

# EUROPEAN TECHNICAL ASSESSMENT

**ETA 20/0399**

Version 02

Date of issue: 2022-01-04



UBAtc Assessment Operator:  
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Technical Assessment Body issuing the European Technical Assessment: UBAtc.  
UBAtc has been designated according to Article 29 of Regulation (EU) No 305/2011  
and is member of EOTA (European Organisation for Technical Assessment)

**Trade name of the construction product:**

SILENTPART / SIMFOCOR

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

Acoustic and thermal insulation products

**Manufacturer:**

RECTICEL INSULATION SAS  
Z.I. - 7 boulevard de la Chanterie  
49124 Saint-Barthélemy-d'Anjou  
France

**Manufacturing plant(s):**

RECTICEL INSULATION SAS  
Z.I. - 7 boulevard de la Chanterie  
F - 49124 Saint-Barthélemy-d'Anjou  
France

**Website:**

[www.recticelinsulation.com](http://www.recticelinsulation.com)

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

European Assessment Document (EAD): 040831-01-1201

**This ETA replaces**

ETA 20/0399, issued on 21 April 2020 by UBAtc

**This European Technical Assessment contains:**

8 pages, with 1 annex which forms an integral part of this ETA



## European Organisation for Technical Assessment

## Legal bases and general conditions

- 1 This European Technical Assessment is issued by UBAtc (Union belge pour l'Agrément technique de la construction, i.e. Belgian Union for technical Approval in construction), in accordance with:
  - Regulation (EU) No 305/2011<sup>1</sup> of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC
  - Commission Implementing Regulation (EU) No 1062/2013<sup>2</sup> of 30 October 2013 on the format of the European Technical Assessment for construction products
  - European Assessment Document (EAD) : 040831-01-1201
- 2 Under the provisions of Regulation (EU) No 305/2011, UBAtc is not authorized to check whether the provisions of this European Technical Assessment are met once the ETA has been issued.
- 3 The responsibility for the conformity of the performances of the products with this European Technical Assessment and the suitability of the products for the intended use remains with the holder of the European Technical Assessment.
- 4 Depending on the applicable Assessment and verification of constancy of performance (AVCP) system, (a) notified body(ies) may carry out third-party tasks in the process of assessment and verification of constancy of performance under this Regulation once the European Technical Assessment has been issued.
- 5 This European Technical Assessment allows the manufacturer of the construction product covered by this ETA to draw up a declaration of performance (DoP) for the construction product.
- 6 CE marking should be affixed to all construction products for which the manufacturer has drawn up a declaration of performance (DoP).
- 7 This European Technical Assessment is not to be transferred to other manufacturers, agents of manufacturers, or manufacturing plants other than those indicated on page 1 of this European Technical Assessment.
- 8 The European Technical Assessment holder confirms to guarantee that the product(-s) to which this assessment relates, is/are produced and marketed in accordance with and comply with all applicable legal and regulatory provisions, including, without limitation, national and European legislation on the safety of products and services. The ETA-holder shall notify the UBAtc immediately in writing of any circumstance affecting the aforementioned guarantee. This assessment is issued under the condition that the aforementioned guarantee by the ETA-holder will be continuously observed.
- 9 According to Article 11(6) of Regulation (EU) No 305/2011, when making a construction product available on the market, the manufacturer shall ensure that the product is accompanied by instructions and safety information in a language determined by the Member State concerned which can be easily understood by users. These instructions and safety information should fully correspond with the technical information about the product and its intended use which the manufacturer has submitted to the responsible Technical Assessment Body for the issuing of the European Technical Assessment.
- 10 Pursuant to Article 11(3) of Regulation (EU) No 305/2011, manufacturers shall adequately take into account changes in the product-type and in the applicable harmonised technical specifications. Therefore, when the contents of the issued European Technical Assessment do not any longer correspond to the product-type, the manufacturer should refrain from using this European Technical Assessment as the basis for their declaration of performance (DoP).
- 11 All rights of exploitation in any form and by any means of this European Technical Assessment is reserved for UBAtc and the ETA-holder, subject to the provisions of the applicable UBAtc regulations.
- 12 Reproduction of this European Technical Assessment including transmission by electronic means shall be in full. However, partial reproduction can be made with the written consent of UBAtc. In this case partial reproduction has to be designated as such. Texts and drawings of advertising brochures shall not contradict or misuse the European Technical Assessment.
- 13 Subject to the application introduced, this European Technical Assessment is issued in English and may be issued by the UBAtc in its official languages. The translations correspond fully to the English reference version circulated in EOTA.
- 14 This European Technical Assessment was first issued by UBAtc on 1 April 2022 and replaces ETA 20/0399, issued on 21 April 2020 by UBAtc.

