Centre Scientifique et Technique du Bâtiment
84 avenue Jean Jaurès
Champs sur Marne
FR-77447 Marne la Vallée Cedex 2
Tél. : (33) 01 64 68 82 82
Fax : (33) 01 60 05 70 37

Authorized and notified according to Article 10 of the Council Directive of 21 December 1988 on the approximation of laws, regulations and administrative provisions of Member States relating to construction products (89/106/EEC)

CSTB le futur en construction

MEMBER OF EOTA

European Technical Approval ETA-10/0080

(English translation prepared by CSTB - Original version in French language)

Trade name: Nom commercial :	**AX, AXA, AXTA, XA, XTA**
Holder of approval: Titulaire :	**AV COMPOSITES** **Z.A. de la Massane** **11, avenue des Joncades Basses** **FR-13210 SAINT REMY DE PROVENCE**
Generic type and use of construction product: Type générique et utilisation prévue du produit de construction :	**Self-supporting composite lightweight panels for use in roofs** Panneaux composites légers autoportants destinés aux toitures
Validity from/to: Validité du/au :	**08/07/2010 to 08/07/2015** 08/07/2010 au 08/07/2015
Manufacturing plant: Usine de fabrication :	**AV COMPOSITES** **Z.A. de la Massane** **11, avenue des Joncades Basses** **FR-13210 SAINT REMY DE PROVENCE**
This European Technical Approval contains: Le présent Agrément Technique Européen contient :	**30 pages including 4 annexes.** 30 pages incluant 4 annexes.

I LEGAL BASES AND GENERAL CONDITIONS

1 - This European Technical Approval is issued by the Centre Scientifique et Technique du Bâtiment (CSTB) in accordance with:

- Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of Member States relating to construction products[1], modified by the Council Directive 93/68/EEC of 22 July 1993[2];

- Décret n° 92-647 du 8 juillet 1992[3] concernant l'aptitude à l'usage des produits de construction;

- Common Procedural Rules for Requesting, Preparing and the Granting of European Technical Approvals set out in the Annex of Commission Decision 94/23/EC[4];

- Guideline for European Technical Approval of "Self supporting composite lightweight panels ETAG 016 edition November 2003, Part 1: "General" and Part 2: Specific aspects relating to self-supporting composite lightweight panels for use in roofs".

2 - The Centre Scientifique et Technique du Bâtiment is authorised to check whether the provisions of this European Technical Approval are met. Checking may take place in the manufacturing plant (for example concerning the fulfilment of assumptions made in this European Technical Approval with regard to manufacturing). Nevertheless, the responsibility for the conformity of the products with the European Technical Approval and for their fitness for the intended use remains with the holder of the European Technical Approval.

3 - This European Technical Approval is not to be transferred to manufacturers or agents of manufacturer other than those laid down in the contact of the European Technical Approval ; or manufacturing plants other than those announced to the Centre Scientifique et Technique du Bâtiment.

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6 - The European Technical Approval is issued by the approval body in its official language. This version fully corresponds to the version circulated within EOTA. Translations into other languages have to be designated as such.

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1 Official Journal of the European Communities no. L 40, 11.2.1989, p. 12
2 Official Journal of the European Communities no. L 220, 30./.1993, p. 1
3 Journal Officiel de la République française du 14 juillet 1992
4 Official Journal of the European Communities no. L 17, 20.1.1994, p. 34

II SPECIFIC CONDITIONS OF THE EUROPEAN TECHNICAL APPROVAL

1 Definition of product(s) and intended use

1.1 Scope

This ETA covers self supporting composite lightweight panels AV COMPOSITES for roof of metal/wood frame building, only accessible for installation and maintenance (use category A2 as defined in ETAG 016 part 2).

The provisions made in this European Technical Approval (ETA) are based on an assumed intended working life of at least 25 years, provided that the installed kit is subjected to an appropriate use and maintenance.

The indications given as to the working life cannot be interpreted as a guarantee given by the manufacturer, 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.

1.2 Definition of panels

AX, AXA, AXTA, XA, XTA , panels (cf. annex 3) are made of a rigid polystyrene core: XPS and EPS, HCFC free and 2 metal sheets (coated aluminium sheets). The internal metal sheet is plane or structured.

The panels are designed to get a waterproof junction system in the longitudinal edge. Along each longitudinal edge of panel is provided a specific PVC profile or only groove in core. On site and between two PVC profiles and the both sides of the panels, a specific junction key, PVC profile is set up. There is no transversal side overlapping. The thickness of the panels with PVC profile on edge can be 52 to 85 mm; 95 to 105 mm for panels with grooved edges.

The reference indicates Type/thickness:

- Type:
  - AX 52 = Thermic and reversible, Thickness 52 mm, mass 6,4 kg/m², length 3 m to 4,5 +/- 0,005 m, width 1,195 m.
  - AXA 55 = Thermic and acoustic, Thickness 55 mm, mass 8,5 kg/m², length 3 m to 4,5 +/- 0,005 m, width 1,195 m. Use of panels of color dark (slate or brown) is limited to length some 4 m.
  - AXTA 58 = Thermic, acoustic and reversible, Thickness 58 mm, mass 6,4 kg/m², length 3 m to 4 m +/- 0,005 m, width 1,195 m. It is not possible to use panels of dark color.
  - X82R16 = Thermic, acoustic and reversible, Thickness 82 mm, mass 7,4 kg/m², length 3 m to 5 m +/- 0,005 m, width 1,195 m.
  - X102R16 = Thermic, acoustic and reversible, Thickness 102 mm, mass 8,1 kg/m², length 3 m to 5,5 m +/- 0,005 m, width 1,195 m.
  - XA85R16 = Thermic, acoustic, thickness 85 mm, mass 9,5 kg/m², length 3 m to 5 m +/- 0,005 m, width 1,195 m.

- XA105R16 = Thermic, acoustic, thickness 105 mm, mass 10,2 kg/m², length 3 m to 5,5 m +/- 0,005 m, width 1,195 m.
- XTA 85 = Thermic, acoustic and reversible, Thickness 85 mm, mass 6,8 kg/m², length 3 m to 5 m +/- 0,005 m, width 1,195 m.
- XTA 95R16 = Thermic, acoustic and reversible, Thickness 95 mm, mass 7,7 kg/m², length 3 m to 5 m +/- 0,005 m, width 1,195 m.

– Color:

- White RAL 9010.
- Structured sheet white RAL 9010.
- Roussillon.
- Brown RAL 8004.
- Grey slate.

1.3 Characteristics of the product

1.3.1 Metal face

- Aluminium sheet, thickness 0,72 mm or 1,00 mm following EN 485-4, coated following EN 1396, and can be plane or structured. This aluminium sheet can be in alloy:
  - EN AW 3004 H46, EN AW 3005 H48 or EN AW 3105 H48.

