



Akoestisch Pan-terre paneel

Prestatieverklaring.
(Naar EU 305/2011, bijlage III)

N° Ac-Pt 001

1. Unieke identificatiecode van het producttype :

Akoestisch industrieel product voor luchtgeluiden ; Pan-terre Natuur, referentie 16N.

2. Type-, partij- of serienummer, dan wel een ander identificatiemiddel voor het bouwproduct, zoals voorgeschreven in artikel 11, lid 4 :

Zie productlabel.

3. Beoogde gebruiken van het bouwproduct, overeenkomstig de toepasselijke geharmoniseerde technische specificatie, zoals door de fabrikant bepaald :

Akoestisch isolerend paneel samengesteld uit cellulose en natuurlijke vezels bestemd voor isolatie tegen luchtgeluid.

4. Naam, geregistreerde handelsnaam of geregistreerd handelsmerk en contactadres van de fabrikant, zoals voorgeschreven in artikel 11, lid 5 :

Pan-terre safes 690 rue de Milmort B-4040 Herstal	Tel : +32 4 240 58 58 E-Mail : info@terre.be
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5. Indien van toepassing, naam en contactadres van de gemachtigde wiens mandaat de in artikel 12, lid 2, vermelde taken bestrijkt :

Acoustix sa 9, rue Joba B-4053 Embourg	Tel : +32 4 262 20 21 E-Mail : info@acoustix.be
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6. Het systeem of de systemen voor de beoordeling en verificatie van de prestatiebestendigheid van het bouwproduct, vermeld in bijlage V :

Systeem 3. Zie tabellen 3 en 4 van de ETA-09/0020.

Volgens de voorziene toepassing.

Alle toepassingen = 3.

Of voor gebruik onderworpen aan technisch advies op brandweerstand = 4.



7. Indien de prestatieverklaring betrekking heeft op een bouwproduct dat onder een geharmoniseerde norm valt :

Niet van toepassing.

8. Indien de prestatieverklaring betrekking heeft op een bouwproduct waarvoor een Europese technische beoordeling is afgegeven :

Kiwa Nederland b.v. NB 0620
Unit Bouwmaterialen
Postbus 70, 2280 AB Rijswijk NL

Afgeleverd:

ETA 09/0020

Op basis van:

CUAP 12.01.02 CL1 rev.1

Uitgevoerd:

Als erkend laboratorium, de bepaling van het type product op basis van typeproeven (gebaseerd op monsternamen uitgevoerd door de fabrikant), typeberekening, waardetabel of beschrijvende documentatie van het product.

Krachtens het systeem:

3

En afgeleverd:

Proefrapport / Berekening

9. Aangegeven prestatie :

Toelichting bij de tabel :

1. Kolom 1 bevat de lijst van essentiële kenmerken die voor het(de) in punt 3 aangegeven beoogde gebruik(en) in de geharmoniseerde technische specificatie zijn bepaald.
2. Voor elk essentieel kenmerk in kolom 1 dat aan de voorschriften van artikel 6 voldoet, wordt in kolom 2 de aangegeven prestatie vermeld in niveaus, klassen of in een beschrijving of met betrekking tot de overeenkomstige essentiële kenmerken. Indien er geen prestatie is aangegeven, worden de letters „NPD” (No Performance Determined) vermeld.

3. Voor elk essentieel kenmerk in kolom 1, wordt in kolom 3 het volgende vermeld :
- a) referentiedatum van de betrokken geharmoniseerde norm en, indien van toepassing, het referentienummer van de gebruikte specifieke of geëigende technische documentatie;
 - of
 - b) referentiedatum van het overeenkomstige Europees beoordelingsdocument, indien beschikbaar, en het referentienummer van de gebruikte Europese technische beoordeling.