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<sup>1</sup> OJEU, L 88 of 2011/04/04

<sup>2</sup> OJEU, L 289 of 2013/10/31

## Technical Provisions

### 1 Technical description of the product

#### 1.1 General

This ETA is being issued for the products specified on the cover page, on the basis of agreed data/information, deposited with the UBAtc, which identifies the products that have been assessed and judged. Changes to the product/production process, which could result in the deposited data/information being incorrect, should be notified to the UBAtc before the changes are introduced. The UBAtc will decide whether or not such changes affect the ETA and, if so, whether further assessment/alterations to the ETA, shall be necessary.



#### 1.2 Description of the construction product

The construction product is made of bonded foam, based on recycled polyurethane flakes. The construction product is supplied in the form of rolls and/or slabs and contains a mixture of different materials such as PU foam flakes (recyclates) and fibres. The product can be a bonded foam as such and/or can be faced on one or both sides with a flexible facing.

The bonded foam is typically composed of:

- Recycled polyurethane:  $(80 \pm 5)\%$  (recyclates)
- Polyester low-melting fibres:  $(20 \pm 5)\%$  (this material comes from raw material sourcing but can be recycled from production of the bonded foam)

By 'recyclates' is meant: production and end-of-life waste having undergone recovery operations.

The assessed product is a slab with a nominal density of  $35 \text{ kg/m}^3$ , a nominal thickness of 45 mm and is faced on one side with a non-woven glass fleece.

The filler for the finishing plasterboard, referred to in this ETA, is not covered by this ETA.

### 2 Specification of the intended use(s) in accordance with the applicable EAD

#### 2.1 Intended uses

The bonded foam is intended to be used for acoustic and thermal insulation for lining and internal partition applications and shall be installed in accordance with the manufacturer's installation manual.

The acoustic and thermal insulation product shall only be installed in areas where it is not exposed to wetting, weathering, condensation, wind or compression load.

The product shall be protected from precipitation, wetting or weathering during transport, storage and installation.

This European Technical Assessment does not cover the complete or finished insulation system. National design specifications and codes of practice and regulations apply.

#### 2.2 Working life/Durability

The provisions made in this ETA are based on the assumed working life of the bonded foam for an intended use of 25 years when installed in the works, provided that the bonded foam is subject to appropriate installation.

The indications given as to the working life of the construction product cannot be interpreted as a guarantee either given by the product manufacturer or by the UBAtc, but are regarded only as means for expressing the expected economically reasonable working life of the product.

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

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

Not applicable.

#### 3.2 Safety in case of fire (BWR 2)

##### 3.2.1 Reaction to fire

Classification according to EN 13501-1 and the mounting and fixing rules given in EN 15715.

The table below specifies the reaction to fire class that applies for the bonded foam in function of its end use application.

No performance was assessed for the bonded foam as such.

| End use application  | Reaction to fire class |
|--|------------------------|
| Substrate/ surface product: all non-combustible mineral substrates/surface products of Euro classes A1 and A2 with a minimal thickness of 12,5 mm.<br><br>Fixing: the bonded foam is fitted in a metal sub-structure of vertical and horizontal metal studs. The surface product and substrate are mechanically fixed onto the metal sub-structure, using screws. The screws (35 mm) are fixed through the thickness of the boards into the sub-structure at 250 mm centers measured along the length of each supporting member. The screw heads are filled with Recticel Filler & Finisher. | B-s1, d0               |

#### 3.3 Hygiene, health and the environment (BWR 3)

##### 3.3.1 Content, emission and/or release of dangerous substances

The following scenarios for the intended use are applicable:

- IA2: Product with indirect contact to indoor air
- IA3: Product with no contact to indoor air
- S/W3: Product with no contact to soil-, ground- and surface water

Assessment of the release of VOC and SVOC according to the relevant parts of the EN ISO 16000 series of standards and according to CEN/TS 16516. The classification criteria for VOC and SVOC, as stated in EOTA TR 034 are taken into account.