The internal coated sheet can be polyester 20 µm, white RAL 9010. This side is protected by film strippable. The inner face of the sheet is coated with primer epoxy coat thickness 5 µm. This sheet can be plane or structured.

The external coated sheet can be polyester 20 µm, white RAL 9010 or Roussillon (RAL 3012), or grey slate (RAL 7026), or brown copper (RAL 8004). This side is protected by film strippable. The inner face of the sheet is coated with primer epoxy coat thickness 5 µm.

1.3.2 Core

Thermic insulation and core is made with expanded polystyrene grey graphite foam (EPS) according to EN 13163 or extruded polystyrene (XPS) according to EN 13164.

EPS

Properties	Units	Value	Regulation
Density	Kg/cm^3	20-55	EN 1602
Compression with 10% deformation	kPa	115-400	EN 826
Tensile stress	kPa	180-600	EN 1607
Thermal conductivity	$w/m^2.K$	0,038-0,036	EN 12667

XPS

Properties	Units	Value	Regulation
Density	Kg/cm^3	30-35	EN 1602
Compression with 10% deformation	kPa	300	EN 826
Tensile stress	kPa	500-600	EN 1607
Thermal conductivity	$w/m^2.K$	0,029-0,034	EN 12667

1.3.3 Acoustics layers

Thermo acoustics layers, 3 mm thickness and 700 kg/m^3 density.

1.3.4 Glue

Glue polyurethane bicomponent.

- 250 to 400 g/m^2 per face.

1.3.5 Profiles

PVC profiles on edge of panels.

For thickness 52, 55, 58 mm.

Thermoplastic set up during manufacturing, length of the roof:

- Section 48 x 17,5 mm.

Rigid PVC profile connecting link, hold of location, length of the roof:

- Section 34 x 15 mm.

1.3.6 Screw

Stainless screws with sealing washer vulcanized, ref SXC5-S19-5.5 x 87 or ref SXC5-S19-5.5 x 160.

2 Characteristics of product(s) and methods of verification

2.1 Mechanical resistance and stability

As the AX, AXA, AXTA, XA, XTA panels are non-loadbearing parts of work, mechanical resistance is considered under ER4 Safety in use (see § 2.4).

2.2 Safety in case of fire

2.2.1 Reaction to fire

For panel reference AXA 55, thickness 55 mm, weight 8,6 kg/m², density of polystyrene 33 to 35 kg/m^3 and thickness 50 mm, fireproofing, density of elastomer layer 700kg/m^3 and thickness 3mm, thickness of facing 0,72 mm, the reaction to fire behaviour is classified E.

For panel reference AXTA 58, thickness 58 mm, weight 6,5 kg/m², density of polystyrene extruded 35 kg/m^3 and 2 thickness 14 mm, fireproofing, density of polystyrene expansed 20 kg/m^3 and thickness 28,5 mm, fireproofing, thickness of facing 0,72 mm, the reaction to fire behaviour is classified E.

The reaction to fire behaviour of the others panels classified with Euroclass F has not been determined (NPD).

2.2.2 Resistance to fire

No performance determined (NPD).

2.2.3 External fire performance

No performance determined (NPD).

2.3 Hygiene, health and the environment

2.3.1 Water permeability

AX, AXA, AXTA, XA, XTA panels are designed to get a waterproof junction system in the longitudinal edge with a specific junction key, in specific PVC profiles or in groove in core along the both sides of the panel, which ensures the watertightness of the roof.

Depending on the roofing pitch design (10% minimum), it may respect the watertightness arrangements according to national regulation.

2.3.2 Water vapour permeability (condensation risk)

Condensation risk on inner surface depending on the internal relative humidity. There is no condensation risk for studied conditions with a U maximum (see table).

Internal temp.		12°	16°	20°	+12°	+16°	+20°	+12°	16°	20°	12°	16°	20°	12°	16°	20°	12°	16°	20°
External temp.		+5°	+5°	-+5	0°	0°	0°	-5°	-5°	-5°	-10°	-10°	-10°	-15°	-15°	-15°	-20°	-20°	-20°
40% RH	Dew point	-1,2°	2,4°	6°	-1,2°	2,4°	6°	-1,2°	2,4°	6°	-1,2°	2,4°	6°	-1,2°	2,4°	6°	-1,2°	2,4°	6°
	U maxi w/m^2.K			9,3		8,5	7,0	7,8	6,5	5,6	6,0	5,2	4,7	4,9	4,4	4,0	4,1	3,8	3,5
50% RH	Dew point	1,9°	5,6°	9,3°	1,9°	5,6°	9,3°	1,9°	5,6°	9,3°	1,9°	5,6°	9,3°	1,9°	5,6°	9,3°	1,9°	5,6°	9,3°
	U maxi w/m^2.K		9,5	7,1	8,4	6,5	5,4	5,9	5,0	4,3	4,6	4,0	3,6	3,7	3,4	3,1	3,2	2,9	2,7
60% RH	Dew point	4,5°	6,4°	12°	4,5°	6,4°	12°	4,5°	6,4°	12°	4,5°	6,4°	12°	4,5°	6,4°	12°	4,5°	6,4°	12°
	U maxi w/m^2.K		8,7	5,3	6,3	6,0	4,0	4,4	4,6	3,2	3,4	3,7	2,7	2,8	3,1	2,3	2,3	2,7	2,0
70% RH	Dew point	6,7°	10,5°	14,4°	6,7°	10,5°	14,4°	6,7°	10,5°	14,4°	6,7°	10,5°	14,4°	6,7°	10,5°	14,4°	6,7°	10,5°	14,4°
	U maxi w/m^2.K	7,6°	5,0	3,7	4,4	3,4	2,8	3,1	2,6	2,2	2,4	2,1	1,9	2,0	1,8	1,6	1,7	1,5	1,4
80% RH	Dew point	8,7°	12,6°	16,4°	8,7°	12,6°	16,4°	8,7°	12,6°	12,6°	8,7°	12,6°	16,4°	8,7°	12,6°	16,4°	8,7	12,6°	16,4°
	U maxi w/m^2.K	4,7	3,1	2,4	2,8	2,1	1,8	1,9	1,6	1,6	1,5	1,3	1,2	1,2	1,1	1,0	1,0	0,9	0,9

2.3.3 Release of dangerous substances

Manufacturer declares to be conform to the Council Directive 76/769/EEC, published in «Official Journal of the European Communities» of 27/07/1976 and its amendments.

In addition to the specific clauses relating to dangerous substances contained in this ETA, there may be other requirements applicable to the self-supporting composite lightweight panels falling within its scope (e.g transposed European Legislation and National law, regulation, and administrative provisions). In order to meet the provisions of the EU Construction Product Directive, these requirements also need to be complied with when and where they applied.

