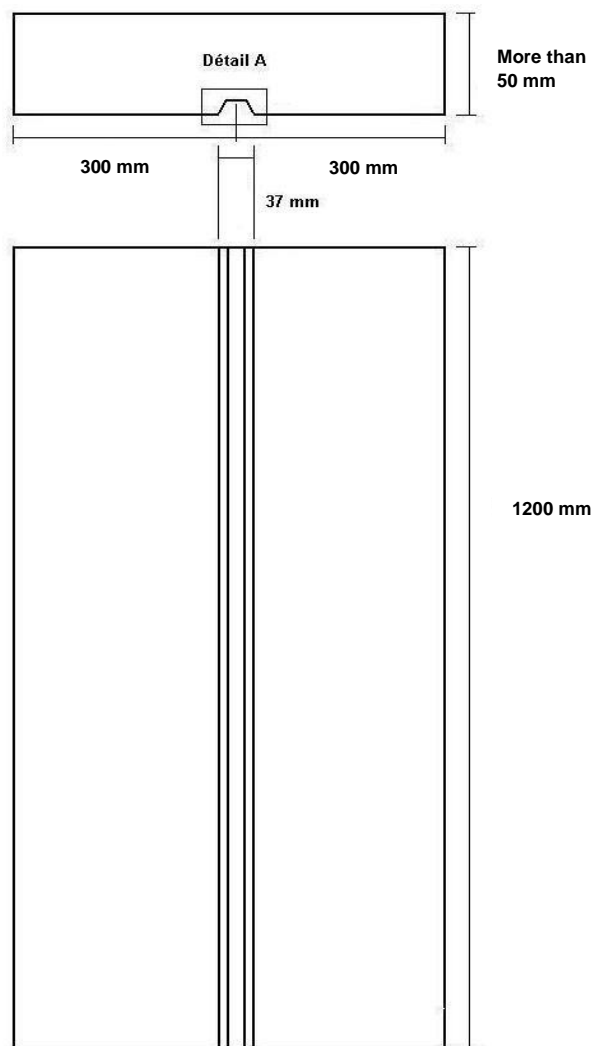
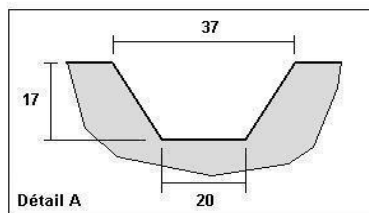
ETICS TOLL-O-THERM POUDRE NEO

Description of the special EPS Type I for bonded ETICS and mechanically fixed ETICS with anchors

ANNEX 1 (2/4)
of ETA-20/0215-version 1

Dimensions in millimeters

Type 37/20/17
Type II



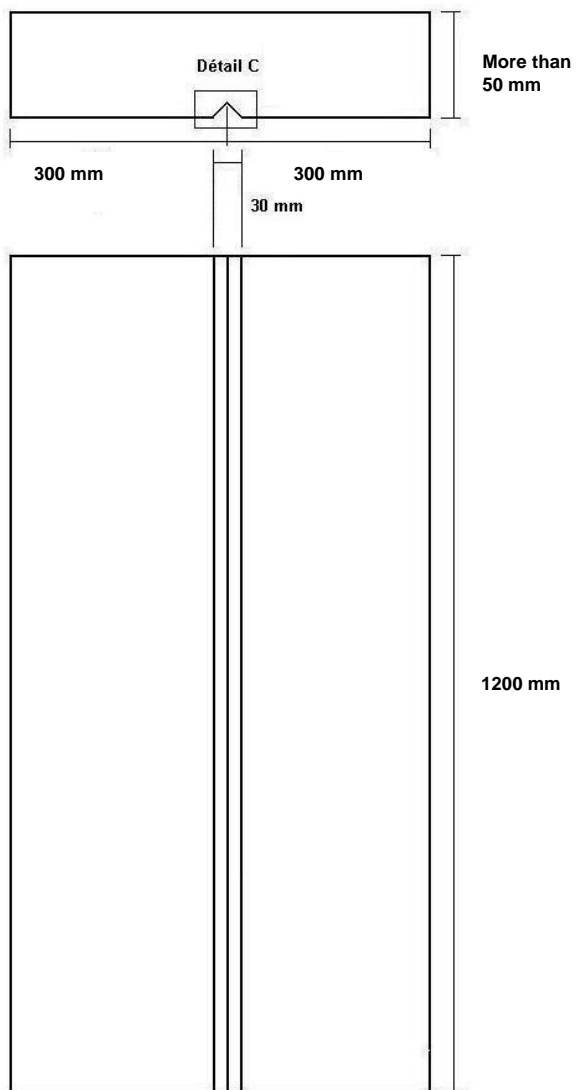
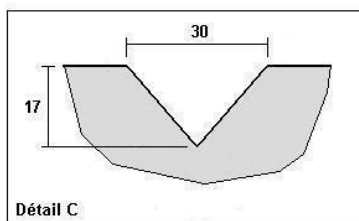
ETICS TOLL-O-THERM POUDRE NEO