The correspondence with the limit values specified in the following Member State's regulation, as declared by the manufacturer, has been verified by UBAtc by means of representative sampling and testing.

| Belgium<br>Belgian Royal Decree of 4/05/2014    |          |  |
|---|----------|--|
| Compound  | CAS no   | Limit values<br>[ $\mu\text{g}/\text{m}^3$ ] |
| R   | -        | $\leq 1$                                     |
| TVOC  | -        | $\leq 1000$                                  |
| TSVOC   | -        | $\leq 100$                                   |
| Carcinogenic substances of categories 1A and 1B | -        | $\leq 1$                                     |
| Acetaldehyde                                    | 75-07-0  | $\leq 200$                                   |
| Toluene   | 108-88-3 | $\leq 300$                                   |
| Formaldehyde                                    | 50-00-0  | $\leq 100$                                   |

| France - Emission class A+<br>Decree 2011-321 of March 2011 and Order of 19 April 2011 |           |   |
|--|-----------|---|
| Compound   | CAS no    | Limit values for<br>emission class A+<br>[ $\mu\text{g}/\text{m}^3$ ] |
| Formaldehyde   | 50-00-0   | $< 10$  |
| Acetaldehyde   | 75-07-0   | $< 200$   |
| Toluene  | 108-88-3  | $< 300$   |
| Tetrachloroethylene  | 127-18-4  | $< 250$   |
| Xylene   | 1330-20-7 | $< 200$   |
| 1,2,4-Trimethylbenzene   | 95-63-6   | $< 1000$  |
| 1,4-Dichlorobenzene  | 106-46-7  | $< 60$  |
| Ethylbenzene   | 100-41-4  | $< 750$   |
| 2-Butoxyethanol  | 111-76-2  | $< 1000$  |
| Styrene  | 100-42-5  | $< 250$   |
| TVOC   | -         | $< 1000$  |
| Benzene  | 71-43-2   | $< 1$   |
| Trichloroethylene  | 79-01-6   | $< 1$   |
| DBP, Dibutylphthalate  | 84-74-2   | $< 1$   |
| DEHP, Diethylhexylphthalate  | 117-81-7  | $< 1$   |

#### 3.4 Safety and accessibility in use (BWR 4)

Not applicable.

#### 3.5 Protection against noise (BWR 5)

##### 3.5.1 Airflow resistance

Assessment according to EN ISO 9053-1.

Performance:  $R_s = 120 \text{ Pa}\cdot\text{s}/\text{m}$

##### 3.5.2 Sound absorption

Assessment according to EN 13165, clause 4.3.10 and according to EN ISO 354 and EN ISO 11654.

Measuring setup according to type A-mounting as described in EN ISO 354, Annex B.

Tests were conducted taking into account both sides of the product (facing on one side, no facing on the other).

Performance:  $\alpha_w = 0,60$

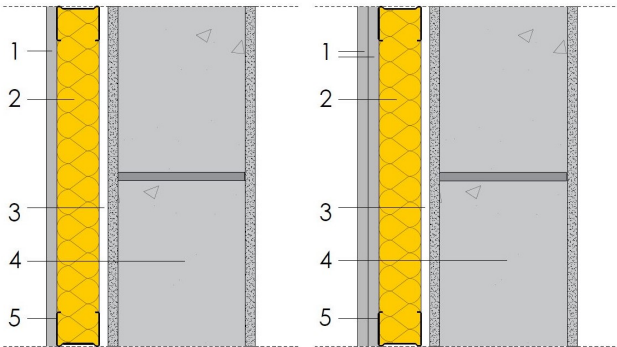
**3.5.3 Airborne sound insulation**

Assessment according to EN ISO 10140-2 and EN ISO 10140-5 and classification of the results according to EN ISO 717-1.

**3.5.3.1 Bonded foam used for lining**

The assessed construction consists of a 50 mm metal stud structure with bonded foam inside, and covered with a single and double layer of 12,5 mm thick plasterboard (density ca. 8 kg/m<sup>2</sup>), installed on a 164 mm thick standard wall (density ca. 338 kg/m<sup>2</sup>) made of mortar coated concrete bricks, with 10 mm separation. See figure 1.

**Figure 1: The assessed constructions for airborne sound insulation – lining application**



- 1: 12,5 mm plasterboard (density ca. 8 kg/m<sup>2</sup>)
- 2: 50 mm metal stud structure with bonded foam
- 3: 10 mm separation
- 4: 164 mm mortar coated concrete bricks (density ca. 338 kg/m<sup>2</sup>)
- 5: metal stud structure

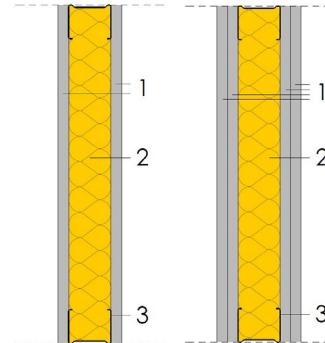
Performance:

| Weighted sound reduction index, $R_w$ |  |   | Weighted sound reduction improvement index, $\Delta R_w$ |                              |
|---------------------------------------|--|---|--|------------------------------|
| Standard wall                         | Standard wall + lining with bonded foam and 1 plasterboard | Standard wall + lining with bonded foam and 2 plasterboards | Variant with 1 plasterboard                              | Variant with 2 plasterboards |
| (dB)                                  | (dB)   | (dB)  | (dB)   | (dB)                         |
| 52                                    | 62   | 64  | 10   | 12                           |

**3.5.3.2 Bonded foam used in partitions**

The assessed construction consists of a 50 mm metal stud structure with bonded foam inside, and covered with a single and double layer of 12,5 mm thick plasterboard (density ca. 8 kg/m<sup>2</sup>) on both sides. See figure 2.