2.3.4 Dimensional variations

The experience gained since 2005 on site shows the watertightness ensured during the life of the work. The dimensional variations do not compromise the watertightness of the panels.

2.4 Safety in use

2.4.1 Mechanical resistance

It is necessary to take into account the fact that the mechanical resistance is obtained in accordance with ETAG 016 – Part 1 – Annex C. The designer can apply the safety factors according to national regulation.

Reference	Thickness mm	Between 2 supports	Deflexion mm	Load daN/m^2	Break or ruin daN/m^2	Deflection at break mm
AXA 55	55	2500 mm	6,25	+71 -63	+454 -331	-39,88 35,70
		3500 mm	8,75	+33 -36	+193 -291	54,56 79,90
		4500 mm	11,25	/ 22	+116 -181	81,32
AXTA58	58	2500	6,25	+46 -50	+289 -299	49,07 58,20
		3250	8	+31 -38	+186 -180	68,62 69,42
		4000	10	+19 -22	+104 -126	80,94 80,14
XTA 85	85	4500	11,25	+38 -32	+260 -223	93,96 90,01
AXA 105	105	5500	14	+30 -36	+130 -201	58,67 /

2.4.2 Impact resistance

The panels withstand to a shock of 5 N.m hard body or 1200 N.m soft body.

Resistance to impact:

- Hard body: 5 N.m.
- Soft body: 1200 N.m.

The tests results enable AX, AXA, AXTA, XA, XTA panels classification in the use category A2.

2.4.3 Resistance to fixings

2.4.3.1 Resistance of the panels at fixings devices and joints

No performance determined.

2.4.3.2 Resistance to eccentric load due to objects fixed to the panel

No performance determined.

2.4.4 Walkability

No performance determined.

2.5 Protection against noise

2.5.1 Sound insulation

No performance determined.

2.5.2 Acoustic absorption

No performance determined.

2.6 Energy, economy and heat retention

Thermal insulation properties.

Thermal conductivity is:

- Foam XPS: 0,029 - 0,034 W/m.K.
- Foam EPS: 0,033 – 0,038 W/m.K.

The thermal transmittance (U) for different AX, AXA, AXTA, XA, XTA panels, should be calculated in accordance with EN ISO 6946, case by case , following the product.

The thermal bridge at the edge of each panel should be taken case by case, following the product.

2.6.2 Air permeability

No performance determined.

2.7 Durability and serviceability

2.7.1 Durability

2.7.1.1 Creep

No performance determined.

2.7.1.2 Climate cycles

The experience gained since 2005 on site shows the resistance to climate cycles during the life of the work. The dimensional variations do not compromise the watertightness of the panels.

2.7.1.3 Thermal shock

The most unfavourable types of AX, AXA, AXTA, XA, XTA panels have been submitted to 15 cycles of thermal shock in accordance with ETAG 016 Part 2. The test was carried out with panels reference AXA 55, 55 mm thickness, with XPS core.

The mechanical bending strength of the panels was not affected by thermal shocks. The assessment of this product in national Technical Approvals, during a few years, allowed to declare working life of the panels in 25 years.

2.7.2 Serviceability

2.7.2.1 Resistance to impact from hard body

Hard body: 5Nm.

2.7.2.2 Resistance to impact from soft body

Soft body: 700 Nm.

3 Evaluation and attestation of Conformity and CE marking

3.1 System of attestation of conformity

The system of attestation of conformity specified by the European Commission is system 4 for product characteristics, according to Council Directive 89/106/EEC Annex III laid down by the European Commission provides:

System 4

a) Tasks for the manufacturers:

- Factory production control.
- Initial type testing of the product.

3.2 Responsibilities

3.2.1 Tasks for the manufacturer

3.2.1.1 Factory production control (FPC)

The personnel involved in the production process shall be identified, sufficiently qualified and trained to operate and maintain the production equipment. Machinery equipment shall be regularly maintained and this shall be documented. All processes and procedures of production shall be recorded at regular intervals.

The controls performed by the manufacturer include at least:

- Ratio of proportioning to each startup of the machine, by taking away with the pumps of the components A and B, and check of the temperature of each component.
- The glue weight deposited is checked at the beginning of manufacturing, or each day. The weight of the glue is checked on 1 m² of kraft paper.
- The glue weight is adapted to each type of components and insulators.

The manufacturer shall maintain a traceable documentation of the production process from purchasing or delivery of raw or basic raw materials up to the storage and delivery of finished products.

Products that do not comply with requirements as specified in the ETA shall be separated from the conforming products and marked as such. The manufacturer shall register non-compliant production and action(s) taken to prevent further non conformities. External complaints shall also be documented, as well as actions taken.

3.2.1.2 Testing of samples taken at the factory

When and if testing is performed, then the manufacturer shall maintain and calibrate the testing equipment regularly to ensure constant accuracy of test results.

The controls performed by the manufacturer include at least:

- Check of aspect, dimensional, and state of surface.
- Check by perpendicular tension on faces for each lot of glue.
- Check by peeling at 180° with control of failure.

3.2.1.3 Declaration of conformity (system 4)

When all the criteria of the Conformity Attestation are satisfied, the manufacturer shall make a Declaration of Conformity.

3.2.2 Tasks for the manufacturer or the approved body

3.2.2.1 Initial type testing

Approval tests will have been conducted by the approval body or under its responsibility (which may include a proportion conducted by a laboratory or by the manufacturer, witnessed by the approval body) in accordance with section 5 of this ETAG. The approval body will have assessed the results of these tests in accordance with section 6 of this ETAG, as part of the ETA issuing procedure.

These tests shall be used for the purposes of initial type testing.

System 4: this work should be taken over by the manufacturer for Declaration of Conformity purposes.

3.3 Documentation

The approval body issuing the ETA shall supply the information detailed below. The information given below together with the requirements given in EC Guidance Paper B will:

System 4: generally form the basis of the factory production control (FPC).

This information shall initially be prepared or collected by the approval body and shall be agreed with the manufacturer. The following gives guidance on the type of information required:

(1) The ETA

See section 9 of this Guideline.
The nature of any additional (confidential) information shall be declared in the ETA.

(2) Basic manufacturing process

The basic manufacturing process shall be described in sufficient detail to support the proposed FPC methods.

Any critical process or treatment of the components affecting performance shall be highlighted.

(3) Product and materials specifications

These may include:

- detailed drawings (including manufacturing tolerances),
- incoming (raw) materials specifications and declarations,
- references to European technical specifications and/or international standards or appropriate specifications,
- manufacturer's data sheets.

(4) Test plan

The manufacturer and the approval body issuing the ETA shall agree an FPC test plan. An agreed FPC test plan is necessary as current standards relating to quality management systems, do not ensure that the product specification remains unchanged and they cannot address the technical validity of the type and frequency of checks/tests.

