

## European Technical Assessment

**ETA-17/0033  
of 11/01/2021**

(English language translation, the original version is in French language)

Nom commercial  
**Trade name**

**GREY SNOW – IGLOO FRANCE – WATT LESS –  
OUATIFI – CELLULO'PRO**

Famille de produit  
**Product family**

Isolant thermique en fibres de cellulose en vrac  
**Thermal insulation material made of loose, free  
cellulose fibres**

Titulaire  
**Manufacturer**

**IGLOO FRANCE CELLULOSE SAS**  
**18 rue Michel Breton – ZA Sud Est**  
**85150 Les Achards (France)**

Usine de fabrication  
**Manufacturing plant**

**IGLOO FRANCE CELLULOSE SAS**  
**18 rue Michel Breton – ZA Sud Est**  
**85150 Les Achards (France)**

Cette évaluation contient :

6 pages incluant 0 annexes qui font partie intégrante de  
cette évaluation

**This Assessment contains**

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

Cette Evaluation Technique Européenne  
est établie conformément à la directive (UE)  
n° 305/2011 sur la base du

Document d'Evaluation Européen (DEE) (EAD 0401381-01-  
1201) « Produits isolants thermiques et / ou acoustiques en  
vrac, formés en vrac, en fibres végétales », édition 2018

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

**European Assessment Document (EAD) (040138-01-1201)  
“In-situ formed loose fill thermal and/or acoustic insulation  
products made of vegetable fibres”, edition 2018**

Cette version remplace  
**This version replaces**

ETA-17/0033 from 28/04/2017

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## **SPECIFIC PART**

### **1 Technical: definition of product and intended use**

#### **1.1 Definition of product**

The European Technical Assessment applies to thermal insulation products made of loose, free cellulose fibres, with the designations « GREY SNOW », « IGLOO FRANCE », « WATT LESS », « OUATIPi », « CELLULO'PRO ».

The cellulose fibres (hereinafter referred to as thermal insulation product) are produced from selected paper by mechanical grinding with the addition of flame-retardant proofing agents. The thermal insulation product serves for the production of thermal insulation layers by means of machine processing at the place of use. The European Technical Assessment does not apply for a manual processing application of the 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 Manufacturing process**

The product « GREY SNOW », « IGLOO FRANCE », « WATT LESS », « OUATIPi », « CELLULO'PRO » is made from selected paper by mechanical grinding. During the manufacturing process, magnesium sulfate and boric acid are added as flame retardant. The composition of the adjuvants (nature and content) is the subject of a technical sheet deposited at CSTB.

The production unit comprises a receiving belt supplying raw materials to a first fragmentation station where they are grinded. The pieces obtained pass one metal detector 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)**

#### **2.1 Intended use**

The thermal insulation product made of cellulose fibres is used as non-loadable insulating material. for intended uses in vertical, sloped, or horizontal cavities or where horizontal exposed areas are covered.

Depending on the intended application, the product must be installed with a density between 24 and 32 kg/m<sup>3</sup> (open blowing), between 35 and 45 kg/m<sup>3</sup> (spraying with addition of water) or between 48 and 58 kg/m<sup>3</sup> (blowing into cavities).

##### **Field of application for walls:**

- In cavities in exterior or interior walls in timber frame construction and similar structures
- by blowing into closed cavities      Density range: 48 - 58 kg/m<sup>3</sup>

- by spraying with addition of water    Density range: 35 - 45 kg/m<sup>3</sup>
- In cavities between partition on exterior or interior walls in masonry or concrete constructions
  - by blowing into closed cavities    Density range: 48 - 58 kg/m<sup>3</sup>
  - by spraying with addition of water    Density range: 35 - 45 kg/m<sup>3</sup>
- In cavities of partitioning walls
  - by blowing into closed cavities    Density range: 48 - 58 kg/m<sup>3</sup>
  - by spraying with addition of water    Density range: 35 - 45 kg/m<sup>3</sup>

**Field of application for floors and ceilings**

- Blowing on floors/ceilings under non habitable attics (thermal insulation layer under, between and/or above the load-bearing structure)
  - Density range: 24 - 32 kg/m<sup>3</sup>
- Blowing into closed cavities in floors or ceilings
  - Density range: 48 - 58 kg/m<sup>3</sup>

**Field of application for roofs**

- Blowing into cavities in pitched roofs (full rafter insulation)
  - Density range: 48 - 58 kg/m<sup>3</sup>

**2.2 General assumptions**

Cellulose insulation should only be used in structures where the insulation is not exposed to rain and weather, or in constructions in contact with the soil.

The design value of the thermal conductivity shall be defined 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.

National regulations on dangerous substances may require verification and declaration on release, and sometimes content, when construction products covered by this standard are placed on those markets.

National regulations on the sustainable use of natural resources may require declaration and verification, when construction products covered by this standard are placed on those markets.

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.

It is assumed that the product will be installed according to the manufacturer's instructions or (in absence of such instructions) according to the usual practice of the building professionals to guarantee a precise compression of the cellulose fibres.

