

Centre
Scientifique et
Technique du Bâtiment

84 avenue Jean Jaurès
CHAMPS-SUR-MARNE
F-77447 Marne-la-Vallée Cedex 2
Tél. : (33) 01 64 68 82 82
Fax : (33) 01 60 05 70 37

European Technical Assessment

ETA-20/0114 of 09/04/2024

English language translation, the original version is in French language

General part

Technical Assessment Body issuing the European Technical Assessment

CSTB

Centre Scientifique et Technique du Bâtiment

Trade name of construction product

CELLAOUATE, BREIZHOUATE, GIGAOUATE, ISOFLOC EU02

Product family to which the construction product belongs

Thermal insulation material made of loose, free
cellulose fibres

Manufacturer

SAS CELLAOUATE
ZI de KERIVEN
33 RUE MARCELIN BERTHELOT
29600 SAINT MARTIN DES CHAMPS – FRANCE

Manufacturer plant

SAS CELLAOUATE
ZI de KERIVEN
33 RUE MARCELIN BERTHELOT
29600 SAINT MARTIN DES CHAMPS – FRANCE

This European Technical Assessment contains

5 pages including 0 annexes which form an integral part of
this assessment

This European Technical Assessment is issued in accordance with regulation (EU) N° 305/2011, on the basis of

European Technical Assessment (EAD) (040138-01-
1201) "In-situ formed loose fill thermal and/or acoustic
insulation products made of vegetable fibres, 2018"

ETA 20/0114 – issued the 13/03/2020

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such. Communication of this European Technical Assessment, including transmission by electronic means, shall be in full. However, partial reproduction may be made, with the written consent of the issuing Technical Assessment Body. Any partial reproduction has to be identified as such.

English translation prepared by CSTB

The European Technical Assessment is issued by the Technical Assessment Body in its official language. Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and shall be identified as such.

Communication of this European Technical Assessment, including transmission by electronic means, shall be in full. However, partial reproduction may only be made with the written consent of the issuing Technical Assessment Body. Any partial reproduction shall be identified as such.

This European Technical Assessment may be withdrawn by the issuing Technical Assessment Body, in particular pursuant to information by the Commission in accordance with Article 25(3) of Regulation (EU) No 305/2011.

SPECIFIC PART

1 Technical description and fabrication of the product

1.1 Definition of product

The European Technical Assessment applies to thermal insulation products made of loose, free cellulose fibres, with the designations "CELLAOUATE", "BREIZHOUATE", "GIGAOUATE" and "ISOFLUC EU02".

The cellulose fibres made from newspaper by mechanical grinding with the addition of flame-retardant proofing agents (hereinafter referred to as thermal insulation products) are used to manufacture thermal insulation layers by means machine processing at the place of use.

The European Technical Assessment does not apply for a manual processing application of thermal insulation products.

The European Technical Assessment has been issued for the products based on agreed data/information, deposited with the CSTB, which identifies the product that has been assessed. The European Technical Assessment applies only to products corresponding to this agreed data/information.

1.2 Composition and manufacturing-process

Product referred "CELLAOUATE", "BREIZHOUATE", "GIGAOUATE" and "ISOFLUC EU02" is composed of:

- 90 (+/- 2) % mass of paper,
- 10 (+/- 2) % mass of adjuvants:
 - (+/- 0,5) % mass of boric acid,
 - 7 (+/- 1,5) % mass of magnesium sulphate.

The composition of adjuvants (nature and content) is the subject of a technical sheet given to CSTB.

The production unit comprises a receiving tank supplying raw material to a first fragmentation station where they are reduced. The pieces obtained pass two metal detectors and arrive at a second grinding station which transforms them into fibres. The adjuvants are dosed and incorporated continuously on this second station. On leaving the machine, the material is weighed, bagged, marked, palletized, then filmed

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

The cellulose fibres insulation is used in cases where the insulating material must not be subjected to loads. It is implemented for insulation from the inside:

Walls:

- By insufflation or wet spraying in exterior wall coffered in timber frame constructions
- By insufflation or wet projection between partitions on masonry wall of constructions
- By insufflation or wet projection of partition walls

English translation prepared by CSTB

On floors of Attic lost:

- Blowing on the attic floors lost.

Sloping or inclined walls of attic:

- By insufflation in boxes/coffered or sloping/inclined in timber frame constructions

Cellulose insulation should not be used in buildings where the insulation is exposed to rain and weather, or in buildings built on the ground.

The design value of the thermal conductivity shall be laid down according to relevant national provisions.