Tabel 1

Essentiële kenmerken (zie nota 1)	Prestaties (zie nota 2)	Geharmoniseerde technische specificaties (zie nota 3)
Dikte	16 mm ± 1,0 mm	ETA-09/0020 2.2.1/EN 823
Lengte	2500 mm ± 1,0 mm (± 0,2%)	ETA-09/0020 2.2.2/EN 822
Beedte	1200 mm ± 1,0 mm (± 0,4%)	ETA-09/0020 2.2.3/EN 822
Haaksheid	5,0 mm/m	ETA-09/0020 2.2.3/EN 824
Effenheid	5,0 mm	ETA-09/0020 2.2.3/EN 825
Dichtheid	310 Kg/m ³ ± 20 Kg/m ³	ETA-09/0020 2.3/EN 1602
Weerstand tegen waterdamp	$\mu = 1$	ETA 09/0020 2.4
Dimensiestabiliteit	$\Delta\epsilon < 1,0 \%$	ETA-09/0020 2.5/ EN 1604
Specifieke weerstand tegen luchtstromen	10155 kPa.s/m ²	ETA-09/0020 2.7/ EN 29053
Akoestische absorptiecoëfficiënt	$\sigma_w = 0,25$ NRC = 0,25	ETA-09/0020 2.8/ EN ISO 354
Vuurbestendigheid	Classe F	ETA-09/0020 2.10/ EN 13501-1
Weerstand tegen biologische Acties	2	ETA-09/00202.10
Weerstand tegen corrosie van metalen, producten	NPD	ETA-09/0020 2.11
Akoestisch verzwakkingsindex	Zie documentatie van de fabrikant.	EN ISO 717-1 & 2



10. De prestaties van het in de punten 1 en 2 omschreven product zijn conform de in punt 9 aangegeven prestaties.

Deze prestatieverklaring wordt verstrekt onder de exclusieve verantwoordelijkheid van de in punt 4 vermelde fabrikant:

Ondertekend voor en namens de fabrikant door:

Robert Lekane, administrateur délégué.

Embourg, le 1^{er} juillet 2013

Kiwa N.V.

Sir Winston Churchilllaan 273
2288 EA Rijswijk
Postbus 70
2280 AB Rijswijk
Tel.: 070 - 414 44 00
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E-mail: info@kiwa.nl



Partner for progress

Lid van EOTA
Member of EOTA

European Technical Approval
(original version is in the English language)

ETA 09/0020

Trade name

Pan-terre Nature

Holder of the approval

Pan-terre SAFS
Rue de Milmort, 690
B – 4040 Herstal
Telephone + 32 4 240 58 58
www.terre.be
mail info@terre.be

**Generic type and use
of construction product**

**Boards made of a mixture of cellulose and
vegetable fibres for airborne sound
insulation**

**Validity first issued
to**

**17-02-2009
17-02-2014**

Manufacturing plant

Pan-terre SAFS
P.I. des Hauts-Sarts
4ème Avenue, 45
B – 4040 Herstal

Report number

Kiwa K49235/ 02

**This European Technical Approval
contains**

10 pages



Europese Organisatie voor Technische Goedkeuringen
European Organisation for Technical Approvals
Europäische Organisation für Technische Zulassungen
Organisation pour l'Agrément Technique Européen

I LEGAL BASES AND GENERAL CONDITIONS

- 1 This European Technical Approval is issued by Kiwa N.V., 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 products¹, modified by the Council Directive 93/68/EEC of 22 July 1993²;

Besluit van 7 augustus 2001, houdende vaststelling van voorschriften met betrekking tot het bouwen van bouwwerken uit het oogpunt van veiligheid, gezondheid, bruikbaarheid, energiezuinigheid en milieu (Bouwbesluit)³, gewijzigd door Besluit van 17 april 2002, houdende wijziging van het Bouwbesluit en enige andere maatregelen van bestuur (correcties en aanvullingen van het Bouwbesluit en aanpassing van andere besluiten aan het Bouwbesluit) en de Ministeriële regeling Bouwbesluit 2003⁴, gewijzigd door Besluit van 30 oktober 2007, houdende wijziging van Bouwbesluit 2003 (wijziging met betrekking tot de CE-markeringen en kwaliteitsverklaringen)⁵.

