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## European Technical Assessment

## ETA 22/0665 of 30/11/2022

**Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011:** **UL International (Netherlands) B.V.**

<b>Trade name of the construction product</b>	BATIBOARD T
<b>Product family to which the construction product belongs</b>	Fire Protective Products: Fire Protective Board
<b>Manufacturer</b>	Sitek Insulation SASU Route de Lauterbourg Wissembourg F-67160 France
<b>Manufacturing plant(s)</b>	As above
<b>This European Technical Assessment contains</b>	11 pages including 3 Annexes which forms an integral part of this assessment.
<b>This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of</b>	EAD 350142-00-1106 for Fire protective board, slab and mat products and kits , September 2017

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## **I. SPECIFIC PARTS OF THE EUROPEAN TECHNICAL ASSESSMENT**

### **Technical description of the product**

BATIBOARD T is a fire protective board and its intended use is to protect building elements against fire or to be used in building assemblies.

BATIBOARD T is supplied as rigid panels in nominal sizes of 1200 mm x 1000 mm with a nominal density of 500 kg/m<sup>3</sup> and a nominal thickness of 10 to 50 mm.

The applicant has submitted a written declaration that BATIBOARD T does not contain substances which have to be classified as dangerous according to Directive 67/548/EEC and Regulation (EC) No 1272/2008 and listed in the "Indicative list on dangerous substances" of the EGDS - taking into account the installation conditions of the construction product and the release scenarios resulting from there.

In addition to the specific clauses relating to dangerous substances contained in this European technical Assessment, 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 Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

## **II. Specification of the intended uses of the product in accordance with the applicable European Assessment Document: EAD 350142-00-1106**

Detailed information and data is given in Annex A-C.

The intended use of BATIBOARD T is use category Type 3 as defined in EAD 350142-00-1106 (Fire protective products to protect load-bearing concrete elements).

The performances given in section 3 are only valid if BATIBOARD T is used in compliance with

- the specifications and conditions given in Annexes A to C and
- the manufacturer's instructions as stated in section 5.

The provisions made in this European Technical Assessment are based on an assumed working life of the BATIBOARD T of 25 years, provided that the conditions laid down in the product datasheet for the packaging/transport/ storage/installation/use/repair are met. The indications given on the working life cannot be interpreted as a guarantee given by the producer or the Technical Assessment Body, 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.

BATIBOARD T has been assessed for internal and semi-exposed use conditions defined in EAD 350142-00-1106 for Type Y environmental conditions.

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

Product-type: Protective Board		Intended use: Fire protective products to protect load-bearing concrete elements
Basic requirement for construction work	Essential characteristic	Performance
Safety in case of fire		
	Reaction to fire	Class A1/A1 <sub>FL</sub>
	Resistance to fire	Annex B Annex C
	Durability and serviceability	Annex A
Hygiene, health and environment		
	Water permeability	No performance assessed
	Release of dangerous substances	Declaration of manufacturer
Safety and accessibility in use		
	Flexural strength	Annex A
	Dimensional stability	Annex A
Energy economy and heat retention		
	Thermal resistance	No performance assessed
	Water vapour transmission coefficient	No performance assessed

IV. **ASSESSMENT AND VERIFICATION OF CONSTANCY OF PERFORMANCE (HEREINAFTER AVCP) SYSTEM APPLIED, WITH REFERENCE TO ITS LEGAL BASE**

According to the decision 1999/454/EC – Commission Decision of date 22nd June 1999 on the procedure for attesting the conformity of construction products pursuant to Article 20(2) of Council Directive 89/106/EEC as regards fire stopping, fire sealing and fire protective products, published in the Official Journal of the European Union (OJEU) L178/52 of 14/07/1999, see <http://eur-lex.europa.eu> of the European Commission<sup>1</sup>, as amended, the system(s) of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) given in the following table(s) applies (apply).

