ISOLGOMMA
★★★★★ insulation technology

L'arte del silenzio | *The art of silence*

Technical catalogue

The solutions to your questions

Design for living - the perfect instrument for you as Designer, Architect, Engineer or Acoustical Consultant.

This is the new technical catalogue from Isolgomma, a manual wich is easy to use and offers solutions for thermal and sound insulation in buildings.

Our aim: to provide the best solutions for comfortable living.

Our skilled Technical Department is at your complete disposal for any further specific request
tecservice@isolgomma.com

Visit our web site: **www.isolgomma.com**

Application guideline

The solutions shown in this manuals are proposed with the scope to solve acoustic need first; nevertheless the given solution are suitable for other purpose as summarized here following:


Impact noise insulation


Walls airborne sound insulation


Ceilings airborne sound insulation


Thermal insulation


Fire protection


Ecological product


Recycled product

Isolgomma Company...

Company History:

- 1972 Establishment of Isolgomma in Vicenza.
- 1985 The “Roll” mat line for impact sound insulation for floor is patented.
- 1993 The new “Mustwall” panels line for acoustic wall insulation is patented.
- 1999 A new factory in Albettone is built.
- 2001 Isolgomma obtains ISO 9001 quality system certification.
- 2002 The research center in Pozzuoli (NA) is inaugurated.
- 2005 The new “Grei” line for flooring insulation is patented.
- 2008 New Isolgomma Acoustics Lab is built according to ISO140 standard.
- 2012 Opening of San Paolo (Brasile) Sale Office.

Technical support

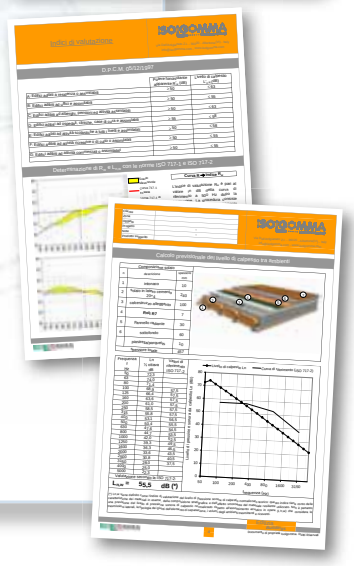
Isolgomma’s Technical Support is capable to offer:

✔ **Before sale:**

solutions for the acoustic and thermal insulation of floors and walls are studied and developed calculating optimum performance and presenting a professional Acoustic Technical Report.

✔ **After sale:**

the client is supported at the construction site in the application phase.
In-Site Acoustic Tests can be conducted according to ISO 140 and ISO 717, by the Isolgomma engineers.



A commitment to well being and quality of living: Quality of life evolves from silence.

Environmental sustainability

Construction materials need to be more and more Eco-Friendly to ensure the lowest environmental impact.
Isolgomma has always used recycled raw materials, highly selected, to preserve the environment and quality of life.
Isolgomma now operates in full compliance with EN ISO 14001 and OHSAS 18001:2007 standards.

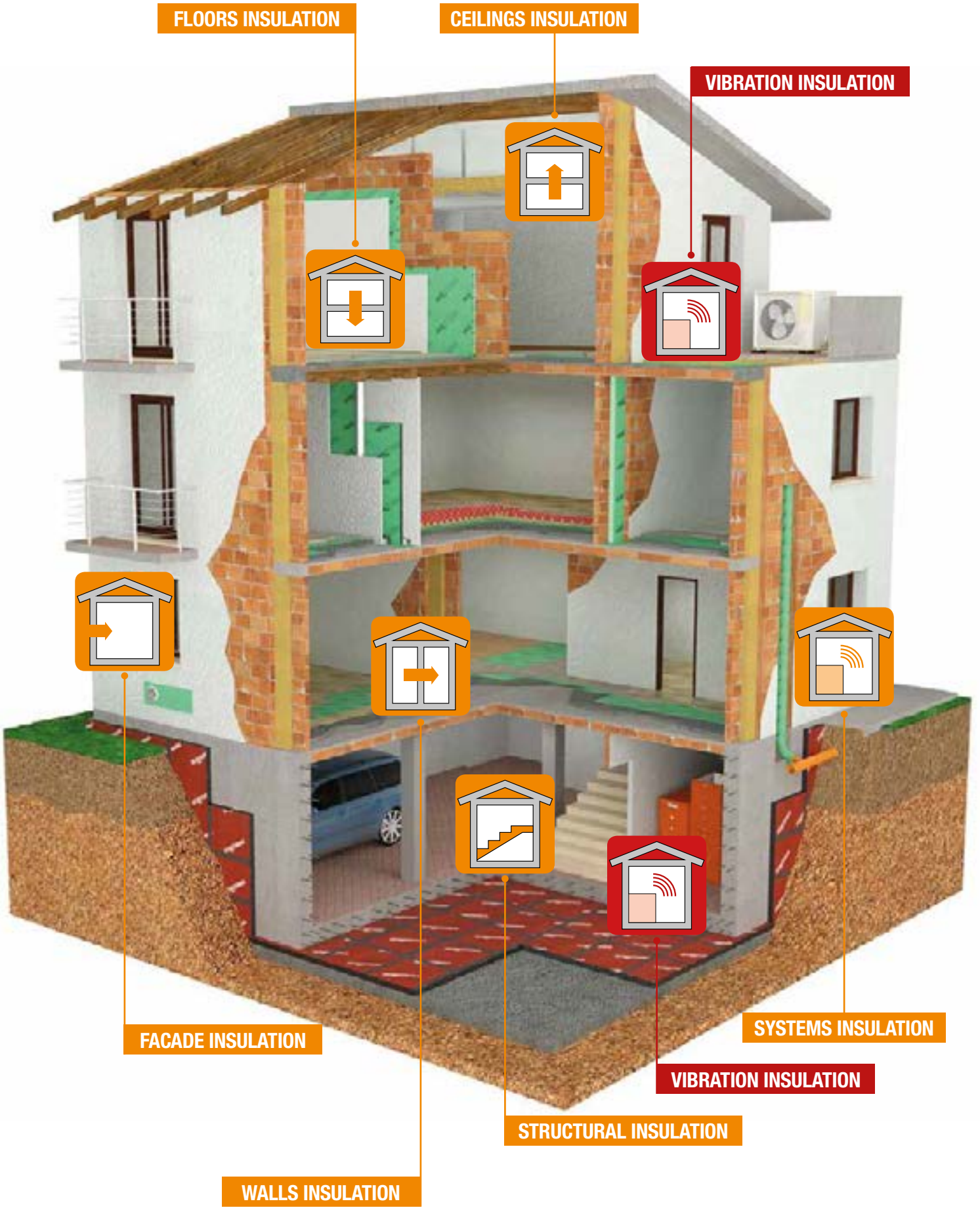
Isolgomma is member of GBC Italia organization and with its products which contain a minimum of 92% recycled materials, contributes to achieve the LEED® credits rate system.

Acoustic insulation

Isolgomma has been a leading company in the supply of sound insulations for new housing and commercial building markets for many years.
In fact, due to an extremely wide and varied product range, which guarantee excellent performance, the company is able to offer multiple solutions for floor and wall sound insulation.

Thermal insulation

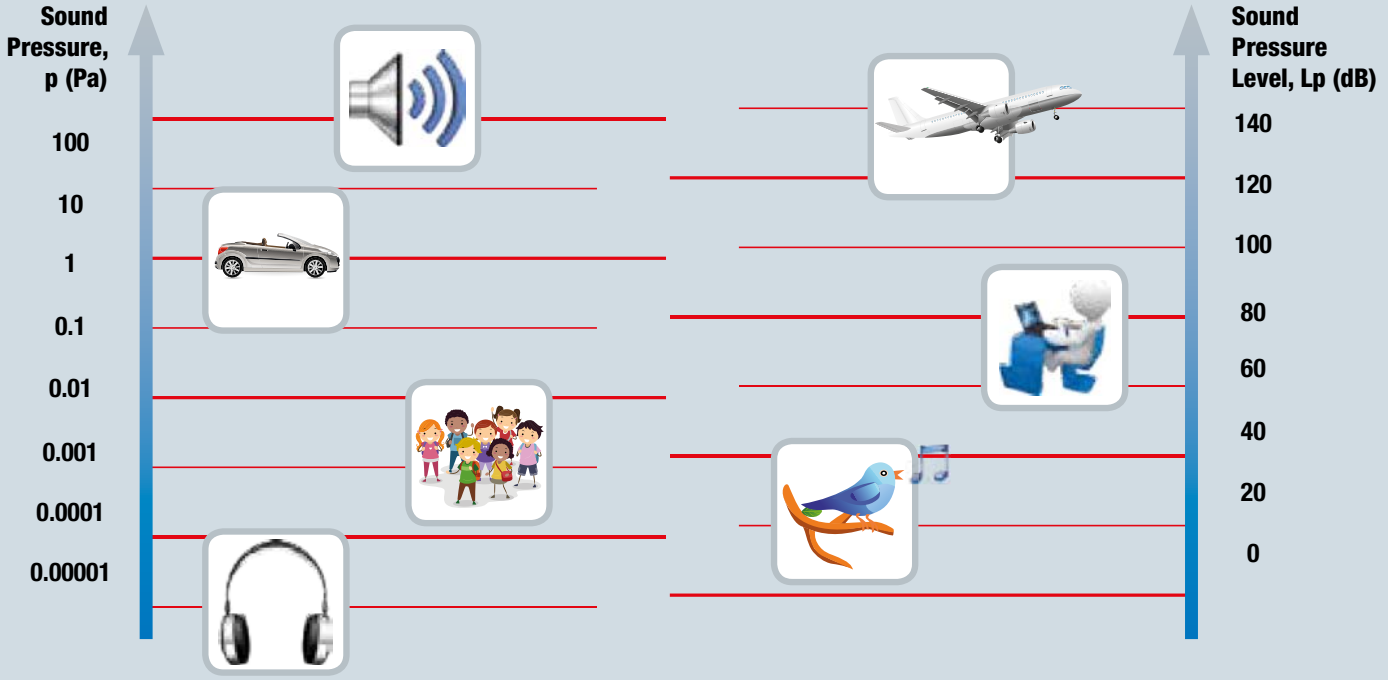
Isolgomma has developed product lines that combine thermal and acoustic insulation for partitions and light walls.
Using innovative recycled rubber technology, the company provides solutions with optimal thermal insulation, excellent humidity resistance and ease of installation.


FLOORS INSULATION
CEILINGS INSULATION
VIBRATION INSULATION
FACADE INSULATION
SYSTEMS INSULATION
VIBRATION INSULATION
STRUCTURAL INSULATION
WALLS INSULATION

Sound is a molecular wave, produced by a **sound source** which is propagated in an elastic means with an oscillator mechanism to produce a pressure variation and a particle movement around an equilibrium point.

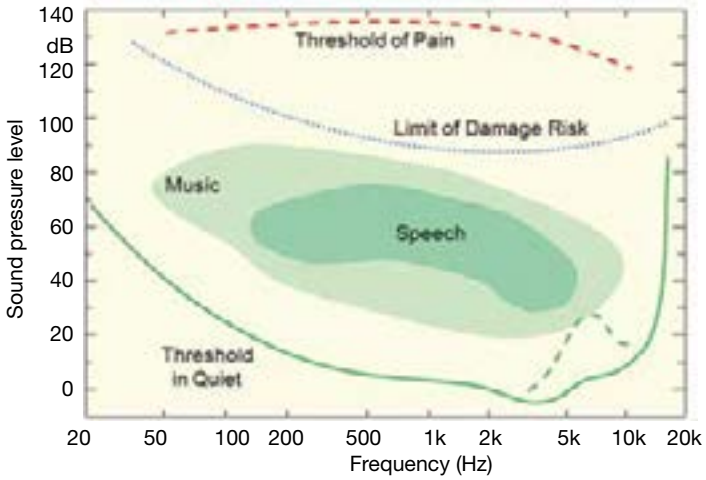
The sound is **propagated through the air** (or other physical element) as a longitudinal wave. The sound velocity is a function of the air property and not from the frequency or sound wave shape.

Sound from a pressure unit point of view involves 8 units of magnitude, from **0.00001 Pa up to 100 Pa**. This wide range is not practical for acoustical analysis, evaluation and measurement and does not reflect the behaviour and sensibility of the human hearing system.



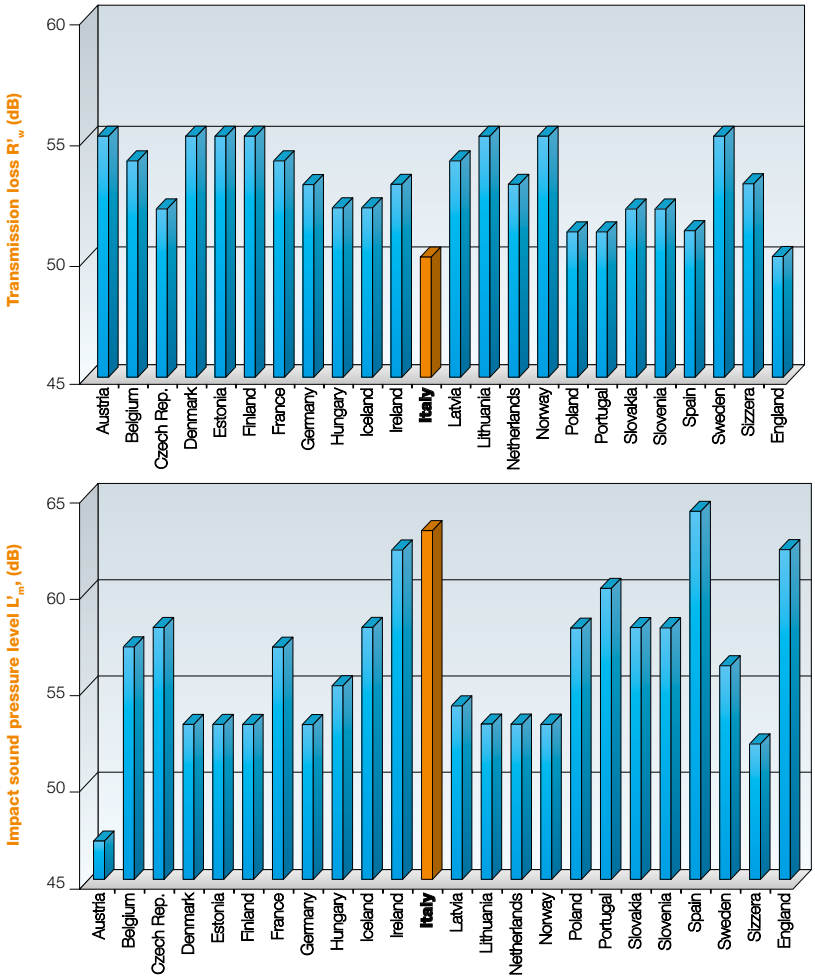
The **sound pressure scale "Lp"**, compresses all the various pressure levels into a very narrow range of values. This scale allows us to handle values with a maximum of three digits and no decimals. In the above scale, a small variation in "dB" value corresponds to a large variation of the pressure level "Pa".

The human hearing system experiences sounds from **16 Hz** to **20.000 Hz**.
In the construction industry or under laboratory and/or site tests, the reference **range** of frequency is between **100 Hz** to **3150 Hz**.
The graphic on the right illustrates the range of frequencies that the average person is exposed to.



EUROPEAN LAWS AND STANDARDS

From a Technical point of view certain groups of ISO and EN standards govern the various calculation, measurements and testing situations (e.g. ISO 140, ISO 717, EN 12354); while the performance indexes of the various building regulations are still governed by the national laws of each individual country.
The following graphs shows the indexes as per the national laws of acoustic insulation levels for walls and floors for each country.



From these we can see the variations in **European insulation** levels from country to country.

Moreover in at least 9 European countries a **"Classification System"** is implemented, which prescribes higher acoustic insulation levels for higher classified building ratings.

This allows the grading of each building from a comfort point of view.

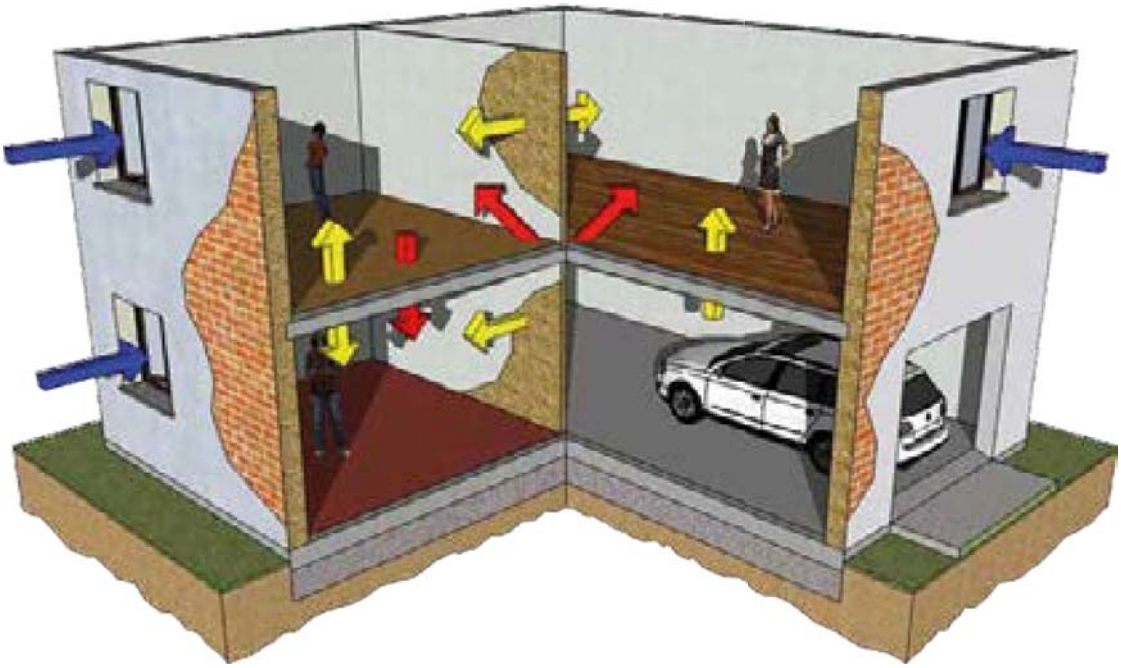
The bottom table shows the insulation indexes by country as well as the **national building classification** (if any) and the standard reference code.

Country	Airborne Insulation	Impact Sound	Insulation Index	Insulation Class National Standard
Denmark	55-58 (R'_w + Ctr 50-3150)	53 ($L'_{n,w}$)	A / B / C / D	DS 490
Finland	55 (R'_w)	53 ($L'_{n,w}$)	A / B / C / D	SFS 5907
Iceland	53 (n.d.)	58 (n.d.)	A / B / C / D	IST 45
Norway	55 (R'_w)	53 ($L'_{n,w}$)	A / B / C / D	NS 8175
Sweden	53 (R'_w + Ctr 50-3150)	56 ($L'_{n,w}$)	A / B / C / D	SS 25267
Lithuania	55 (n.d.)	53 (n.d.)	A / B / C / D / E	STR 2.01.07
Germany	53-56 (R'_w + Ctr 50-5000)	53 ($L'_{n,w}$)	III / II / I	VDI 4100
Netherlands	52-57 ($D_{nT,w}$ + C)	53 ($L'_{nT,w}$+Ci)	1 / 2 / 3 / 4 / 5	NEN 1070
France	53-55 ($D_{nT,A}$)	55 ($L'_{nT,w}$)	QLAC / QL	Qualitel
Belgium	54-58 ($D_{nT,w}$ + C)	58 ($L'_{nT,w}$)	-	-
Austria	55-58 ($D_{nT,w}$)	48 ($L'_{nT,w}$)	-	-
Switzerland	49 ($D_{nT,w}$ + C)	55 ($L_{nT,w}$+C_i)	-	-
Great Britain	45 ($D_{nT,w}$ + Ctr)	62 ($L'_{nT,w}$)	-	-
Spain	45 ($D_{nT,w}$)	68 ($L'_{nT,w}$)	-	-
Portugal	50 ($D_{nT,w}$)	60 ($L'_{nT,w}$)	-	-
Italy	**50 (R'_w)**	**63 ($L'_{n,w}$)**	**-**	**D.P.C.M. 05/12/1997**
Estonia	52 (R'_w)	60 ($L'_{n,w}$)	-	-

$D_{2m,nT,w}$

$L'_{n,w}$

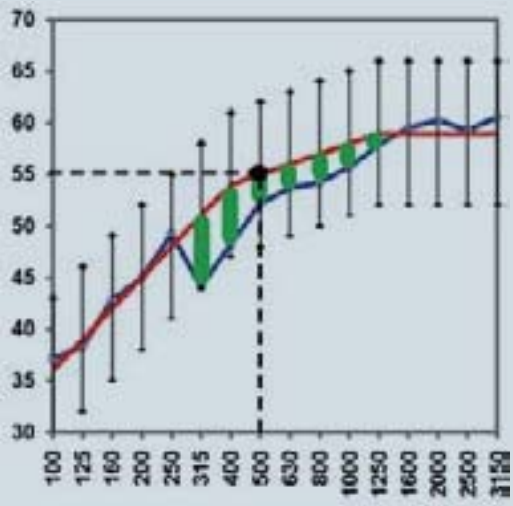
R'_w



DETERMINATION OF R_w INDEX FOR AIRBORNE SOUND INSULATION

R_w and R'_w according to ISO 717-1

The transmission loss index R_w, is the value in dB at 500Hz of the ISO curve 717-1 (red curve) after the due translation.
In fact the reference curve ISO 717 (red) must be moved up or down so that the yellow area have to be ≤ 32 dB of the recorded curve.

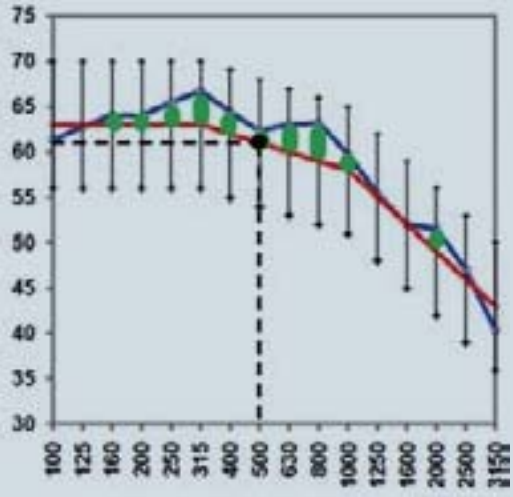


Unfavourable refuse **+ positive variation**
Reference curve (717-1) **- negative variation**
Reference curve translate

DETERMINATION OF L_{nw} INDEX FOR IMPACT SOUND LEVEL

$L_{n,w}$ and $L'_{n,w}$ according to ISO 717-2

The impact sound insulation index L_w, is the value in dB at 500Hz of the ISO curve 717-2 (red curve) after the due translation.
As said above the reference curve ISO 717 (red) must be moved up or down in order to get the function ≤ 32 dB satisfied.



Unfavourable refuse **+ positive variation**
Reference curve (717-1) **- negative variation**
Reference curve translate

For **thermal insulation** means all systems and operations making up the efforts to reduce the heat flow of heat exchanged between the two environments at temperatures different. The thermal insulation in building construction is aimed, primarily, in order to contain the heat inside buildings.

The interventions of thermal insulation in buildings are regulated by the provisions of the European Community, to which designers and applicators should refer. It is therefore appropriate to inquire in great detail about the requirements of the law and even more about the actual technical capabilities of the applicators which are given appropriate training and to equip itself with adequate certification.

The thermal insulation of a material is measured by its thermal conductivity.

If we consider a constructive element in the whole talk about the total heat transfer coefficient U.

Index	Unit	Definition
λ	**(W/m K)**	**thermal conductivity**
R	**(m^2K/W)**	**thermal resistance**
R_{si}	**(m^2K/W)**	**internal thermal convection resistance**
R_{se}	**(m^2K/W)**	**external thermal convection resistance**
U	**(W/m^2K)**	**thermal trasmittance**

λ : derives from laboratory tests or references; it depends on the product.

R_{si}-R_{se}: derives from standards; conventional values of internal and external surfaces of the building.

R = s1/λ1 + s2/λ2 + s3/λ3 + …. *Thermal resistance of a multi-layer system*

R_T = R + Rsi + Rse *Thermal resistance of a building element*

U = 1 / R_T *Thermal trasmittance of the building element*

Building element	Intermal thermal convection resistance	
	Rsi	Rse
Internal wall (between two dwellings)	0.13	0.13
External wall	0.13	0.04
Internal floor (between two dwellings or towards a cold car box / cellar)	0.17	0.17
Floor towards outside	0.17	0.04

Isolgomma Laboratory

Since June 2008 **Isolgomma S.r.l.** is equipped with an Acoustic Laboratory made according to ISO 10140 standards and suitable to conduct acoustic test for floor and walls.
It had been designed and built in cooperation with **Padua University** following the latest rules of acoustics and building standards.

Thanks to this news advance Laboratory the R&D Isolgomma department is able to perform the following tests:

- Airborne sound insulation index for partition walls, floors and roofs.
- Impact sound insulation index for standardized floor on reinforced concrete slab of 14 cm thickness.
- Impact sound insulation index for beam & hollow blocks floor of 20+5 cm thickness.
- Vibration Test on building environment.

Isolgomma Laboratory



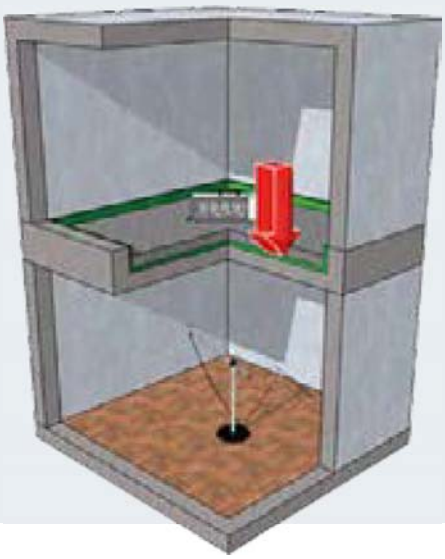

Pictures from real laboratory tests

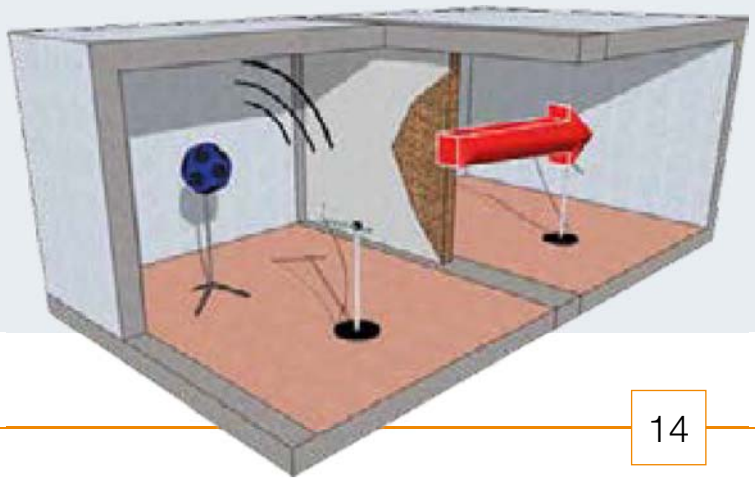
DESCRIPTION

In the bottom Laboratory rooms we have an opening frame of 12m² size of 60 cm thickness on which the partition walls are built to conduct the Airborne noise insulation test .
At the upper floor we have two rooms equipped with one 140 mm reinforced concrete slab floor and one with beam & Hallow blocks floor of 25 cm thickness in accordance with Italian market.

