

TECHNICAL DATA

REGUPOL SOUND 12



Product

Impact and airborne sound insulating underlayment for various floor structures under screed beds and floating floors with traffic loads $\geq 5 \text{ kN/m}^2$, CE certified.



Material

- Polyurethane-bonded elastomers
- Dimpled profile on the underside
- Laminated with sheeting on top

Weight

4.5 kg/m²



Dimensions

Length: 1,000 mm, Width: 1,200 mm, Thickness: 17 mm

Applications

Under screed beds and floating floors for both residential and commercial use $\geq 5 \text{ kN/m}^2$, e. g. floor renovations, new buildings, reconstructions.

Certification

European Technical Assessment ETA-15/0727

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Acoustical Performance*	Standard	Result	Comment
90 mm cement screed, REGUPOL sound 12 , 140 mm concrete slab	DIN EN ISO 10140-3 DIN EN ISO 717-2	$\Delta L_w \geq 33 \text{ dB}$	According to ETA: $\Delta L_w \geq 31 \text{ dB}$ PB4.2/16-378-1
90 mm cement screed, REGUPOL sound 12 (2 layers), 140 mm concrete slab	DIN EN ISO 10140-3 DIN EN ISO 717-2	$\Delta L_w \geq 37 \text{ dB}$	According to ETA: $\Delta L_w \geq 36 \text{ dB}$ PB2.3/19-417-1

*Assembly from top to bottom

Material properties	Standard	Result	Comment
Maximum traffic load		30 kN/m ²	
Mean dynamic stiffness value	DIN EN 29052-1	$s'_t \leq 6 \text{ MN/m}^3$ $s'_t \leq 4 \text{ MN/m}^3$	one layer (17 mm) two layers (2 x 17 mm)
Compressibility	DIN EN 12431	$c \leq 2 \text{ mm}$ $c \leq 5 \text{ mm}$	one layer (17 mm) two layers (2 x 17 mm)

Thermal behaviour	Standard	Result
Thermal conductivity	DIN EN 12667	$\lambda = 0.06 \text{ W/(mK)}$
Thermal resistance	DIN EN 12667	$R = 0.21 \text{ (m}^2\text{K)/W}$
Temperature resistance		-20 to +60° C

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Fire behaviour	Standard	Result
Fire classification	DIN EN 13501-1	E

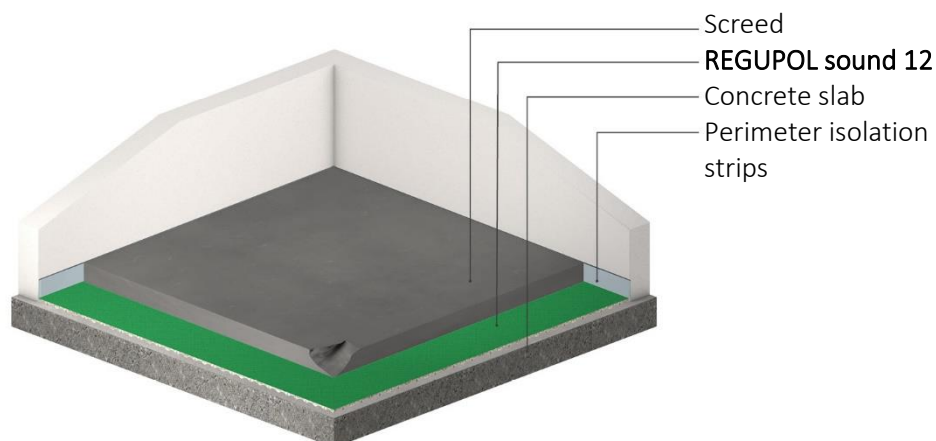
Moisture behaviour	Standard	Result
Sensitivity to moisture		To be protected from moisture during storage, transport and installation

Health protection	Standard	Result
VOC	DIN EN 16516	compliant with EU-LCI list and German AgBB scheme; "A+" as per décret n°2011-321
Nitrosamine	DIK Method	Compliant with German Model Building Regulation
PAH	DIN EN 18287	Compliant with German Model Building Regulation

Bedding modulus for one layer (17 mm)			Bedding modulus for two layers (2x 17 mm)		
Compressive stress [N/mm ²]	Settlement [mm]	Bedding modulus [MN/m ³]	Compressive stress [N/mm ²]	Settlement [mm]	Bedding modulus [MN/m ³]
0.005	2.1	2.8	0.005	7.0	0.7
0.010	3.2	3.1	0.010	10.1	1.0
0.020	4.5	4.5	0.020	13.0	1.6
0.025	4.9	5.1	0.025	13.8	1.8
0.030	5.3	5.7	0.030	14.7	2.1
0.020	4.7	4.3	0.020	13.5	1.5

The tests have been conducted and analysed as per DIN 18134
 Test specimen sizing and equipment has been set up as per DIN EN 826