This European Technical Approval does not cover the complete or finished system of insulation. As for the application of all products insulating, the national codes of practice and regulations must be respected for design and implementation of construction systems.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the thermal insulation products of at least 50 years. 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 means for choosing the right products in relation to the expected economically reasonable working life of the works.

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

The identification tests and the assessment for the intended use of this product according to the Essential Requirements were carried out in compliance with the European Assessment Document EAD 040138-01-1201 "In-situ formed loose fill thermal and/or acoustic insulation products made of vegetable fibres, 2018.

3.1 Density

The density of the product is determined according to EN 15101. The density specifications according to the field of application mentioned in table 1 must be observed and verified by the applicators:

Table 1: Specification of density according to the Intended use applications

Intended use applications		Density in kg/m ³
On floors of Attic lost by Blowing		25-35
Vertical walls	by insufflation	50-60
	By wet projection	35-45
Sloping or inclined walls of attic under roofs by insufflation		50-60

3.2 Mechanical resistance and stability (BWR1)

Not applicable

3.3 Safety in case of fire (BWR1)

Essential characteristic	Named range of density	Performance
Reaction to fire According to EN ISO 11925-2:2010	25 – 60 kg/m ³ 50 – 450 mm	Euroclass: E According to EN 13501-1:2007+A1:2009

English translation prepared by CSTB

3.4 Hygiene, health and environment (BWR3)

Essential characteristic	Performance
Resistance to a growth of mould According to EAD « In-situ formed loose fill thermal and/or acoustic insulation products made of vegetable fibres », 2018 et à EN 15101 – annex F	Class: 0

3.5 Safety and accessibility (BWR4)

Not applicable

3.6 Protection against noise (BWR5)

Not applicable

3.7 Energy economy and heat retention (BWR5)

Intended use applications	Named rang of density	Thermal conductivity: According to EN 12667 at 10°C and conditioning at 23°C and 50 %HR (humidity relative)
On floors of Attic lost by Blowing	25 à 40 kg/m ³	$\lambda_{D(23,50)} = 0,039 \text{ W/(m} \cdot \text{K)}^*$
Vertical walls by wet projection	35 à 45 kg/m ³	$\lambda_{D(23,50)} = 0,041 \text{ W/(m} \cdot \text{K)}^*$
Vertical walls by insufflation	50 à 60 kg/m ³	$\lambda_{D(23,50)} = 0,041 \text{ W/(m} \cdot \text{K)}^*$
Conversion factors for all applications: blowing, wet projection and insufflation: <ul style="list-style-type: none"> - Mass related moisture content: <ul style="list-style-type: none"> - for 23 °C/50 % related moisture of air: $u_{23,50} = 0,069 \text{ kg/kg}$ - for 23 °C/80 % related moisture of air: $u_{23,80} = 0,111 \text{ kg/kg}$ - Mass related moisture conversion factor: <ul style="list-style-type: none"> - for 23 °C/50 % related moisture of air: $f_{u1} = 0,47$ - for 23 °C/80 % related moisture of air: $f_{u1} = 0,58$ - Moisture conversion factor of thermal conductivity (dry to 23°C/50 HR or 23°C/80 HR) : <ul style="list-style-type: none"> - for 23 °C/50 % related moisture of air: $F_{m1} = 1,01$ - for 23 °C/80 % related moisture of air: $F_{m1} = 1,02$ 		

* The declared value is representative for at least 90 % of the production with a confidence level of 90% and applies to the above-named density range. For the admissible deviation of an individual value of the thermal conductivity from the declared value the method is described in EN 13172, annex F.

Application	Named density range	Settlement
Blowing on floor of lose attics	25 à 40 kg/m ³	Setting under impact excitation: ≤ 15 %
		Setting in cyclical variation of temperature and humidity according to EN 15101: Class: SH20
Insufflation on vertical walls	50 à 60 kg/m ³	Setting under vibration in wall cavity according EN 15101-1: 2013: SC 0 (≤ 1 %)

Essential characteristic	Performance
Water vapor diffusion resistance coefficient according to EN 12086, climate condition C	$\mu = 1$
Airflow resistance Résistance according to EN 29053, method A	$\geq 5 \text{ kPa.s/m}^2$
Corrosion developing capacity	No potential corrosion development

3.8 Release of dangerous substances

For the sustainable use of natural resources, no performance was investigated for this product.

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

In accordance with the European Technical Assessment (EAD) (040138-01-1201) "In-situ formed loose fill thermal and/or acoustic insulation products made of vegetable fibres, 2018", the applicable European legal act is: 1999/91/EC.

The system to be applied is: 3.

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 with CSTB.

The original French version is signed by

Aurélie BAREILLE
Head of Certification and Assessment of Building's Envelope
Direction of Building's Envelope
 CSTB