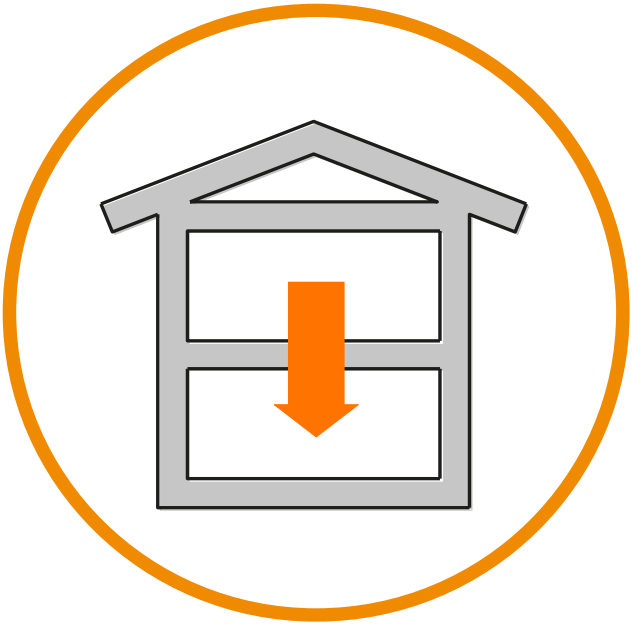
- The rooms are physically disconnected both vertically and horizontally thanks to elastomeric joints.
- As prescribed from the ISO 10140 Standard the floor and wall dimension are bigger than 10 m².
- The rooms volumes are bigger than 50 m³.
- The upper rooms for impact sound insulation are closed to avoid any airborne interference.

The maximum Airborne sound insulation value testable is 65 dB.



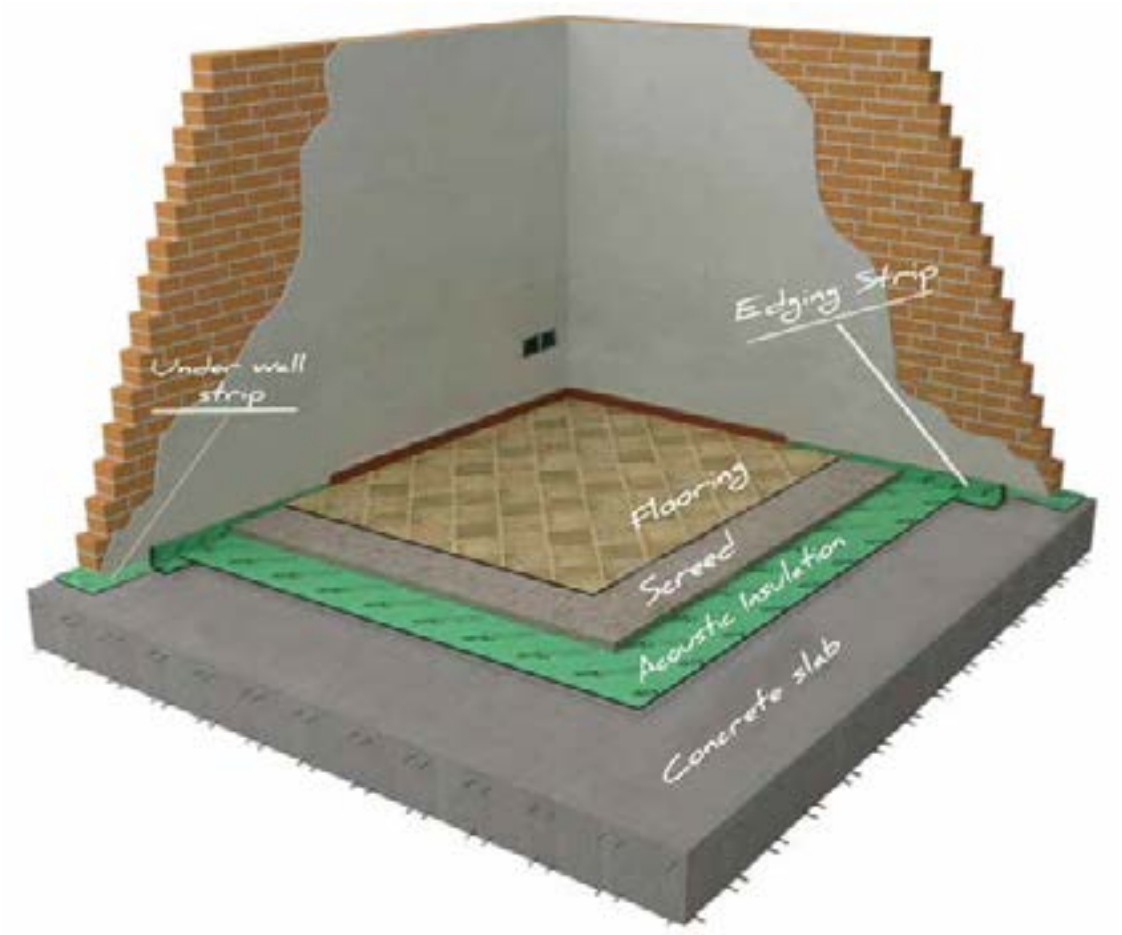


FLOORS INSULATION



Floor insulation

Floating screed

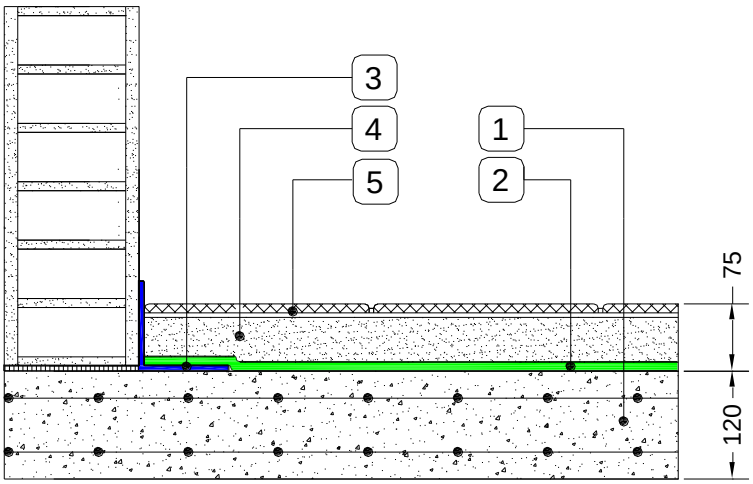


A floating screed is the ideal solution for the impact sound insulation of any type of floor. This floor system is designed in order to obtain “mass” over the resilient layer which is acting as a “spring” to produce that mitigation effect.
This floor system very efficiently reduces sound waves and vibration produced by walking, speaking or other sources. This is thanks to the floor system transforming all vibration and sound into micro movements of the upper floating screed.

Under-Wall Strip: under any wall or partition a resilient strip is needed in order to prevent the transfer of structural vibration or noise to the floor and vice versa.
Levelling Screed: if there is piping located over the floor base a levelling screed is required in order to produce a homogeneous flat surface on which the resilient layer will be placed.
Acoustic Insulation: the acoustic insulation layer is selected to achieve the required level of impact sound improvement as specified by the relevant national building regulations.
Edging Perimeter Strip: to achieve the floating movements of the upper screed, the screed must be separated from the surrounding room walls. This separation can be obtained by placing the horizontal insulation layer onto to the vertical wall side or more simply by using the Profyle Self Adhesive Edging Strips which are placed on all the perimeter walls before laying down the horizontal insulation layer. In this manner an elastic joint between the floating screed and the wall is created granting free movement of the floor against the walls.
Floating Screed: a traditional mixture of sand and cement or a “self-levelling” proprietary screed mixture. The important point here is to achieve a uniform thickness with a minimum thickness required by the acoustical analysis in our application manual of never less than 4 cm.
Floor Finish: during the application of the floor finishing, it is important not to cut the edging strip along the wall, but to keep it intact for the separation of the floating screed and the walls.

Floating screed

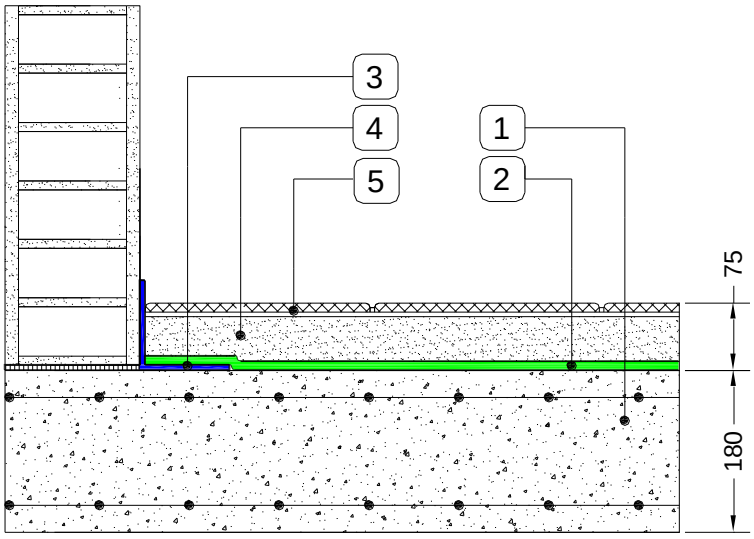
120 mm concrete slab



1. Concrete slab, 120 mm thickness
2. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM rubber. Thickness is between 5-10 mm**
3. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
4. Sand and cement floating screed , 50 mm thickness
5. Ceramic tile floor finish, 15 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5	61	54	2.07		Page 126	Page 168		
Roll 5	58	54	2.04		Page 120	Page 168	Page 182	
Roll 7	56	54	1.96		Page 120	Page 168	Page 182	
Roll 10	54	54	1.85		Page 120	Page 168	Page 183	
Grei 5	54	54	1.94	Page 84	Page 122	Page 168	Page 183	
Grei 8	53	54	1.79		Page 122	Page 168	Page 184	
Upgrei 8	50	54	1.64		Page 124	Page 168	Page 184	

180 mm concrete slab

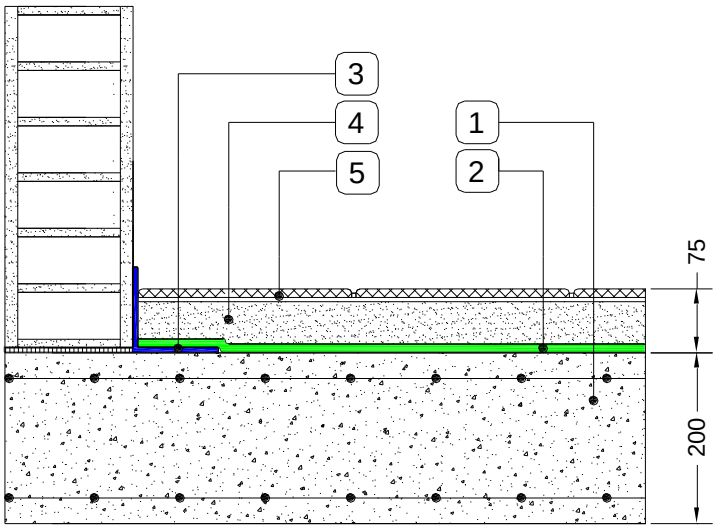


1. Concrete slab, 180 mm thickness
2. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM rubber. Thickness is between 5-10 mm**
3. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
4. Sand and cement floating screed , 50 mm thickness
5. Ceramic tile floor finish, 15 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5	57	57	2.13		Page 126	Page 168		
Roll 5	54	57	1.93		Page 120	Page 168	Page 182	
Roll 7	52	57	1.86		Page 120	Page 168	Page 182	
Roll 10	50	57	1.76		Page 120	Page 168	Page 183	
Grei 5	50	57	1.85		Page 122	Page 168	Page 183	
Grei 8	49	57	1.71	Page 84	Page 122	Page 168	Page 184	
Upgrei 8	46	57	1.57		Page 124	Page 168	Page 184	

Floor insulation

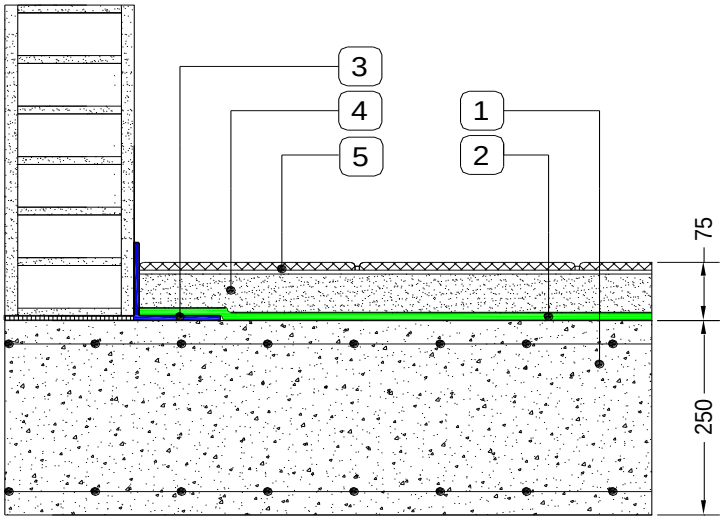
200 mm concrete slab



1. Concrete slab, 200 mm thickness
2. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM rubber. Thickness is between 5-10 mm**
3. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
4. Sand and cement floating screed , 50 mm thickness
5. Ceramic tile floor finish, 15 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5	56	58	2.09		Page 126	Page 168		
Roll 5	53	58	1.90		Page 120	Page 168	Page 182	
Roll 7	51	58	1.83		Page 120	Page 168	Page 182	
Roll 10	49	58	1.74	Page 85	Page 120	Page 168	Page 183	
Grei 5	49	58	1.82		Page 122	Page 168	Page 183	
Grei 8	48	58	1.68		Page 122	Page 168	Page 184	
Upgrei 8	45	58	1.55		Page 124	Page 168	Page 184	

250 mm concrete slab

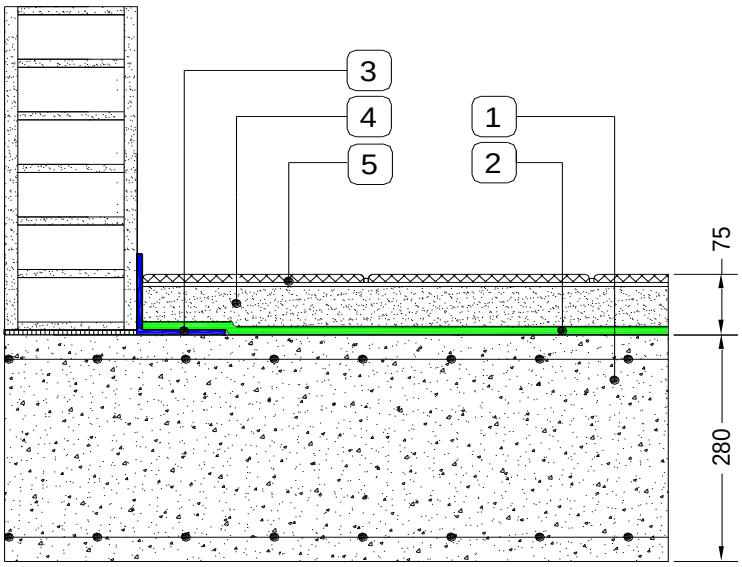


1. Concrete slab, 250 mm thickness
2. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM rubber. Thickness is between 5-10 mm**
3. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
4. Sand and cement floating screed , 50 mm thickness
5. Ceramic tile floor finish, 15 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5	53	61	1.86		Page 126	Page 168		
Roll 5	50	61	1.83		Page 120	Page 168	Page 182	
Roll 7	48	61	1.76	Page 85	Page 120	Page 168	Page 182	
Roll 10	46	61	1.67		Page 120	Page 168	Page 183	
Grei 5	46	61	1.75		Page 122	Page 168	Page 183	
Grei 8	45	61	1.62		Page 122	Page 168	Page 184	
Upgrei 8	42	61	1.50		Page 124	Page 168	Page 184	

Floating screed

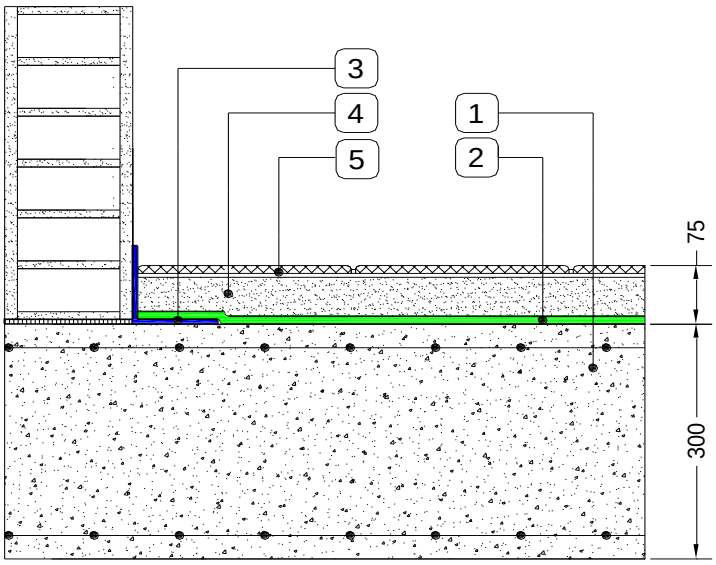
280 mm concrete slab



1. Concrete slab, 280 mm thickness
2. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM rubber. Thickness is between 5-10 mm**
3. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
4. Sand and cement floating screed , 50 mm thickness
5. Ceramic tile floor finish, 15 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5	51	62	1.81		Page 126	Page 168		
Roll 5	48	62	1.78	Page 86	Page 120	Page 168	Page 182	
Roll 7	46	62	1.72		Page 120	Page 168	Page 182	
Roll 10	44	62	1.64		Page 120	Page 168	Page 183	
Grei 5	44	62	1.71		Page 122	Page 168	Page 183	
Grei 8	43	62	1.59		Page 122	Page 168	Page 184	Page 200
Upgrei 8	40	62	1.47		Page 124	Page 168	Page 184	

300 mm concrete slab

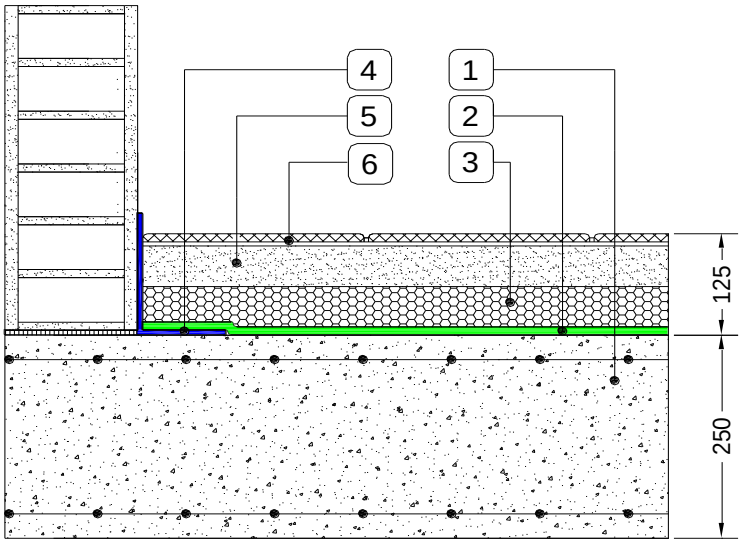


1. Concrete slab, 300 mm thickness
2. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM rubber. Thickness is between 5-10 mm**
3. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
4. Sand and cement floating screed , 50 mm thickness
5. Ceramic tile floor finish, 15 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5	50	63	1.79		Page 126	Page 168		
Roll 5	47	63	1.76		Page 120	Page 168	Page 182	
Roll 7	45	63	1.70		Page 120	Page 168	Page 182	
Roll 10	43	63	1.61		Page 120	Page 168	Page 183	
Grei 5	43	63	1.69		Page 122	Page 168	Page 183	
Grei 8	42	63	1.57		Page 122	Page 168	Page 184	
Upgrei 8	39	63	1.45	Page 86	Page 124	Page 168	Page 184	

Floor insulation

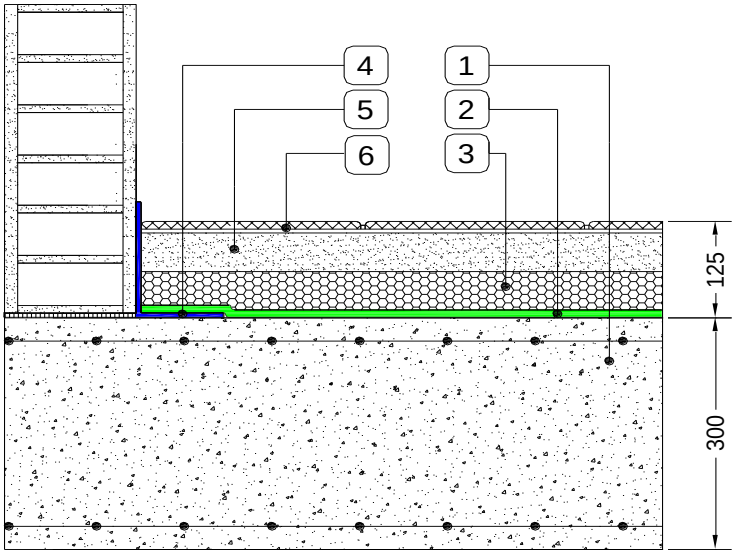
250 mm concrete slab with thermal insulation



1. Concrete slab, 250 mm thickness
2. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM rubber. Thickness is between 5-10 mm**
3. Thermal insulation, 50 mm thickness
4. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
5. Sand and cement floating screed , 50 mm thickness
6. Ceramic tile floor finish, 15 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5	53	61	0.50		Page 126	Page 168		
Roll 5	50	61	0.50		Page 120	Page 168	Page 182	
Roll 7	48	61	0.49		Page 120	Page 168	Page 182	
Roll 10	46	61	0.48		Page 120	Page 168	Page 183	
Grei 5	46	61	0.49	Page 87	Page 122	Page 168	Page 183	
Grei 8	45	61	0.48		Page 122	Page 168	Page 184	
Upgrei 8	42	61	0.47		Page 124	Page 168	Page 184	

300 mm concrete slab with thermal insulation

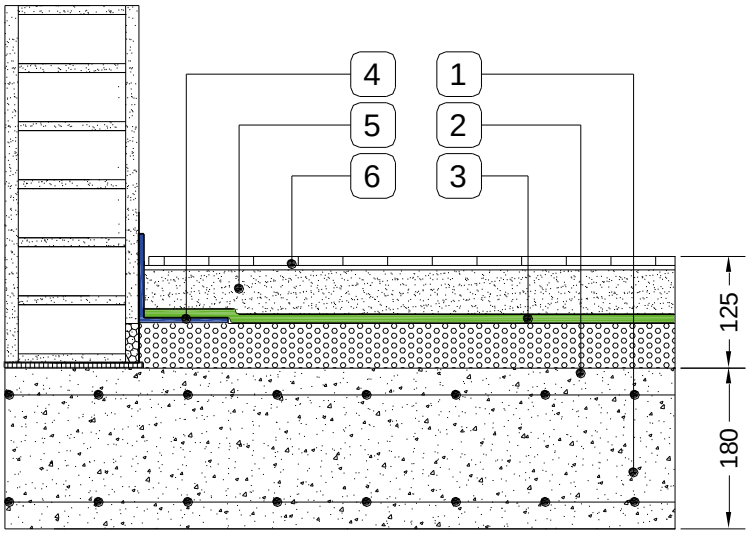


1. Concrete slab, 300 mm thickness
2. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM rubber. Thickness is between 5-10 mm**
3. Thermal insulation, 50 mm thickness
4. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
5. Sand and cement floating screed , 50 mm thickness
6. Ceramic tile floor finish, 15 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5	50	63	0.49		Page 126	Page 168		
Roll 5	47	63	0.49		Page 120	Page 168	Page 182	
Roll 7	45	63	0.49		Page 120	Page 168	Page 182	
Roll 10	43	63	0.48		Page 120	Page 168	Page 183	
Grei 5	43	63	0.49		Page 122	Page 168	Page 183	
Grei 8	42	63	0.47	Page 87	Page 122	Page 168	Page 184	Page 200
Upgrei 8	39	63	0.46		Page 124	Page 168	Page 184	

Floating screed

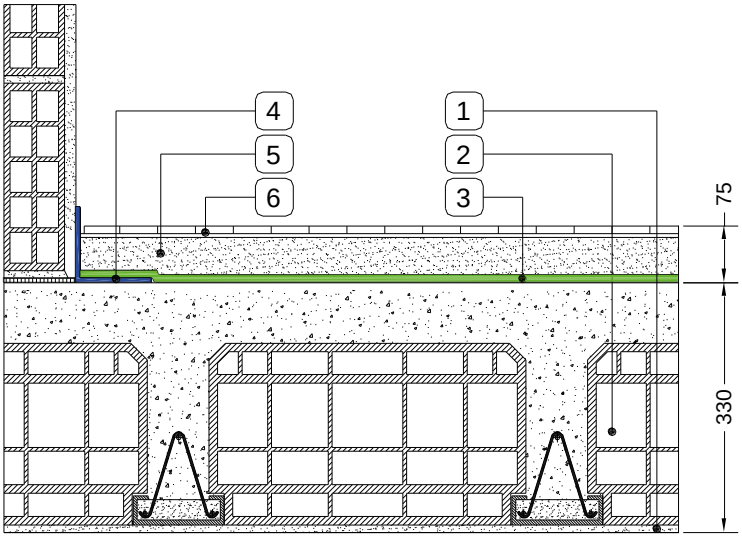
180 mm concrete slab with levelling screed



1. Concrete slab, 180 mm thickness
2. Levelling screed with eps granules and cement, 50 mm thickness
3. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM rubber. Thickness is between 5-10 mm**
4. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
5. Sand and cement floating screed , 50 mm thickness
6. Parquet flooring, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5	56	58	0.94		Page 126	Page 168		
Roll 5	53	58	0.93		Page 120	Page 168	Page 182	
Roll 7	51	58	0.92		Page 120	Page 168	Page 182	
Roll 10	49	58	0.89		Page 120	Page 168	Page 183	
Grei 5	49	58	0.91		Page 122	Page 168	Page 183	
Grei 8	48	58	0.88	Page 88	Page 122	Page 168	Page 184	Page 203
Upgrei 8	45	58	0.84		Page 124	Page 168	Page 184	

320 mm Hollow brick slab

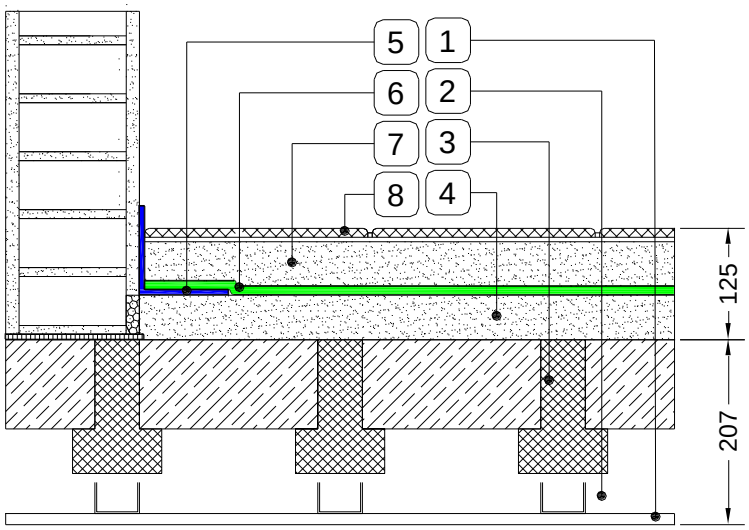


1. Plaster, 10 mm thickness
2. Hollow brick slab, 320 mm thickness
3. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM rubber. Thickness is between 5-10 mm**
4. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
5. Sand and cement floating screed, 50 mm thickness
6. Parquet flooring, 8 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5	58	57	1.17		Page 126	Page 168		
Roll 5	55	57	1.16		Page 120	Page 168	Page 182	
Roll 7	53	57	1.14		Page 120	Page 168	Page 182	
Roll 10	51	57	1.10		Page 120	Page 168	Page 183	Page 200
Grei 5	51	57	1.13		Page 122	Page 168	Page 183	
Grei 8	50	57	1.08	Page 88	Page 122	Page 168	Page 184	
Upgrei 8	47	57	1.02		Page 124	Page 168	Page 184	

