

Approval body for construction products  
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and  
Laender Governments



## European Technical Assessment

ETA-17/1030  
of 29 January 2018

English translation prepared by DIBt - Original version in German language

### General Part

Technical Assessment Body issuing the  
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

Regupol comfort

Product family  
to which the construction product belongs

"polyurethane foam mat to be used for impact sound  
insulation under floating screeds"

Manufacturer

BSW  
Berleburger Schaumstoffwerk GmbH  
Am Hilgenacker 24  
57319 Bad Berleburg  
DEUTSCHLAND

Manufacturing plant

BSW Berleburger Schaumstoffwerk GmbH  
Am Hilgenacker 24  
57319 Bad Berleburg  
DEUTSCHLAND

This European Technical Assessment  
contains

7 pages including 1 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 040049-00-0502

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## Specific part

### 1 Technical description of the product

This European Technical Assessment applies to the polyurethane foam mats "Regupol comfort 5", "Regupol comfort 8" and "Regupol comfort 12" for impact sound insulation under floating screeds, hereinafter referred to as impact sound insulation mats.

The impact sound insulation mats "Regupol comfort 8" and "Regupol comfort 12" have a single-sided profiled surface.

The impact sound insulation mats are made with the following dimensions:

Nominal length:	2250 mm	("Regupol comfort 5")
	13000 mm	("Regupol comfort 8")
	9300 mm	("Regupol comfort 12")
Nominal width:	1150 mm	
Nominal thickness $d_L$ :	5.0 mm	("Regupol comfort 5")
	8.0 mm	("Regupol comfort 8")
	12.0 mm	("Regupol comfort 12")

The European Technical Assessment has been issued for the products on the basis of agreed data/information, deposited with Deutsches Institut für Bautechnik, which identifies the product that has been assessed. The European Technical Assessment applies only to products corresponding to this agreed data/information.

### 2 Specification of the intended use in accordance with the applicable European assessment Document

The impact sound insulation mats are used as insulation material on solid floor slabs for the improvement of impact sound insulation inside buildings. In this connection the impact sound insulation mats are placed in one layer under floating unheated screeds.

The performance according to section 3 only applies if the impact sound insulation mats are installed according to the manufacturer's installation instructions and according to annex A and if they are protected from precipitation, wetting or weathering in built-in state and during transport, storage and installation.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the polyurethane foam mats of at least 25 years. 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.

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

For sampling, conditioning and testing the provisions of the EAD No 040049-00-0502 "polyurethane (PU) foam mat to be used for impact sound insulation" apply.

#### 3.1 Mechanical resistance and stability (BWR 1)

Not applicable.

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

Essential characteristic	Performance
Reaction to fire test acc. to EN ISO 11925-2:2010	
"Regupol comfort 5" and "Regupol comfort 12"	Class E-d2 acc. to EN 13501-1:2007 + A1:2009
"Regupol comfort 8"	Class E acc. to EN 13501-1:2007 + A1:2009

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

No performance assessed.

### 3.4 Safety and accessibility (BWR 4)

Not applicable.

### 3.5 Protection against noise (BWR 5)

Essential characteristic	Performance
Dynamic stiffness <sup>a)</sup> test acc. to EN 29052-1:1992 "Regupol comfort 5" "Regupol comfort 8" "Regupol comfort 12"	$s'_t \leq 110 \text{ MN/m}^3$ $s'_t \leq 16 \text{ MN/m}^3$ $s'_t \leq 10 \text{ MN/m}^3$
Impact sound reduction with a structural assembly in accordance with annex A <sup>b), c)</sup> Rating acc. to EN ISO 10140:2010 (category II acc. to EN ISO 10140-1, annex H) assessment acc. to EN ISO 717-2:2013 "Regupol comfort 5" "Regupol comfort 8" "Regupol comfort 12"	$\Delta L_w \geq 18 \text{ dB}^{\text{d)}$ $\Delta L_w \geq 18 \text{ dB}^{\text{e)}$ $\Delta L_w \geq 21 \text{ dB}^{\text{f)}$ $\Delta L_w \geq 24 \text{ dB}^{\text{g)}$ $\Delta L_w \geq 26 \text{ dB}^{\text{h)}$ $\Delta L_w \geq 27 \text{ dB}^{\text{i)}$
Nominal length test acc. to EN 822:2013 dimensional deviation	1100 mm L1 acc. to EN 16069:2012 + A1:2015
Nominal widths test acc. to EN 822:2013 dimensional deviation	1500 mm W1 acc. to EN 16069:2012+ A1:2015