Common Procedural Rules for Requesting, Preparing and the Granting of European technical approvals set out in the Annex of Commission Decision 94/23/EC⁶.

CUAP 12.01/02 Revision 1⁷; Factory-made thermal insulation material and/or acoustic insulation material made of vegetable or animal fibres.

- 2 Kiwa N.V. is authorized to check whether the provisions of this European technical approval are met. Checking may take place in the manufacturing plant. Nevertheless, the responsibility for the conformity of the products to 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 manufacturers other than those indicated on page 1 of this European technical approval.
- 4 This European technical approval may be withdrawn by Kiwa N.V., in particular after information by the Commission on the basis of Article 5 (1) of Council Directive 89/106/EEC.
- 5 Reproduction of this European technical approval including transmission by electronic means shall be in full. However, partial reproduction can be made with the written consent of Kiwa N.V.. In this case partial reproduction has to be designated as such. Texts and drawings of advertising brochures shall not contradict or misuse the European technical approval.

¹ Official Journal of the European Communities N° L 40, 11.02.1989, p. 12

² Official Journal of the European Communities N° L 220, 30.08.1993, p. 1

³ Staatsblad 2001: 410; Staatsblad 2002: 203,516,518 en 582

⁴ Staatsblad 2002: 241; Staatsblad 2003: 101

⁵ Staatsblad 2007: 439

⁶ Official Journal of the European Communities N° L 17, 20.01.1994, p. 34

⁷ CUAP 12.01/02 Rev. 1: June 2005; Factory-made thermal insulation material and/or acoustic insulation material made of vegetable or animal fibres

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

II SPECIFIC CONDITIONS OF THE EUROPEAN TECHNICAL APPROVAL

1 Definition of products and intended use

1.1 Definition of products

This European Technical Approval applies to boards manufactured from a mixture of cellulose and vegetable fibres with the following dimensions:

nominal thickness: 16 mm
nominal length: 2500 mm
nominal width: 1200 mm

The insulation material is not faced.

The dimensions correspond to the delivery program of the manufacturer.

The cellulose fibres, fabricated from waste paper comply to class 1.02 of EN 643.
NOTE: *class 1.02 equals "mixed papers and boards (sorted)" which contains a maximum of 40 % of news papers and magazines.*

The vegetable fibres meets the following criteria:

- fibre length : maximum 50 mm;
- amount of dust : maximum 10 %

The ratio cellulose fibres to vegetable fibres in the board amounts $(70 \pm 3)\%$ to $(30 \pm 3)\%$.

1.2 Intended use

The boards "Pan-terre Nature" are used in non-load bearing constructions, for airborne sound insulation in walls and or floors.

The product shall not be used in structures where it will be exposed to wetting or weathering and such constructions with direct contact to the soil.

The corrosion developing capacity of the insulation product has not been determined. Suitable measures might be necessary to avoid corrosion of metal parts of the construction in contact with.

The provisions made in this ETA are based on an assumed intended working life of 50 years for the insulation product . The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a mean for choosing the right product in relation the expected reasonable working life of the works.

2 Characteristics of the product and methods of verification

2.1 Composition and manufacturing process

The composition and the manufacturing process of the airborne sound insulation product correspond to the product subject to the approval testing.
Details of the composition and manufacturing process are deposited at Kiwa N.V.

2.2 Geometry

2.2.1 Thickness

The thickness of the board is determined according EN 823, with a load of 50 Pa.
The deviation from the nominal thickness does not exceed $\pm 1,0$ mm.

2.2.2 Length

The length of the board is determined according EN 822.
The deviation from the nominal length does not exceed $\pm 5,0$ mm ($\pm 0,2$ %).

2.2.3 Width

The width of the board is determined according EN 822.
The deviation from the nominal width does not exceed $\pm 5,0$ mm ($\pm 0,4$ %).

2.2.4 Squareness

The squareness of the board is determined according EN 824.
The deviation from squareness on length and width does not exceed 5 mm/m.

