

Data sheet acoustic insulation and vibration damping

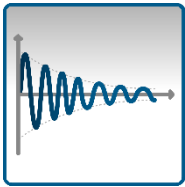
Commodity group 60
COMFORT

Sound and vibrations occur almost everywhere where something is in motion or moved around. In addition, requirements for sound and vibration insulation solutions vary widely. As a generalist with good impact sound insulation, our mat achieves beneath lots of subfloors already very good results and provides the necessary insulation also beneath wooden constructions and pavements.



Quality type	060.0780-S COMFORT	
Dimensions		
Roll width	1'250 mm	
Thicknesses	8 10 12 15 20mm Any other material thicknesses on demand.	
Lengths	8 6 5 4 4m	
Sheet formats	On request	
Tolerances	Length and width $\pm 1.5\%$, thickness $\pm 5\%$	
Material		
Properties	Tough and permanently elastic, high compression resistance and impact strength, rotproof, very good impact sound insulation.	
Composition	SBR caoutchouc granules bonded with PUR.	
Specifications		
Bulk density	Approx. 780 kg/m ³	
Ultimate tensile strength	> 0.7 N/mm ² Elongation at break: 69% 10 mm: Elongation at break; 71% E modulus 50%; 0.68 N/mm ²	ISO 37 and ISO 1798
Temperature stability	-30° C to +80° C (in resting condition -120° C and for short periods up +300° C)	
Thermal conductivity	0.17 W/(mK)	EN 12667
Fire behaviour	Efl (normal inflammable; B2)	EN 13501
Sound improvement	8 mm: 19dB (with a 50 mm „Lauber“ slab, 1.6 x 1.9 m) 47dB (carried out in the residential building) Please look at page 2 and 3 for detailed evaluations	EN 10140
Compression set (DVR)	10 mm: 14% DVR with a compression of 25%	ISO 815
Static and dynamic stiffness	10 mm: Please look at page 3 for a detailed evaluation	
Vapour diffusion	Vapour permeable	
Chemical behaviour	Resistant to water, numerous diluted acids and alkaline solutions; Chemically neutral; UV-resistant	
Installation		
Lay loosely, butt tightly together and cover it with a PE-foil (min. 0.2 mm) overlapping the joints approx. 20 cm.		





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Evaluations

Measurements carried out in the residential building

Aufbau: Stahlbetondecke
+ 8mm Gummigranulatmatte
+ Unterlagsboden

SIA 181

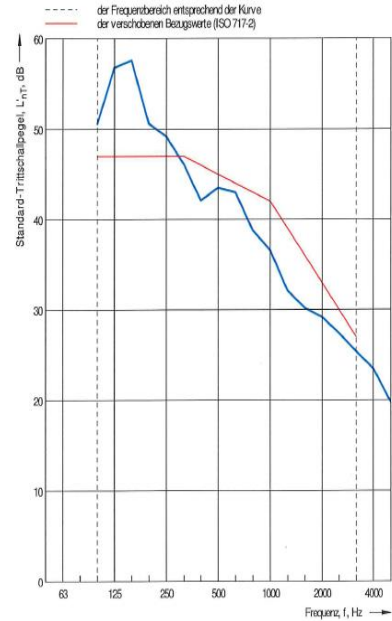
Senderraum: Zustand: Rohbau/ UB eingebaut
Art: WC
Lage: 3.OG TRH Ost

Empfangsraum: Zustand: Rohbau
Art: WC
Lage: 2.OG TRH Ost

Prüfeschall: Normhammerwerk
Empfangsfilter:

Volumen des Senderraumes: m³
Volumen des Empfangsraumes: 23.5 m³

Frequenz f [Hz]	L _{1T} Terz [dB]
50	
63	
80	
100	50.6
125	56.8
160	57.6
200	50.6
250	49.2
315	46.1
400	42.1
500	43.5
630	43.0
800	38.8
1000	36.6
1250	32.1
1600	30.2
2000	29.2
2500	27.4
3150	25.4
4000	23.5
5000	19.8



Bewertung nach ISO 717-2 / SIA 181-2006

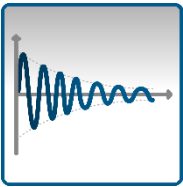
$L_{1T, w}(C_0, C_1) = 45$ (29) dB

$L_{1T} = 47$ dB

Die Ermittlung basiert auf Gebäude-Messungen, die in Terzbändern gewonnen wurden.