The validity of the type and frequency of checks/tests conducted during production and on the final product shall be considered. This will include the checks conducted during manufacture on properties that cannot be inspected at a later stage and for checks on the final product. These will normally include:

- material properties,

- dimensions of components parts.

Where materials/components are not manufactured and tested by the supplier in accordance with agreed methods, then, where appropriate, they must subject to suitable checks/tests by the manufacturer before acceptance.

3.4 CE marking and information

3.4.1 General

The ETA shall indicate the information to accompany the CE-marking.

In accordance with EC Guidance Paper D, the required information to accompany the symbol “CE” is:

- Name/address of the manufacturer of the panel.
- Indication to clarify the intended use.
- Last two digits of the year when the marking was affixed.
- ETA number.
- Relevant performance characteristics, as far as they are not specified in the ETA.
- Reference to this ETA Guideline.

3.4.2 Example

CE	“CE” – Symbol.
Any company Any address Country	Name and address of the manufacturer or his representative established in the EEA and of the plant where the product was manufactured.
XX	Two last digits of year of affixing CE Marking.
ETA N° 10/XXXX	ETA Number. ETAG Reference and date of publication.
XXXXX	Relevant performance characteristics and/or designation code.

3.4.3 Location of CE-marking

The CE-marking will be affixed on the packaging of the self supporting composite lightweight panels (each packaging to be marked). Panels should not be put on the market without packaging.

4 Assumptions under which the fitness of the product(s) for the intended use was favourably assessed

4.1 Manufacturing

The European Technical Approval is issued on the basis of agreed data/information, deposited with Centre Scientifique et Technique du Bâtiment, which identifies panels that has been assessed and judged. Changes to the panels or production process, which could result in this deposited data/information being incorrect, should be notified to the Centre Scientifique et Technique du Bâtiment before the changes are introduced. The Centre Scientifique et Technique du Bâtiment will decide whether or not such changes affect the ETA and consequently the validity of the CE-marking on the basis of the ETA and if so whether further assessment or alterations to the ETA shall be necessary.

4.2 Installation

4.2.1 General

It is the responsibility of the ETA holder to guarantee that the information about design and installation of these panels are easily accessible to the concerned people. These information can be given using reproductions of the European Technical Approval. Besides, all the data concerning the execution shall be clearly indicated on the packaging and/or the enclosed instruction shells using one or several illustrations.

In any case, the user shall comply with the national regulations and particularly concerning fire and wind load resistance.

Only the components described in clause 1.1 with characteristics according to clause 2 of this ETA can be used.

The support on which the system will be executed must be rigid and stable. Its rigidity must be appropriate to ensure the system will not be exposed to deformations which might damage it.

Execution tasks must be planned to prevent water penetrating the system. The laying of the panels shall follow the same national regulations, which proceed as set forth in section 4.3 of this ETA and manufacturer's instructions.

4.2.2 Design and installation

Layout and preparation of support likewise the generalities of the system execution shall be pursuant to chapter 7 of the ETAG 016, likewise the corresponding national dispositions. Panels shall be placed that their greater sides are perpendicular to the supports, the panel lesser sides resting on them. Each panel shall rest on 2 supports maximum. PVC, profiles and spline, housed along the longuest panel dimension, shall serve as a joint along the panels.

Panels will be fixed at least by 4 screws per panel, or with maximum interaxial 300 mm and following the manufacturer's instructions. The choise and density of the fixings shall be determined considering:

- the design wind loads according to the national regulations,
- the characteristic resistance of the fixing device into the substract,
- safety in use of the panels.

Joints between the panels will be sealed to limit heat bridges forming and realize watertightness.

5 Recommendations

5.1 Packaging, transport and storage

Panels are packed horizontally with wooden protection edges, polyethylene film and strips. There are 20 panels on one packaging.

Handling will be careful during loading and unloading, to prevent panel breakage or scratching.

Transport in closed lorries is recommended to prevent exposing panels to direct sunlight or rain. For these reasons, the product will be delivered wrapped in plastic film.

Packets are safe for handling, using mechanical elevation means if initial factory stripping has been removed. If packet has been unstripped, the panels must be secured to prevent material falling or breakage during transport.

Storage shoud be horizontal, supporting the entire length, in dry area.

Panels will be kept stripped and packaged until used. The storage period on site must be reduced to the minimum. The protection adhesive film must be removed after 45 days outside.

5.2 Maintenance and repair of the work

To preserve AX, AXA, AXTA, XA, XTA system performances, watertightness will be efficiently maintained and regularly checked for possible water filtration.

5.2.1 Outer face

The maintenance of outer coated sheet must be carried out according to the following instructions:

1 Cleaning with a standard detergent and without abrasive materials.

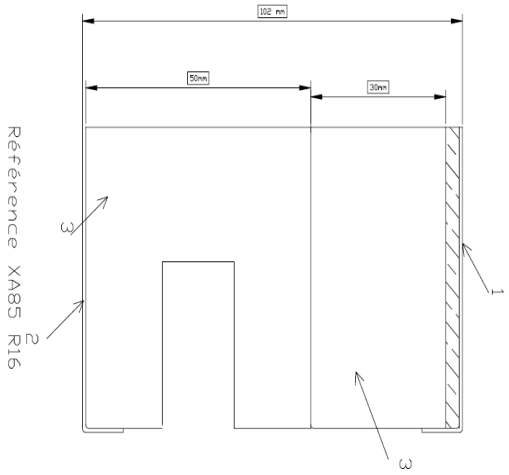
2 Rinsing with clean water, without high pressure.

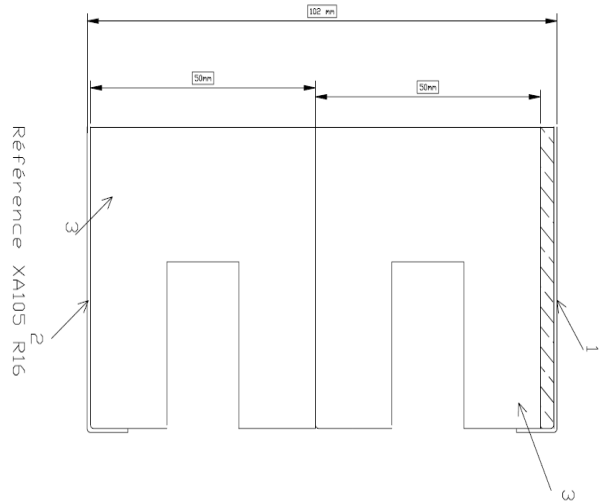
3 Drying.