Description of the special EPS Type II for bonded ETICS and mechanically fixed ETICS with anchors

ANNEX 1 (3/4)
of ETA-20/0215-version 1

Dimensions in millimeters

Type 30/0/17
Type III



ETICS TOLL-O-THERM POUDRE NEO

Description of the special EPS Type III for bonded ETICS and mechanically fixed ETICS with anchors

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of ETA-20/0215-version 1

Anchors or powder actuated fastener with ETA according to European Technical Approval Guideline No 014 (hereinafter ETAG 014) or to European Assessment Document (EAD) 330196-ED-0604 (hereinafter EAD “anchors”) and 330965-ED-0601 (for the fastener). The anchors are composed of a plastic expansion sleeve with a plate having diameter of 60 mm and a plastic or metallic nail or screw. The powder actuated fastener is composed of a plastic expansion sleeve with a plate having diameter of 60 mm and a metallic fastener. Use categories and characteristic resistances in the substrate are given in each anchor / fastener's ETA. Validity of the anchor / fastener's ETA shall be checked before using the anchor / the fastener.

Trade name	ETA reference	Mounting ⁽¹⁾	Plate stiffness(kN/mm)
Fischer TERMOZ CN 8	ETA-09/0394	a	≥ 0.3
Fischer TERMOZ PN 8	ETA-09/0171	a	
Hilti XI-FV (fastener)	ETA-17/0304	a	
Koelner KI-10, KI-10M, KI-10PA	ETA-07/0291	a	
Koelner KI-10 N, KI-10 NS	ETA-07/0221	a	
Ejot SDF-S plus 8 UB + Plate element TE	ETA-04/0064	a	≥ 0.6
Ejot H1 eco	ETA-11/0192	a	
Ejot H3	ETA-14/0130	a	
Ejotherm STR U, STR U 2G	ETA-04/0023	a, b	
Koelner TFIX-8M	ETA-07/0336	a	
Koelner TFIX-8S	ETA-11/0144	a	
Koelner TFIX-8ST	ETA-11/0144	b	
Spit ISO N	ETA-13/0994	a	
Spit ISO S	ETA-13/0560	a, b	
termoz SV II ecotwist	ETA-12/0208	b	—

⁽¹⁾ a: surface mounting; b: countersunk mounting.

Additionally, every anchor with an ETA according to ETAG 014 or EAD “anchors” and having the following characteristics can be used:

- plate diameter ≥ 60 mm;
- plate stiffness ≥ 0.3 kN/mm according to EOTA Technical Report No 026;
- load resistance of the plate ≥ 1.0 kN according to EOTA Technical Report No 026.

These characteristics, the use categories and the characteristic resistances in the substrate shall be taken from the corresponding anchor's ETA.