2.2.5 Flatness

The flatness of the board is determined according EN 825.
The deviation from the flatness shall not exceed 5 mm.

2.3 Density

The density of the board is determined according EN 1602.

The nominal density of the board is 310 kg/m³.
The tolerance on the nominal density is ± 20 kg/m³.

2.4 Water vapour diffusion resistance factor

The water vapour diffusion factor of the board is declared as $\mu = 1$ (see 4.2.1.1)

2.5 Dimensional stability under specified temperature and humidity conditions

The dimensional stability of the board is determined according EN 1604 after conditioning for 48 h at a temperature of (70 ± 2) °C and a relative humidity of (50 ± 5) % .

The relative change in length is $\Delta\epsilon_l < 1,0$ %
The relative change in width is $\Delta\epsilon_b < 1,0$ %
The relative change in thickness is $\Delta\epsilon_d < 1,0$ %

2.6 Thermal conductivity

The intended use of the insulation is airborne sound insulation, therefore the characteristic "thermal conductivity" is not addressed.
No Performance Determined.

2.7 Specific airflow resistivity

The specific airflow resistivity is determined according ISO 9053 (EN 29053).
 The results are given in table 1.

Table 1 – Specific Airflow resistivity

Nominal Thickness	Airflow resistivity r in kPa.s/m ²
16	10155

2.8 Sound absorption (acoustic absorption index)

The “sound absorption coefficient”, σ_s , is determined according EN ISO 354 with the type “A” mounting.

The “practical absorption coefficient”, σ_p , and the “weighed sound absorption coefficient”, σ_w , are calculated according EN ISO 11654.

The “Noise Reduction Coefficient (NRC)” is calculated according ASTM –C423.

The values for the “sound absorption coefficient”, σ_s , are measured on boards with nominal thicknesses of 16 mm and a nominal density of 310 kg/m³.

The results of the measurements and calculations are given in table 2.

Table 2 – Sound absorption coefficients σ_s , σ_p , σ_w and NRC

Frequentie in Hz	16 mm	
	σ_s	σ_p
125	0,10	0,11
250	0,32	0,30
500	0,27	0,28
1000	0,20	0,21
2000	0,23	0,23
4000	0,29	0,27
	σ_w	
	0,25	
	NRC	
	0,25	

2.9 Reaction to fire

The reaction to fire of the board is classified as **Class F** according EN 13501-1.

2.10 Resistance to biological actions

The test and the assessment of the resistance to growth of mould fungus has been verified following the procedure as detailed in the EOTA testing procedure (Annex C of CUAP “ Factory-made thermal insulation material and/or acoustic insulation material made of vegetable or animal fibres ; edition Revision 1 June 2005”)

The reached class of the board is **2**.

2.11 Corrosion developing capacity on metal; products

No performance determined.

2.12 Retention of additives

The test and the assessment of the retention of additives have been verified following the procedure as detailed in the EOTA testing procedure (Annex F of CUAP “ Factory-made thermal insulation material and/or acoustic insulation material made of vegetable or animal fibres ; edition Revision 1 June 2005”).

No significant loss of dust has been noticed. These samples have been used for the determination of the resistance to biological action (see 2.7).

2.13 Release of dangerous substances

The manufacturer has made a declaration that the board “Pan-terre Nature” as defined in clause 1.1 do not contain dangerous substances according the European regulations and has been assessed in regard to the release of dangerous substances with the procedures as detailed in Guidance Paper H.

In addition to the specific clauses relating to dangerous substances contained in this European Technical Approval, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the EU Construction Products Directive, these requirements need also to be complied with, when and where they apply.

3 Evaluation of conformity and CE marking

3.1 Attestation of conformity system

The system of attestation of conformity for thermal insulation products as shown in Table 3 and 4, is specified by the Commission Decision 1999/91/EC of 25 January 1999⁸ (and Corrigendum) and amended by Commission Decision 2001/596/EC of 8 January 2001⁹ , relating to thermal insulation products.