5.3 Panels repair

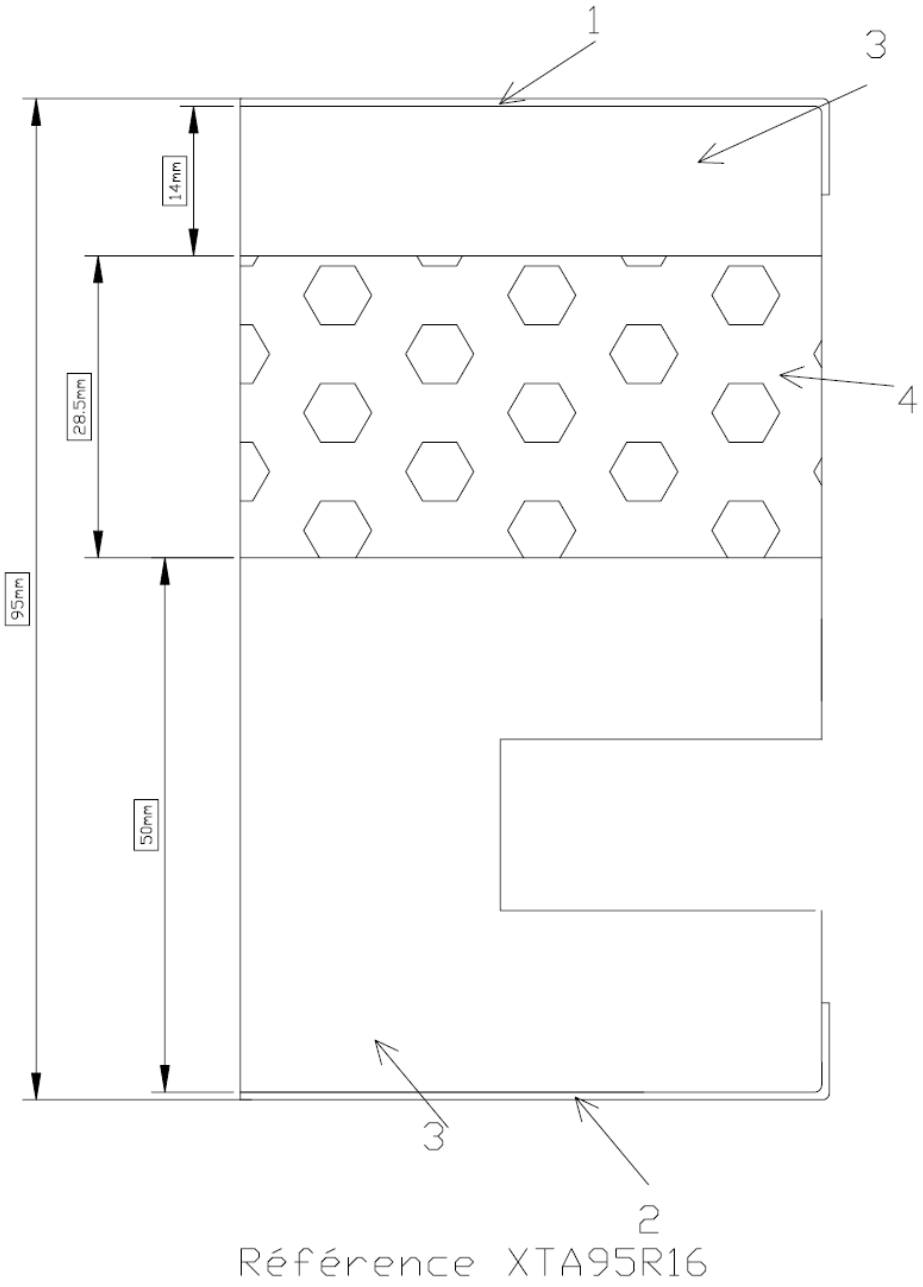
Panel repair must be carried out by removal of the fastening screws and junction system, to allow the disassembling of this panel.