**Figure 2: The assessed constructions for airborne sound insulation – partition application**



- 1: 12,5 mm plasterboard (density ca. 8 kg/m<sup>2</sup>)
- 2: 50 mm metal stud structure with bonded foam
- 3: metal stud structure

Performance:

| Weighted sound reduction index, $R_w$ |                              |
|---------------------------------------|------------------------------|
| Variant with 1 plasterboard           | Variant with 2 plasterboards |
| (dB)                                  | (dB)                         |
| 41                                    | 50                           |

**3.6 Energy economy and heat retention (BWR 6)**

**3.6.1 Tensile strength perpendicular to faces**

No performance assessed.

**3.6.2 Geometry**

**3.6.2.1 Length and width**

Assessment according to EN 13165, clause 4.2.2, and according to EN 822. Tolerances on length and width:

| Dimensions   | Tolerances |
|--------------|------------|
| [mm]         | [mm]       |
| < 1000       | ± 5        |
| 1000 to 2000 | ± 7,5      |
| 2001 to 4000 | ± 10       |

**3.6.2.2 Thickness**

Assessment according to EN 13165, clause 4.2.3 and according to EN 823.

Performance: T1 (45 ± 3 mm)

**3.6.2.3 Squareness**

No performance assessed.

**3.6.2.4 Flatness**

No performance assessed.

### 3.6.3 Density

Assessment according to EN 1602.

Performance:  $35 \pm 5 \text{ kg/m}^3$

### 3.6.4 Water vapour transmission

No performance assessed.

### 3.6.5 Dimensional stability

Assessment according to EN 1603.

Test conditions: 23°C / 50% relative humidity.

Performance: DS(N)2 ( $\Delta\epsilon_{i,b} \pm 0,2\%$ )

### 3.6.6 Water absorption

No performance assessed.

### 3.6.7 Thermal conductivity

Assessment according to EN 12667.

The declared thermal conductivity is determined on the basis of the statistical value of thermal conductivity,  $\lambda_{90/90}$ . The declared thermal conductivity is given at a mean temperature of 10 °C and with a moisture content equal to the one in equilibrium with air at 23 °C and relative humidity of 50 %.

Performance:  $\lambda_D = 0,041 \text{ W/m.K}$

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

For the products covered by EAD 040831-01-1201, the applicable European legal act is Decision<sup>3</sup> 1999/91/EC of the European Commission for thermal insulating products, as amended by Decision<sup>4</sup> 2001/596/EC of 8 January 2001 and Commission Delegated Regulation (EU) 2016/364<sup>5</sup>. The system to be applied has been specified in the table below.

**Table 1: System of assessment and verification of constancy of performance applicable to the products covered by EAD 040831-01-1201**

| Product(s)  | Intended use(s)                                  | Level(s) or class(es) (reaction to fire) | System(s) of assessment and verification of constancy of performance <sup>(1)</sup> |
|---|--|--|---|
| Thermal insulation products   | Any  | -  | 3   |
|   | For uses subject to reaction to fire regulations | (A1, A2, B, C)*                          | 1   |
|   |  | (A1, A2, B, C)**, D, E                   | 3   |
|   |  | (A1 to F)***, NPD****                    | 4   |
| <sup>(1)</sup> Systems 1, 3 and 4: see Regulation (EU) N° 305/2011, Annex V   |  |  |   |
| * Products/materials for which a clearly identifiable stage in the production process results in an improvement of the reaction to fire classification (e.g. an addition of fire retardants or a limiting of organic material). |  |  |   |
| ** Products/materials not covered by footnote (*).  |  |  |   |
| *** Products/materials that do not require to be tested for reaction to fire (e.g. products/materials of classes A1 according to Commission Decision 96/603/EC, as amended).  |  |  |   |
| **** 'No performance declared' in accordance with Regulation (EU) N° 305/2011, Article 6(f).  |  |  |   |

<sup>3</sup> OJEU, L 29 of 1999/02/03

<sup>4</sup> OJEU, L 209 of 2001/08/02

<sup>5</sup> OJEU, L 68 of 2016/03/15

## 5 Technical details necessary for the implementation of the AVCP system

### 5.1 Tasks of the manufacturer – Factory production control

#### 5.1.1 General

The manufacturer shall establish, document and maintain a FPC system to ensure that the products are placed on the market conform to the stated performance characteristics. The FPC system shall consist of procedures, regular inspections and tests and/or assessments and the use of the results to control raw and other incoming materials or components, equipment, the production process and the product.

