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European Technical Assessment

ETA-23/0750
of 19.02.2024

General Part

Technical Assessment Body issuing the European Technical Assessment:
ITC Division CSI – Centre of Civil Engineering

Trade names of the construction product	**THERMOSILEX**
Product family to which the construction product belongs	Insulation product made of expanded perlite (EPB)
Holder of the assessment	Basic & Co. Srl Via Al Pini 20 36034 MALO VI Italy
Manufacturing plant(s)	Basic & Co. Srl Via Al Pini 20, 36034 MALO VI, Italy
This European Technical Assessment contains	7 pages including 0 Annex which form an integral part of this assessment
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of	EAD 040010-00-1201 Insulation product made of expanded perlite (EPB)

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Specific part

1. Technical description of the product

1.1. Definition of the construction product

This European technical assessment applies to insulation product made of expanded perlite (EPB) in a form of boards with the designation THERMOSILEX. The thermal insulation boards deviate from the standard EN 13169 as they do not contain reinforcing fibres and do not fulfil the minimum value of bending strength stated in the standard.
The thermal insulation boards are manufactured of expanded perlite by adding a binding agent and other additives. The surfaces of the thermal insulation boards can be coated with a single sided or double-sided primer.
The thermal insulation boards are made with the following dimensions:
Nominal thicknesses: 25, 30 and 40 mm
Nominal length: 520 mm; 600 mm
Nominal width: 400 mm; 520 mm
Declared density: 130 ± 30 kg/m^3

Any changes of the product/manufacturing process which could result in this deposited data/information being incorrect, shall be notified to the ITC before the changes are introduced. ITC will decide whether or not such changes affect the European Technical Assessment (ETA) and consequently the CE marking on the basis of the ETA and if so whether any further assessment or any amendments of the ETA, are required.

Concerning product packaging, transport, storage, maintenance, replacement and repair it is the responsibility of the manufacturer to undertake the appropriate measures and to advise his clients on the transport, storage, maintenance, replacement and repair of the product as he considers necessary.
It is assumed that the product will be installed according to the manufacturer´s instructions and according to the usual practice of building professionals.

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

2.1. Intended use

The construction product is intended to be used for thermal insulation of buildings as follows (without contact to soil, ground and surface water):
- *Intended use 1: internal insulation of walls*

Concerning the application of the thermal insulation boards, also the respective national regulations shall be observed.
The design value of the thermal conductivity shall be laid down according to relevant national provisions.
Where the thermal insulation boards are fixed by using adhesives and/or anchors, only such adhesions or anchors shall be used, which are suitable for this purpose. The assessment of these fixings is not subject of this European Technical Assessment.
The performance according to Clause 3 only applies if the thermal insulation boards are installed according to the manufacture's installation instructions and if they are protected from precipitation, wetting or weathering in built-in state and during transport, storage and installation.

2.2. Working life/Durability

The provisions made in this European Technical Assessment are based on an assumed working life of the product for 50 years when installed in the works provided that the product is subject to appropriate installation (see CI 1-2). These provisions are based upon the current state of the art and the available knowledge and experience.

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

The essential characteristics of the product and methods of verification were carried out in compliance with the EAD concerning "Insulation product made of expanded perlite (EPB)"