Floor insulation

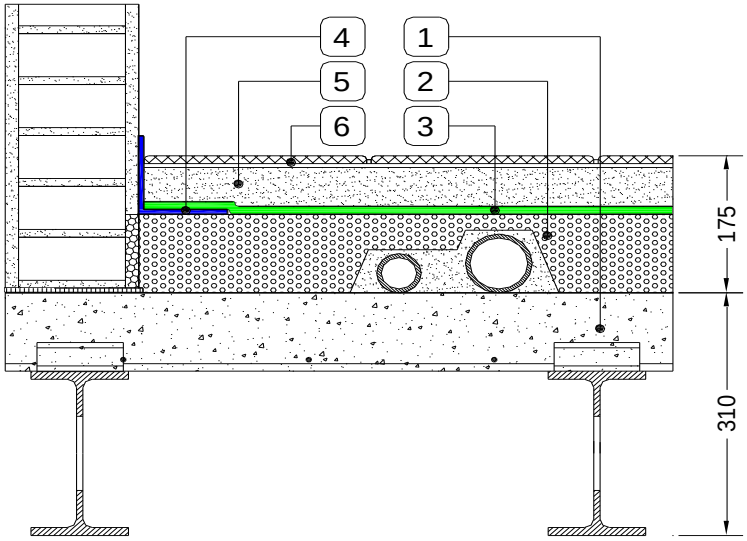
Beam and block floor



1. Gypsum board layer, 12.5 mm thickness
2. Air cavity, 50 mm thickness
3. Beam and block floor , 150 mm thickness (150 mm beam, 100 mm block)
4. Sand and cement screed, 50 mm thickness
5. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
6. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM rubber. Thickness is between 5-10 mm**
7. Sand and cement floating screed , 50 mm thickness
8. Ceramic tile floor finish, 15 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5	61	57	0.73		Page 126	Page 168		
Roll 5	58	57	0.72		Page 120	Page 168	Page 182	
Roll 7	56	57	0.71		Page 120	Page 168	Page 182	
Roll 10	54	57	0.70	Page 89	Page 120	Page 168	Page 183	
Grei 5	54	57	0.71		Page 122	Page 168	Page 183	
Grei 8	53	57	0.69		Page 122	Page 168	Page 184	Page 203
Upgrei 8	50	57	0.67		Page 124	Page 168	Page 184	

Steel beam and concrete slab

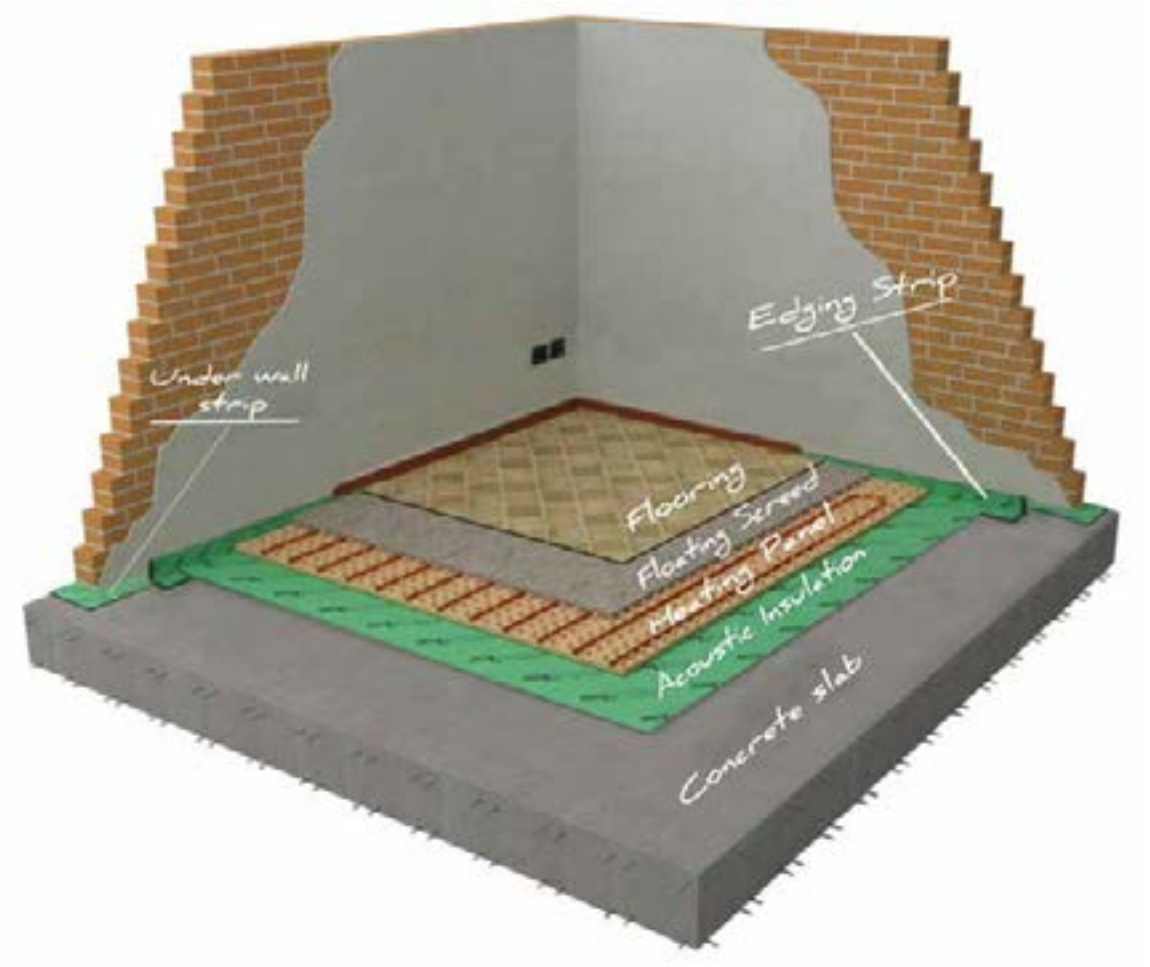


1. Steel beam and concrete slab of 100 mm thickness, 310 mm total thickness
2. Levelling screed to cover piping system, 100 mm thickness
3. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM rubber. Thickness is between 5-10 mm**
4. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
5. Sand and cement floating screed , 50 mm thickness
6. Ceramic tile floor finish, 15 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5	63	55	0.63		Page 126	Page 168		
Roll 5	60	55	0.63		Page 120	Page 168	Page 182	
Roll 7	58	55	0.62		Page 120	Page 168	Page 182	
Roll 10	56	55	0.61		Page 120	Page 168	Page 183	
Grei 5	56	55	0.62		Page 122	Page 168	Page 183	
Grei 8	55	55	0.60	Page 89	Page 122	Page 168	Page 184	
Upgrei 8	52	55	0.58		Page 124	Page 168	Page 184	

Floor insulation

Underfloor heating

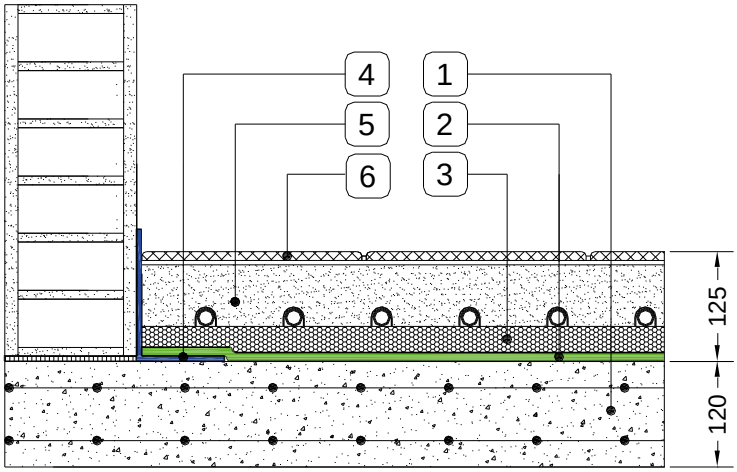


Underfloor heating systems needs good impact sound insulation since the heating panels are very weak on acoustic insulation.
In this case the floating screed concept is applied to create a floating mass consisting of the screed, heating panel and floor finish; these elements are located above the resilient layer which adds an elastic spring effect to the system.

Under-Wall Strip: under any wall or partition a resilient strip is needed in order to prevent the transfer of structural vibration or noise to the floor and vice versa.
Levelling Screed: if there is piping located over the floor base, a levelling screed is required in order to produce a homogeneous flat surface on which the resilient layer will be placed.
Acoustic Insulation: the acoustic insulation layer is selected so as to achieve the required level of impact sound improvement as specified by the relevant national building regulations.
Edging Perimeter Strip: to achieve the floating movements of the upper screed, it must be separated from the surrounding room walls. This separation can be obtained by placing the horizontal insulation layer onto to the vertical wall side or more simply by using the Profyle Self Adhesive Edging Strips which are placed on all perimeter walls before laying down the horizontal insulation layer. In this way an elastic joint between the floating screed and the wall is created, granting a free movement of the floor against the walls.
Heating Panel: the heating panel must be placed over the resilient acoustic insulation layer. The piping system is then installed over the panel.
Floating Screed: a traditional mixture of sand and cement or a “self-levelling” proprietary screed mixture. The important point here is to achieve a uniform thickness with a minimum thickness required by the acoustical analysis in our application manual of never less than 4 cm.
Floor Finish: during the application of the floor finishing, it is important not to cut the edging strip along the wall, but to keep it intact for the separation of the floating screed and the walls.

Floor insulation

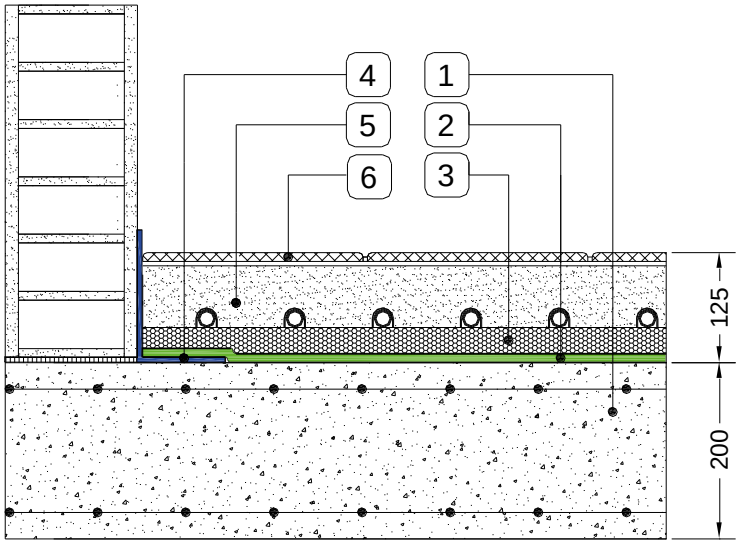
120 mm concrete slab



1. Concrete slab, 120 mm thickness
2. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM rubber. Thickness is between 5-10 mm**
3. 30 mm thick heating panel and piping. 50 mm total thickness
4. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
5. Sand and cement floating screed , 50 mm thickness
6. Ceramic tile floor finish, 15 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5	61	54	0.73		Page 126	Page 168		
Roll 5	58	54	0.73		Page 120	Page 168	Page 182	
Roll 7	56	54	0.72		Page 120	Page 168	Page 182	
Roll 10	54	54	0.70	Page 90	Page 120	Page 168	Page 183	
Grei 5	54	54	0.72		Page 122	Page 168	Page 183	
Grei 8	53	54	0.69		Page 122	Page 168	Page 184	
Upgrei 8	50	54	0.67		Page 124	Page 168	Page 184	

200 mm concrete slab

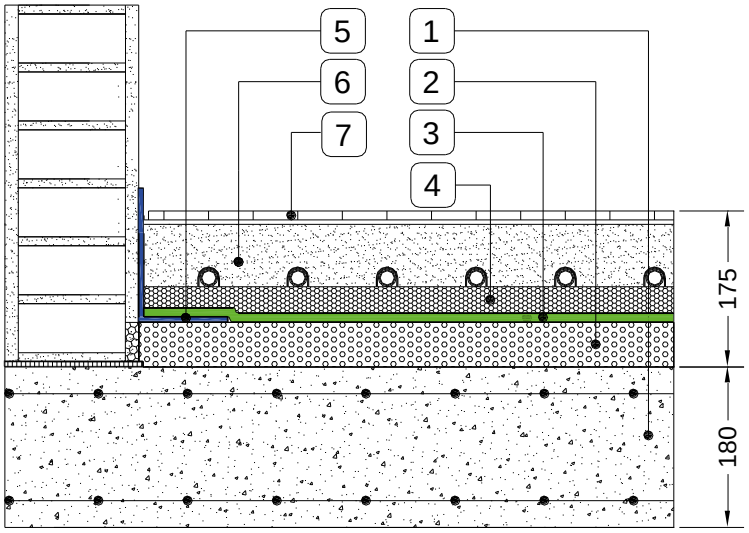


1. Concrete slab, 200 mm thickness
2. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM rubber. Thickness is between 5-10 mm**
3. 30 mm thick heating panel and piping. 50 mm total thickness
4. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
5. Sand and cement floating screed , 50 mm thickness
6. Ceramic tile floor finish, 15 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5	56	58	0.72		Page 126	Page 168		
Roll 5	53	58	0.71		Page 120	Page 168	Page 182	
Roll 7	51	58	0.70		Page 120	Page 168	Page 182	
Roll 10	49	58	0.69		Page 120	Page 168	Page 183	
Grei 5	49	58	0.70		Page 122	Page 168	Page 183	
Grei 8	48	58	0.68		Page 122	Page 168	Page 184	
Upgrei 8	45	58	0.66	Page 90	Page 124	Page 168	Page 184	

Underfloor heating

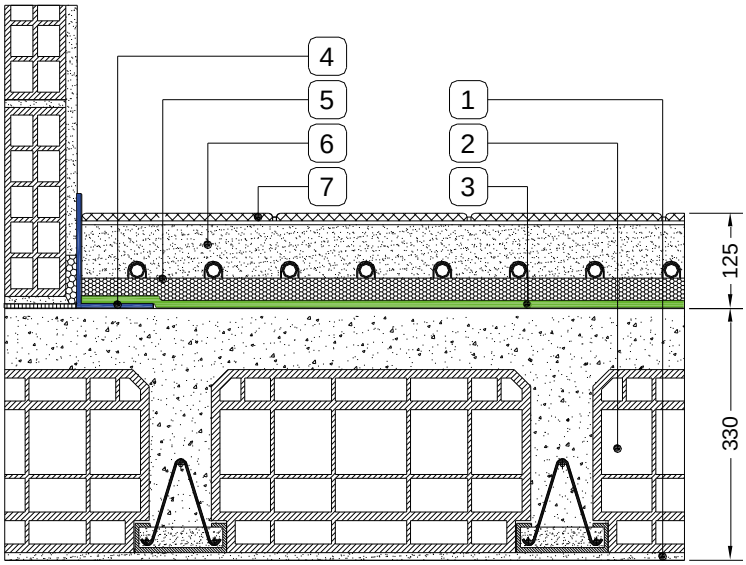
180 mm concrete slab with levelling screed



1. Concrete floor slab, 180 mm thickness
2. Levelling screed with eps granules and cement, 50 mm thickness
3. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM rubber. Thickness is between 5-10 mm**
4. 30 mm thick heating panel and piping. 50 mm total thickness
5. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 100 mm, height 200 mm**
6. Sand and cement floating screed , 50 mm thickness
7. Parquet flooring, 10 mm thickness

Product	L_{nw} (dB)	R_w (dB)	U (W/m²K)	Calculation	Product data	Installation	Lab test	Site test
Syl 5	56	58	0.51		Page 126	Page 168		
Roll 5	53	58	0.51		Page 120	Page 168	Page 182	
Roll 7	51	58	0.51		Page 120	Page 168	Page 182	
Roll 10	49	58	0.50		Page 120	Page 168	Page 183	
Grei 5	49	58	0.51	Page 91	Page 122	Page 168	Page 183	
Grei 8	48	58	0.49		Page 122	Page 168	Page 184	
Upgrei 8	45	58	0.48		Page 124	Page 168	Page 184	

320 mm Hollow brick slab



1. Plaster, 10 mm thickness
2. Hollow brick slab, 320 mm thickness
3. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM rubber. Thickness is between 5-10 mm**
4. 30 mm thick heating panel and piping. 50 mm total thickness
5. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
6. Sand and cement floating screed , 50 mm thickness
7. Ceramic tile floor finish, 15 mm thickness

Product	L_{nw} (dB)	R_w (dB)	U (W/m²K)	Calculation	Product data	Installation	Lab test	Site test
Syl 5	58	57	0.58		Page 126	Page 168		
Roll 5	55	57	0.57		Page 120	Page 168	Page 182	
Roll 7	53	57	0.57		Page 120	Page 168	Page 182	
Roll 10	51	57	0.56		Page 120	Page 168	Page 183	
Grei 5	51	57	0.57		Page 122	Page 168	Page 183	
Grei 8	50	57	0.55	Page 91	Page 122	Page 168	Page 184	Page 201
Upgrei 8	47	57	0.54		Page 124	Page 168	Page 184	

Floor insulation

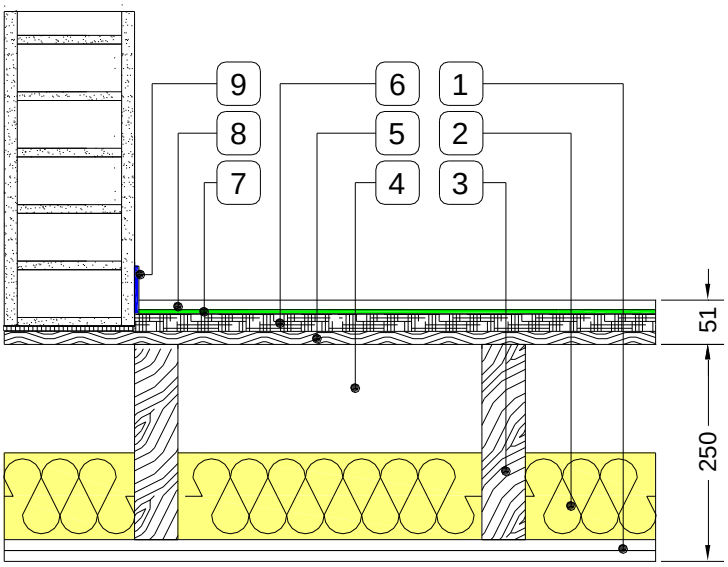
Wooden slab structure

The wooden floor slab structure, has a light structural mass which requires a high grade of acoustic insulation.
A common solution is to combine the wooden structure with concrete structures.
In this case we can create a floating screed system as follows.

Base Screed: a steel reinforced concrete slab which has the scope to increase the static load capacity of the wooden base slab. This concrete slab improves the total floor mass, and therefore the acoustic insulation.
Under-Wall Strip: under any wall or partition a resilient strip is needed in order to prevent the transfer of structural vibration or noise to the floor and vice versa.
Levelling Screed: if there is piping located over the floor base, a levelling screed is required in order to produce a uniform flat surface on which the resilient layer will be placed.
Acoustic Insulation : the acoustic insulation layer is selected so as to achieve the required level of impact sound improvement as specified by the relevant national building regulations.
Edging Perimeter Strip: to achieve the floating movements of the upper screed, it must be separated from the surrounding room walls. This separation can be obtained by placing the horizontal insulation layer onto the vertical wall side or more simply by using the Profyle Self Adhesive Edging Strips which are placed on all perimeter walls before laying down the horizontal insulation layer. In this way an elastic joint between the floating screed and the wall is created , granting a free movement of the floor against the walls.
Floating Screed: a traditional mixture of sand and cement or a “self-levelling” proprietary screed mixture. The important point here is to achieve a uniform thickness with a minimum thickness required by the acoustical analysis in our application manual of never less than 4 cm.
Floor Finish: during the application of the floor finishing, it is important not to cut the edging strip along the wall, but to keep it intact for the separation of the floating screed and the walls.

Wooden slab structure

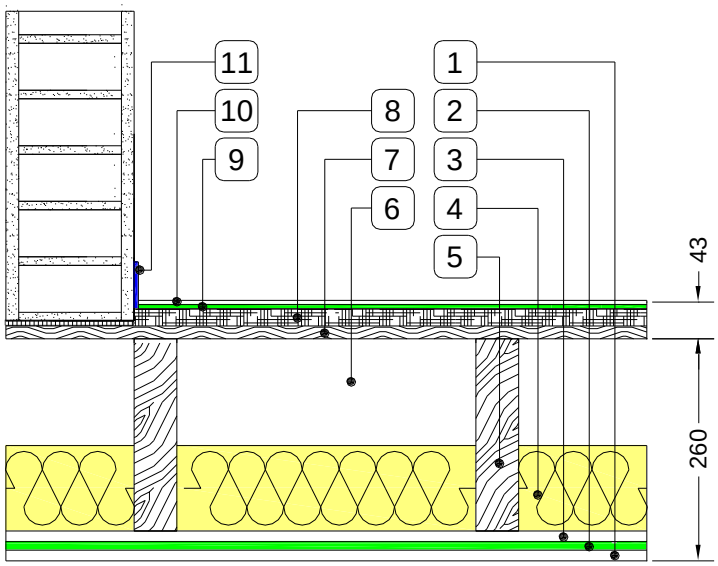
Timber framed floor with under wooden floor and ceiling



1. Plasterboard double layer, 2x12.5 mm thickness
2. **Rock wool panel, 100 mm thick, 50 kg/m³ density**
3. Wooden beam, 225 mm x 50 mm
4. Air cavity, 125 mm thickness
5. Plywood flooring, 18 mm thickness
6. OSB panel, 20 mm thickness
7. **Acoustic insulation supplied in roll, 5 mm thickness**
8. Parquet flooring, 8 mm thickness
9. **Acoustic insulation strip**

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5	61	55	0.26	Page 92	Page 126	Page 168	Page 185	

Timber framed floor with under wooden floor and ceiling

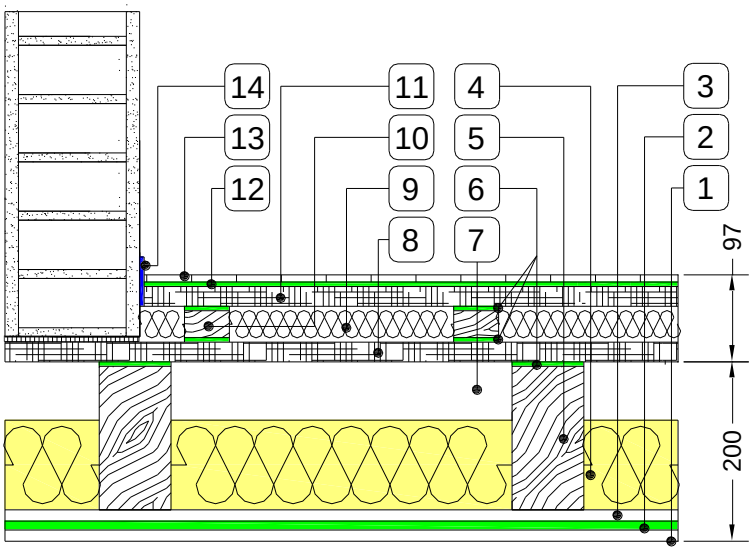


1. Plasterboard layer, 12.5 mm thickness
2. **Acoustic insulation panel, 5 mm thickness**
3. Plasterboard layer, 12.5 mm thickness
4. **Rock wool panel, 100 mm thick, 50 kg/m³ density**
5. Wooden beam, 225 mm x 50 mm
6. Air cavity, 60 mm thickness
7. Plywood flooring, 18 mm thickness
8. OSB panel, 20 mm thickness
9. **Acoustic insulation panel, 10 mm thickness**
10. Parquet flooring, 8 mm thickness
11. **Acoustic insulation strip**

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5 – Mustwall 10	59	62	0.26	Page 92	Page 126 - 134	Page 168	Page 185	

Floor insulation

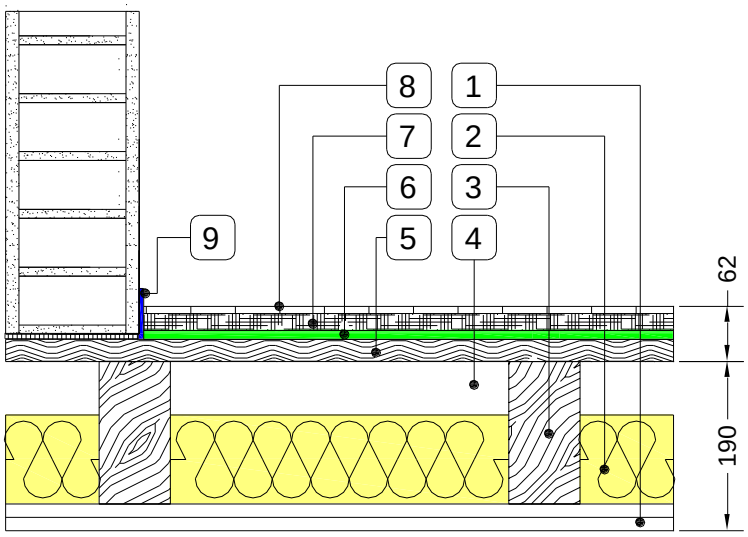
Timber framed floor with timber joinst and ceiling



1. Plasterboard layer, 12.5 mm thickness
2. **Acoustic insulation panel 10 mm thickness**
3. Plasterboard layer, 12.5 mm thickness
4. **Rock wool panel, 100 mm thick, 50 kg/m³ density**
5. Wooden beam, 80 mm x 160 mm
6. **Acoustic insulation strip, 5 mm thickness**
7. Air cavity, 65 mm thickness
8. Wooden board (OSB), 22 mm thickness
9. **Rock wool panel, 30 mm thick, 70 kg/m³ density**
10. Wooden stud, 30 mm x 50 mm
11. Wooden board (OSB), 22 mm thickness
12. **Acoustic insulation supplied in roll, 5 mm thickness**
13. Parquet flooring, 8 mm thickness
14. **Acoustic insulation strip**

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5 – Mustwall 10	50	63	0.204	Page 93	Page 126-134	Page 168	Page 185	

Timber framed floor with floating plywood and ceiling

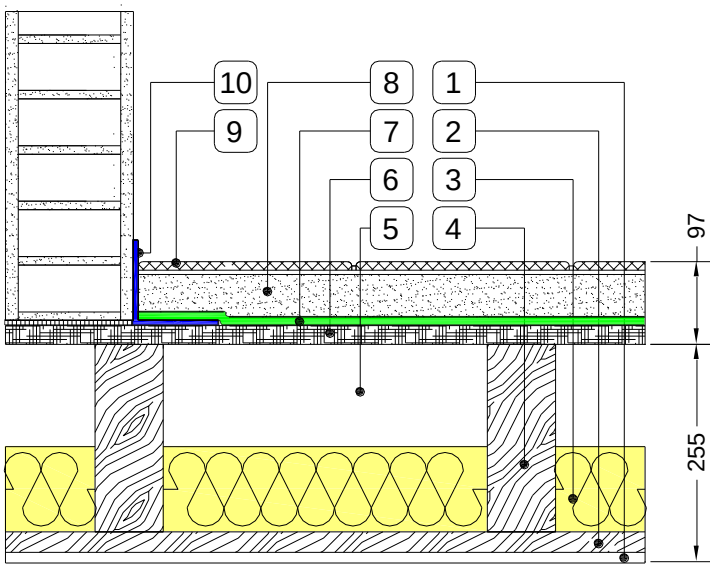


1. Plasterboard layer double layer, 2x15 mm thickness
2. **Rock wool panel, 100 mm thick, 50 kg/m³ density**
3. Wooden beam, 80 mm x 160 mm
4. Air cavity, 65 mm thickness
5. Wooden board, 25 mm thickness
6. **Acoustic insulation supplied in roll, 5-10 mm thickness**
7. Wooden board, 19 mm thickness
8. Parquet flooring, 8 mm thickness
9. **Acoustic insulation strip**

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Roll 10	55	55	0.25	Page 93	Page 120	Page 168		
Grei 5	55	55	0.25		Page 122	Page 168		
Upgrei 8	53	55	0.25		Page 124	Page 168		

Wooden slab structure

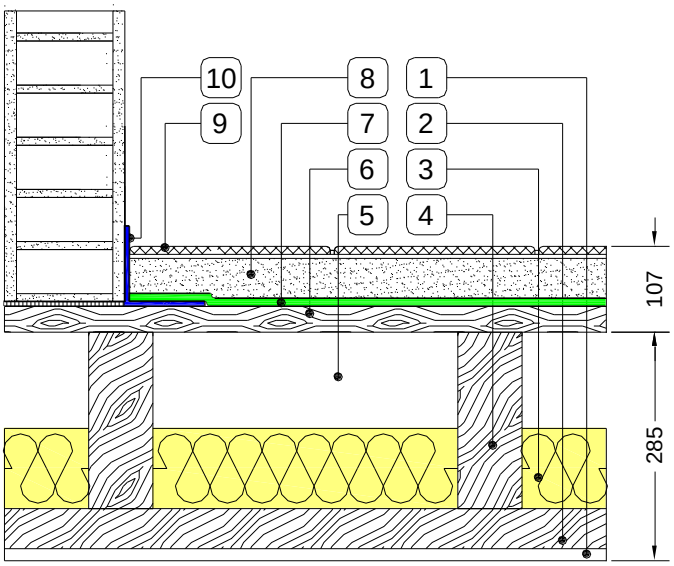
Timber framed floor with floating screed and ceiling