The original French version is signed by
the Technical Director
C. BALOCHE



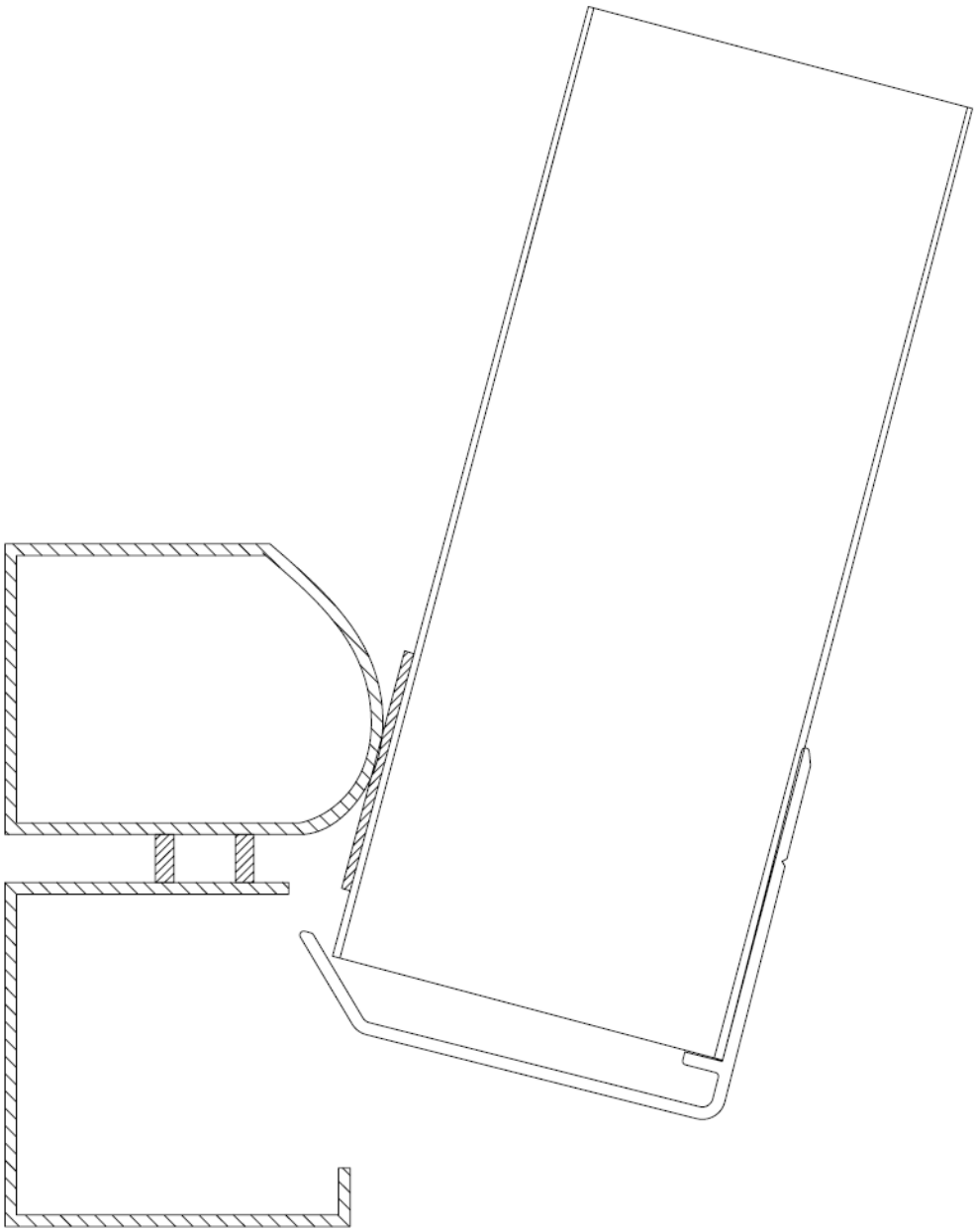


XA85R16 – XA105R16	**Annex 1** of European Technical Approval **ETA-10/0080**



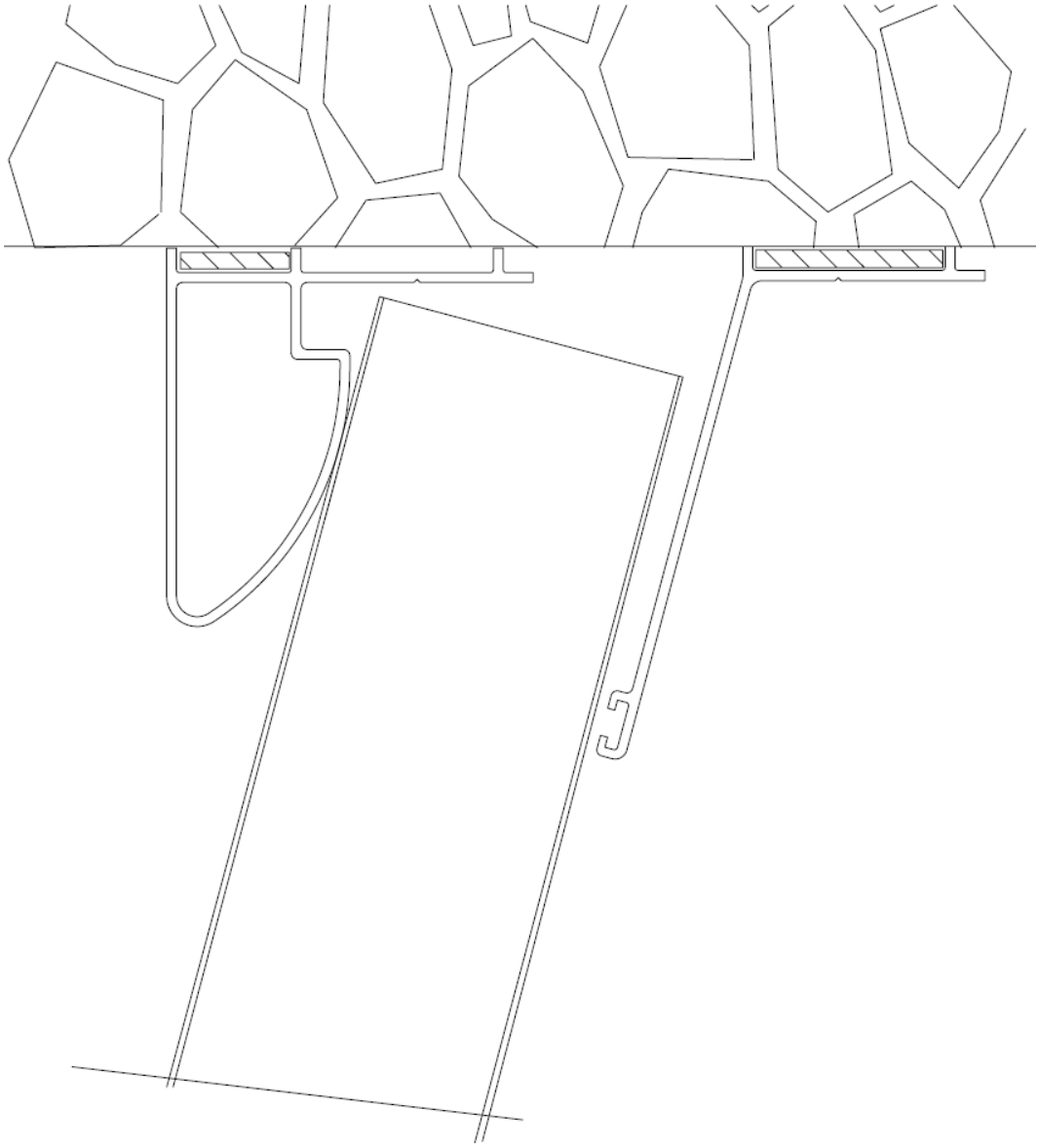
Référence XTA95R16

XTA95R16	**Annex 2** of European Technical Approval **ETA-10/0080**



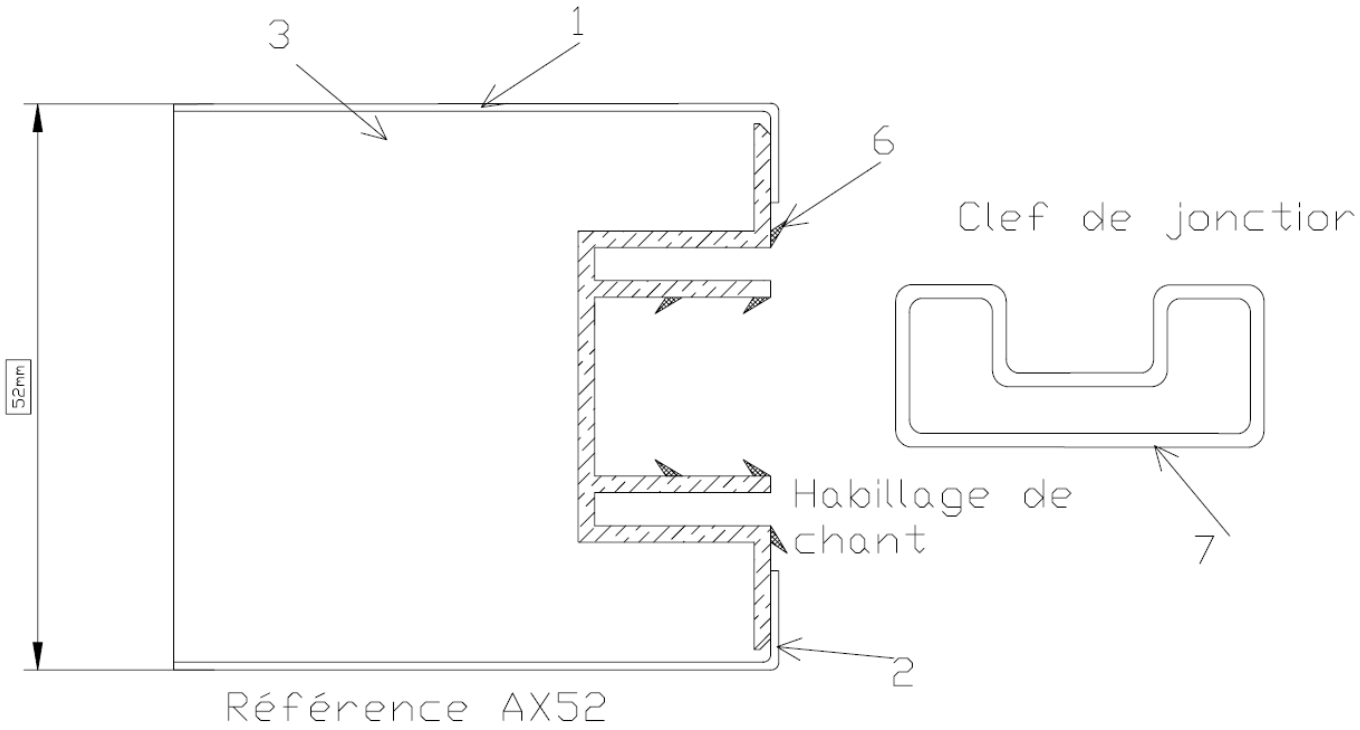
Annex 3

of European Technical Approval **ETA-10/0080**

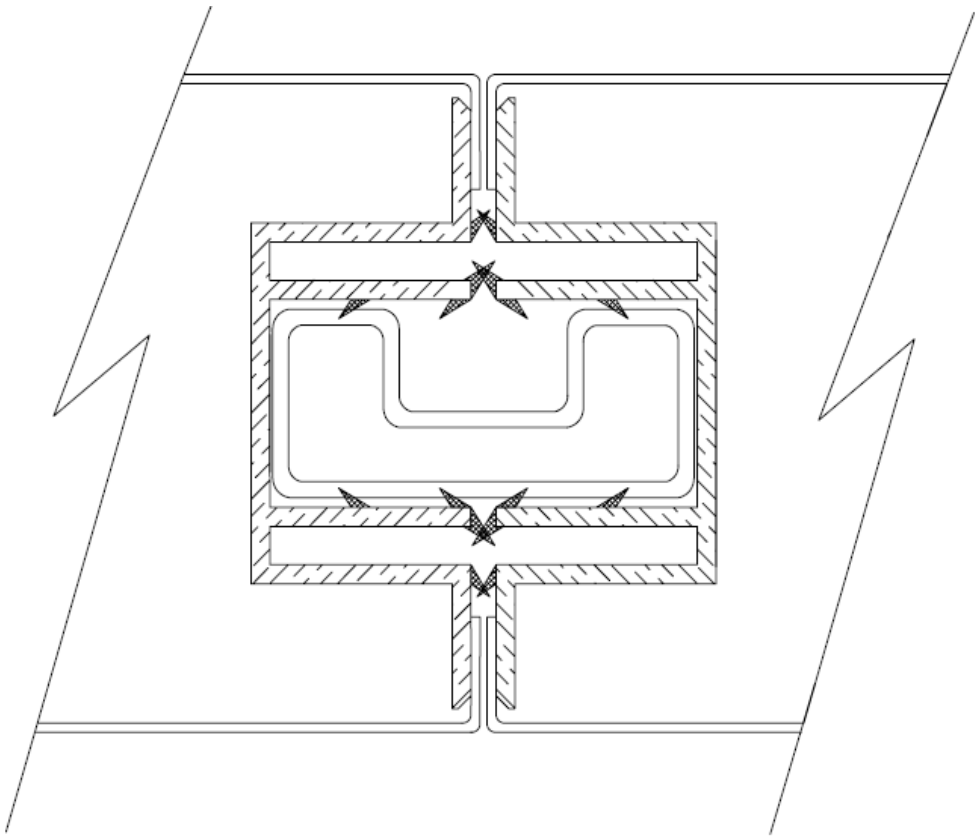


Annex 4