Product(s)	Intended use(s)	Level(s) or class(es)	System(s)
Fire Protective Products	For fire compartmentation and/or fire protection or fire performance	Any	1

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

**Tasks for the manufacturer:**

Factory production control

The manufacturer shall exercise permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures, including records of results performed. This production control system shall ensure that the product is in conformity with this European Technical Assessment.

The manufacturer may only use initial/raw/constituent materials stated in the technical documentation of this European Technical Assessment.

The factory production control shall be in accordance with the Control Plans for Wissembourg plant relating to the European technical assessment ETA 22/0665 issued on 30/11/2022 which is part of the technical documentation of this European technical approval. The "Control Plan" is laid down in the context of the factory production control system operated by the manufacturer and deposited at UL International (Netherlands) B.V.

The results of factory production control shall be recorded and evaluated in accordance with the provisions of the Control Plan.

**Other tasks for the manufacturer**

Additional information

The requirements of Table 3 of EAD 350142-00-1106, which specifies properties that should be controlled and minimum frequencies of control. The test method and limitations have been laid down in the factory production Control Plan.

VI. **Issued on:**

**30<sup>th</sup> November 2022**

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For and on behalf of UL International (Netherlands) B.V.

## Annex A – Performance of the product

### A.1 Durability and serviceability

#### A.1.1 Resistance to soak/dry

In accordance with EAD 350142001106, BATIBOARD T is resistant to soak/dry cycles.

#### A.1.2 Resistance to freeze/thaw

In accordance with EAD 350142001106, BATIBOARD T is resistant to freeze/thaw cycles.

### A.2 Flexural Strength

In accordance with EN 12467, BATIBOARD T has a modulus of rupture (MOR) respectively  $R_L$  of  $\geq 0,79$  for samples (25 mm) subjected to soak/dry resistance.

In accordance with EN 12467, BATIBOARD T has a modulus of rupture (MOR) respectively  $R_L$  of  $\geq 0,96$  for samples (25 mm) subjected to freeze/thaw resistance.

### A.3 Dimensional Stability

Relative change in length and thickness after a change in the relative humidity, tested in accordance with EN 318.

Dimensional Change/Relative Humidity	65-85 % RH	65-30 % RH
Change in Length	0,01 % (Lengthwise)	-0,01 % (Lengthwise)
	0,01 % (Crosswise)	-0,01% (Crosswise)
Change in Thickness	0,24 %	-0,26 %

### A.4 Identification

#### A.4.1 Compressive strength

The compressive strength of the BATIBOARD T, based on assessment testing in accordance with EAD 350142001106 and EN 789, is 1,53 MPa. This value is a guidance value, and does not reflect a statistical evaluation, nor a minimum guaranteed value. This value is not intended to be used as a calculation value as basis for structural design.

#### A.4.2 Tension strength

The perpendicular tensile strength of the BATIBOARD T, based on assessment testing in accordance with EAD 350142-00-1106 and EN 319, is 0,03 MPa.

The parallel tensile strength of the BATIBOARD T, based on assessment testing in accordance with EAD 350142001106 and EN 789, is 1,08 MPa.

These values are a guidance values, and do not reflect a statistical evaluation, nor minimum guaranteed values. This value is not intended to be used as calculation values as basis for structural design.

## Annex B - Arrangement and design of BATIBOARD T

### B.1 Overview of fire resistance performances for BATIBOARD T assemblies

Assemblies installed according to the provisions given in this annex are covered by this ETA.