1. Plasterboard layer, 12.5 mm thickness
2. Wooden beam, 24 mm x 68 mm
3. **Rock wool panel, 100 mm thick, 50 kg/m³ density**
4. Wooden beam, 80 mm x 220 mm
5. Air cavity, 120 mm thickness
6. Wooden board (OSB), 22 mm thickness
7. **Acoustic insulation supplied in roll, 5-10 mm thickness**
8. Sand and cement screed, 50 mm thickness
9. Ceramic tiles, 10 mm thickness
10. **Acoustic insulation strip**

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5	60	55	0.26		Page 126	Page 168		
Roll 5	59	55	0.25		Page 120	Page 168	Page 182	
Roll 7	57	55	0.25		Page 120	Page 168	Page 182	
Roll 10	55	55	0.25		Page 120	Page 168	Page 183	
Grei 5	55	55	0.25	Page 94	Page 122	Page 168	Page 183	
Grei 8	54	55	0.25		Page 122	Page 168	Page 184	
Upgrei 8	52	55	0.25		Page 124	Page 168	Page 184	

Timber framed floor with floating screed and ceiling

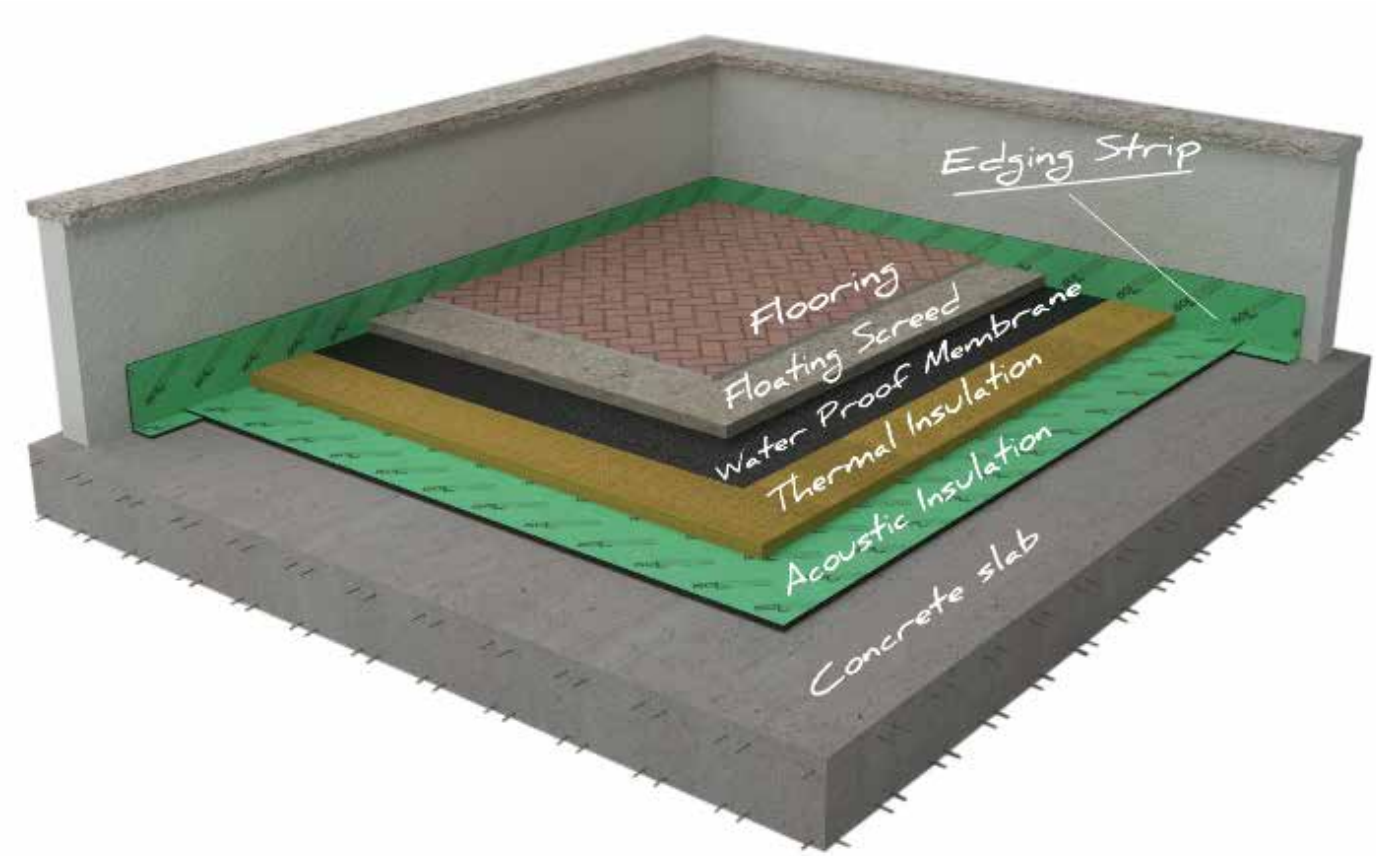


1. Plaster, 15 mm thickness
2. Wooden plank, 50 mm thickness
3. **Rock wool panel, 100 mm thick, 50 kg/m³ density**
4. Wooden beam, 80 mm x 220 mm
5. Air cavity, 120 mm thickness
6. Wooden plank, 32 mm thickness
7. **Acoustic insulation supplied in roll, 5-10 mm thickness**
8. Sand and cement screed, 50 mm thickness
9. Ceramic tiles, 10 mm thickness
10. **Acoustic insulation strip**

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5	59	56	0.25		Page 126	Page 168		
Roll 5	58	56	0.25		Page 120	Page 168	Page 182	
Roll 7	56	56	0.25		Page 120	Page 168	Page 182	
Roll 10	54	56	0.25		Page 120	Page 168	Page 183	
Grei 5	54	56	0.25		Page 122	Page 168	Page 183	
Grei 8	53	56	0.25		Page 122	Page 168	Page 184	
Upgrei 8	51	56	0.24	Page 94	Page 124	Page 168	Page 184	

Floor insulation

Terrace

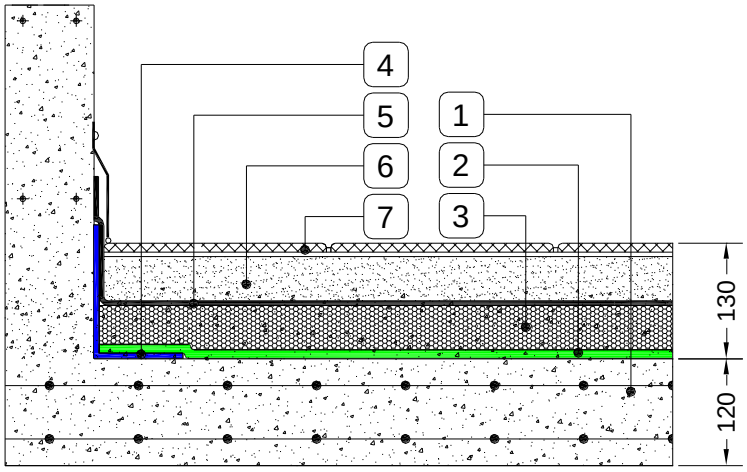


Terraces located above the housing area, or internal balconies and flat roofs, are floors that must be isolated from impact noise.
A floating screed is the ideal solution - creating a floating mass of a screed and floor finish. These elements are located above the resilient layer which adds an elastic spring effect to the whole system.

Acoustic Insulation: the acoustic insulation layer is selected to achieve the required level of impact sound improvement as specified by the relevant national building regulations.
Edging Perimeter Strip: to achieve the floating movements of the upper screed, the screed must be separated from the surrounding room walls. This separation can be obtained by placing the horizontal insulation layer onto the vertical wall side or more simply by using the Profyle Self Adhesive Edging Strips which are placed on all perimeter walls before laying down the horizontal insulation layer. In this way an elastic joint between the floating screed and the wall is created granting free movement of the floor against the walls.
Thermal Insulation: above the acoustic insulation a layer of thermal insulation is generally provided as specified by the relevant national building regulations. Fibres or Synthetic panels can be used depending on the grade of thermal insulation to be achieved.
Water Proof Membrane: a Bituminous membrane or other equivalent material preventing water penetration in the inner structure.
Floating Screed: a traditional mixture of sand and cement or a “self-levelling” proprietary screed mixture. The important point here is to achieve a uniform thickness with a minimum thickness required by the acoustical analysis in our application manual of never less than 4 cm.
Floor Finish: during the application of the floor finishing, it is important not to cut the edging strip along the wall, but to keep it intact for the separation of the floating screed and the walls.

Terrace

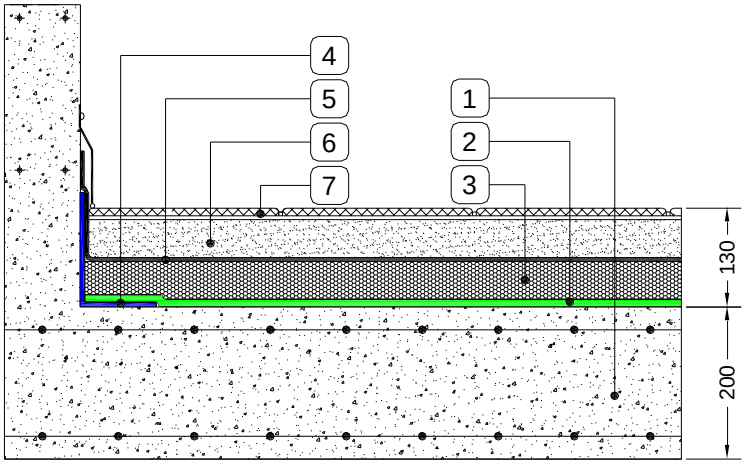
120 mm concrete slab



1. Concrete slab, 120 mm thickness
2. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM rubber. Thickness is between 5-10 mm**
3. Thermal insulation in polystyrene, mineral wool or other similar material, 50 mm thickness
4. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 100 mm, height 200 mm**
5. Waterproof membrane, 10 mm thickness
6. Sand and cement floating screed , 50 mm thickness
7. Ceramic tile floor finish, 15 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5	61	54	0.50		Page 126	Page 168		
Roll 5	58	54	0.50	Page 95	Page 120	Page 168	Page 182	
Roll 7	56	54	0.50		Page 120	Page 168	Page 182	
Roll 10	54	54	0.49		Page 120	Page 168	Page 183	
Grei 5	54	54	0.49		Page 122	Page 168	Page 183	
Grei 8	53	54	0.48		Page 122	Page 168	Page 184	
Upgrei 8	50	54	0.47		Page 124	Page 168	Page 184	

200 mm concrete slab

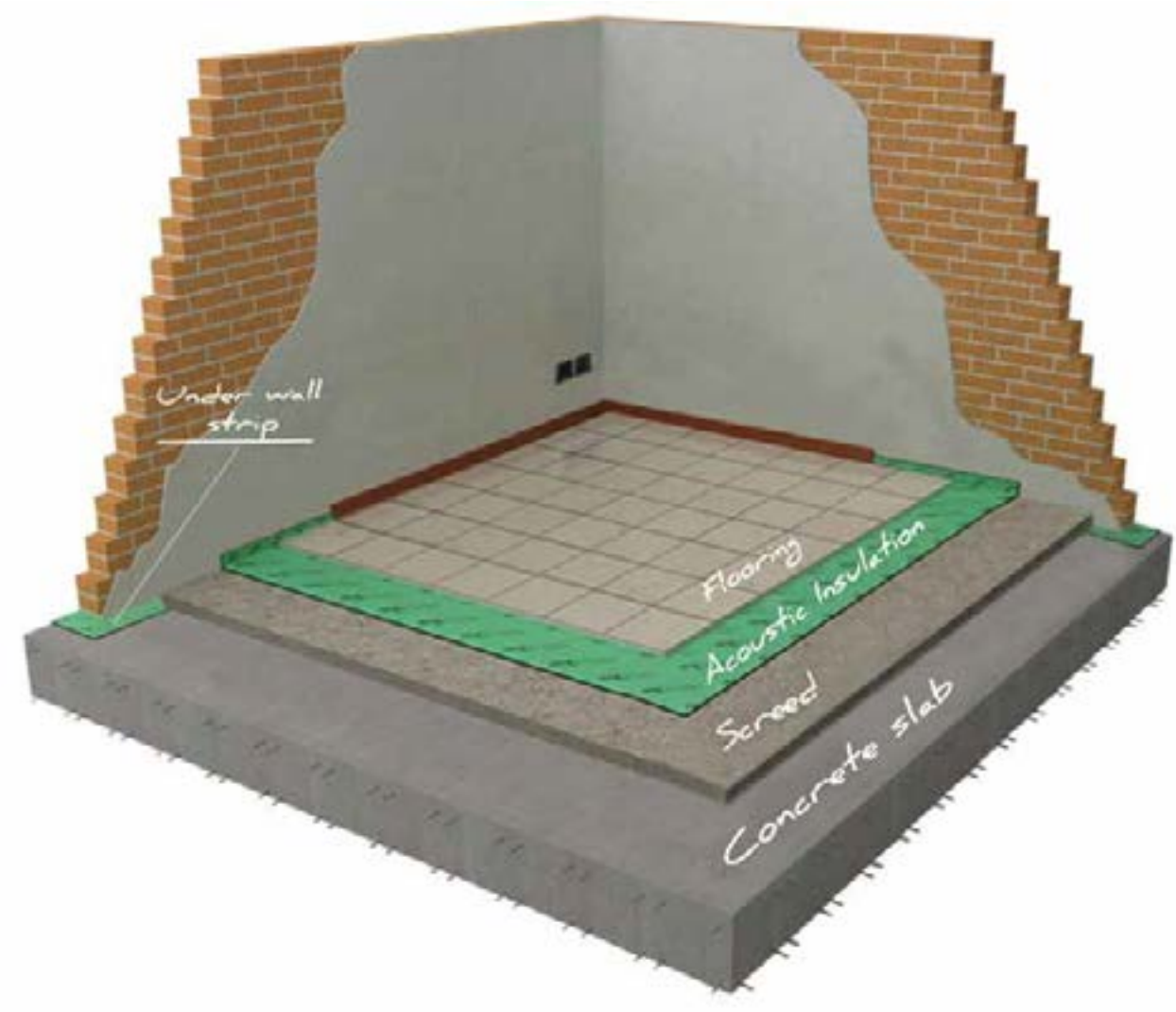


1. Concrete slab, 200 mm thickness
2. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM rubber. Thickness is between 5-10 mm**
3. Thermal insulation in polystyrene, mineral wool or other similar material, 50 mm thickness
4. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 100 mm, height 200 mm**
5. Waterproof membrane, 10 mm thickness
6. Sand and cement floating screed , 50 mm thickness
7. Ceramic tile floor finish, 15 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5	56	58	0.49		Page 126	Page 168		
Roll 5	53	58	0.49		Page 120	Page 168	Page 182	
Roll 7	51	58	0.49		Page 120	Page 168	Page 182	
Roll 10	49	58	0.48	Page 95	Page 120	Page 168	Page 183	
Grei 5	49	58	0.49		Page 122	Page 168	Page 183	
Grei 8	48	58	0.48		Page 122	Page 168	Page 184	
Upgrei 8	45	58	0.46		Page 124	Page 168	Page 184	

Floor insulation

Under ceramic floor



The under tiles flooring insulation is used in the case of renovation, when the demolition of the screed is not possible, or to increase the performance of floors with floating screed, having a traditional ceramic finishing. The resilient mat is glued on the screed or on the existing finishing and the final flooring is glued on it.

Under wall strip: under any wall or partition a resilient strip is needed in order to prevent the transfer of structural vibration or noise to the floor and vice versa.

Levelling screed: if there is piping located over the floor base, a levelling screed is required in order to produce a uniform flat surface on which the resilient layer will be placed.

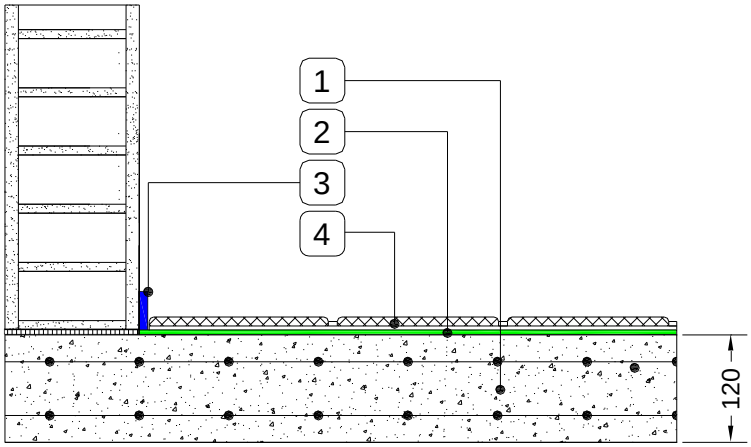
Floating Screed: a traditional mixture of sand and cement or a “self-levelling” proprietary screed mixture. The important point here is to achieve a uniform thickness with a minimum thickness required by the acoustical analysis in our application manual of never less than 4 cm.

Acoustic Insulation : must be laid down on a clean flat concrete base. It can be glued to the base using an elastic adhesive.

Flooring: it is made of ceramic tiles or stone; it is glued on the resilient mat and grouted with specific products.

Under ceramic floor

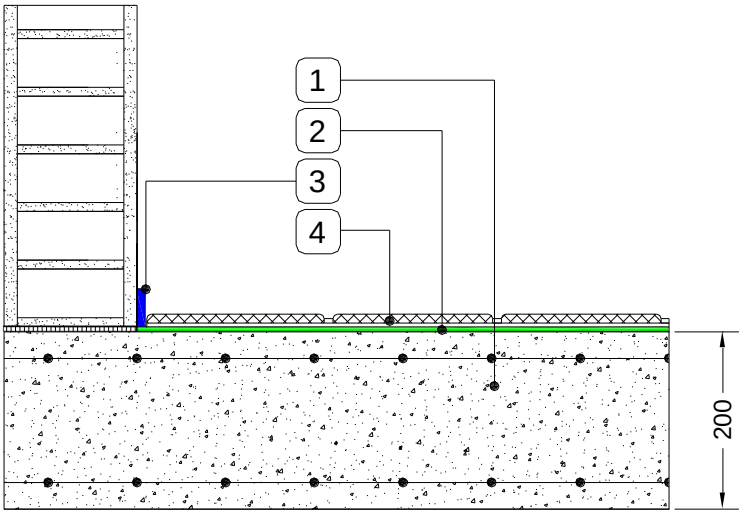
120 mm concrete slab



1. Concrete slab, 120 mm thickness
2. **Acoustic insulation supplied in rolls and produced using granules of SBR or EPDM rubber, 3 mm thickness**
3. **Acoustic insulating bands made of polyethylene with a self adhesive film on one side for ease of application, 50 mm height**
4. Ceramic tile, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Sylcer 3	68	51	2.35	Page 96	Page 130	Page 169	Page 185	

200 mm concrete slab

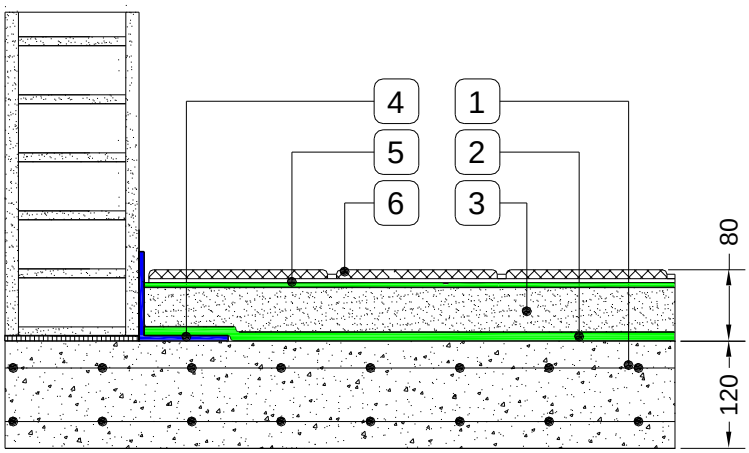


1. Concrete slab, 200 mm thickness
2. **Acoustic insulation supplied in rolls and produced using granules of SBR or EPDM rubber, 3 mm thickness**
3. **Acoustic insulating bands made of polyethylene with a self adhesive film on one side for ease of application, 50 mm height**
4. Ceramic tile, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Sylcer 3	61	55	2.17	Page 96	Page 130	Page 169	Page 185	

Floor insulation

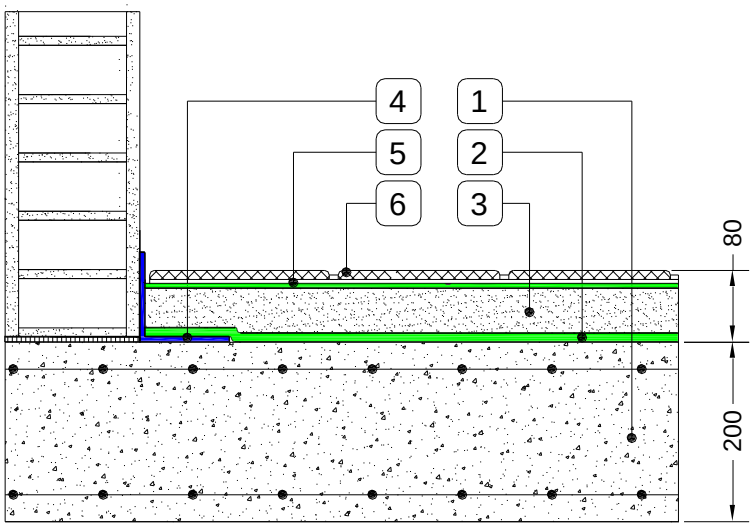
120 mm concrete slab with floating screed



1. Concrete slab, 120 mm thickness
2. **Acoustic insulation supplied in rolls and produced using granules of SBR or EPDM rubber, 3 mm thickness**
3. Sand and cement screed, 50 mm thickness
4. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
5. **Acoustic insulation supplied in rolls and produced using granules of SBR or EPDM rubber, 3 mm thickness**
6. Ceramic tile, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5 – Sylcer 3	60	54	1.99		Page 126 – 130	Page 168 - 169	Page 185	
Roll 7 – Sylcer 3	55	54	1.88		Page 120 – 130	Page 168 - 169	Page 182 – 185	
Grei 5 – Sylcer 3	53	54	1.87		Page 122 – 130	Page 168 - 169	Page 183 – 185	
Upgrei 8 – Sylcer 3	49	54	1.76	Page 97	Page 124 – 130	Page 168 - 169	Page 184 – 185	

200 mm concrete slab with floating screed

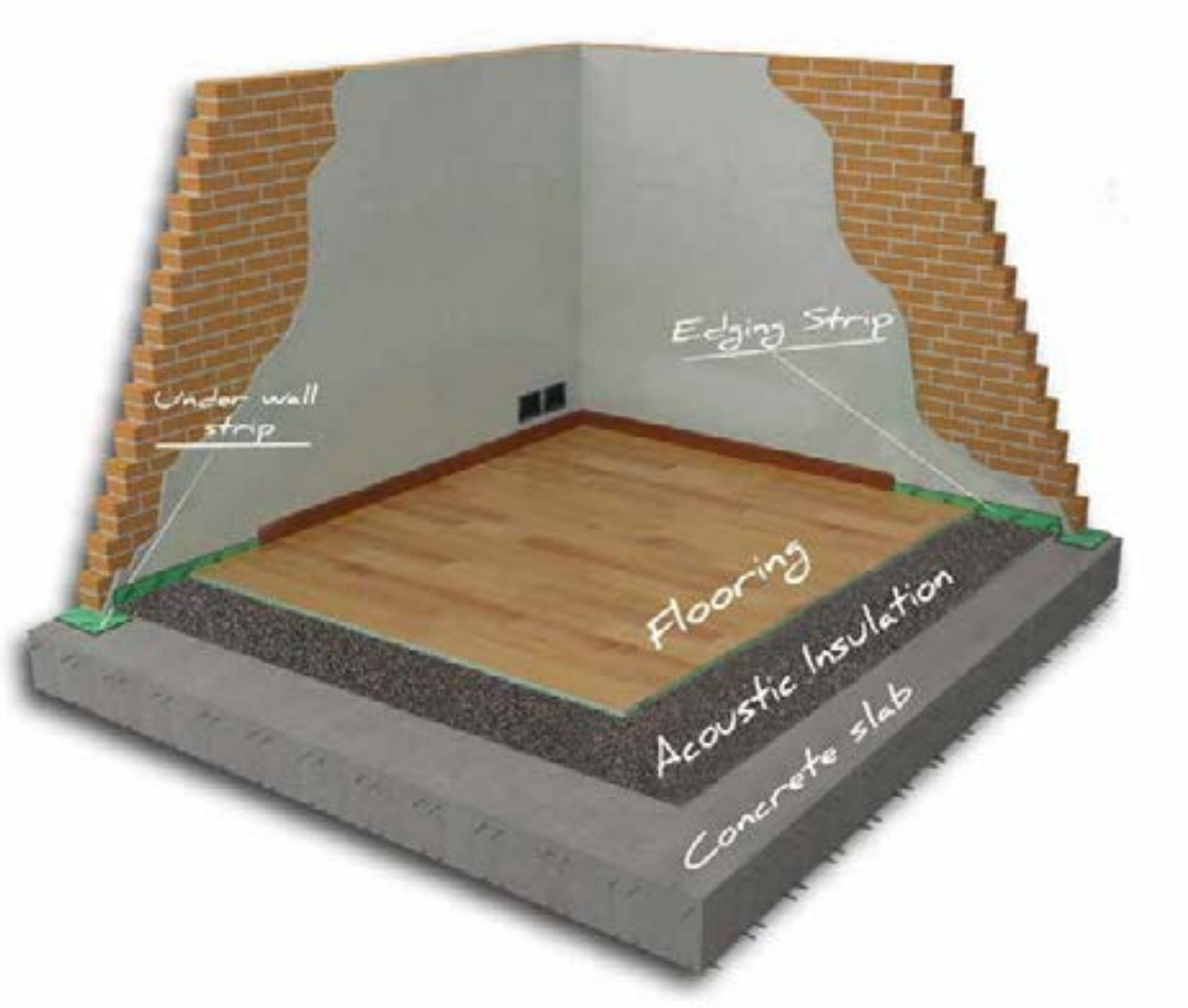


1. Concrete slab, 200 mm thickness
2. **Acoustic insulation supplied in rolls and produced using granules of SBR or EPDM rubber, 3 mm thickness**
3. Sand and cement screed, 100 mm thickness
4. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
5. **Acoustic insulation supplied in rolls and produced using granules of SBR or EPDM rubber, 3 mm thickness**
6. Ceramic tile, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5 – Sylcer 3	54	58	1.86		Page 126 – 130	Page 168 - 169	Page 185	
Roll 7 – Sylcer 3	49	58	1.77		Page 120 – 130	Page 168 - 169	Page 182 – 185	
Grei 5 – Sylcer 3	47	58	1.75	Page 97	Page 122 – 130	Page 168 - 169	Page 183 – 185	
Upgrei 8 – Sylcer 3	42	58	1.66		Page 124 – 130	Page 168 - 169	Page 184 – 185	

Floors insulation

Under wooden floor

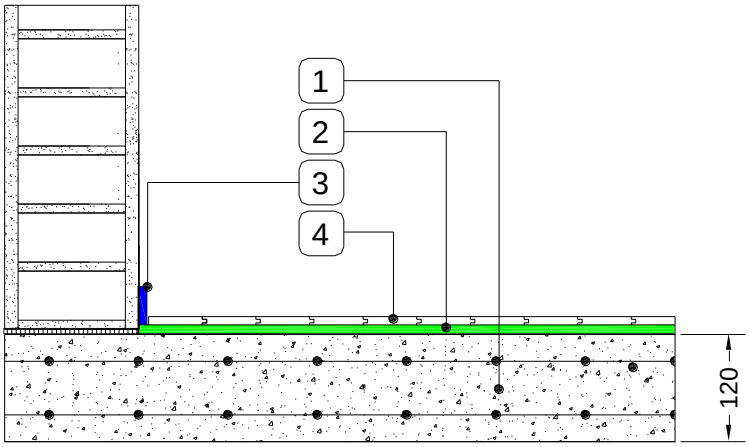


Acoustic insulation under a floor finishing is required in the case of floor / building renovations or when there is a need to upgrade the existing floating floor performance.
The Isolgomma resilient layer is placed directly under the floor finishing such us parquet, carpet or other synthetic type flooring in order to get the floor floating over the resilient layer.