The density of the product is determined according to EN 15101. The density specifications according to the field of application mentioned in part 2.1 must be observed and verified by the applicators.

For horizontal machine processed installation of exposed insulation the thermal insulation layer has a constant installation thickness considering the nominal thickness. For that purpose, suitable height marks have to be arranged by the executing company in sufficient distances before the processing. The executing company check the installation thickness and the density.

In case of use as space-filling thermal insulation in closed cavities it is made sure by appropriate measures (e. g. control drillings) that the cavity is completely filled with the thermal insulation product.

In case of processing under the addition of water it shall be ensured that the main share of water is evaporated before closing the cavity. The time necessary for this depends on the climatic conditions of the surroundings.

The requirements concerning ventilation openings and the ventilation section above the thermal insulation layer have to be considered.

The construction shall be designed and installed in such a way that no harmful condensation occurs within the works.

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

The performance of the product is assessed for the intended use, in relation to the essential characteristics and in compliance with the European Assessment Document EAD 040011-01-1201 for "In-situ formed loose fill thermal and/or acoustic insulation products made of vegetable fibres", 2018.

The density specifications according to the field of application are mentioned in 2.1.

#### 3.1 Mechanical resistance and stability (BWR1)

Not applicable

#### 3.2 Safety in case of fire (BWR2)

No performance determined

#### 3.3 Hygiene, health and environment (BWR3)

Essential characteristic	Performance
Biological resistance: 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» and to EN 15101	<b>Class: 0</b>

#### 3.4 Safety and accessibility (BWR4)

Not applicable

#### 3.5 Protection against noise (BWR5)

No performance determined

#### 3.6 Energy economy and heat retention (BWR5)

Intended use	Density range	Declared thermal conductivity: At mean reference temperature of 10 °C and for a moisture content of the insulation material at 23 °C and 50 % relative humidity. Test according to EN 12667
Open Blowing	24 to 32 kg/m <sup>3</sup>	$\lambda_{D(23,50)} = 0,040 \text{ W/(m} \cdot \text{K)}^*$
Blowing into cavities in floors/ceilings	48-58 kg/m <sup>3</sup>	$\lambda_{D(23,50)} = 0,042 \text{ W/(m} \cdot \text{K)}^*$
Blowing into cavities in pitched roofs	48-58 kg/m <sup>3</sup>	$\lambda_{D(23,50)} = 0,042 \text{ W/(m} \cdot \text{K)}^*$
Blowing into cavities in walls	48 to 58 kg/m <sup>3</sup>	$\lambda_{D(23,50)} = 0,042 \text{ W/(m} \cdot \text{K)}^*$
Spraying with addition of water in walls	35 to 45 kg/m <sup>3</sup>	$\lambda_{D(23,50)} = 0,042 \text{ W/(m} \cdot \text{K)}^*$

**Conversion factors for all applications: blowing, wet projection and insufflation:**

- Mass-related moisture content:
  - for 23 °C/50 % relative humidity:  $u_{23,50} = 0,065 \text{ kg/kg}$
  - for 23 °C/80 % relative humidity:  $u_{23,80}$  : not assessed
- Mass-related moisture conversion factor:
  - for 23 °C/50 % relative humidity:  $f_{u1} = 0,15$
  - for 23 °C/80 % relative humidity:  $f_{u2}$  : not assessed
- Moisture conversion factor of thermal conductivity (dry to 23°C/50 HR and 23°C/50 HR to 23°C/80 RH):
  - Conversion of  $\lambda_{10,dry}$  to  $\lambda_{23,50}$  :  $F_{m1} = 1,01$
  - Conversion of  $\lambda_{23,50}$  to  $\lambda_{23,80}$  :  $F_{m2}$  : not assessed

\* 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 described in EN 13172, annex F, applies.

Intended use	Density range	Settlement
Open blowing on floors under attics	24 to 32 kg/m <sup>3</sup>	Settlement under impact excitation: <b><math>s_v \leq 15 \%</math></b>
		Settlement in cyclical variation of temperature and humidity according to EN 15101-1, annex B1: <b>Class: SH25 , <math>s_{cyc} = 21\%</math></b>
Blowing into closed cavities of walls and between rafters	48 to 58 kg/m <sup>3</sup>	Settlement under vibration in wall cavity according EN 15101-1: 2013: <b>SC 0</b>

Essential characteristic	Performance
Water vapor diffusion resistance coefficient according to EN ISO 10456	<b><math>\mu = 2</math></b>
Specific airflow resistivity according to EN 29053, method A	<b>NPD</b>
Corrosion developing capacity according EN 15101-1, clause 4.3.5	<b>NPD</b>

#### 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: Decision 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**

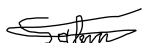
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with CSTB.

**The original French version is signed by**

*Head of Hygro-Thermal properties of constructions unit*

*Building Envelope Direction*

*CSTB*

A handwritten signature in black ink, appearing to be 'S. J. M.', is positioned below the text 'CSTB'.