Assemblies assessed within the framework of this ETA	Classification according to EN 13501-2	Test Standard	Intended use category according to EAD350142-00-1106	Installation details
Loaded concrete slab, protected by BATIBOARD T fire protective boards (thickness 30 mm)	Assessment in accordance with Annex C	EN 13381-3:2015	Type 3	Annex B.2

### B.2 Description of the design

#### B.2.1 Concrete slab and wall

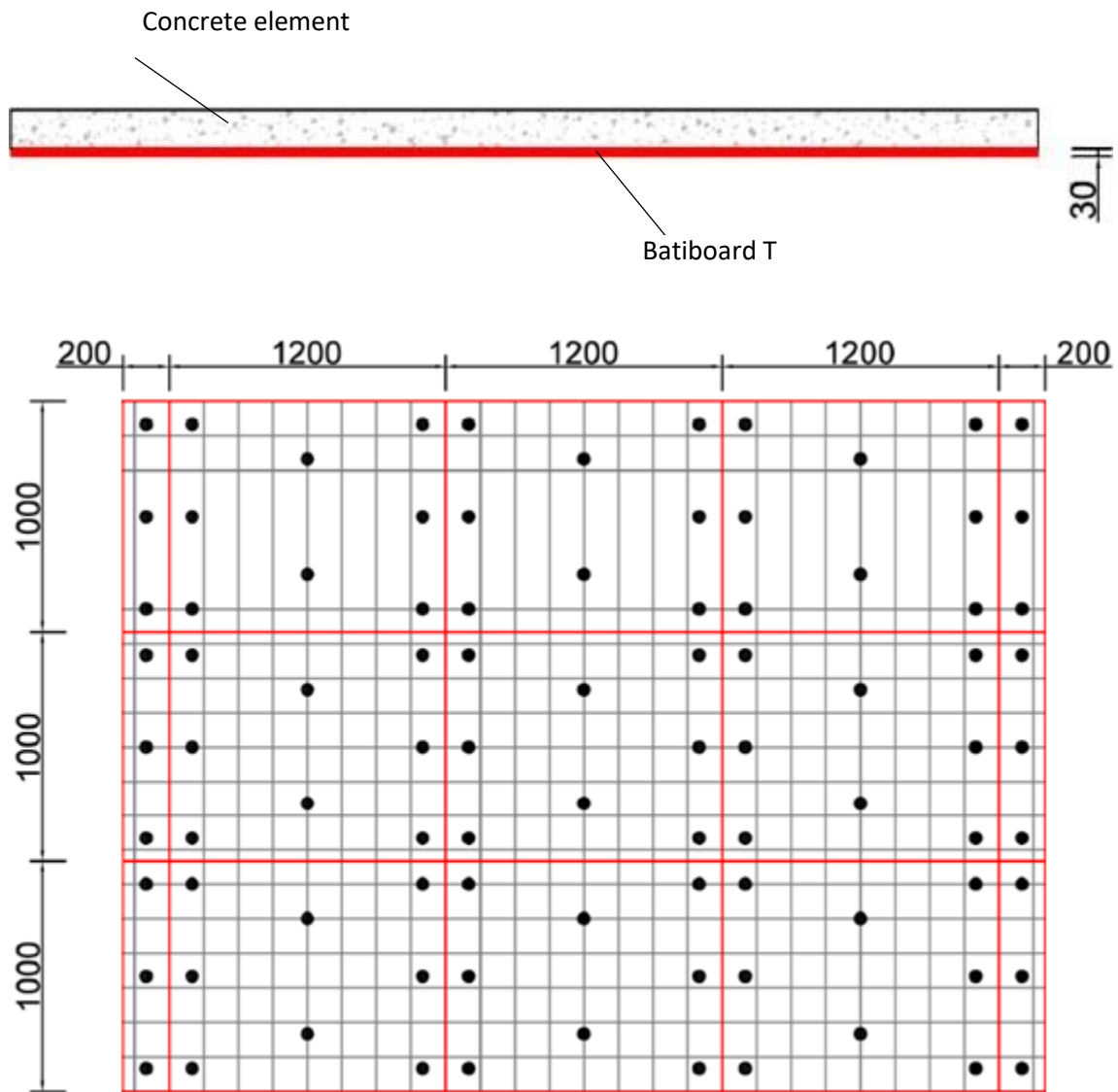
Concrete slabs and walls with fire exposure from one side only, in both horizontal and vertical orientation, provided that:

- The method of fixing and application of BATIBOARD T shall be in accordance with Annex B.2.3 of the ETA
- Concrete elements are within a density range of 2088 to 2824 [kg/m<sup>3</sup>]
- Concrete elements have a strength class of C20/25 or C25/30
- Rules indicated in EN 1992-1-2 are respected for pre stressed structures
- Concretes made with any type of aggregate
- Single Layer of BATIBOARD T with thickness of 30 mm is used



### B.2.2 Arrangement and design of BATIBOARD T assemblies

The fire protective BATIBOARD T shall be arranged beneath the concrete slab or onto exposed side of wall so that the concrete element is completely cladded with the boards. The fire protective boards shall be butt-jointed. Fixing of protective boards shall be in accordance with B.2.3.

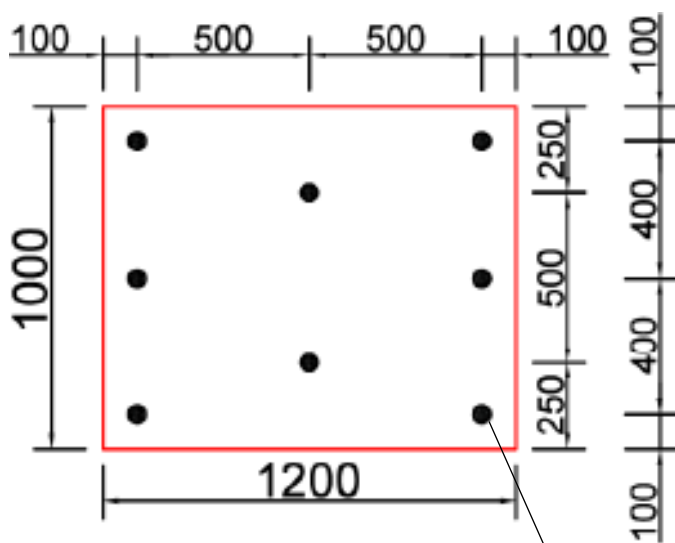


### B.2.3 Fixing

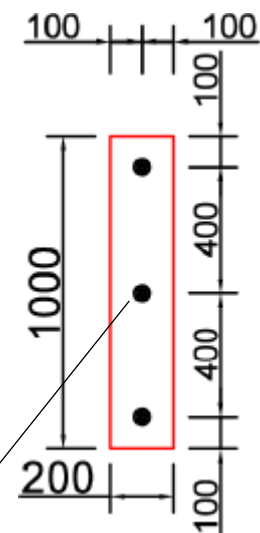
Fastening of BATIBOARD T onto the support structure shall be in accordance with the assembly information provided below:

Material (Type)	Steel Anchor
Manufacturer	Hilti
Trade Name	Hilti HFB
Length	65 mm
Diameter	M6

**Standard Board:**



**Lateral Board:**



Steel Anchor

## **Annex C Fire Resistance Evaluation – BATIBOARD T**

### **C.1 Determining the contribution of 30 mm thick BATIBOARD T fire protective boards to the fire resistance of structural concrete members**

#### **C.1.1 General**

The cladding of 30 mm thick BATIBOARD T for the protection of structural concrete members was determined in accordance with EN 13381-3:2015 with regard to:

- The insulation performance when exposed to fire up to 360 minutes in accordance with EN1363-1
- The stickability when exposed to fire up to 360 minutes in accordance with EN 1363-1
- The determination of equivalent thickness of concrete relating to the insulation when exposed to fire up to 360 minutes in accordance with EN 1363-1

#### **C.1.2 Equivalent thickness of the concrete for concrete slabs and walls clad with BATIBOARD T of a thickness of 30 mm**

Period of exposure to fire [min]	Equivalent thickness of concrete $\epsilon$ [mm]
30	75
60	86
90	94
120	104
180	118
240	124
360	150