Under-Wall Strip: under any wall or partition a resilient strip is needed in order to prevent the transfer of structural vibration or noise to the floor and vice versa.
Levelling Screed: if there is piping located over the floor base, a levelling screed is required in order to produce a uniform flat surface on which the resilient layer will be placed.
Screed: a traditional mixture of sand and cement or a "self-levelling" proprietary screed mixture. The important point here is to achieve a uniform thickness .
Acoustic Insulation : must be laid down on a clean flat concrete base. It can be glued to the base using an elastic adhesive.
Floor Finishing: it can be any type of parquet, carpet or synthetic elastic flooring . Installed dry or using any elastic adhesive. If the adhesive is too rigid and not compatible with the elastic layer it could reduce the final acoustic performance.

Floors insulation

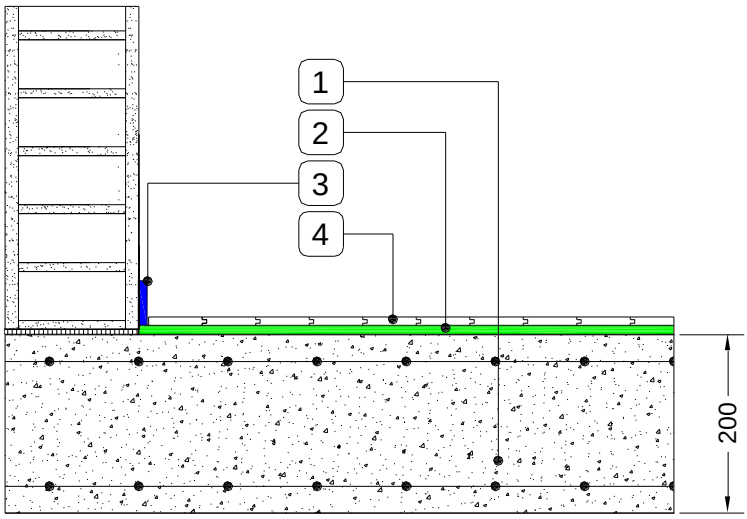
120 mm concrete slab



1. Concrete slab, 120 mm thickness
2. **Acoustic insulation supplied in rolls and produced using granules of SBR and cork. Thickness is between 3-5 mm**
3. **Acoustic insulating bands made of polyethylene with a self adhesive film on one side for ease of application, 50 mm height**
4. Parquet floor finish, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Sylwood 3 *with glue*	67	51	2.16		Page 132	Page 169	Page 186	
Sylwood 3 *dry installation*	63	51	2.16	Page 98	Page 132	Page 169	Page 186	
Sylwood 5 *dry installation*	63	51	2.09		Page 132	Page 169		

200 mm concrete slab

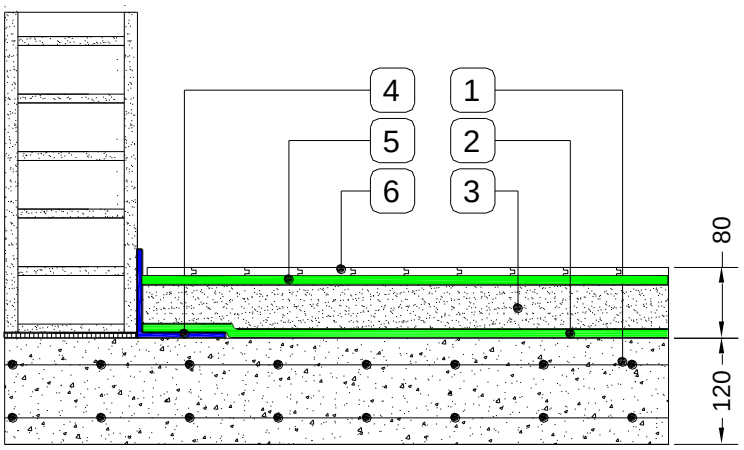


1. Concrete slab, 200 mm thickness
2. **Acoustic insulation supplied in rolls and produced using granules of SBR and cork. Thickness is between 3-5 mm**
3. **Acoustic insulating bands made of polyethylene with a self adhesive film on one side for ease of application, 50 mm height**
4. Parquet floor finish, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Sylwood 3 *with glue*	61	55	2.01		Page 132	Page 169	Page 186	
Sylwood 3 *dry installation*	58	55	2.01		Page 132	Page 169	Page 186	
Sylwood 5 *dry installation*	58	55	1.95	Page 98	Page 132	Page 169		

Under wooden floor

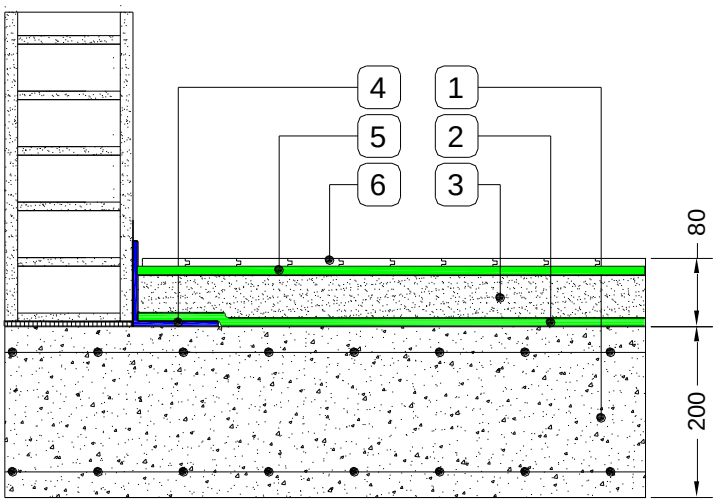
120 mm concrete slab with floating screed



1. Concrete slab, 120 mm thickness
2. **Acoustic insulation supplied in rolls and produced using granules of SBR or EPDM rubber, 3 mm thickness**
3. Sand and cement screed, 50 mm thickness
4. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
5. **Acoustic insulation supplied in rolls and produced using granules of SBR or EPDM rubber, 3 mm thickness**
6. Parquet floor finish, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Grei 8 - Sylwood 3 *with glue*	50	54	1.69		Page 122 – 132	Page 168 – 169	Page 184 – 186	
Grei 8 - Sylwood 3 *dry installation*	47	54	1.69		Page 122 – 132	Page 168 – 169	Page 184 – 186	
Grei 8 - Sylwood 5 *dry installation*	47	54	1.69	Page 99	Page 122 – 132	Page 168 – 169	Page 184	

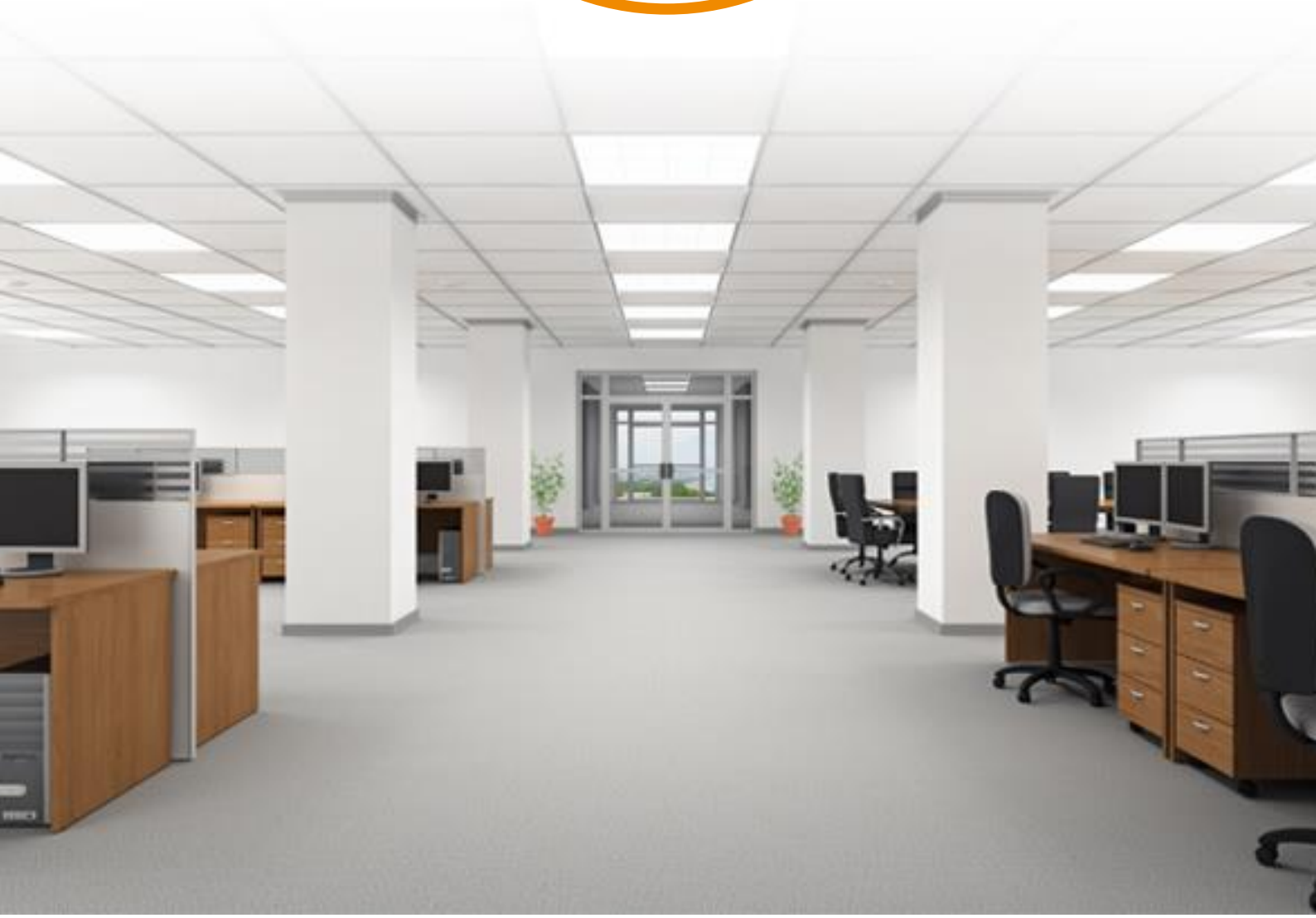
200 mm concrete slab with floating screed



1. Concrete slab, 200 mm thickness
2. **Acoustic insulation supplied in rolls and produced using granules of SBR or EPDM rubber, 3 mm thickness**
3. Sand and cement screed, 100 mm thickness
4. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
5. **Acoustic insulation supplied in rolls and produced using granules of SBR or EPDM rubber, 3 mm thickness**
6. Parquet floor finish, 10 mm thickness

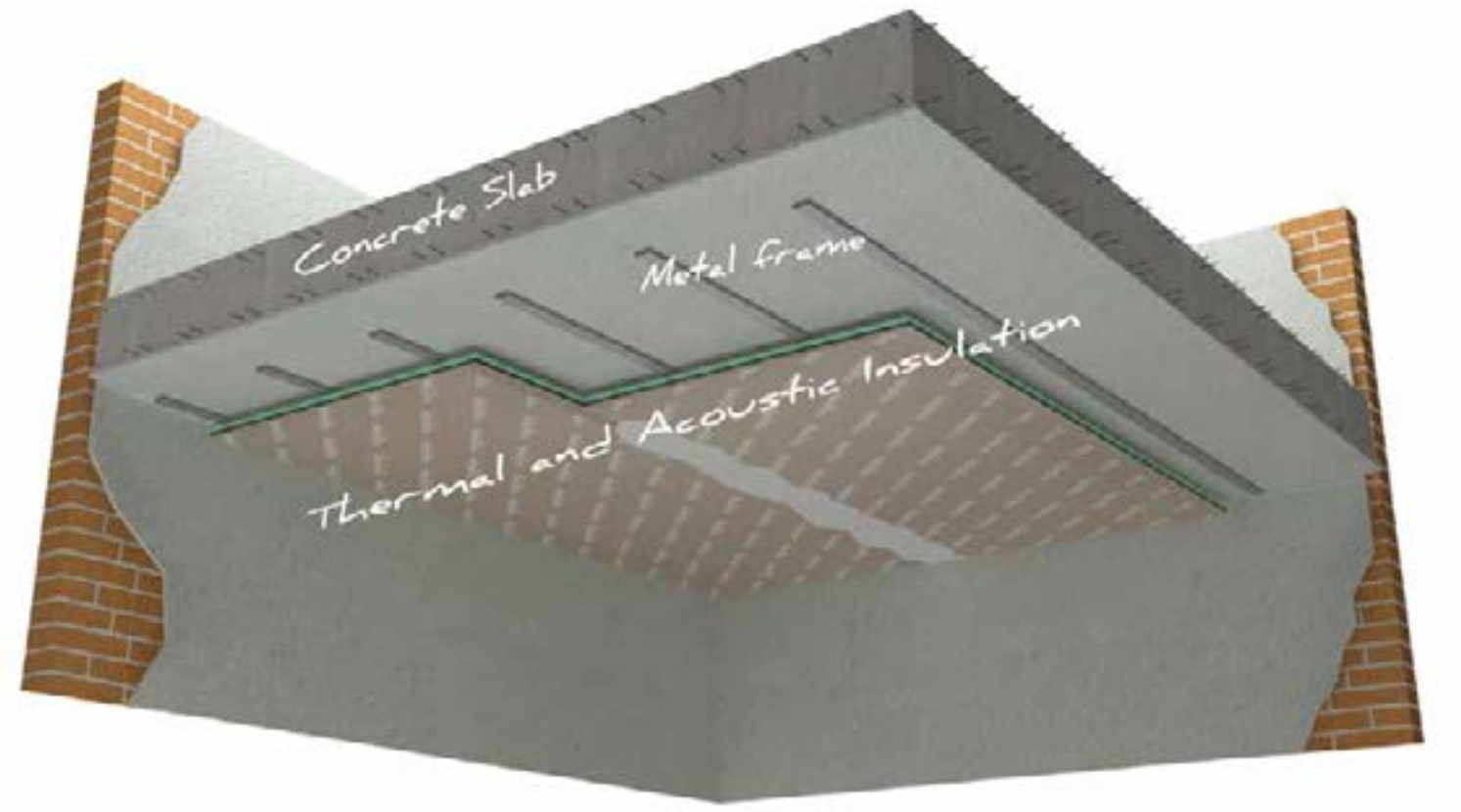
Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Roll 7 - Sylwood 3 *with glue*	51	58	1.73	Page 99	Page 120 – 132	Page 168 – 169	Page 182 – 186	
Roll 7 - Sylwood 3 *dry installation*	48	58	1.73		Page 120 – 132	Page 168 – 169	Page 182 – 186	
Roll 7- Sylwood 5 *dry installation*	48	58	1.73		Page 120 – 132	Page 168 – 169	Page 182	

CEILINGS INSULATION



Ceilings insulation

Coated ceiling



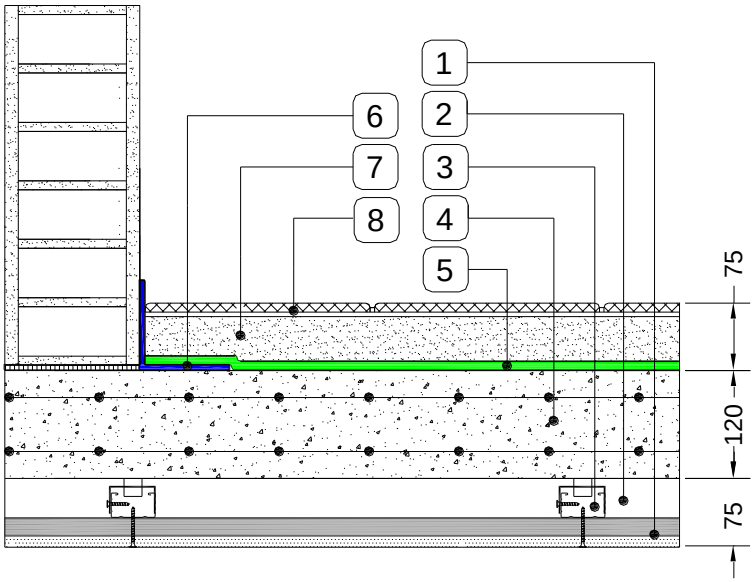
The coated ceiling is typically used to increase the thermal and acoustic performance of existing floors. It is the ideal solution to increase acoustic and thermal insulation in limited space.

Acoustic insulation: *the choice is based on different variables: the available space, the desired acoustic and thermal insulation. The increase in acoustic and thermal insulation depends on the thickness, because the more space is used for the covering, the better will be the values of acoustic and thermal insulation. The coated ceiling solution allows to insulate the ceiling with a thickness less than 10 cm.*

Steel structure: the fastening of the insulating boards can be done directly to the ceiling, but to grant a better adherence and a safer fastening, it is strongly recommended a steel structure. In the case of a beam and hollow block floor or similar, the fastening of the structure must be done on the concrete beams. It is important to adopt damped hangers for the fastening of the steel structures.

Ceilings insulation

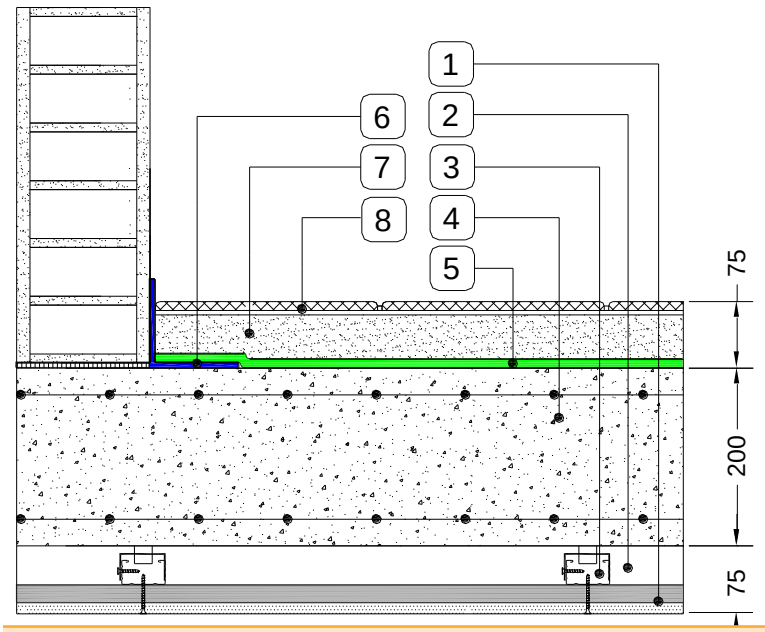
120 mm concrete slab



1. **40 mm-thick acoustic insulation coupled panels, composed of the following: an 20 mm-thick fiber panel produced using granules of SBR rubber, a 12.5 mm-thick plaster covered slab. The panels are 1.20 m wide x 2.00 m hight.**
2. Air cavity, 35 mm thickness
3. Metal frame
4. Concrete slab, 120 mm thickness
5. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM. Thickness is between 4-10 mm**
6. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
7. Sand and cement floating screed, 50 mm thickness
8. Ceramic tile, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5 – Mustwall 33B	58	61	0.77		Page 126 – 136	Page 168 – 170		
Roll 7 – Mustwall 33B	53	61	0.76		Page 120 – 136	Page 168 – 170		
Grei 5 – Mustwall 33B	51	61	0.76	Page 100	Page 122 – 136	Page 168 – 170		
Upgrei 8 – Mustwall 33B	47	61	0.70		Page 124 – 136	Page 168 – 170		

200 mm concrete slab

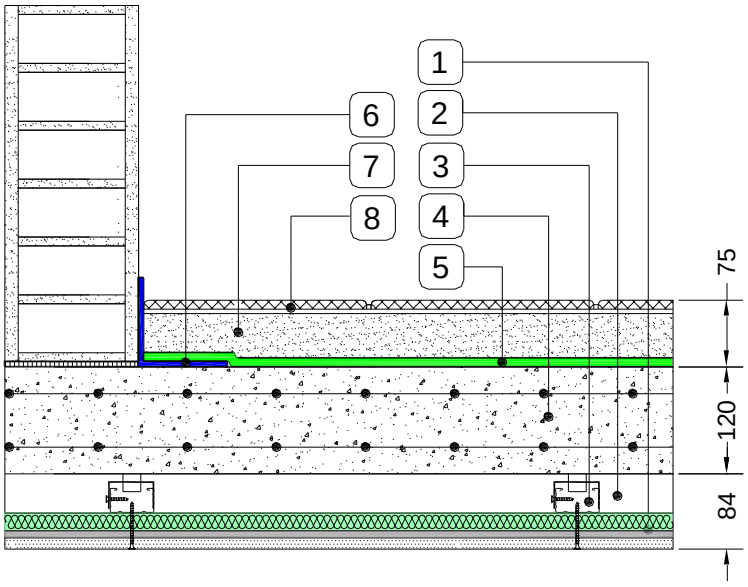


1. **40 mm-thick acoustic insulation coupled panels, composed of the following: an 20 mm-thick fiber panel produced using granules of SBR rubber, a 12.5 mm-thick plaster covered slab. The panels are 1.20 m wide x 2.00 m hight.**
2. Air cavity, 35 mm thickness
3. Metal frame
4. Concrete slab, 200 mm thickness
5. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM. Thickness is between 4-10 mm**
6. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
7. Sand and cement floating screed, 50 mm thickness
8. Ceramic tile, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5 – Mustwall 33B	50	65	0.75		Page 126 – 136	Page 168 – 170		
Roll 7 – Mustwall 33B	45	65	0.74		Page 120 – 136	Page 168 – 170		
Grei 5 – Mustwall 33B	43	65	0.74		Page 122 – 136	Page 168 – 170		
Upgrei 8 – Mustwall 33B	39	65	0.69	Page 100	Page 124 – 136	Page 168 – 170		

Ceilings insulation

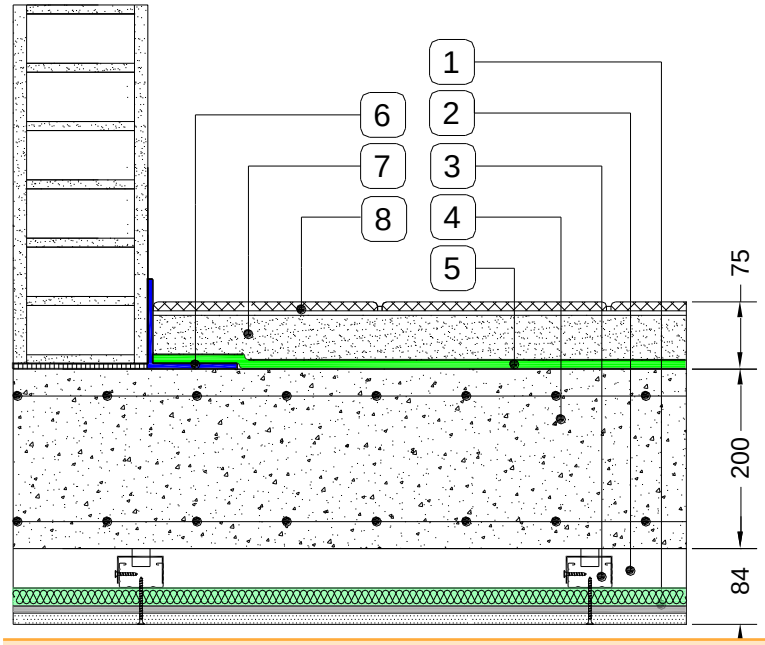
120 mm concrete slab



1. **33 mm–thick acoustic insulation coupled panels: a 20 mm-thick polyester fiber panel and a 12.5 mm-thick plaster covered slab (Rewall 33B). 40 mm-thick acoustic insulation coupled panels: an 8mm-thick SBR rubber panel a 20 mm-thick polyester fiber panel, and a 12.5 mm-thick plaster covered slab (Rewall 40). The panels are 1.20 m wide x 2.00 m hight.**
2. Air cavity, 35 mm thickness
3. Metal frame
4. Concrete slab, 120 mm thickness
5. **Acoustic insulation supplied in rolls and produced using SBR or EPDM rubber. Thickness is between 4-10 mm**
6. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene. The dimensions are: base 50 mm, height 150 mm**
7. Sand and cement floating screed, 50 mm thickness
8. Ceramic tile, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Roll 7 – Rewall 33B	53	61	0.73		Page 120 – 141	Page 168 – 170		
Roll 7 – Rewall 40	52	62	0.69		Page 120 – 140	Page 168 – 170		
Grei 5 – Rewall 33B	51	61	0.73		Page 122 – 141	Page 168 – 170		
Grei 5 – Rewall 40	50	62	0.69	Page 101	Page 122 – 140	Page 168 – 170		

200 mm concrete slab

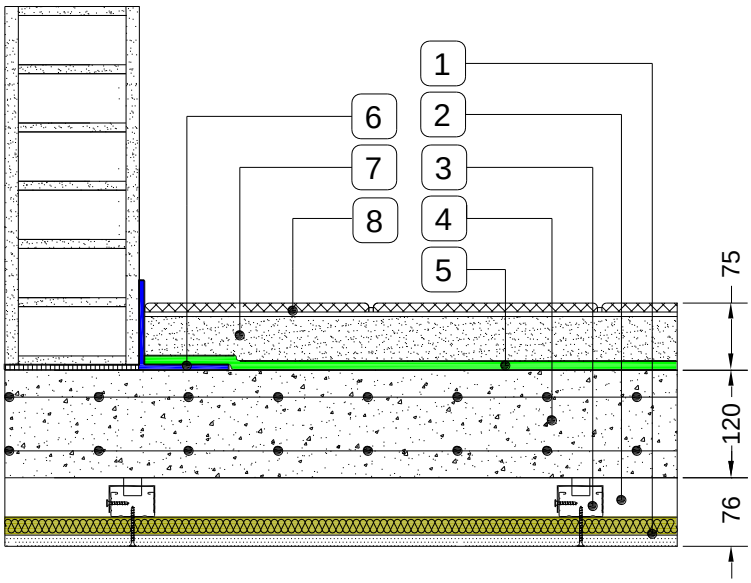


1. **33 mm–thick acoustic insulation coupled panels: a 20 mm-thick polyester fiber panel and a 12.5 mm-thick plaster covered slab (Rewall 33B). 40 mm-thick acoustic insulation coupled panels: an 8mm-thick SBR rubber panel a 20 mm-thick polyester fiber panel, and a 12.5 mm-thick plaster covered slab (Rewall 40). The panels are 1.20 m wide x 2.00 m hight.**
2. Air cavity, 35 mm thickness
3. Metal frame
4. Concrete slab, 200 mm thickness
5. **Acoustic insulation supplied in rolls and produced using SBR or EPDM rubber. Thickness is between 4-10 mm**
6. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene. The dimensions are: base 50 mm, height 150 mm**
7. Sand and cement floating screed, 50 mm thickness
8. Ceramic tile, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Roll 7 – Rewall 33B	45	65	0.71		Page 120 – 141	Page 168 – 170		
Roll 7 – Rewall 40	44	66	0.67	Page 101	Page 120 – 140	Page 168 – 170		
Grei 5 – Rewall 33B	43	65	0.71		Page 122 – 141	Page 168 – 170		
Grei 5 – Rewall 40	42	66	0.67		Page 122 – 140	Page 168 – 170		