Table 3, System of attestation of conformity of factory-made thermal insulation products for any intended use

Product(s)	Intended use(s)	Level(s) or class(es)	Attestation of conformity system(s)
Factory-made thermal insulation products	Any	-	3
System 3: See Directive 89/106/EEC (CPD), Annex III. 2. (ii), Second possibility			

⁸ Official Journal of the European Communities N° L29, 03.02.1999, p. 44

⁹ Official Journal of the European Communities N° L209, 02.08.2001, p. 33

Additionally, for products to be applied in uses subject to regulations on reaction to fire, the following applies:

Table 4, System of attestation of uses subject to reaction to fire regulations according to Commission Decision 2001/596/EC of 8 January 2001

Product(s)	Intended use(s)	Level(s) or class(es) (reaction to fire)	Attestation of conformity system(s)
Factory-made thermal insulating products	For uses subject to regulations on reaction to fire	A1*; A2*, B*, C*	1
		----- A1**, A2**, B**, C**, D, E -----	3
		(A1 to E)***, F	4
System 1: See Directive 89/106/EEC (CPD), Annex III.2.(i), without audit-testing of samples System 3: See Directive 89/106/EEC (CPD), Annex III.2.(ii), Second possibility System 4: See Directive 89/106/EEC (CPD), Annex III.2.(ii), Third possibility * 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) ** Products/ materials not covered by footnote (*). ***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, as amended).			

When a product is classified as E, the level of Attestation of Conformity shall be 3.

Concerning table 3, footnote *** , this is not applicable for the thermal and/or acoustic insulating product made of vegetable or animal fibres, because all the products are based on organic material and therefore not covered by the Commission Decision 96/603/EC¹⁰ and its amendment

For the products falling under system 3 for the initial type testing of the acoustical insulation board [see Annex III.1.a) of the CPD] the task for the approved body will be limited to the following characteristics.

- Dimensional stability under specified temperature and humidity conditions;
- Release of dangerous substances;
- Specific airflow resistance;
- Sound absorption;
- Resistance to biological actions.

For initial type testing, the rest of the characteristics in clause 2 are being under the responsibility of the manufacturer.

3.2 Responsibilities

3.2.1 Tasks for the manufacturer; factory production control (FPC)

The manufacturer has in his plant a FPC system as detailed in Guidance Paper B and exercises permanent internal control of production.

All the elements, requirements and provisions adopted by the manufacturer are documented in a systematic manner in the form of written policies and procedures. The FPC system has to ensure that the products are in conformity with the declarations in this European Technical Approval.

¹⁰ Official Journal of the European Communities N° L 267, 19.10.1996, p. 23

In the framework of FPC the manufacturer shall carry out tests and controls with the prescribed test plan¹¹, which is part of this European Technical Approval.

In this test plan are detailed extent, nature and frequency of testing and controls to be performed.

The results of FPC are recorded and evaluated. The records shall include at least the following information:

- designation of products and the constituents (raw materials);
- type of control or testing;
- date of manufacture of the products and date of testing of the products and the constituents;
- result of control and testing and comparison with requirements and declarations;
- result of treatment of products, which do not conform to the declarations;
- signature of the person responsible for the FPC.

On request the results shall be presented to Kiwa N.V.

The "Factory Production Control" plan shall address at least the following items/characteristics and (minimum) frequencies as detailed in Table 5.

Table 5 – Factory Production Control plan

Nr	Subject/type of control	Minimum frequency of control
(1)	(2)	(3)
1	Cellulose fibres	Per delivered batch
2	Vegetable fibres	Per delivered batch
3	Thickness	One panel per pallet
4	Length	One panel per pallet
5	Width	One panel per pallet
6	Squariness	One panel per pallet
7	Flatness	One panel per pallet
8	Density	One panel per pallet

Forty panels are stocked per pallet.

3.2.2 Tasks for the approved bodies

3.2.2.1 Initial type testing of the products

For initial type testing the results of the tests performed as part of the assessment for the European Technical Approval shall be used, unless there are changes in the composition of the product (raw materials), production line or plant. In such cases the necessary initial type testing has to be agreed between Kiwa N.V. and approved body(ies) involved. This testing can result in a revision of the European Technical Approval.

