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European Technical Assessment

ETA 23/0777
of 04/11/2023

I General Part

**Technical Assessment Body issuing the
ETA and designated according to Article
29 of the Regulation (EU) No 305/2011:
Trade name of the construction product**

Technical and Test Institute for Construction
Prague

BFlex

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

**FACTORY-MADE INSULATION
PRODUCT MADE OF HEMP AND
CELLULOSE FIBRES**

Manufacturer

**Balticfloc Ltd.
Ata Kronvalda Street 40/22-601, Cēsis,
LV 4101, Latvia**

Manufacturing plant

**Balticfloc Ltd.
Ata Kronvalda Street 40/22-601, Cēsis,
LV 4101, Latvia**

**This European Technical Assessment
contains**

7 pages including 0 annex which forms an
integral part of this assessment.

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

European Assessment Document(EAD) No.
040005-00-1201 for "Factory-made thermal
insulation and/or acoustic insulation
products made of vegetable or animal
fibres"

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II Specific part

1 Technical description of the product (definition of the product)

This European Technical Assessment applies to the factory-made thermal products made of vegetable fibres with designations “**Bflex**”

Products “**Bflex**” consist of hemp fibres, cellulose with the binding fibres, etc.

The insulation products are manufactured in a form of mats which are not coated.

Nominal length: 1200 mm

Nominal width: 600 mm

Nominal thickness of product: 50 mm

Density: 50 kg/m³ ± 15%



Figure 1: “Bflex” mat

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

2.1 Intended use

“Bflex” product is designed for use as cavity insulation for external and internal walls of timber frame constructions and similar structures.

The assessment of the insulation material is relevant only if the insulation material is installed according to the manufacturer's installation instructions and if it is protected from precipitation, wetting or weathering in built-in state.

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

The assessment of the intended use of the insulation products was carried out in compliance with the specific part of EAD “Factory-made thermal insulation and/or acoustic insulation products made of vegetable or animal fibres”.

3.1 Essential characteristics of the product

Table No. 1: Essential characteristic of the products BFlex

No	Essential characteristic and method of verification/assessment	Expression of product performance
Basic Works Requirement 1: Mechanical resistance and stability		
Not applicable		
Basic Works Requirement 2: Safety in case of fire		
1	Reaction to fire (EN 13501-1)	Class F
Basic Works Requirement 3: Hygiene, health and environment		
Not applicable		
Basic Works Requirement 4: Safety and accessibility in use		
Not applicable		
Basic Works Requirement 5: Protection against noise		
2	Specific airflow resistivity r (AFR) (EN ISO 9053, method A)	$> 5 \text{ kPa.s.m}^{-2}$
3	Sound absorption (EN ISO 354, EN ISO 11654) α_w α_p Frequency: 125 [Hz] 250 [Hz] 500 [Hz] 1000 [Hz] 2000 [Hz] 4000 [Hz]	0.90 0.20 0.65 0.90 0.90 0.90 0.90

No	Essential characteristic and method of verification/assessment	Expression of product performance
Basic Works Requirement 6: Energy economy and heat retention		
4	Thermal conductivity^{*)} (EN ISO 10456, Annex A of EAD 040005-00-1201)	
	$\lambda_{D, 23,50}$ [W/m.K]	0.040
	$\lambda_{D, 10,dry,90/90}$ [W/m.K]	0.038
	$\lambda_{10, dry}$ [W/m.K]	0.0366
	$\lambda_{10, dry, 90/90}$ [W/m.K]	0.0376
	$\lambda_{10(23,50), 90/90}$ [W/m.K]	0.0395
	Moisture conversion factors: F_{m1} F_{m2}	1.05 1.06 (given by EAD)
5	Water vapour diffusion resistance μ^{**} (EN 12086)	≤ 8
6	Geometry^{**)}	
	- width (EN 822)	tolerance $\pm 1.5\%$
	- thickness (EN 823)	T2 (according to EN 13171)
	- length	tolerance $\pm 2\%$
7	Density^{**)} (EN 1602)	50 kg/m ³ tolerance: $\pm 15\%$
8	Dimensional stability (EN 1604) (70 ± 2)°C and (90 ± 5)%, 48 hours	
	$\Delta \mathcal{E}_l$	$\leq 3\%$
	$\Delta \mathcal{E}_b$	$\leq 3\%$
	$\Delta \mathcal{E}_d$	$\leq 3\%$
		<i>Note: According to EN 13171 level DS(70,90)3</i>
9	Tensile strength parallel to faces^{**)} (EN 1608)	≥ 30 kPa
10	Tensile strength perpendicular to faces^{**)} (EN 1607)	≥ 5 kPa

^{*)}The declared value of thermal conductivity 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 thermal conductivity from the declared value the method described in Annex F of EN 13172 applies.

^{**)}This characteristic also relates to BWR5.

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

4.1 AVCP System

According to the decision 1999/91/EC of the European Commission as amended by Commission Decision 2001/596/EC of 08.01.2001, the AVCP **system 3** (further described in clause 1.4 of Annex V, to Regulation (EU) No 305/2011) applies.

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

In order to help the Notified Body to make an evaluation of conformity, the Technical Assessment Body issuing the ETA shall supply the information detailed below. This information shall initially be prepared or collected by the Technical Assessment Body and shall be agreed with the manufacturer. The following gives guidance on the type of information required:

1) The ETA

Where confidentiality of information is required, this ETA makes reference to the manufacturer's technical documentation which contains such information.

2) Basic manufacturing process

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

3) Product and materials specifications

The manufacturer's documentation includes:

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

4) Control Plan (as a part of FPC)

The manufacturer and the Technical and Test Institute for Construction Prague- branch Prague have agreed a control plan which is deposited with the Technical and Test Institute for Construction Prague – branch Prague in documentation which accompanies the ETA. The control plan specifies the type and frequency of checks/tests conducted during production and on the final product. This includes the checks conducted during manufacture on properties that cannot be inspected at a later stage and for checks on the final product.

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By

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Head of the Technical Assessment Body