Essential characteristic	Performance
Squareness test acc. to EN 824:2013 dimensional deviation	$S_b \leq 5 \text{ mm/m}$
Thickness test acc. to EN 12431:2013 "Regupol comfort 5" "Regupol comfort 8" "Regupol comfort 12"	$d_L \geq 5.0 \text{ mm}$ $d_L \geq 8.0 \text{ mm}$ $d_L \geq 12.0 \text{ mm}$
Compressibility test acc. to EN 12431:2013 "Regupol comfort 5" "Regupol comfort 8" "Regupol comfort 12"	(with $c = d_L - d_B$ ) $c \leq 1.0 \text{ mm}$ $c \leq 1.0 \text{ mm}$ $c \leq 2.0 \text{ mm}$
Mass per unit area test in line with EN 1602:2013 "Regupol comfort 5" "Regupol comfort 8" "Regupol comfort 12"	$1.8 \text{ kg/m}^2$ to $2.2 \text{ kg/m}^2$ $2.3 \text{ kg/m}^2$ to $2.9 \text{ kg/m}^2$ $2.7 \text{ kg/m}^2$ to $3.3 \text{ kg/m}^2$
Compressive creep	No performance assessed.
Compressive stress at 10 % deformation test acc. to EN 826:2013 "Regupol comfort 5" "Regupol comfort 8" "Regupol comfort 12"	$\sigma_{10\%} \geq 25.0 \text{ kPa}$ $\sigma_{10\%} \geq 4.0 \text{ kPa}$ $\sigma_{10\%} \geq 3.0 \text{ kPa}$
Deformation under specified load and temperature test acc. to EN 1605:2013 with test condition 2 step A: $(23 \pm 5)^\circ\text{C} / (48 \pm 1) \text{ h} / 40 \text{ kPa}$ step B: $(70 \pm 1)^\circ\text{C} / (168 \pm 1) \text{ h} / 40 \text{ kPa}$ "Regupol comfort 5" "Regupol comfort 8" "Regupol comfort 12"	(difference between the relative deformation $\epsilon_1$ after step A and $\epsilon_2$ after step B) $\Delta \epsilon \leq 5.0 \%$ $\Delta \epsilon \leq 5.0 \%$ $\Delta \epsilon \leq 5.0 \%$
<p>a) Note: The dynamic stiffness is not used for calculation of impact sound reduction of a floor build-up. Only the declared impact sound reduction is to be used for the design of protection against noise.</p> <p>b) The given value includes a reduction of 2 dB to take influence of possible ageing into account.</p> <p>c) The design of the sound protection is to be performed according to the national provisions taking account of the structural assembly according to annex A.</p> <p>d) with cement screed with quick cement and synthetic resin dispersion, mixed with steel fibers (<math>75 \text{ kg/m}^2</math>, 37 mm)</p> <p>e) with cement screed (<math>105 \text{ kg/m}^2</math>, 53 mm)</p> <p>f) with cement screed with quick cement and synthetic resin dispersion, mixed with steel fibers (<math>90 \text{ kg/m}^2</math>, 42 mm)</p> <p>g) with cement screed (<math>188 \text{ kg/m}^2</math>, 92 mm)</p> <p>h) with cement screed with quick cement and synthetic resin dispersion, mixed with steel fibers (<math>89 \text{ kg/m}^2</math>, 43 mm)</p> <p>i) with cement screed (<math>118 \text{ kg/m}^2</math>, 59 mm)</p>	

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

Not applicable.

**3.7 Sustainable use of natural resources (BWR 7)**

For the sustainable use of natural resources no performance was investigated for this product.

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

In accordance with the European Assessment Document EAD No 040049-00-0502 "polyurethane (PU) foam mat to be used for impact sound insulation" the legal basis is: Commission Decision 2000/273/EC (including change)

The system to be applied is: system 3

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

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at Deutsches Institut für Bautechnik.

Issued in Berlin 29 January 2018 by Deutsches Institut für Bautechnik

Prof. Gunter Hoppe  
Head of Department

*beglaubigt:*  
Getzlaff

## ANNEX A

The given values for the impact sound reduction in clause 3.5 apply, if the following is taken into account regarding the structural assembly:

- The impact sound insulation mats are loosely laid with the profiled side down on the even solid floor slab to be insulated. If necessary unevenness is leveled off.
- The impact sound insulation mats are 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 used at the boundary area on rising walls in order to avoid sonic bridges.
- The impact sound insulation mats are protected by a suitable foil before the screed will be built in.
- The floating screed, to be executed according to the national provisions, has a mass per unit area of at least according to clause 3.5, footnote d) to i).