3.3 CE marking

The CE marking shall be affixed on the products, the packaging or the attached label. The symbol "CE" shall be accompanied by the following information.

- Number of the ETA – **ETA – 09/0020** ;
- Trade name of the product – **PAN-TERRE NATURE** ;
- Name or identification mark of the producer and manufacturing plant;
- Last two digits of the year in which the CE marking was affixed;
- Intended use of the product – **Airborne sound insulation**;
- Nominal density, nominal dimensions (length, width and thickness);

¹¹ The prescribed test plan has been deposited at Kiwa N.V.

- Class of reaction to fire – **Class F** ;
- Water vapour diffusion factor – $\mu = 1$;
- Dimensional stability;
- Specific airflow resistivity;
- Sound absorption coefficient, practical absorption coefficient and noise reduction coefficient (NRC).

4 Assumptions under which the fitness of the products for the intended use was favourable assessed

4.1 Manufacturing

The thermal insulation products shall correspond as far as their composition and manufacturing process is concerned to the products subject to the approval tests. Composition of the products and manufacturing process are deposited at Kiwa N.V.

4.2 Installation

4.2.1 Parameters for the design of construction works or parts of construction works

4.2.1.1 Value of water vapour diffusion resistance

For evaluating the diffusion equivalent thickness of air layer of the thermal insulation products the value $\mu = 1$ of water vapour diffusion resistance factor shall be used. The construction shall be designed and installed in such a way that no harmful condensation occurs within the works.

4.2.1.2 Sound insulation

For the application of the product for acoustical insulation it is necessary to have knowledge how to use the practical absorption coefficient σ_p and weighed sound absorption coefficient σ_w .

4.2.2 Parameters for the installation in the construction works or parts of construction works

The fitness for the intended use of the product Pan-terre Nature is given under the following conditions.

- The installation shall be carried out by appropriate personnel under the supervision of the project representative;
- The installation shall be carried out in accordance the manufacturer's specifications (installation guidelines).

5 Recommendations for the manufacturer

5.1 Recommendations on packaging, transport and storage

Packaging of the products has to be such that they are protected from moisture during transport and storage unless other measures are foreseen by the manufacturer for this purpose.

5.2 Recommendations on installation

At installation the product shall be protected from moisture. The installation guidelines of the manufacturer shall be followed.

5.3 Accompanying information

In the information accompanying the CE marking the manufacturer shall indicate that product during transport, storage and installation shall be protected from moisture. The responsibility of the manufacturer is further to ensure that the information on the installation procedure is clearly shown on the package and/or the enclosed instruction sheet.

6. Bibliography

Guidance Paper B : August 2002	The definition of factory production control in technical specifications for construction products
Guidance Paper H : August 2002	A harmonised approach relating to dangerous substances under the construction products directive
EN 822 : 1994	Thermal insulating products for building applications – Determination of length and width
EN 823 : 1994	Thermal insulating products for building applications – Determination of thickness
EN 824 : 1994	Thermal insulating products for building applications – Determination of squareness
EN 825 : 1994	Thermal insulating products for building applications – Determination of flatness
EN 643 : 2001	Paper and board – European list of standard grades of recovered paper and board
EN 1602 : 1996	Thermal insulating products for building applications – Determination of the apparent density
EN 1604 : 1996	Thermal insulating products for building applications – Determination of dimensional stability under specified temperature and humidity conditions
EN 13501-1: 2001	Fire classification of construction products and building elements – Part 1: Classification using test data from reaction to fire tests
EN ISO 354 : 2003	Acoustics – Measurements of sound absorption in a reverberation room
EN ISO 11654 : 1997	Sound absorbers for use in buildings – Rating of sound absorption
ISO 9053 (EN 29053) : 1991	Acoustics – Materials for acoustical applications – Determination of airflow resistance
ASTM C 423 – 08	Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method