



## European Technical Approval ETA-10/0057

English translation prepared by DIBt - Original version in German language

Handelsbezeichnung  
*Trade name*

Regupol® sound 17

Zulassungsinhaber  
*Holder of approval*

BSW  
Berleburger Schaumstoffwerk GmbH  
Am Hilgenacker 24  
57319 Bad Berleburg  
DEUTSCHLAND

Zulassungsgegenstand  
und Verwendungszweck  
*Generic type and use  
of construction product*

Gummifaserbahn zur Trittschalldämmung unter schwimmendem Estrich  
*Rubber fibre mat for impact sound insulation under floating screed*

Geltungsdauer:  
*Validity:* vom  
*from*  
bis  
*to*

14 June 2013  
14 June 2018

Herstellwerk  
*Manufacturing plant*

BSW GmbH (Werk II)  
Industriestraße 6  
57319 Bad Berleburg  
DEUTSCHLAND

Diese Zulassung umfasst  
*This Approval contains*

7 Seiten  
7 pages

Diese Zulassung ersetzt  
*This Approval replaces*

ETA-10/0057 mit Geltungsdauer vom 03.03.2010 bis 02.03.2015  
*ETA-10/0057 with validity from 03.03.2010 to 02.03.2015*

## I LEGAL BASES AND GENERAL CONDITIONS

- 1 This European technical approval is issued by Deutsches Institut für Bautechnik in accordance with:
  - Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of Member States relating to construction products<sup>1</sup>, modified by Council Directive 93/68/EEC<sup>2</sup> and Regulation (EC) N° 1882/2003 of the European Parliament and of the Council<sup>3</sup>;
  - *Gesetz über das In-Verkehr-Bringen von und den freien Warenverkehr mit Bauprodukten zur Umsetzung der Richtlinie 89/106/EWG des Rates vom 21. Dezember 1988 zur Angleichung der Rechts- und Verwaltungsvorschriften der Mitgliedstaaten über Bauprodukte und anderer Rechtsakte der Europäischen Gemeinschaften (Bauproduktengesetz - BauPG) vom 28. April 1998<sup>4</sup>, as amended by Article 2 of the law of 8 November 2011<sup>5</sup>;*
  - Common Procedural Rules for Requesting, Preparing and the Granting of European technical approvals set out in the Annex to Commission Decision 94/23/EC<sup>6</sup>.
- 2 Deutsches Institut für Bautechnik is authorized to check whether the provisions of this European technical approval are met. Checking may take place in the manufacturing plant. Nevertheless, the responsibility for the conformity of the products to the European technical approval and for their fitness for the intended use remains with the holder of the European technical approval.
- 3 This European technical approval is not to be transferred to manufacturers or agents of manufacturers other than those indicated on page 1, or manufacturing plants other than those indicated on page 1 of this European technical approval.
- 4 This European technical approval may be withdrawn by Deutsches Institut für Bautechnik, in particular pursuant to information by the Commission according to Article 5 (1) of Council Directive 89/106/EEC.
- 5 Reproduction of this European technical approval including transmission by electronic means shall be in full. However, partial reproduction can be made with the written consent of Deutsches Institut für Bautechnik. 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 approval.
- 6 The European technical approval is issued by the approval body in its official language. This version corresponds fully to the version circulated within EOTA. Translations into other languages have to be designated as such.

<sup>1</sup> Official Journal of the European Communities L 40, 11 February 1989, p. 12  
<sup>2</sup> Official Journal of the European Communities L 220, 30 August 1993, p. 1  
<sup>3</sup> Official Journal of the European Union L 284, 31 October 2003, p. 25  
<sup>4</sup> *Bundesgesetzblatt Teil I 1998*, p. 812  
<sup>5</sup> *Bundesgesetzblatt Teil I 2011*, p. 2178  
<sup>6</sup> Official Journal of the European Communities L 17, 20 January 1994, p. 34

## II SPECIFIC CONDITIONS OF THE EUROPEAN TECHNICAL APPROVAL

### 1 Definition of product and intended use

#### 1.1 Definition of the construction product

This European technical approval applies to the single-sided profiled rubber fibre mat for impact sound insulation under floating screed "Regupol® sound 17", hereinafter referred to as impact sound insulation mat.

The mat manufactured using scrap tire material and a binding agent based on polyurethane is delivered in the form of boards laminated with an aluminium composite foil at the non-profiled side.

The impact sound insulation mat is made with the following dimensions:

Nominal length: 1200 mm  
Nominal width: 1000 mm  
Nominal thickness  $d_L$ : 17.0 mm

#### 1.2 Intended use

The impact sound insulation mat is used as insulation material on solid floor slabs for the improvement of impact sound insulation inside buildings. In this connection the impact sound insulation mat is placed in single-layer or double-layer execution under floating screed. Concerning the execution clause 4 shall be considered.