Table No. 1

No	Essential characteristic and method of verification and assessment	Expression of product performance
	Basic Works Requirement 2: Safety in case of fire	
1	**Reaction to fire** (Cl. 2.2.1 of EAD 040010-00-1201)	A1
	Basic Works Requirement 3: Hygiene, health and the environment	
2	**Content and/or release of dangerous substances** (Cl. 2.2.2 of EAD 040010-00-1201)	No performance assessed
3	**Water vapour permeability** (Cl. 2.2.3 of EAD 040010-00-1201) water vapour resistance factor μ	≤ 11
	Basic Works Requirement 5: Protection against noise	
4	**Sound absorption** (Cl. 2.2.4 of EAD 040010-00-1201)	No performance assessed
	Basic Works Requirement 6: Energy economy and heat retention	
5	**Thermal resistance and thermal conductivity*:** (Cl. 2.2.5 of EAD 040010-00-1201) $\lambda_{D\,(23,50)}$ The mass-related moisture content at 23 °C/50 % RH $u_{23/50}$ The mass-related moisture content at 23 °C/80 % RH $u_{23/80}$ The mass-related moisture conversion coefficient f_u The moisture conversion factor Fm	 0.051 W/m.K 0.02 kg/kg 0.03 kg/kg 0.8 1.01
6	**Dimensions/Geometry** (Cl. 2.2.6 of EAD 040010-00-1201) Length and width Thickness Squareness Flatness	 ± 3 mm for thickness of 25; 30 mm is tolerance ±1 mm for thickness of 40 mm is tolerance ±2 mm ≤ 3 mm/m ≤ 3 mm
7	**Water absorption** - by partial immersion W_p (Cl. 2.2.7 of EAD 040010-00-1201)	No performance assessed
8	**Density** (Cl. 2.2.8 of EAD 040010-00-1201)	(130 ± 30) kg/m³
9	**Bending strength** (Cl. 2.2.9 of EAD 040010-00-1201)	No performance assessed
10	**Compressive stress/strength** (Cl. 2.2.10 of EAD 040010-00-1201)	≥150 kPa Level CS(10\Y)150 according to EN 13169

No	Essential characteristic and method of verification and assessment	Expression of product performance
11	**Deformation under specified load and temperature** (Cl. 2.2.11 of EAD 040010-00-1201)	No performance assessed
12	**Dimensional stability** (Cl. 2.2.12 of EAD 040010-00-1201) 23°/90% humidity	$/\Delta\varepsilon_l/ \leq 0.5$ % $/\Delta\varepsilon_b/ \leq 0.5$ % $/\Delta\varepsilon_d/ \leq 1$ %
13	**Dimensional stability** (Cl. 2.2.12 of EAD 040010-00-1201) 70°/50% humidity	$/\Delta\varepsilon_l/ \leq 0.5$ % $/\Delta\varepsilon_b/ \leq 0.5$ % $/\Delta\varepsilon_d/ \leq 1$ %
14	**Tensile strength perpendicular to faces** (Cl. 2.2.13 of EAD 040010-00-1201)	No performance assessed
15	**Compressive creep** (Cl. 2.2.14 of EAD 040010-00-1201)	No performance assessed
16	**Behaviour under point load** (Cl. 2.2.15 of EAD 040010-00-1201)	No performance assessed

*)Declared values of λ are representative for at least 90% of the production with a confidence level of 90% and covers the given density range.

The performances given in the ETA are only valid for the specified density.

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

4.1. AVCP system

According to the decision 1999/91/EC of the European Commission system of verification of constancy of performance **3** applies.
In addition to according to Commission Decision 2001/596/EC system of assessment and verification of constancy of performance **1** applies to the thermal insulation product with regard to reaction to fire.

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

Technical details of the actions to be undertaken by the manufacturer in relation to the FPC are laid down in the "Control plan" which specifies the type and frequency of checks/tests conducted during production and on the final product. This includes the checks conducted during manufacturing process on characteristics that cannot be inspected at a later stage and for checks on the final product. Manufacturer and ITC – Division CSI have agreed a Control Plan which is deposited with ITC- Division CSI in documentation which accompanies the ETA.

All elements, requirements and provisions adopted by the manufacturer should be documented in a systematic manner in the form of written policies and procedures.
Basic manufacturing process is described in sufficient details to support the proposed FPC methods.
Manufacturer's documentation includes:
- detailed description of the product,
- incoming´s (raw) materials specifications and declarations,
- references to European and/or international standards.

Where confidentiality of information is required, this ETA makes reference to the manufacturer's technical documentation which contains such information.
The records shall be kept at least for ten years and presented to ITC – Division CSI on request.
In cases where the provisions of the European Technical Assessment and its Control Plan are no longer fulfilled, the ITC – Division CSI should withdraw the ETA without any delay.

The notified body shall perform the tasks specified in Regulation (EU) No. 305/2011 – relevant Cl. of Annex V. In case where the provisions of the ETA and its "Control Plan" are no longer fulfilled the notified body shall inform ITC – Division CSI without any delay.

Issued in Prague, 19.02.2024

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