Coated ceiling

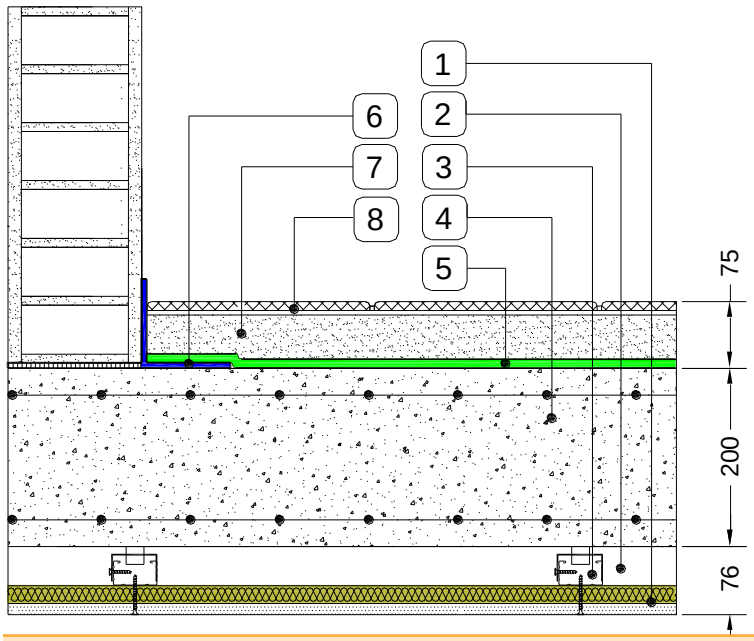
120 mm concrete slab



1. **33 mm-thick acoustic insulation coupled panels, composed of thefollowing: a 20 mm-thick Kenaf fiber panel, and a 12.5 mm thick plaster covered slab. The panels are 1.20 m wide x 2.00 m hight**
2. Air cavity, 35 mm thickness
3. Metal frame
4. Concrete slab, 120 mm thickness
5. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM. Thickness is between 4-10 mm**
6. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
7. Sand and cement floating screed, 50 mm thickness
8. Ceramic tile, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5 – Natur 33B	58	61	0.72		Page 126 – 144	Page 168 – 170		
Roll 7 – Natur 33B	53	61	0.71		Page 120 – 144	Page 168 – 170		
Grei 5 – Natur 33B	51	61	0.70	Page 102	Page 122 – 144	Page 168 – 170		
Upgrei 8 – Natur 33B	47	61	0.66		Page 124 – 144	Page 168 – 170		

200 mm concrete slab

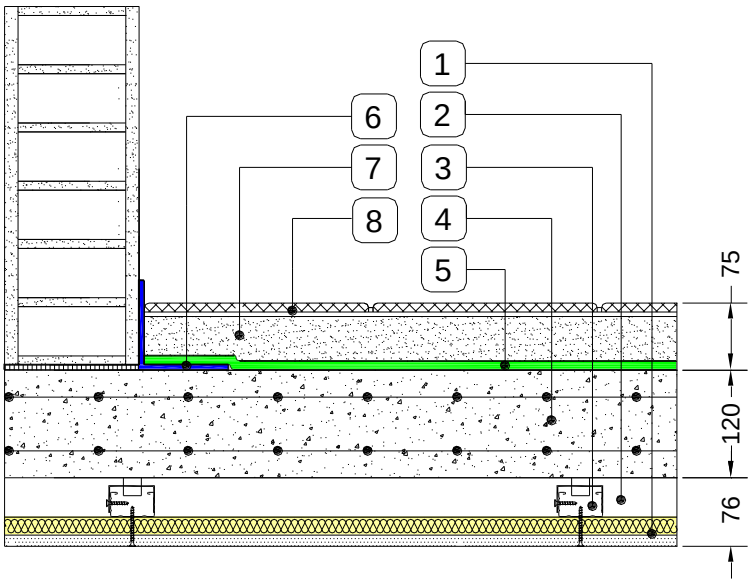


1. **33 mm-thick acoustic insulation coupled panels, composed of thefollowing: a 20 mm-thick Kenaf fiber panel, and a 12.5 mm thick plaster covered slab. The panels are 1.20 m wide x 2.00 m hight**
2. Air cavity, 35 mm thickness
3. Metal frame
4. Concrete slab, 200 mm thickness
5. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM. Thickness is between 4-10 mm**
6. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
7. Sand and cement floating screed, 50 mm thickness
8. Ceramic tile, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Syl 5 – Natur 33B	50	65	0.70		Page 126 – 144	Page 168 – 170		
Roll 7 – Natur 33B	45	65	0.69	Page 102	Page 120 – 144	Page 168 – 170		
Grei 5 – Natur 33B	43	65	0.69		Page 122 – 144	Page 168 – 170		
Upgrei 8 – Natur 33B	39	65	0.65		Page 124 – 144	Page 168 – 170		

Ceilings insulation

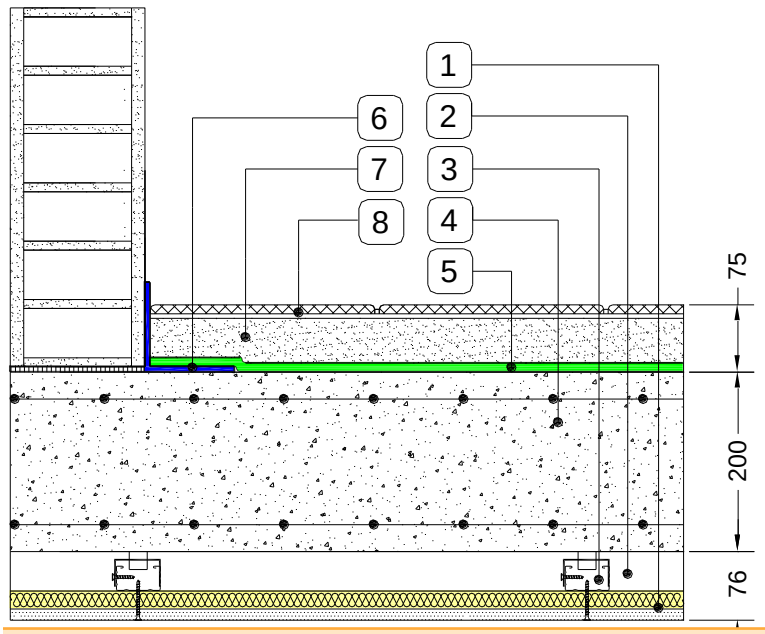
120 mm concrete slab



1. **33 mm–thick acoustic insulation coupled panels: a 20 mm-thick mineral rock wool panel and a 12.5 mm-thick plaster covered slab (Mineral 33B). 40 mm-thick acoustic insulation coupled panels: an 8mm-thick SBR rubber panel a 20 mm-thick rock wool panel, and a 12.5 mm-thick plaster covered slab (Mineral 40RB). The panels are 1.20 m wide x 2.00 m hight.**
2. Air cavity, 35 mm thickness
3. Metal frame
4. Concrete slab, 120 mm thickness
5. **Acoustic insulation supplied in rolls and produced using SBR or EPDM rubber. Thickness is between 4-10 mm**
6. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene. The dimensions are: base 50 mm, height 150 mm**
7. Sand and cement floating screed, 50 mm thickness
8. Ceramic tile, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Roll 7 – Mineral 33B	53	61	0.76		Page 120 – 148	Page 168 – 170		
Roll 7 – Mineral 40RB	52	62	0.72		Page 120 – 149	Page 168 – 170		
Grei 5 – Mineral 33B	51	61	0.76	Page 103	Page 122 – 148	Page 168 – 170		
Grei 5 – Mineral 40RB	50	62	0.72		Page 122 – 149	Page 168 – 170		

200 mm concrete slab

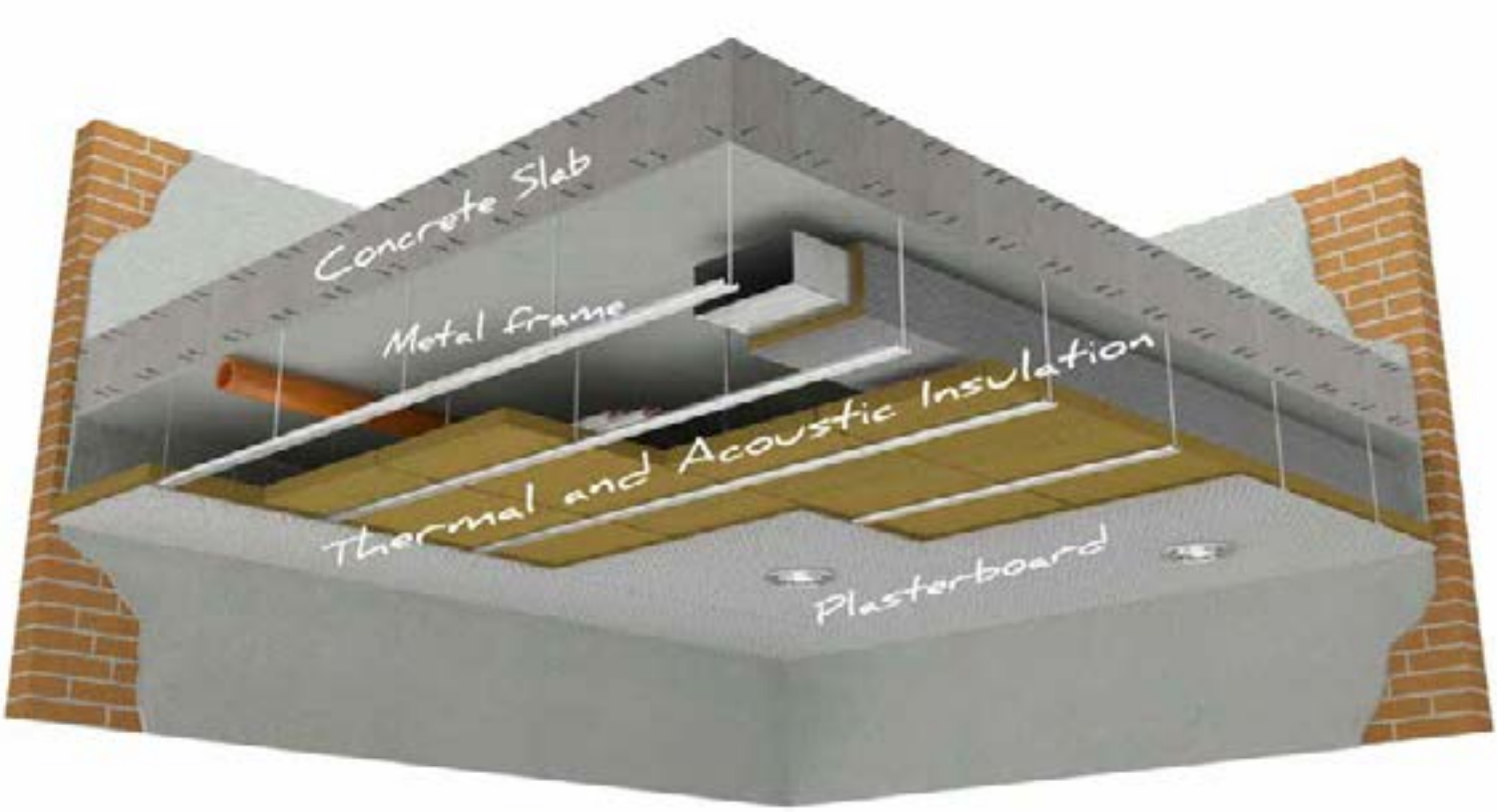


1. **33 mm–thick acoustic insulation coupled panels: a 20 mm-thick mineral rock wool panel and a 12.5 mm-thick plaster covered slab (Mineral 33B). 40 mm-thick acoustic insulation coupled panels: an 8mm-thick SBR rubber panel a 20 mm-thick rock wool panel, and a 12.5 mm-thick plaster covered slab (Mineral 40RB). The panels are 1.20 m wide x 2.00 m hight.**
2. Air cavity, 35 mm thickness
3. Metal frame
4. Concrete slab, 200 mm thickness
5. **Acoustic insulation supplied in rolls and produced using SBR or EPDM rubber. Thickness is between 4-10 mm**
6. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene. The dimensions are: base 50 mm, height 150 mm**
7. Sand and cement floating screed, 50 mm thickness
8. Ceramic tile, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Roll 7 – Mineral 33B	45	65	0.74		Page 120 – 148	Page 168 – 170		
Roll 7 – Mineral 40RB	44	66	0.70	Page 103	Page 120 – 149	Page 168 – 170		
Grei 5 – Mineral 33B	43	65	0.74		Page 122 – 148	Page 168 – 170		
Grei 5 – Mineral 40RB	42	66	0.70		Page 122 – 149	Page 168 – 170		

Ceilings insulation

Suspended ceiling



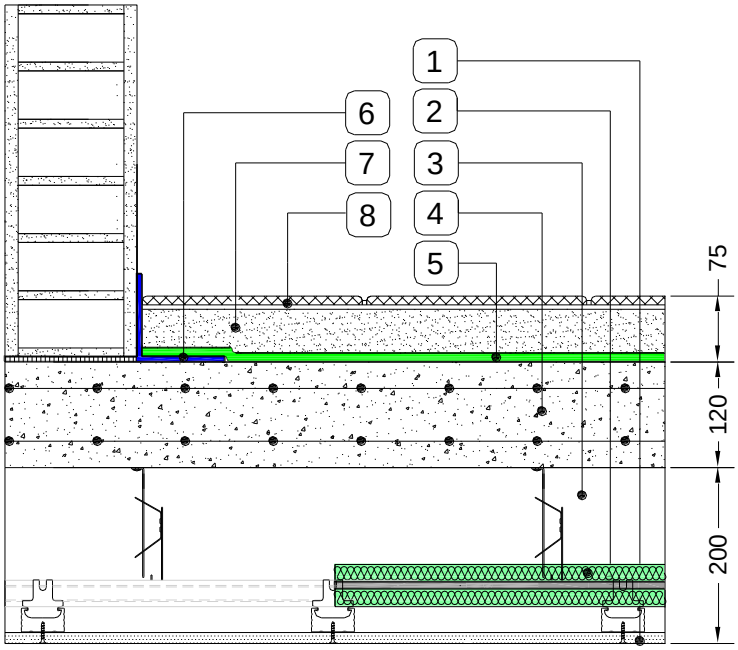
The suspended ceiling is largely used in commercial buildings. It is an interesting solution because it allows the installation of air ducts for heating, cooling and air conditioning in the space between upper floor and finishing, wich can also be large. It allows also the installation of all the other service equipments, before finishing.

Acoustic insulation: *the choice is based on different variables: the space available over the steel structure, the desired acoustic and thermal insulation. The increase in acoustic and thermal insulation depends on the dimension of the cavity and the thickness of the insulation layer. The suspended ceiling solution allows to insulate the ceiling with a thickness more than 10 cm.*

Steel structure: the steel structure is fixed with hangers, to suspend the guides and profiles for the fastening of the plasterboards or alternatively the suspended absorption squared boards. In the case of a beam and hollow block floor or similar, the fastening of the hangers should be done on the concrete beams. It is important to adopt damped hangers for the fastening of the steel structures.

Ceilings insulation

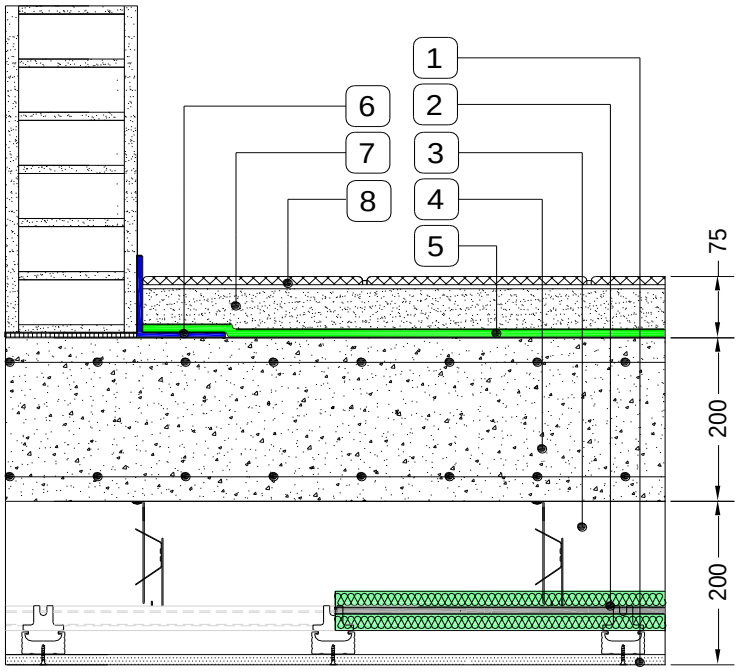
120 mm concrete slab



1. **30 or 50 mm-thick acoustic insulation made in polyesther fibre (Fybro 30 or 50); 48 mm-thick acoustic insulation coupled panels: an 8mm-thick SBR rubber panel, and double layer of 20 mm-thick polyester fiber panel (Trywall 48); the panels are 0.60 m wide x 1.20 m hight.**
2. Air cavity, 35 mm thickness
3. Metal frame
4. Concrete slab, 120 mm thickness
5. **Acoustic insulation supplied in rolls and produced using SBR or EPDM rubber. Thickness is between 4-10 mm**
6. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene. The dimensions are: base 50 mm, height 150 mm**
7. Sand and cement floating screed, 50 mm thickness
8. Ceramic tile, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Grei 5 – Fybro 30	51	62	0.57		Page 122 – 137	Page 168 – 171		
Grei 5 – Fybro 50	51	62	0.43		Page 122 – 137	Page 168 – 171		
Grei 5 – Trywall 48	50	63	0.51	Page 104	Page 122 – 139	Page 168 – 171		

200 mm concrete slab

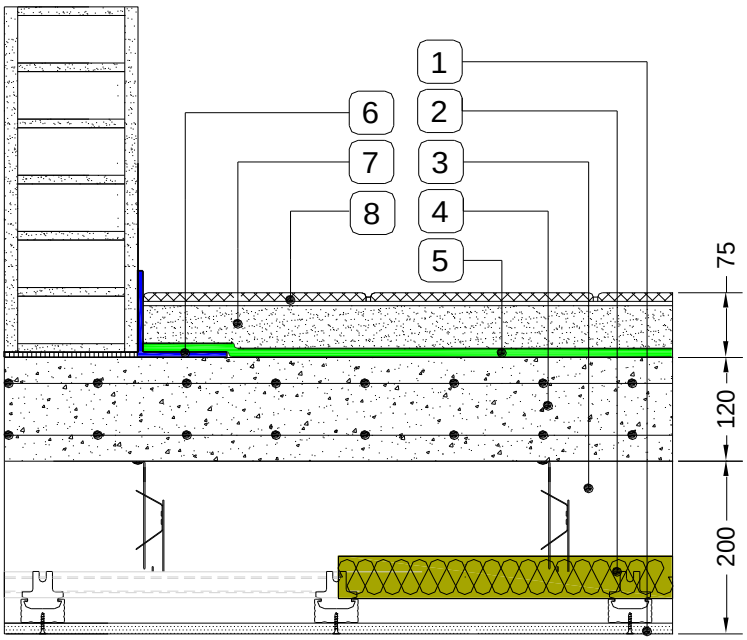


1. **30 or 50 mm-thick acoustic insulation made in polyesther fibre (Fybro 30 or 50); 48 mm-thick acoustic insulation coupled panels: an 8mm-thick SBR rubber panel, and double layer of 20 mm-thick polyester fiber panel (Trywall 48); the panels are 0.60 m wide x 1.20 m hight.**
2. Air cavity, 35 mm thickness
3. Metal frame
4. Concrete slab, 200 mm thickness
5. **Acoustic insulation supplied in rolls and produced using SBR or EPDM rubber. Thickness is between 4-10 mm**
6. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene. The dimensions are: base 50 mm, height 150 mm**
7. Sand and cement floating screed, 50 mm thickness
8. Ceramic tile, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Grei 5 – Fybro 30	42	66	0.56		Page 122 – 137	Page 168 – 171		
Grei 5 – Fybro 50	42	66	0.43		Page 122 – 137	Page 168 – 171		
Grei 5 – Trywall 48	41	67	0.50	Page 104	Page 122 – 139	Page 168 – 171		

Suspended ceiling

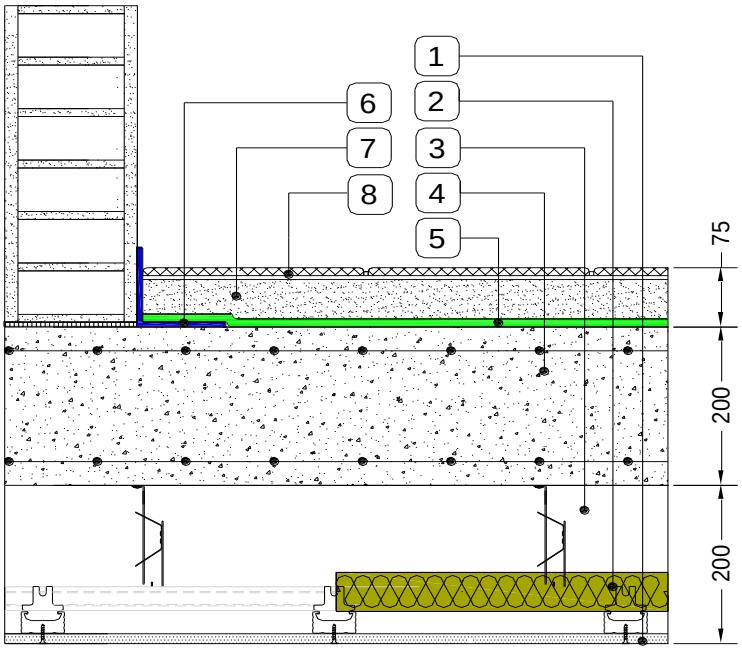
120 mm concrete slab



1. **Airborne noise insulation in 30 or 50 mm made of Kenaf fibers; density 50 kg/m³. Panels dimensions: 1.20 m length, 0.60 m width.**
2. Air cavity, 35 mm thickness
3. Metal frame
4. Concrete slab, 120 mm thickness
5. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM. Thickness is between 4-10 mm**
6. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
7. Sand and cement floating screed, 50 mm thickness
8. Ceramic tile, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Roll 7 – Natur 30	53	62	0.56		Page 120 – 143	Page 168 – 171		
Roll 7 – Natur 50	53	62	0.43		Page 120 – 143	Page 168 – 171		
Grei 5 – Natur 30	51	62	0.56		Page 122 – 143	Page 168 – 171		
Grei 5 – Natur 50	51	62	0.42	Page 105	Page 122 – 143	Page 168 – 171		

200 mm concrete slab

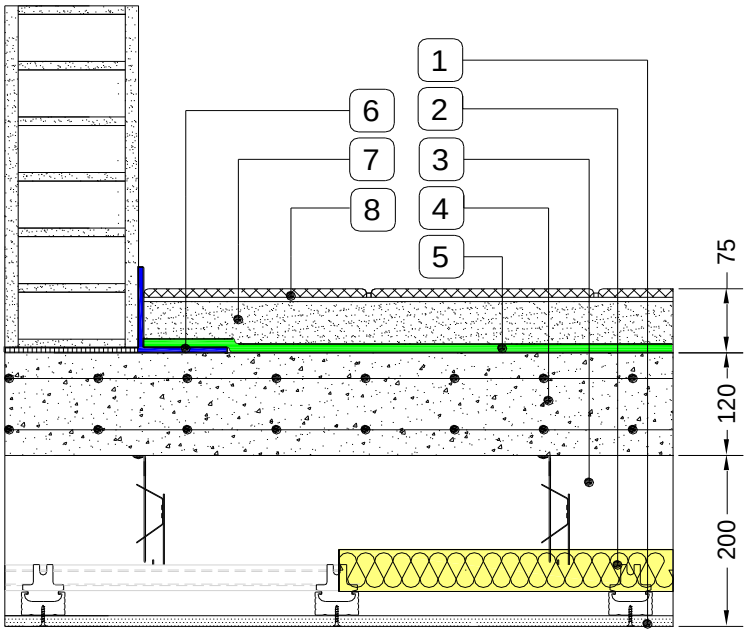


1. **Airborne noise insulation in 30 or 50 mm made of Kenaf fibers; density 50 kg/m³. Panels dimensions: 1.20 m length, 0.60 m width.**
2. Air cavity, 35 mm thickness
3. Metal frame
4. Concrete slab, 200 mm thickness
5. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM. Thickness is between 4-10 mm**
6. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
7. Sand and cement floating screed, 50 mm thickness
8. Ceramic tile, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Roll 7 – Natur 30	44	66	0.55		Page 120 – 143	Page 168 – 171		
Roll 7 – Natur 50	44	66	0.42	Page 105	Page 120 – 143	Page 168 – 171		
Grei 5 – Natur 30	42	66	0.55		Page 122 – 143	Page 168 – 171		
Grei 5 – Natur 50	42	66	0.42		Page 122 – 143	Page 168 – 171		

Ceilings insulation

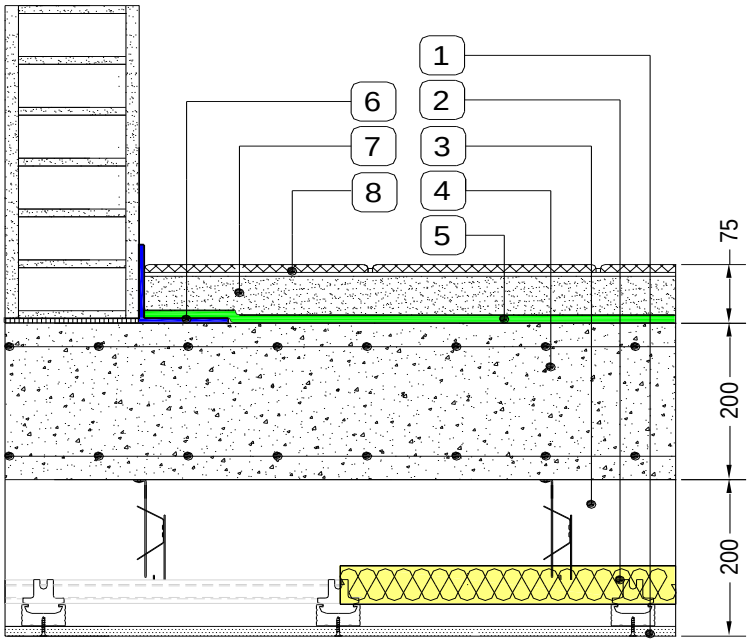
120 mm concrete slab



1. **Acoustic and thermal insulation in 50 mm thick made in rock wool; density 50 or 70 kg/m³. Panels dimensions: 1.00 m lengh, 0.60 m width**
2. Air cavity, 35 mm thickness
3. Metal frame
4. Concrete slab, 120 mm thickness
5. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM. Thickness is between 4-10 mm**
6. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
7. Sand and cement floating screed, 50 mm thickness
8. Ceramic tile, 10 mm thickness

Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Roll 7 – Mineral 50-50	53	62	0.56		Page 120 – 145	Page 168 – 171		
Roll 7 – Mineral 50-70	53	62	0.43		Page 120 – 145	Page 168 – 171		
Grei 5 – Mineral 50-50	51	62	0.56		Page 122 – 145	Page 168 – 171		
Grei 5 – Mineral 50-70	51	62	0.42	Page 106	Page 122 – 145	Page 168 – 171		

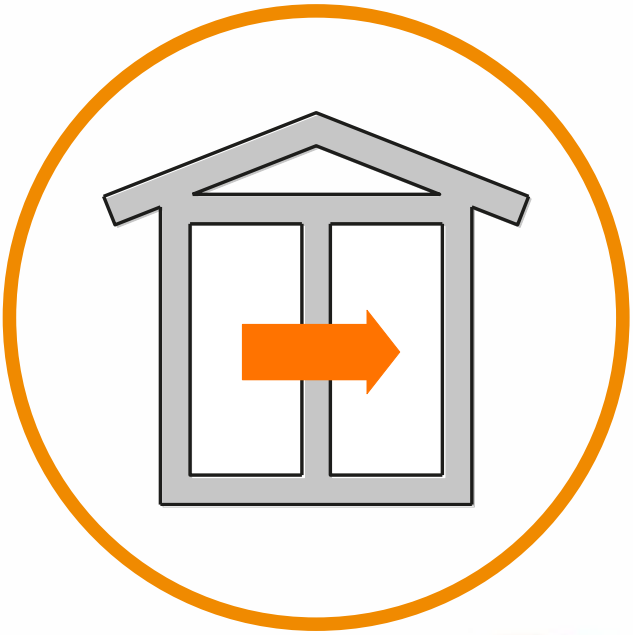
200 mm concrete slab



1. **Acoustic and thermal insulation in 50 mm thick made in rock wool; density 50 or 70 kg/m³. Panels dimensions: 1.00 m lengh, 0.60 m width**
2. Air cavity, 35 mm thickness
3. Metal frame
4. Concrete slab, 200 mm thickness
5. **Acoustic insulation supplied in rolls and produced using fibres and granules of SBR or granules of EPDM. Thickness is between 4-10 mm**
6. **Acoustic insulating bands pre-shaped in an angular profile made of polyethylene with a self adhesive film on one side for ease of application. The dimensions are: base 50 mm, height 150 mm**
7. Sand and cement floating screed, 50 mm thickness
8. Ceramic tile, 10 mm thickness