The impact sound insulation mat is used in particular for structures with high imposed loads.

As to the application of the impact sound insulation mat, the respective national regulations shall additionally be observed.

The provisions made in this European technical approval are based on an assumed working life of the impact sound insulation mat of 25 years, provided that the conditions laid down in section 4.2 for installation and use are met. 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.

### 2 Characteristics of product and methods of verification

#### 2.1 Composition and production process

With regard to composition and production process the impact sound insulation mats shall correspond to those which were the basis for the approval tests. Composition and production process are deposited with Deutsches Institut für Bautechnik. See also clause 4.1.

#### 2.2 Geometry

The impact sound insulation mat shall be of even density and structure over the entire length and width.

Length and width are determined according to EN 822:1994-07. The deviation from the nominal width does not exceed  $\pm 2\%$ , however within one board  $\pm 1\%$ . The deviation from the nominal length does not exceed  $-2\%$ . Exceeding is permitted.

The squareness is determined according to the standard EN 824:1994-07. The deviation from the squareness in the direction of length and width does not exceed 5 mm/m.

### 2.3 Thickness and compressibility

The determination of the thicknesses  $d_L$  and  $d_B$  is performed according to EN 12431:1998-06+A1:2006-09. Each individual value of the thickness  $d_L$  meets at least the nominal thickness. As to the thickness tolerances the impact sound insulation mat meets class T4 according to EN 13163:2008-11, Table 11.

The compressibility  $c$  ( $d_L - d_B$ ) does not exceed 2.0 mm.

### 2.4 Mass per unit area

The mass per unit area of the impact sound insulation mat, tested following EN 1602:1996-11, is at least 6.5 kg/m<sup>2</sup> and does not exceed 8.0 kg/m<sup>2</sup>.

### 2.5 Compressive stress at 10 % deformation

The compressive stress at 10 % deformation is determined according to EN 826:1996-03. The mean value of the compressive stress is at least 10 kPa. Individual values do not fall below this value by more than 10 %.

### 2.6 Deformation under specified compressive load and temperature conditions

The deformation under specified compressive load and temperature conditions is determined according to the standard EN 1605:1996-11+A1:2006-09 for the test condition 3.

In this connection the test is carried out under the following edge conditions:

- compressive load: 80 kPa
- temperature and time: Step A: (23±5) °C / (48±1) h, Step B: (60±1) °C / (168±1) h

The difference between the relative deformation  $\varepsilon_1$  after step A and  $\varepsilon_2$  after step B does not exceed 5 %.

The impact sound insulation mat meets the requirements of the level DLT(3)5 according to EN 13163.

### 2.7 Dynamic stiffness

The mean value of the dynamic stiffness  $s'_t$  (apparent dynamic stiffness of the test specimen), tested according to EN 29052-1:1992-06, is 19 MN/m<sup>3</sup> at the most. Individual values exceed this value by not more than 5 %.

### 2.8 Impact sound reduction

The impact sound reduction of a floating screed on a heavyweight standard floor using the impact sound insulation mat is determined according to EN ISO 10140:2010-09 and rated according to EN ISO 717-2:1996-12+A1:2006-08.

When constructing according to clause 4.2.1 the impact sound insulation mat provides a weighted impact sound reduction  $\Delta L_w$  of at least

- $\Delta L_w = 26$  dB for single-layer execution,
- $\Delta L_w = 30$  dB for double-layer execution.

### 2.9 Reaction to fire

The reaction to fire of the impact sound insulation mat is tested according to the standard EN ISO 11925-2:2010 and classified according to the standard EN 13501-1:2007+A1:2009. The impact sound insulation mat meets the requirements of class E according to EN 13501-1.

## 2.10 Release of dangerous substances or radiation

Note: In addition to the specific clauses relating to dangerous substances contained in this European technical approval, 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 Directive, these requirements need also to be complied with, when and where they apply.

## 3 Evaluation and attestation of conformity and CE marking

### 3.1 System of attestation of conformity

According to the communication of the European Commission<sup>7</sup> system 3 of the attestation of conformity applies.

This system of attestation of conformity is defined as follows:

System 3: Declaration of conformity of the product by the manufacturer on the basis of:

- (a) Tasks for the manufacturer:
  - (1) factory production control;
- (b) Tasks for the approved body:
  - (2) initial type-testing of the product.

Note: Approved bodies are also referred to as "notified bodies".

### 3.2 Responsibilities

#### 3.2.1 Tasks for the manufacturer

##### 3.2.1.1 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 insure that the product is in conformity with this European technical approval.