Floor assembly



For more assemblies and test reports, please visit www.regupol.com

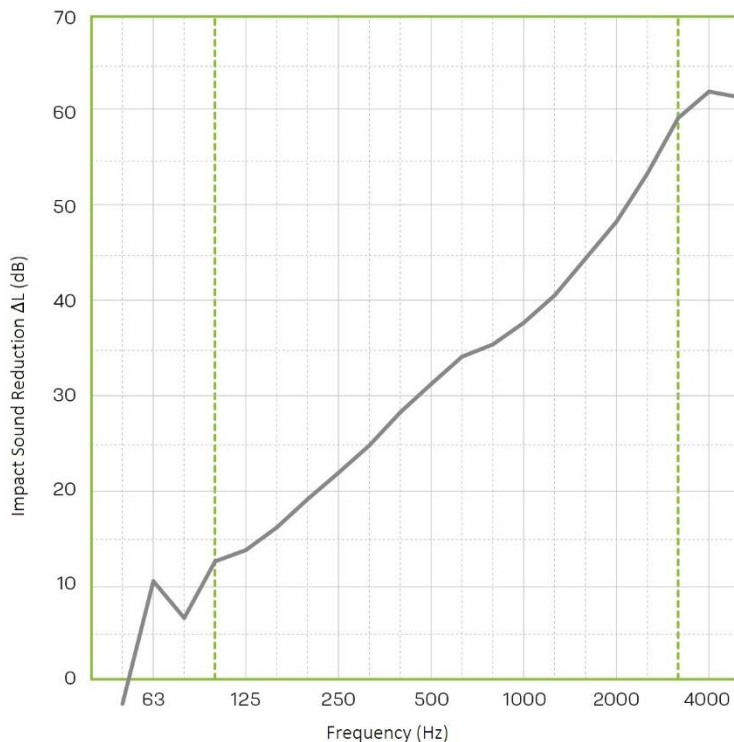
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Detailed test results for impact sound reduction

Test report PB 4.2/14-154-2



Assembly

90 mm Cement screed
CT-C25-F4, 160 kg/m²

17 mm REGUPOL sound 12

140 mm Concrete Slab

Test room size

4.86 x 5.06 m = 24.60 m²

Publication of test results by MFPA
Leipzig GmbH.
The full test report PB4.2/14-154-2 dtd.
17/07/2014 is available upon request.

Frequency [Hz]	L _{n,0} 1/3 octave [dB]	ΔL 1/3 octave [dB]
50	59.2	-0.5
63	60.4	-0.1
80	58.9	4.4
100	63.1	9.6
125	67.4	14.6
160	67.0	17.2
200	67.3	19.5
250	66.3	21.0
315	65.4	21.6
400	67.1	28.7
500	67.7	32.3
630	68.0	34.2
800	68.3	36.6
1000	68.1	40.9
1250	68.5	44.0
1600	69.5	46.6
2000	69.1	49.0
2500	69.4	49.7
3150	70.2	53.4
50	59.2	-0.5
63	60.4	-0.1

Impact Sound Reduction
as per ISO 717-2

ΔL_w = 34 dB

C_{l,Δ} = -12 dB

C_{l,r} = 1 dB

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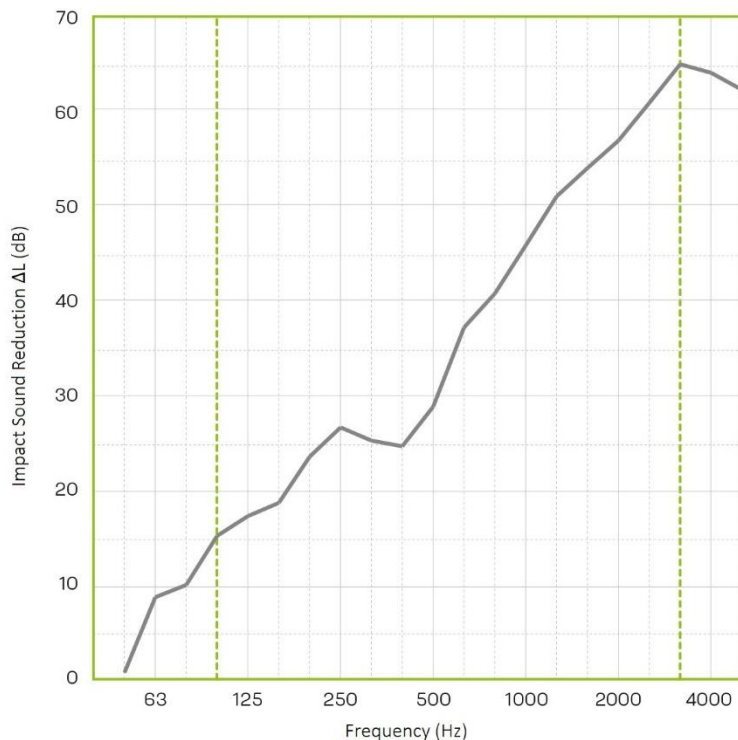
TECHNICAL DATA

REGUPOL SOUND 12



Detailed test results for impact sound reduction

Test report PB 2.3/19-417-1



Frequency [Hz]	$L_{n,0}$ 1/3 octave [dB]	ΔL 1/3 octave [dB]
50	59.5	0.7
63	63.5	8.7
80	59.1	10.0
100	60.9	15.2
125	66.7	17.3
160	64.6	18.7
200	65.8	23.6
250	67.4	26.7
315	65.6	25.3
400	66.2	24.7
500	67.7	28.9
630	68.0	37.3
800	68.8	40.9
1000	69.4	46.0
1250	69.5	51.2
1600	69.6	54.2
2000	70.2	57.1
2500	70.9	61.1
3150	71.8	65.2
4000	70.1	64.3
5000	67.9	62.5

Assembly

90 mm Cement screed
 CT-C25-F4, 191 kg/m²
2x 17 mm REGUPOL sound 12
 140 mm Concrete slab

Test room size

4.41 x 4.05 m = 18.30 m²

Publication of test results by MFPA Leipzig GmbH.
 The full test report PB2.3/19-417-1 dtd. 27/03/2020 is available upon request.

Impact Sound Reduction as per ISO 717-2

$\Delta L_w = 37$ dB

$C_{i,\Delta} = -12$ dB

$C_{i,r} = 1$ dB

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