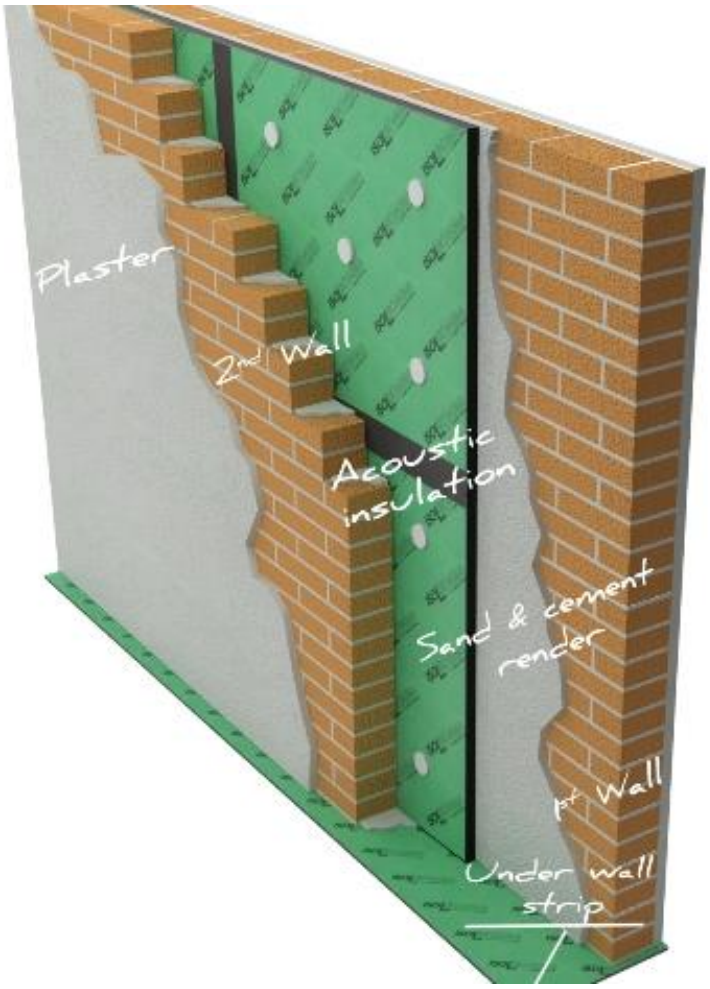
Product	*L_{nw} (dB)*	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Roll 7 – Mineral 50-50	44	66	0.55		Page 120 – 145	Page 168 – 171		
Roll 7 – Mineral 50-70	44	66	0.42	Page 106	Page 120 – 145	Page 168 – 171		
Grei 5 – Mineral 50-50	42	66	0.55		Page 122 – 145	Page 168 – 171		
Grei 5 – Mineral 50-70	42	66	0.42		Page 122 – 145	Page 168 – 171		

WALLS INSULATION



Walls insulation

Double wall

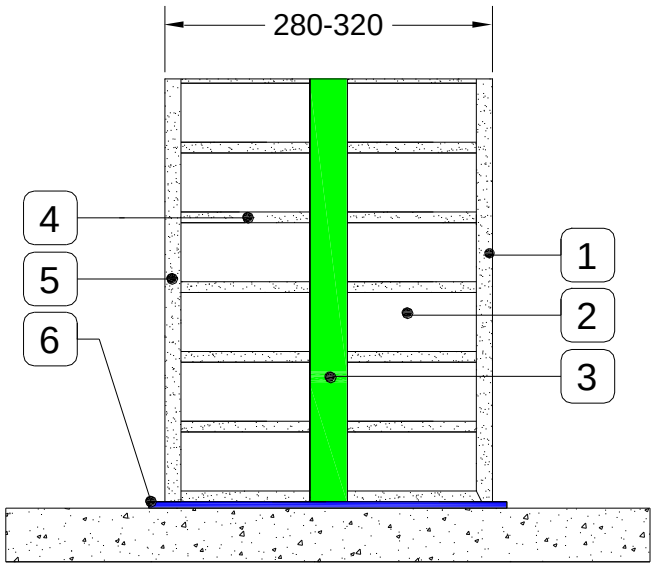


The double wall system is commonly used to separate two independent housing units. This kind of wall is normally made of solid or hollow blocks. The insulation elements are placed within the centre cavity with the purpose of creating an elastic and absorbing panel to improve the acoustic properties of the wall system.

Under-Wall Strip: under any wall or partition a resilient strip is needed in order to prevent the transfer of structural vibration or noise to the floor and vice versa.
Plaster: the finishing layer is generally made of gypsum plaster which, from an acoustic point of view, is used to seal any gaps in the brick wall and contribute to the overall wall mass.
Wall 1: composed of different sizes of bricks, depending on wall specification, which are jointed together with mortar. It is very important that horizontal and vertical joints are properly sealed with sufficient mortar.
Sand & Cement Render: from an acoustic point of view this seals any gaps in the brick wall and contributes to the overall wall mass.
Acoustic Insulation: fixed to the wall by mechanical nailing or adhesive. The desired outcome is to create an uniform acoustic layer separating the two walls, improving greatly the overall acoustic performance of the wall system.
Wall 2: composed of different sizes of bricks, depending on wall specification, which are jointed together with mortar. It is very important that horizontal and vertical joints are properly sealed with sufficient mortar.
Plaster: the finishing layer is generally made from gypsum plaster which, from an acoustic point of view, is used to seal any gaps in the brick wall and contribute to the overall wall mass.

Double wall

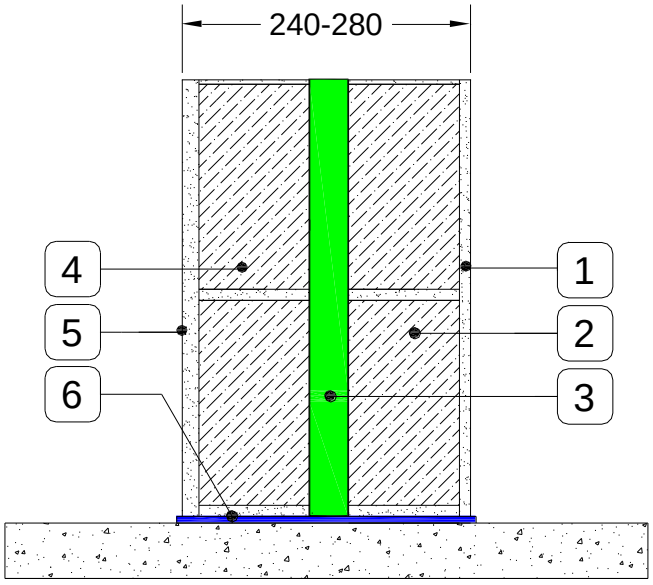
Double brick wall



1. Plaster, 15 mm thickness
2. Brick wall, 120 mm thickness
3. **10-50 mm acoustic insulation panel**
4. Brick wall, 120 mm thickness
5. Plaster, 15 mm thickness
6. **Underwall strip: acoustic insulation supplied in rolls and produced using fibres and granules of SBR rubber.**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Mustwall 10	54	1.38		Page 134	Page 172		
Mustwall 20	56	1.23		Page 134	Page 172	Page 187	
Fybro 30	54	0.68		Page 137	Page 173		
Mineral 50/50	55	0.49		Page 145	Page 173		
Biwall 40	56	0.67	Page 107	Page 138	Page 172		
Mineral 50R	56	0.55		Page 146	Page 172	Page 188	

Double light concrete wall

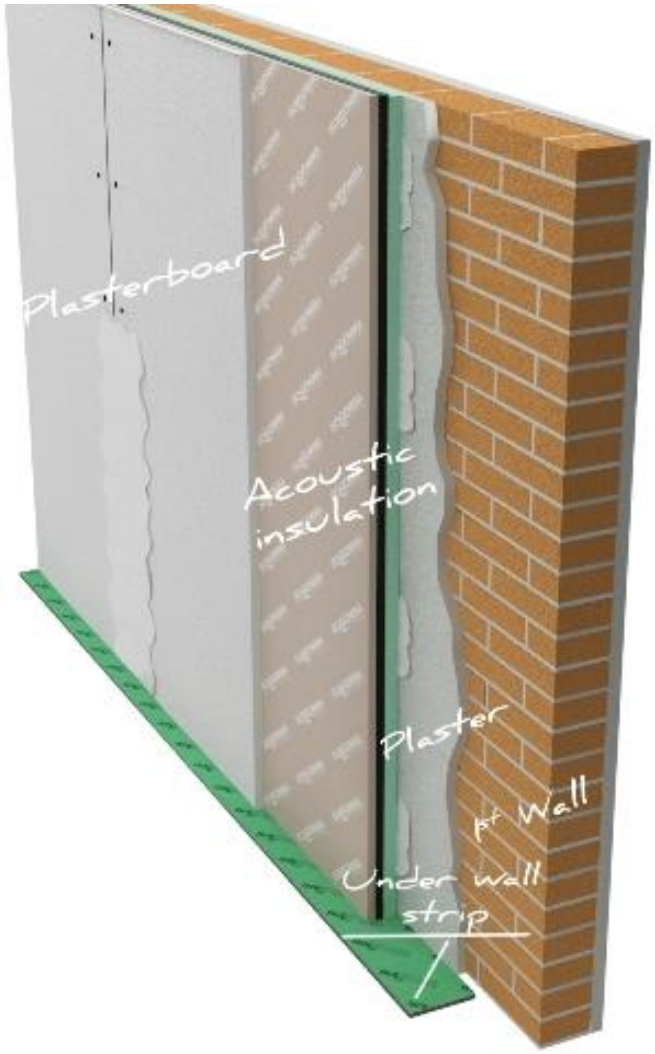


1. Plaster, 15 mm thickness
2. Cellular concrete wall, 100 cm thickness
3. Plaster, 10 mm thickness
4. **10-50 mm acoustic insulation panel**
5. Cellular concrete wall, 100 cm thickness
6. Plaster, 15 cm thickness
7. **Underwall strip: acoustic insulation supplied in rolls and produced using fibres and granules of SBR rubber.**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Mustwall 10	53	0.57		Page 134	Page 172		
Mustwall 20	55	0.54		Page 134	Page 172		
Fybro 30	53	0.40		Page 137	Page 173		
Mineral 50/50	54	0.32		Page 145	Page 173		
Biwall 40	55	0.40	Page 107	Page 138	Page 172	Page 189	
Mineral 50R	55	0.35		Page 146	Page 172		

Walls insulation

Coated wall

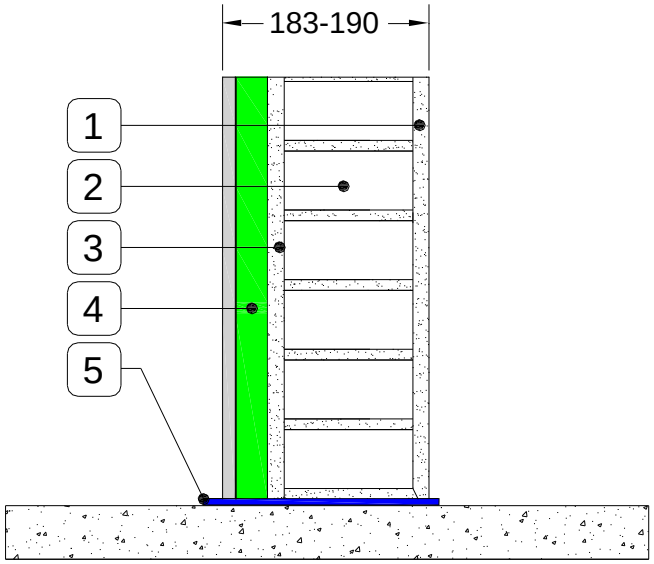


A coated wall is used for renovation or to improve an existing wall performance. This system focuses on increasing the acoustic performance with a limited increase in the wall thickness. This solution can be adopted when a wall needs to be upgraded to meet local building regulations.
The system features a traditional block wall on which a light wall system is installed consisting of acoustic panels with plasterboard finishing.

Under wall strip: under any partition an elastic rubber Stywall strip must be placed to minimise any sound and vibration transmission from the wall to the floor. The minimum width of the strip width must be equal to the total wall width.
Plaster 1: the finishing layer is generally made from gypsum plaster which, from an acoustic point of view, is used to seal any gaps in the brick wall and contribute to the overall wall mass.
Wall: composed of different sizes of bricks, depending on wall specification, which are jointed together with mortar. It is very important that horizontal and vertical joints are properly sealed with sufficient mortar.
Plaster 2: the finishing layer is generally made from gypsum plaster which, from an acoustic point of view, is used to seal any gaps in the brick wall and contribute to the overall wall mass.
Acoustic Insulation: fixed to the wall by mechanical nailing or adhesive. The desired outcome is to create an uniform acoustic layer separating the structural wall from the gypsum board. This coating can be done on both sides of the structural wall.
Plasterboard: external side of the wall system made up of one or more layers of plasterboard. These boards can also be of different thicknesses and between the boards an additional acoustic layer such as Syl, can be placed to improve the acoustic insulation.

Coated wall

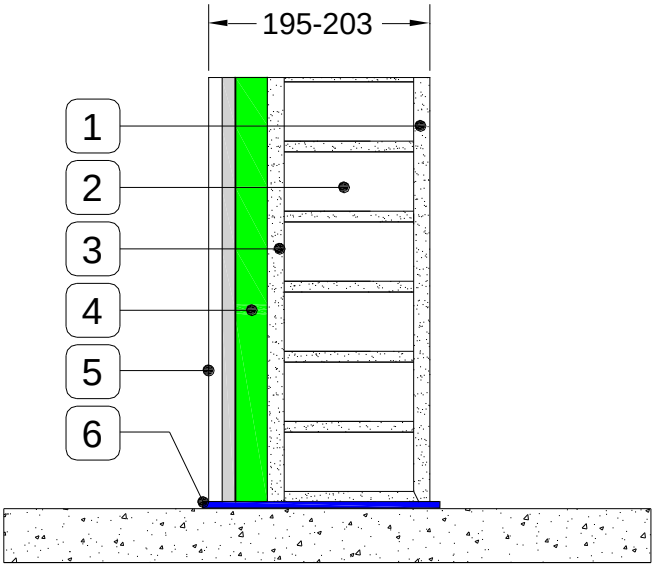
120 mm brick wall



1. Plaster, 15 mm thickness
2. Brick wall, 120 mm thickness
3. Plaster, 15 mm thickness
4. **10-50 mm acoustic insulation panel**
5. **Underwall strip: acoustic insulation supplied in rolls and produced using fibres and granules of SBR rubber.**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Mustwall 33B	53	1.45	Page 108	Page 136	Page 175		
Rewall 33B	53	0.87		Page 141	Page 175		
Rewall 40	56	0.82		Page 140	Page 175		
Natur 33B	53	0.84		Page 144	Page 175		
Mineral 33B	53	0.91		Page 148	Page 175		
Mineral 40RB	56	0.86		Page 149	Page 175		

120 mm brick wall with plasterboard

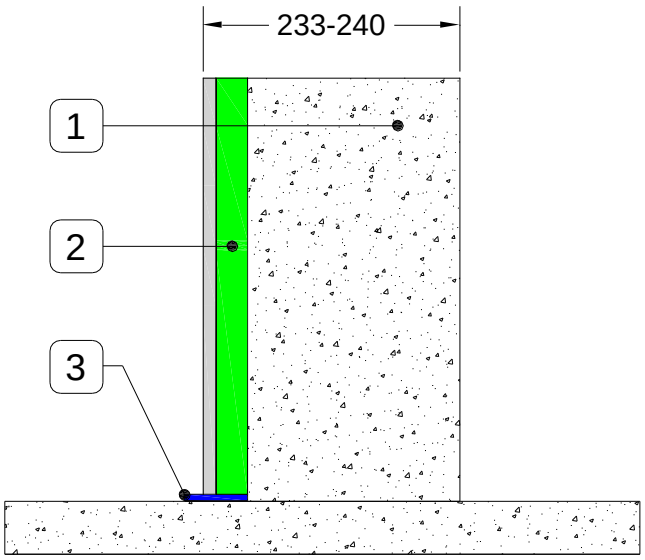


1. Plaster, 15 mm thickness
2. Brick wall, 120 mm thickness
3. Plaster, 15 mm thickness
4. **10-50 mm acoustic insulation panel**
5. Plasterboard layer, 12.5 mm thickness
6. **Underwall strip: acoustic insulation supplied in rolls and produced using fibres and granules of SBR rubber.**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Mustwall 33B	54	1.33		Page 134	Page 175	Page 189	
Rewall 33B	55	0.83		Page 141	Page 175	Page 190	
Rewall 40	57	0.78		Page 140	Page 175		
Natur 33B	55	0.80		Page 144	Page 175		
Mineral 33B	55	0.87		Page 148	Page 175		
Mineral 40RB	57	0.81	Page 108	Page 149	Page 175	Page 190	

Walls insulation

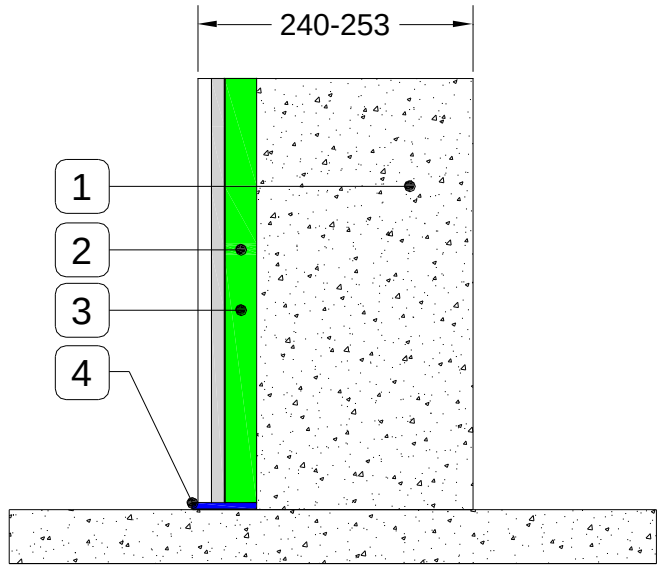
200 mm concrete wall



1. Concrete wall, 200 mm thickness
2. **10-50 mm acoustic insulation panel**
3. **Underwall strip: acoustic insulation supplied in rolls and produced using fibres and granules of SBR rubber.**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Mustwall 33B	58	1.74		Page 136	Page 175		
Rewall 33B	58	0.97		Page 141	Page 175		
Rewall 40	61	0.90		Page 140	Page 175		
Natur 33B	58	0.93	Page 109	Page 144	Page 175		
Mineral 33B	58	1.02		Page 148	Page 175		
Mineral 40RB	61	0.95		Page 149	Page 175		

200 mm concrete wall with plasterboard

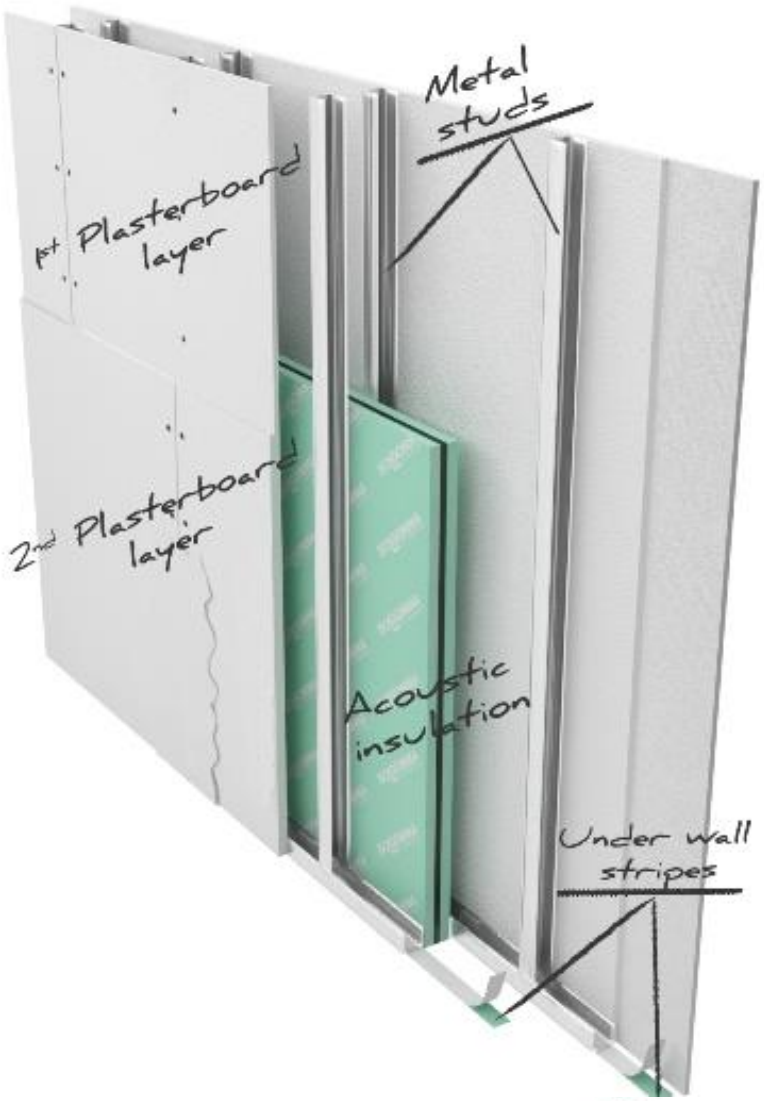


1. Concrete wall, 200 mm thickness
2. **10-50 mm acoustic insulation panel**
3. Plasterboard layer, 12.5 mm thickness
4. **Underwall strip: acoustic insulation supplied in rolls and produced using fibres and granules of SBR rubber.**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Mustwall 33B	59	1.57		Page 136	Page 175		
Rewall 33B	60	0.91		Page 141	Page 175		
Rewall 40	62	0.86	Page 109	Page 140	Page 175		
Natur 33B	60	0.88		Page 144	Page 175		
Mineral 33B	60	0.96		Page 148	Page 175		
Mineral 40RB	62	0.90		Page 149	Page 175		

Wall insulation

Plasterboard wall

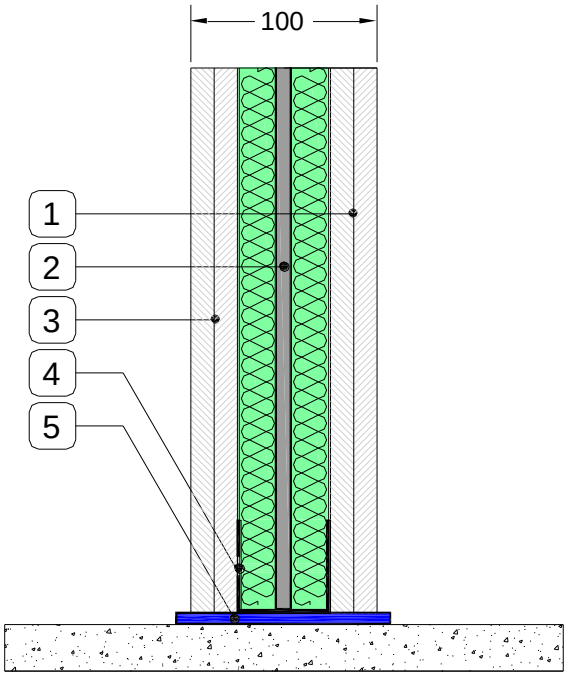


The Plasterboard wall system (also called a dry wall or gypsumboard wall) is made of two layers of plasterboards which are fixed on a single or double metallic frame structure. Typically in the centre of the metal structure a panel of acoustic and thermal insulation is placed.

Under wall strip: under any partition an elastic rubber Stywall strip must be placed to minimise any sound and vibration transmission from the wall to the floor. The minimum width of the strip width must be equal to the total wall width.
Plasterboard 1: external side of the wall system made up of one or more layers of plasterboard. These boards can also be of different thicknesses and between the boards an additional acoustic layer such as Syl, can be placed to improve the acoustic insulation.
Metal Frame: the structural skeleton of the wall on which the external boards are fixed to. They are available in various different sizes depending on wall size and application. The acoustic panels are located inside this frame.
Acoustic Insulation : placed in the cavity of the plasterboard system. It is important that the full metal frame cavity is filled with the acoustic panel to achieve the best performance.
Plasterboard 2: External side of the wall system made up of one or more layers of plasterboard. These boards can also be of different thicknesses and between the boards an additional acoustic layer such as Syl, can be placed to improve the acoustic insulation.