The manufacturer may only use initial materials stated in the technical documentation of this European technical approval.

The factory production control shall be in accordance with the control plan 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 with Deutsches Institut für Bautechnik.<sup>8</sup>

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

##### 3.2.1.2 Other tasks for the manufacturer

The manufacturer shall, on the basis of a contract, involve a body which is approved for the tasks referred to in section 3.1 for the construction product in order to undertake the actions laid down in section 3.2.2. For this purpose, the control plan referred to in sections 3.2.1.1 and 3.2.2 shall be handed over by the manufacturer to the approved body involved.

The manufacturer shall make a declaration of conformity, stating that the construction product is in conformity with the provisions of this European technical approval.

<sup>7</sup> Letter of the European Commission of 16 January 2009 to EOTA

<sup>8</sup> The "control plan" is a confidential part of the documentation of this European technical approval and only handed over to the approved body involved in the procedure of attestation of conformity. See section 3.2.2.

### 3.2.2 Tasks for the approved bodies

The approved body shall perform the

- initial type-testing of the product

in accordance with the provisions laid down in the control plan.

For initial type-testing the results of the test carried out as part of the assessment for the European technical approval shall be used, provided nothing changes in the production or at the factory. Otherwise the necessary initial type-testing shall be agreed on between Deutsches Institut für Bautechnik and the approved bodies involved.

The approved body shall retain the essential points of its actions referred to above and state the results obtained and conclusions drawn in a written report.

### 3.3 CE marking

The CE marking shall be affixed on the product itself, on a label attached to it; on the packaging or on the accompanying commercial document, e.g. the EC declaration of conformity. The letters "CE" shall be accompanied by the following additional information:

- the name and address of the producer (legal entity responsible for the manufacture)
- the last two digits of the year in which the CE marking was affixed
- the number of the European technical approval
- nominal thickness  $d_L$
- compressibility  $c$
- nominal length, nominal width
- reaction to fire: class E according to EN 13501-1

## 4 Assumptions under which the fitness of the product for the intended use was favourably assessed

### 4.1 Manufacturing

The European technical approval is issued for the product on the basis of agreed data/information, deposited with Deutsches Institut für Bautechnik, which identifies the product that has been assessed and judged.

Changes to the product or production process, which could result in this deposited data/information being incorrect, should be notified to Deutsches Institut für Bautechnik before the changes are introduced. Deutsches Institut für Bautechnik will decide whether or not such changes affect the approval and consequently the validity of the CE marking on the basis of the approval and if so whether further assessment or alterations to the approval shall be necessary.

### 4.2 Installation

#### 4.2.1 Execution

##### 4.2.1.1 General

The impact sound insulation mats are loosely laid as single-layer or double-layer execution on the solid floor slab to be insulated.

The surface of the supporting floor slab shall be even.

The floating screed, to be executed according to the national provisions, shall have a mass per unit area of at least 240 kg/m<sup>2</sup>.

The impact sound insulation mats are to be protected by a suitable foil before the screed will be built in.

The impact sound insulation mats shall be laid with edges tightly abutted and fixed with a suitable adhesive tape against displacement in such a way that no gaps will occur in the joint area.

Appropriate insulating edge strips are to be used at the boundary area on rising walls in order to avoid sonic bridges.

When installing the manufacturer's installation instructions shall be observed.

The conditions according to clause 1.2 shall be observed.

The impact sound insulation mats are only to be used inside buildings (protected from wetting and weathering).

#### 4.2.1.2 Single-layer execution

For the single-layer execution the impact sound insulation mats are loosely laid on the solid floor slab, with the profiled side down to the solid floor.

#### 4.2.1.3 Double-layer execution

For the double-layer execution the first layer of the impact sound insulation mats is loosely laid on the solid floor as for the single-layer execution (with the profiled side down to the solid floor).

After this the second layer of the impact sound insulation mats is loosely laid on the first layer, with the profiled side down to the solid floor.

The second layer of the impact sound insulation mats shall be laid staggered to the first layer, so that the buttjoints of the impact sound insulation mats of both layers will not be on top of each other.

#### 4.2.2 Parameters for the design of construction works or parts of construction works

The impact sound insulation mats can be used in cases, where, by the floor covering in conjunction with an appropriate solid floor slab, requirements concerning the protection against noise shall be fulfilled.

The design of the sound protection is to be performed according to the national provisions taking account of the structural assembly according to clause 4.2.1 with the design value of the impact sound reduction.

The design value of the impact sound reduction shall be laid down based on the nominal value given in clause 2.8 according to the respective national regulations.

Dirk Brandenburger  
Head of Department

*beglaubigt:*  
Getzlaff