of European Technical Approval **ETA-10/0080**

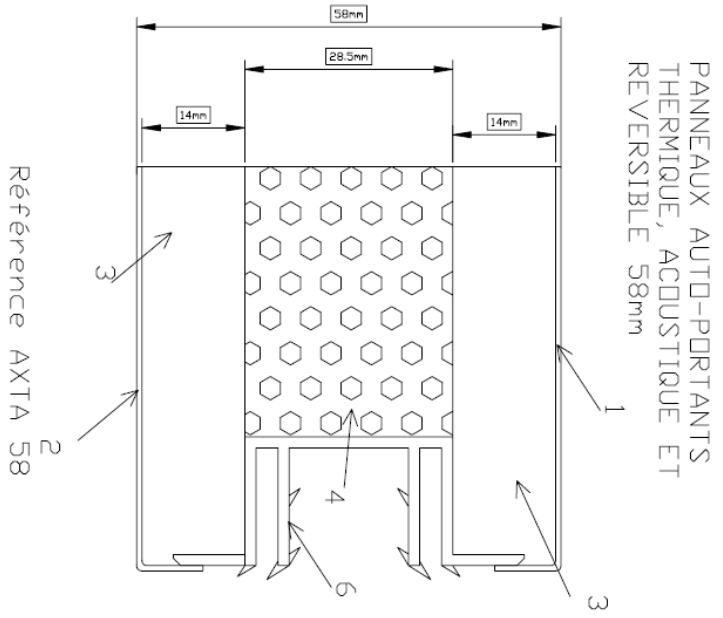


AX52	**Annex 5** of European Technical Approval **ETA-10/0080**



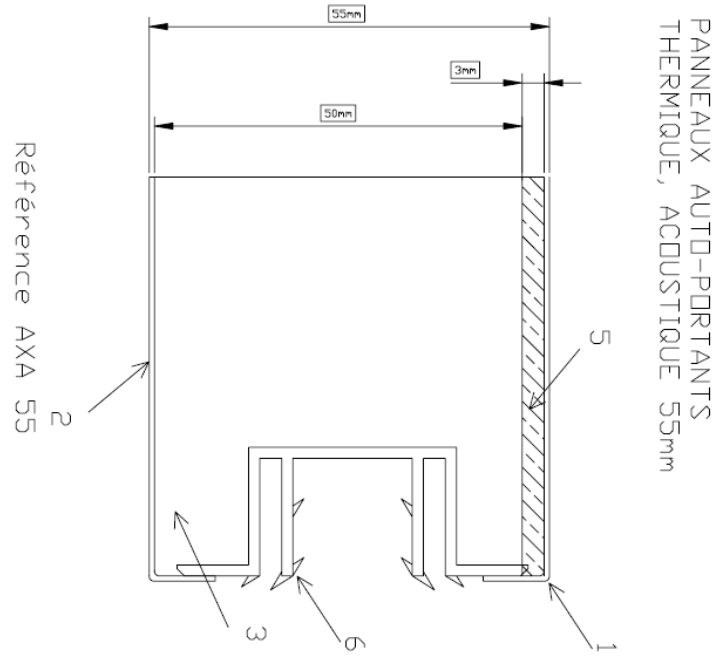
Annex 6

of European Technical Approval **ETA-10/0080**



PANNEAUX AUTO-PORTANTS
THERMIQUE, ACOUSTIQUE ET
REVERSIBLE 58mm

Référence AXTA 58

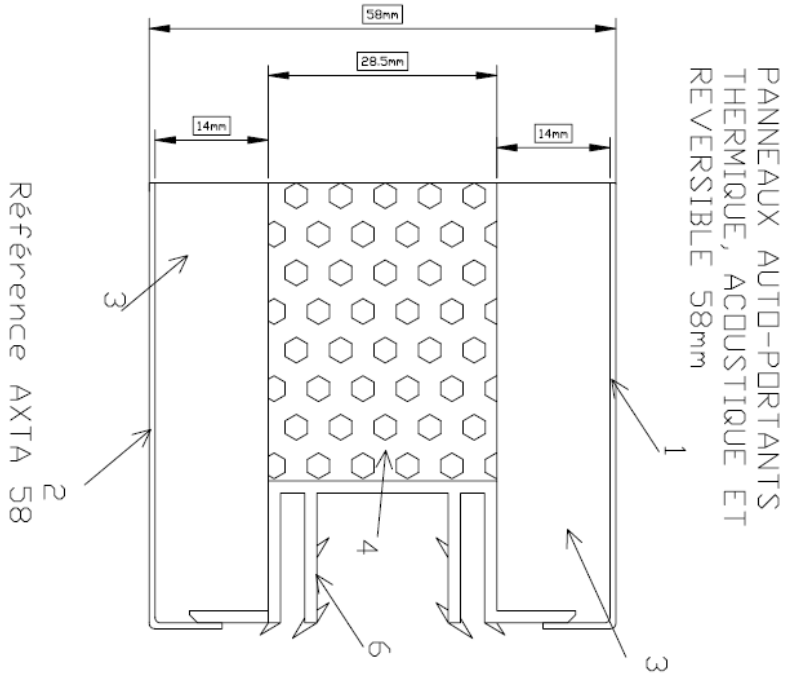


PANNEAUX AUTO-PORTANTS
THERMIQUE, ACOUSTIQUE 55mm

Référence AXA 55

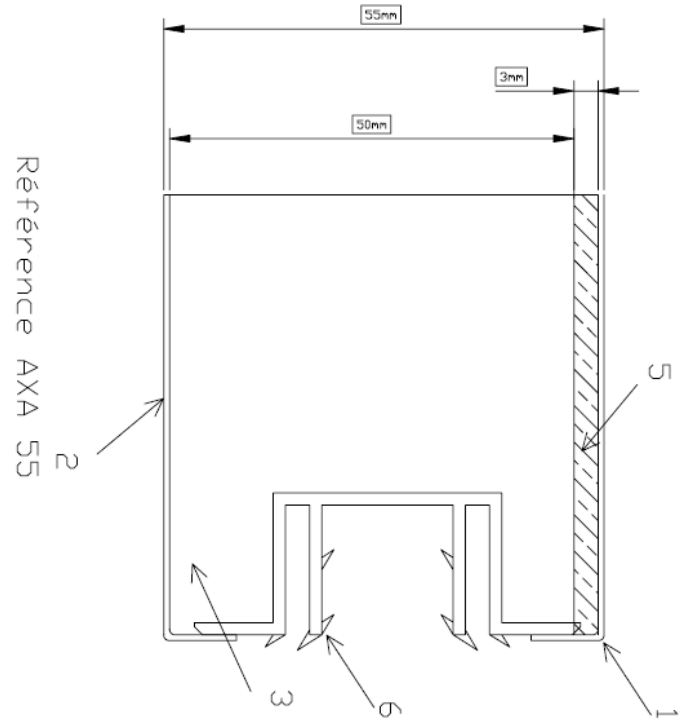