The results of inspections, tests or assessments requiring action shall be recorded, as shall any action taken. The action to be taken when control values or criteria are not met shall be recorded.

#### 5.1.2 Equipment

All weighing, measuring and testing equipment shall be calibrated and regularly inspected according to documented procedures, frequencies and criteria.

#### 5.1.3 Raw materials and components

The specifications of all incoming raw materials and components shall be documented, as shall the inspection scheme for ensuring their conformity.

#### 5.1.4 Non-conforming products

In the event of any non-conformity of any product, that product shall be placed into quarantine and action taken to rectify the cause of the non-conformity. Products may not subsequently be dispatched until the problem has been resolved.

#### 5.1.5 Tests and frequencies

All the elements, requirements and provisions adopted by the manufacturer are documented in a systematic manner in the form of written policies and procedures. This production control system ensures that the product is in conformity with the European Technical Assessment (ETA).

### 5.2 Tasks of the notified body - Assessment of the performance of the construction product

Assessment tests have been conducted under the responsibility of the assessment body (UBA<sub>tc</sub>) in accordance with EAD 040831-01-1201.

The assessment results should be used for the purpose of assessment of the performance of the construction product in accordance with Regulation (EU) N° 305/2011, Annex V.

## Annex I: Reference documents

|                    |   |
|--------------------|---|
| EAD 040831-01-1201 | Factory-made bonded foam to be used as acoustic and thermal insulation  |
| EN 822             | Thermal insulating products for building applications - Determination of length and width   |
| EN 823             | Thermal insulating products for building applications - Determination of thickness  |
| EN 1602            | Thermal insulating products for building applications - Determination of the apparent density   |
| EN 1603            | Thermal insulating products for building applications - Determination of dimensional stability under constant normal laboratory conditions (23°C/50% relative humidity)                                 |
| EN 12667           | Thermal performance of building materials and products - Determination of thermal resistance by means of guarded hot plate and heat flow meter methods - Products of high and medium thermal resistance |
| EN 13165           | Thermal insulation products for buildings - Factory made rigid polyurethane foam (PU) products – Specification  |
| EN 13501-1         | Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests  |
| EN 15715           | Thermal insulation products - Instructions for mounting and fixing for reaction to fire testing - Factory made products   |
| EN ISO 354         | Acoustics - Measurement of sound absorption in a reverberation room   |
| EN ISO 717-1       | Acoustics - Rating of sound insulation in buildings and of building elements - Part 1: Airborne sound insulation  |
| EN ISO 9053-1      | Acoustics - Determination of airflow resistance - Part 1: Static airflow method   |
| EN ISO 10140-2     | Acoustics - Laboratory measurement of sound insulation of building elements - Part 2: Measurement of airborne sound insulation  |
| EN ISO 10140-5     | Acoustics - Laboratory measurement of sound insulation of building elements - Part 5: Requirements for test facilities and equipment  |
| EN ISO 11654       | Acoustics - Sound absorbers for use in buildings - Rating of sound absorption   |
| EN ISO 16000       | Indoor air  |

NOTE: The editions of reference documents given above are those which have been adopted by the UBA<sub>tc</sub> for its specific use when establishing this ETA. When new editions become available, these supersede the editions mentioned only when confirmed by the UBA<sub>tc</sub>.

UBAtc asbl is a non-profit organization according to Belgian law. It is a Technical Assessment Body notified by the Belgian notifying authority, the Federal Public Services Economy, SMEs, Self-Employed and Energy, on 17 July 2013 in the framework of Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC and is member of the European Organisation for Technical Assessment, EOTA ([www.eota.eu](http://www.eota.eu)).

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On behalf of UBAtc asbl,

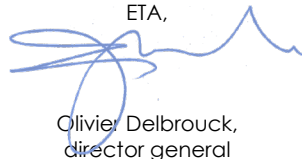


Eric Winnepenninckx  
secretary general



Benny De Blaere,  
director

On behalf of the Assessment Operator, BCCA,  
responsible for the technical content of the  
ETA,



Olivier Delbrouck,  
director general

The most recent version of this European Technical Assessment may be consulted on the UBAtc website ([www.ubatc.be](http://www.ubatc.be)).