ETICS TOLL-O-THERM POUDRE NEO	ANNEX 2 of ETA-20/0215-version 1
Anchors for insulation product	

Glass fibre meshes:

- standard meshes: with mesh size between 3 and 6 mm;
- reinforced mesh: implemented in addition to the standard mesh, to improve the impact resistance.

Trade name	Mass per unit area (g/m ²)	Residual strength after ageing (N/mm)		Relative residual strength after ageing (%) ⁽¹⁾	
		Warp	Weft	Warp	Weft
Standard meshes					
SSA-1363 F+	167	≥ 20	≥ 20	≥ 50	≥ 50
R 131 A 101 C+	167	≥ 20	≥ 20	≥ 50	≥ 50
R 131 A 102 C+	161	≥ 20	≥ 20	≥ 50	≥ 50
03-1C+	160	≥ 20	≥ 20	≥ 50	≥ 50
Reinforced mesh					
R 585 A 101	700	≥ 20	≥ 20	≥ 40	≥ 40

⁽¹⁾ Percentage of the strength in the as-delivered state.

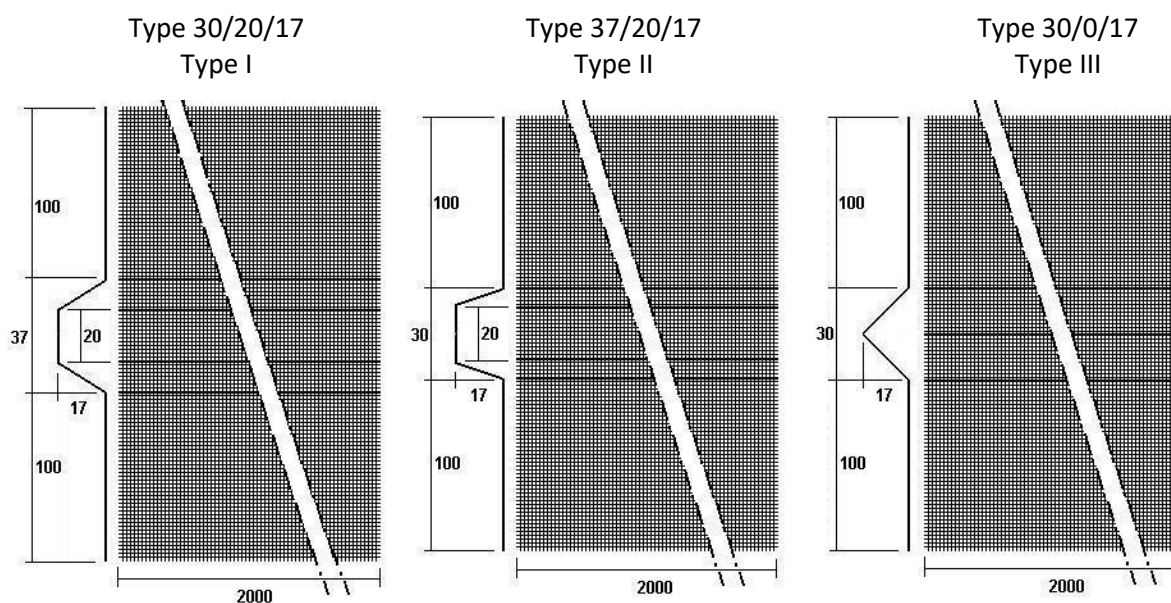
ETICS TOLL-O-THERM POUDRE NEO

Glass fibre meshes

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Special mesh “treillis à bossage”: preformed glass fibres meshes cut into Glasgitter 50430 / 41241, 2.0 m long. Strip implemented in the groove of “Special” expanded polystyrene panels “Panneaux à bossage”.

Dimensions in millimeters



ETICS TOLL-O-THERM POUDRE NEO

Description of the special mesh: “treillis à bossage”

ANNEX 3 (2/2)
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