Annex 7

of European
Technical Approval
ETA-10/0080



PANNEAUX AUTO-PORTANTS
THERMIQUE, ACOUSTIQUE ET
REVERSIBLE 58mm

Référence AXTA 58

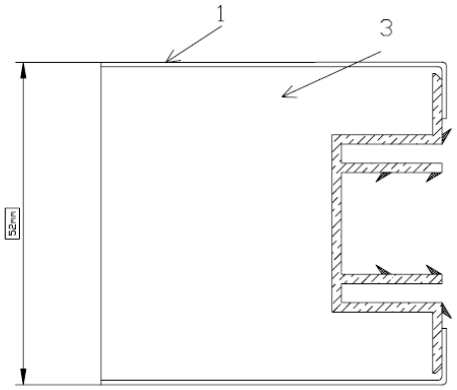


PANNEAUX AUTO-PORTANTS
THERMIQUE, ACOUSTIQUE 55mm

Référence AXA 55

Annex 8

of European
Technical Approval
ETA-10/0080



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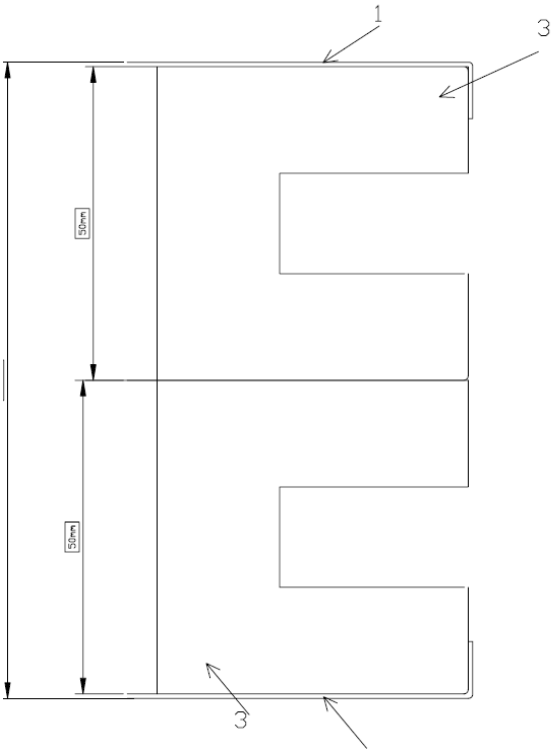

Référence X102 R16

Annex 9

of European Technical Approval **ETA-10/0080**