Our elastic acoustic insulation underlay 060.0780-S COMFORT in 8mm meets the requirements between different cuttings for sound insulation in building construction according to SIA 181 as follows:

Sensitivity to noise	Degree of disturbance / requirements in dB							
	small		moderate		strong		very strong	
Use (cutting)	archive, reading room, etc.		living room, bedroom, kitchen, bathroom, toilet, etc. as well as stairs, office etc.		restaurant, hall, gym, music practicing room, etc.		in the night between 10 p.m. and 6 a.m.	
		fulfilled		fulfilled		fulfilled		fulfilled
low	63	X	58	X	53	X	48	X
modest	58	X	53	X	48	X	43	
heavy	53	X	48	X	43		38	



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Evaluations

Sound improvement beneath subfloor

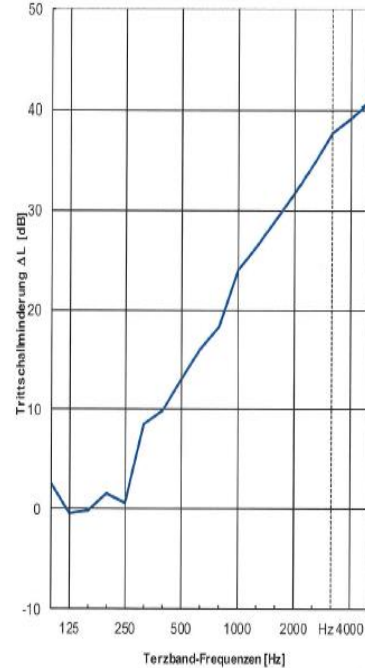
$\Delta L_{nw} = 19 \text{ dB}$
 $C_{L\Delta} = -12 \text{ dB}$
 $\Delta L_{in} = 7 \text{ dB}$

Norm-Trittschallpegel der Deckenauflage auf Referenzrohdecke:

$L_{n,w,f} = 59 \text{ dB}$ $L_{n,w,f} + C_i = 60 \text{ dB}$

EN 10140

Frequenz f [Hz]	$l_{n,i}$ Terzen [dB]	ΔL Terzen [dB]
100	62.1	2.6
125	64.0	-0.4
160	64.0	-0.2
200	64.9	1.6
250	64.4	0.6
315	67.9	6.5
400	66.9	9.9
500	68.3	8.0
630	68.6	6.1
800	69.2	8.3
1000	70.4	24.0
1250	71.6	26.3
1600	72.1	29.0
2000	72.7	31.6
2500	73.3	34.6
3150	73.0	37.8
4000	71.5	39.3
5000	69.9	41.0



> Limitierung durch Grundgeräusch

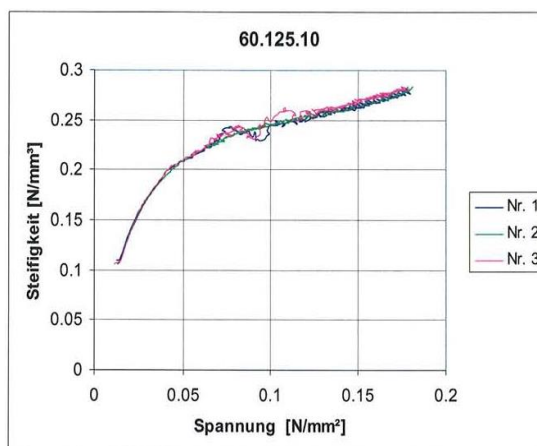
Bewertung EN ISO 717-2 (2013)
Messung EN ISO 10140 (2010)
Sender Norm-Hammerwerk
Empfang Terzbändfilter



Auftrags-Nr. 5060.6 Auftraggeber Formtech AG, CH-8492 Wila



Static stiffness at maximum load of 8 kN



Dynamic stiffness at average loads from 0.4 to 4 kN and frequencies from 5 to 40 Hz