Walls insulation

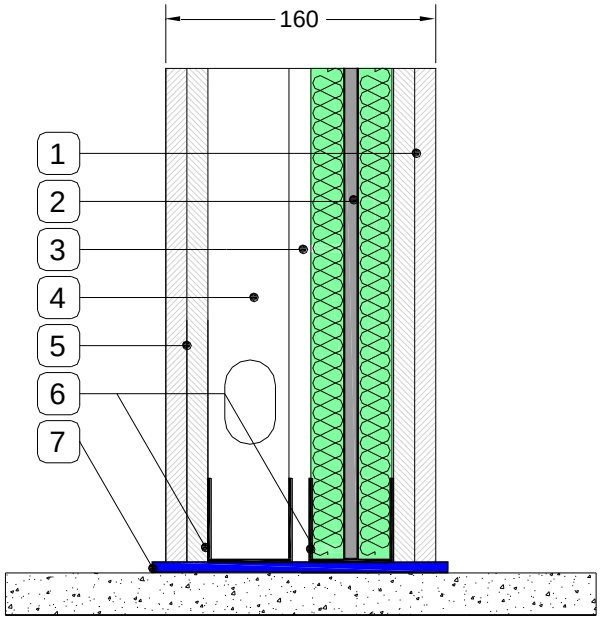
100 mm gypsum wall



1. Plasterboard double layer, 25 mm thickness
2. **Airborne Noise Insulation in 48 mm thick laminated panels. The central panel is made of fiber and granules of SBR and EPDM rubber a thickness of 8 mm; on either side there are two panels in polyester fiber of thickness 20 mm each. Panels dimensions: 1.20 m in length and 0.60 m in width**
3. Plasterboard double layer, 25 mm thickness
4. Metal frame, 50 mm thickness
5. **Acoustic insulation in strips 3 mm thick produced using fibers and granules of SBR rubber. Stripes dimensions: 20 m length**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Trywall 48	54	0.66	Page 110	Page 139	Page 174	Page 191	

160 mm gypsum wall

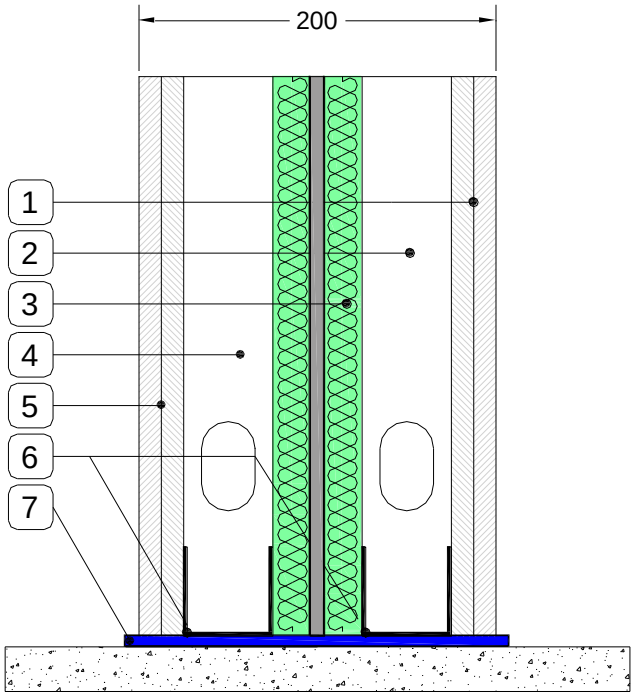


1. Plasterboard double layer, 25 mm thickness
2. **Airborne Noise Insulation in 48 mm thick laminated panels. The central panel is made of fiber and granules of SBR and EPDM rubber a thickness of 8 mm; on either side there are two panels in polyester fiber of thickness 20 mm each. Panels dimensions: 1.20 m in length and 0.60 m in width**
3. Air cavity, 10 mm thickness
4. Air cavity into metal frame, 50 mm thickness
5. Metal frame, 50 mm thickness
6. Plasterboard double layer, 25 mm thickness
7. **Acoustic insulation in strips 3 mm thick produced using fibers and granules of SBR rubber. Stripes dimensions: 20 m length**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Trywall 48	59	0.59	Page 110	Page 139	Page 174	Page 191	

Plasterboard wall

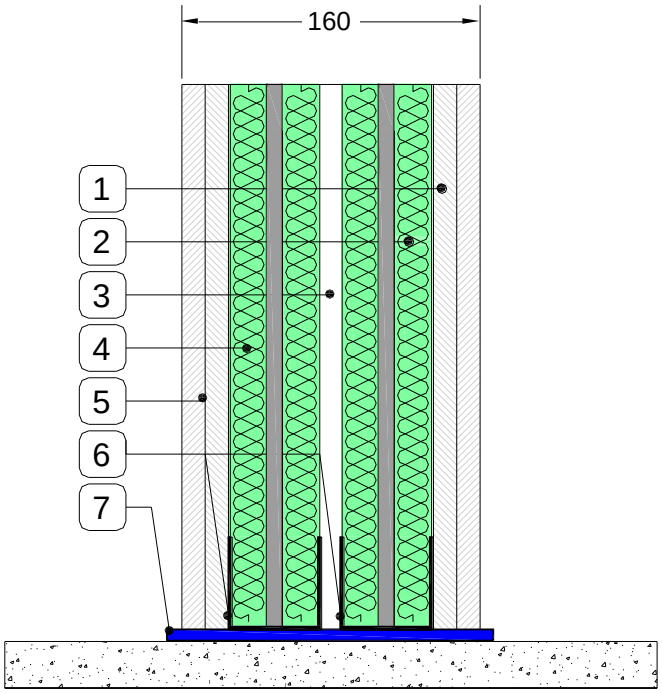
200 mm gypsum wall



1. Plasterboard double layer, 25 mm thickness
2. Air cavity in the metal frame, 50 mm thickness
3. **Airborne Noise Insulation in 48 mm thick laminated panels. The central panel is made of fiber and granules of SBR and EPDM rubber a thickness of 8 mm; on either side there are two panels in polyester fiber of thickness 20 mm each. Panels dimensions: 1.20 m in length and 0.60 m in width**
4. Air cavity in the metal frame, 50 mm thickness
5. Plasterboard double layer, 25 mm thickness
6. Metal frame, 50 mm thickness
7. **Acoustic insulation in strips 3 mm thick produced using fibers and granules of SBR rubber. Stripes dimensions: 20 m length**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Trywall 48	60	0.59	Page 111	Page 139	Page 174	Page 192	

160 mm gypsum wall

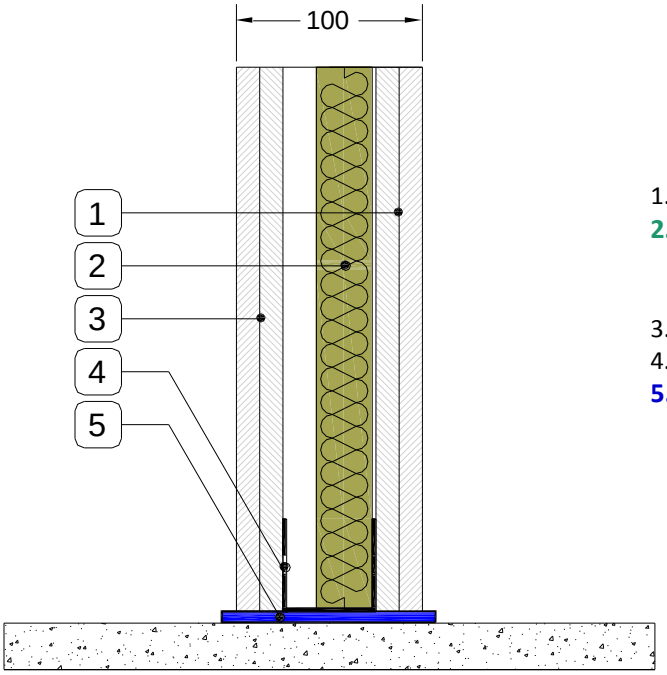


1. Plasterboard double layer, 25 mm thickness
2. **Airborne Noise Insulation in 48 mm thick laminated panels. The central panel is made of fiber and granules of SBR and EPDM rubber a thickness of 8 mm; on either side there are two panels in polyester fiber of thickness 20 mm each. Panels dimensions: 1.20 m in length and 0.60 m in width**
3. Air cavity, 10 mm thickness
4. **Airborne Noise Insulation in 48 mm thick laminated panels. The central panel is made of fiber and granules of SBR and EPDM rubber a thickness of 8 mm; on either side there are two panels in polyester fiber of thickness 20 mm each. Panels dimensions: 1.20 m in length and 0.60 m in width**
5. Plasterboard double layer, 25 mm thickness
6. Metal frame, 50 mm thickness
7. **Acoustic insulation in strips 3 mm thick produced using fibers and granules of SBR rubber. Stripes dimensions: 20 m length**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Trywall 48	63	0.37	Page 111	Page 13	Page 174	Page 192	

Walls insulation

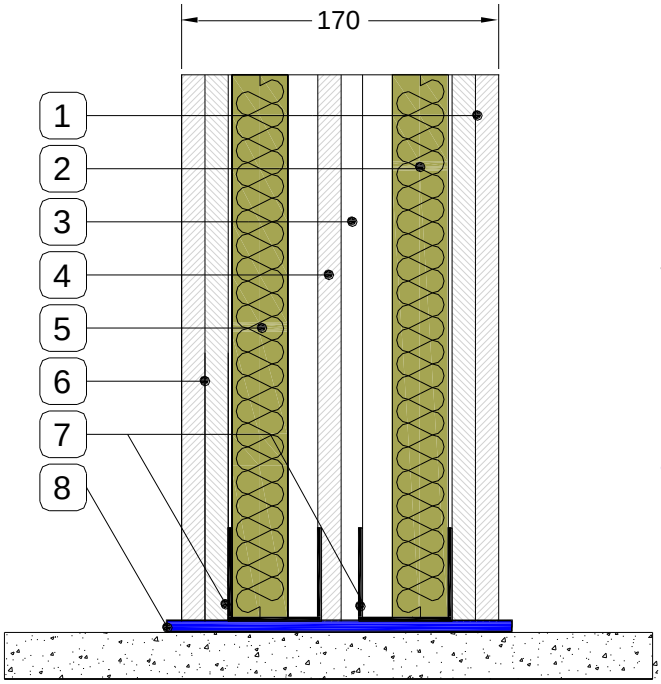
100 mm gypsum wall



1. Plasterboard double layer, 25 mm thickness
2. **Airborne noise insulation in 30 mm made of Kenaf fibers; density 50 kg/m³. Panels dimensions: 1.20 m length, 0.60 m width.**
3. Plasterboard double layer, 25 mm thickness
4. Metal frame, 50 mm thickness
5. **Acoustic insulation in strips 3 mm thick produced using fibers and granules of SBR rubber. Stripes dimensions: 20 m length**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Natur 30	52	0.65	Page 112	Page 143	Page 174		

170 mm gypsum wall

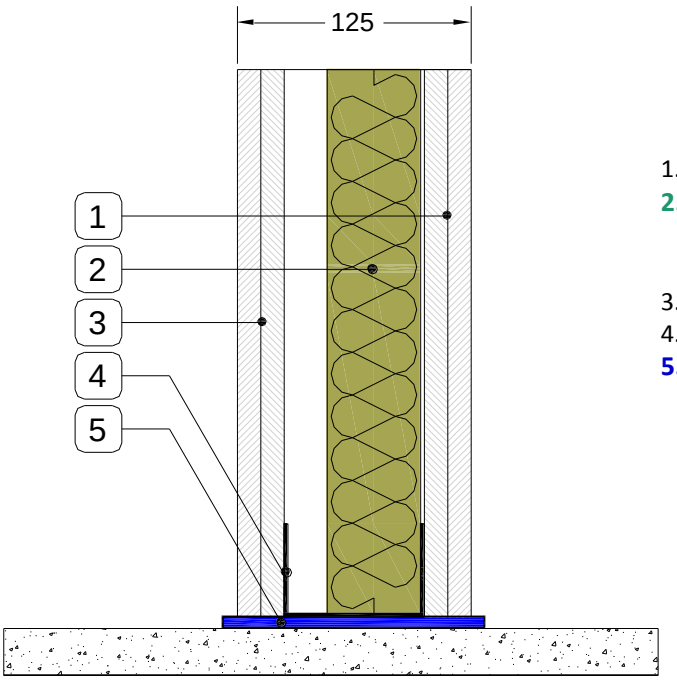


1. Plasterboard double layer, 25 mm thickness
2. **Airborne noise insulation in 30 mm made of Kenaf fibers; density 50 kg/m³. Panels dimensions: 1.20 m length, 0.60 m width.**
3. Air cavity, 10 mm thickness
4. Plasterboard layer, 12.5 mm thickness
5. **Airborne noise insulation in 30 mm made of Kenaf fibers; density 50 kg/m³. Panels dimensions: 1.20 m length, 0.60 m width.**
6. Plasterboard double layer, 25 mm thickness
7. Metal frame, 50 mm thickness
8. **Acoustic insulation in strips 3 mm thick produced using fibers and granules of SBR rubber. Stripes dimensions: 20 m length**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Natur 30	60	0.41	Page 112	Page 143	Page 174		

Plasterboard wall

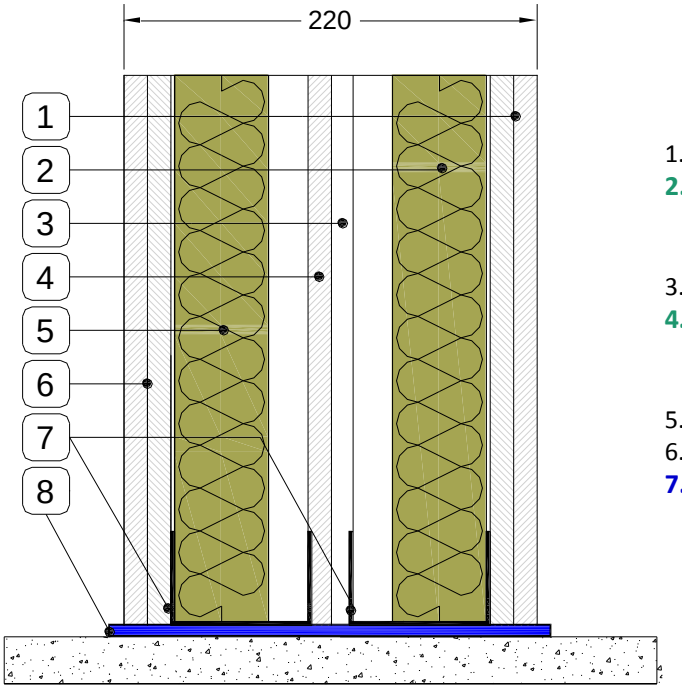
125 mm gypsum wall



1. Plasterboard double layer, 25 mm thickness
2. **Airborne noise insulation in 50 mm made of Kenaf fibers; density 50 kg/m³. Panels dimensions: 1.20 m length, 0.60 m width.**
3. Plasterboard double layer, 25 mm thickness
4. Metal frame, 75 mm thickness
5. **Acoustic insulation in strips 3 mm thick produced using fibers and granules of SBR rubber. Stripes dimensions: 20 m length**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Natur 50	54	0.48	Page 113	Page 143	Page 174	Page 193	

220 mm gypsum wall

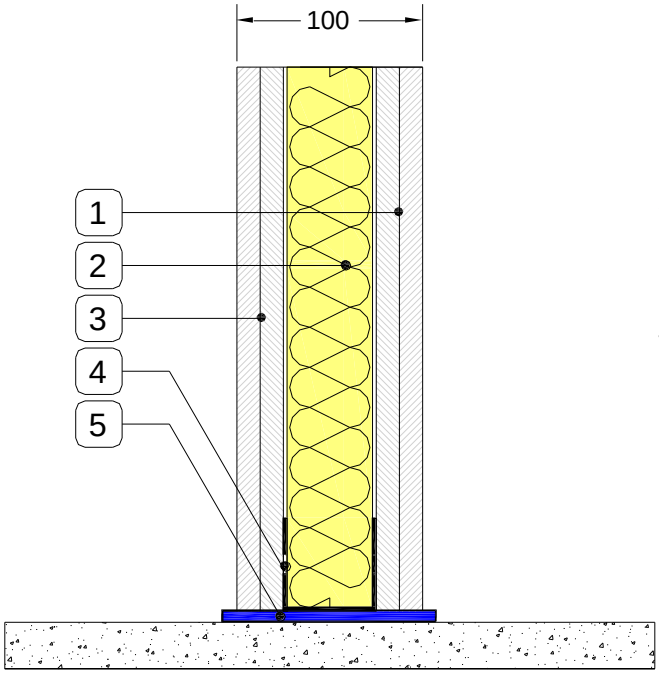


1. Plasterboard double layer, 25 mm thickness
2. **Airborne noise insulation in 50 mm made of Kenaf fibers; density 50 kg/m³. Panels dimensions: 1.20 m length, 0.60 m width.**
3. Air cavity, 10 mm thickness
4. **Airborne noise insulation in 50 mm made of Kenaf fibers; density 50 kg/m³. Panels dimensions: 1.20 m length, 0.60 m width.**
5. Plasterboard double layer, 12.5 mm thickness
6. Metal frame, 75 mm thickness
7. **Acoustic insulation in strips 3 mm thick produced using fibers and granules of SBR rubber. Stripes dimensions: 20 m length**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Natur 50	65	0.28	Page 113	Page 143	Page 174	Page 193	

Walls insulation

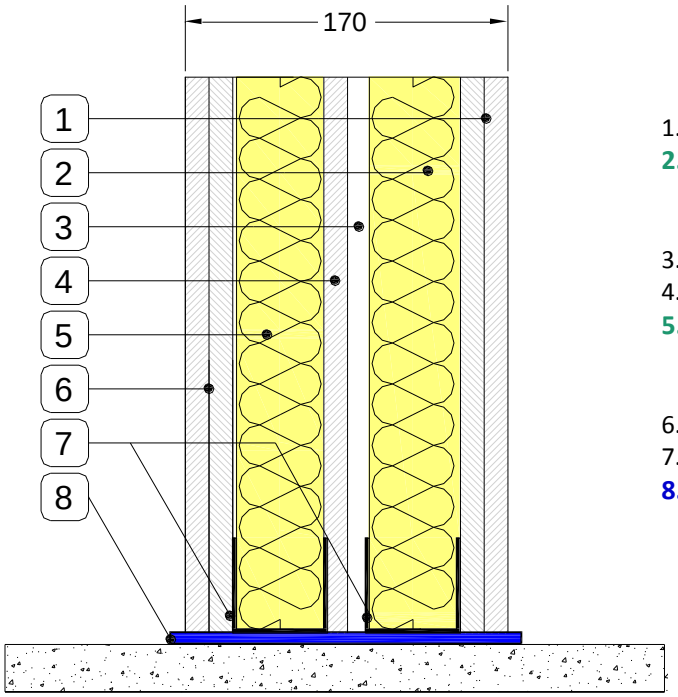
100 mm gypsum wall



1. Plasterboard double layer, 25 mm thickness
2. **Acoustic and thermal insulation in 50 mm thick made in rock wool; density 50 or 70 kg/m³. Panels dimensions: 1.00 m length, 0.60 m width**
3. Plasterboard double layer, 25 mm thickness
4. Metal frame, 75 mm thickness
5. **Acoustic insulation in strips 3 mm thick produced using fibers and granules of SBR rubber. Stripes dimensions: 20 m length**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Mineral 50-70	54	0.52	Page 114	Page 145	Page 174		

170 mm gypsum wall

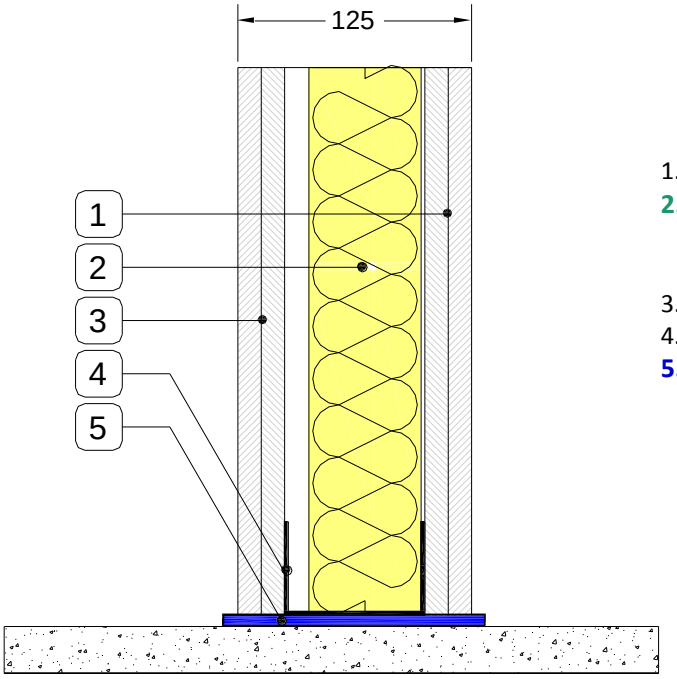


1. Plasterboard double layer, 25 mm thickness
2. **Acoustic and thermal insulation in 50 mm thick made in rock wool; density 50 or 70 kg/m³. Panels dimensions: 1.00 m length, 0.60 m width**
3. Air cavity, 10 mm thickness
4. Plasterboard layer, 12.5 mm thickness
5. **Acoustic and thermal insulation in 50 mm thick made in rock wool; density 50 or 70 kg/m³. Panels dimensions: 1.00 m length, 0.60 m width**
6. Plasterboard double layer, 25 mm thickness
7. Metal frame, 50 mm thickness
8. **Acoustic insulation in strips 3 mm thick produced using fibers and granules of SBR rubber. Stripes dimensions: 20 m length**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Mineral 50-70	63	0.47	Page 114	Page 145	Page 174		

Plasterboard wall

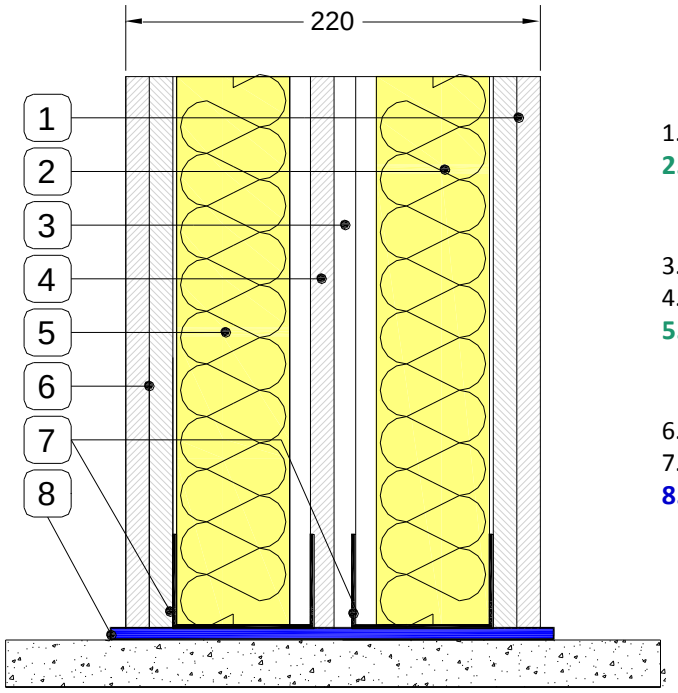
125 mm gypsum wall



1. Plasterboard double layer, 25 mm thickness
2. **Acoustic and thermal insulation in 60 mm thick made in rock wool; density 70 kg/m³. Panels dimensions: 1.00 m length, 0.60 m width**
3. Plasterboard double layer, 25 mm thickness
4. Metal frame, 75 mm thickness
5. **Acoustic insulation in strips 3 mm thick produced using fibers and granules of SBR rubber. Stripes dimensions: 20 m length**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Mineral 60-70	57	0.42	Page 114	Page 145	Page 174	Page 196	

220 mm gypsum wall

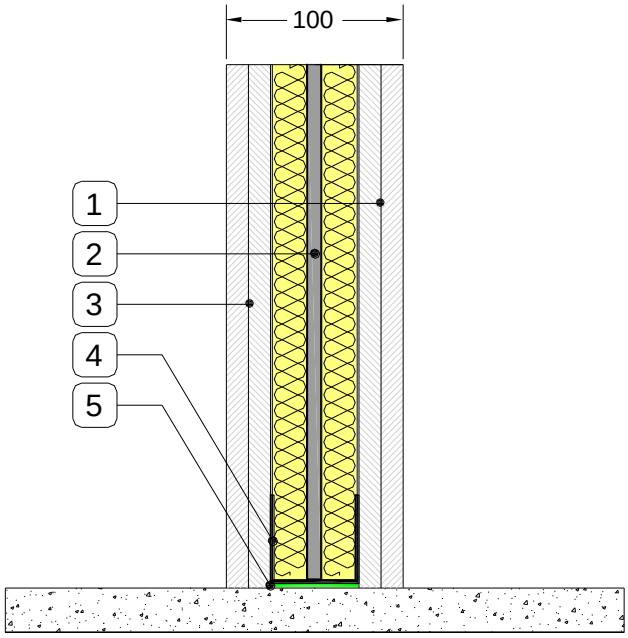


1. Plasterboard double layer, 25 mm thickness
2. **Acoustic and thermal insulation in 60 mm thick made in rock wool; density 70 kg/m³. Panels dimensions: 1.00 m length, 0.60 m width**
3. Air cavity, 10 mm thickness
4. Plasterboard layer, 12.5 mm thickness
5. **Acoustic and thermal insulation in 60 mm thick made in rock wool; density 70 kg/m³. Panels dimensions: 1.00 m length, 0.60 m width**
6. Plasterboard double layer, 25 mm thickness
7. Metal frame, 50 mm thickness
8. **Acoustic insulation in strips 3 mm thick produced using fibers and granules of SBR rubber. Stripes dimensions: 20 m length**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Mineral 60-70	67	0.24	Page 114	Page 145	Page 174		

Walls insulation

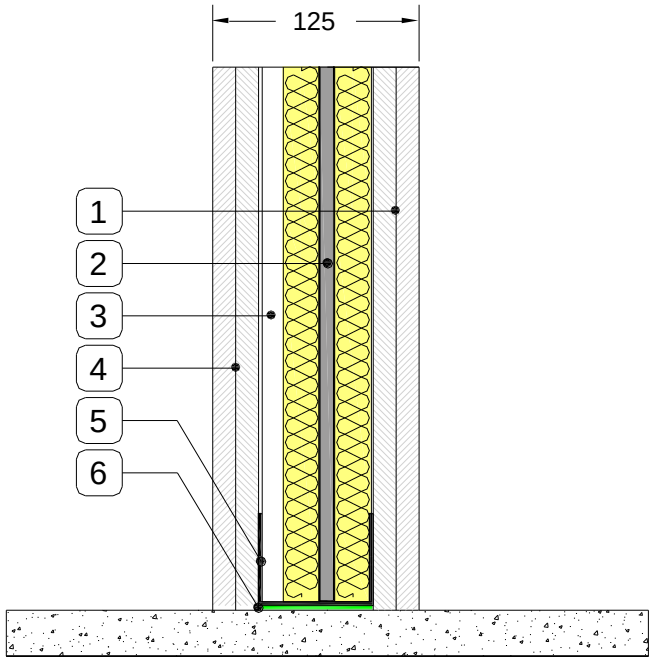
100 mm gypsum wall



1. Plasterboard double layer, 25 mm thickness
2. **Airborne Noise Insulation in 48 mm thick laminated panels. The central panel is made of fiber and granules of SBR and EPDM rubber a thickness of 8 mm; on either side there are two panels in rock wool of thickness 20 mm each. Panels dimensions: 1.00 m in length and 0.625 m in width**
3. Plasterboard double layer, 25 mm thickness
4. Metal frame, 50 mm thickness
5. **Acoustic insulation in strips 3 mm thick produced using fibers and granules of SBR rubber. Stripes dimensions: 20 m length**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Mineral 48 RM	55	0.59	Page 116	Page 147	Page 174	Page 194	

125 mm gypsum wall

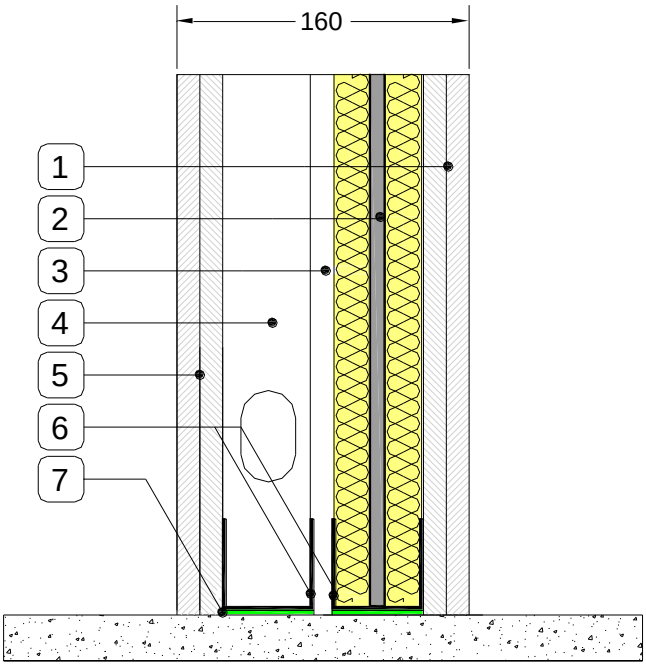


1. Plasterboard double layer, 25 mm thickness
2. **Airborne Noise Insulation in 48 mm thick laminated panels. The central panel is made of fibre and granules of SBR and EPDM rubber a thickness of 8 mm; on either side there are two panels in rock wool of thickness 20 mm each. Panels dimensions: 1.00 m in length and 0.625 m in width**
3. Air cavity, 25 mm thickness
4. Plasterboard double layer, 25 mm thickness
5. Metal frame, 75 mm thickness
6. **Acoustic insulation in strips 3 mm thick produced using fibres and granules of SBR rubber. Stripes dimensions: 20 m lenght**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Mineral 48 RM	58	0.53	Page 116	Page 147	Page 174	Page 194	

Plasterboard wall

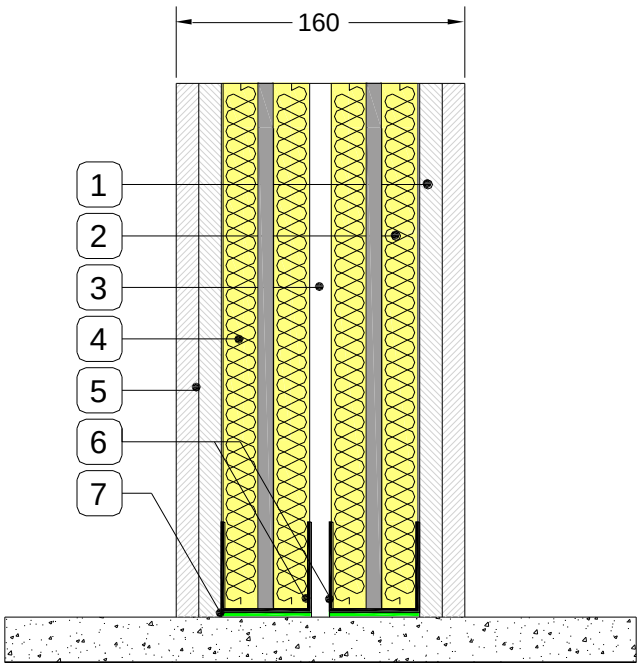
160 mm gypsum wall



1. Plasterboard double layer, 25 mm thickness
2. **Airborne Noise Insulation in 48 mm thick laminated panels. The central panel is made of fiber and granules of SBR and EPDM rubber a thickness of 8 mm; on either side there are two panels in rock wool of thickness 20 mm each. Panels dimensions: 1.00 m in length and 0.625 m in width**
3. Air cavity, 10 mm thickness
4. Air cavity into metal frame, 50 mm thickness
5. Plasterboard double layer, 25 mm thickness
6. Metal frame, 50 mm thickness
7. **Acoustic insulation in strips 3 mm thick produced using fibres and granules of SBR rubber. Stripes dimensions: 20 m lenght**

Product	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Mineral 48 RM	60	0.53	Page 117	Page 147	Page 174	Page 195	

160 mm gypsum wall

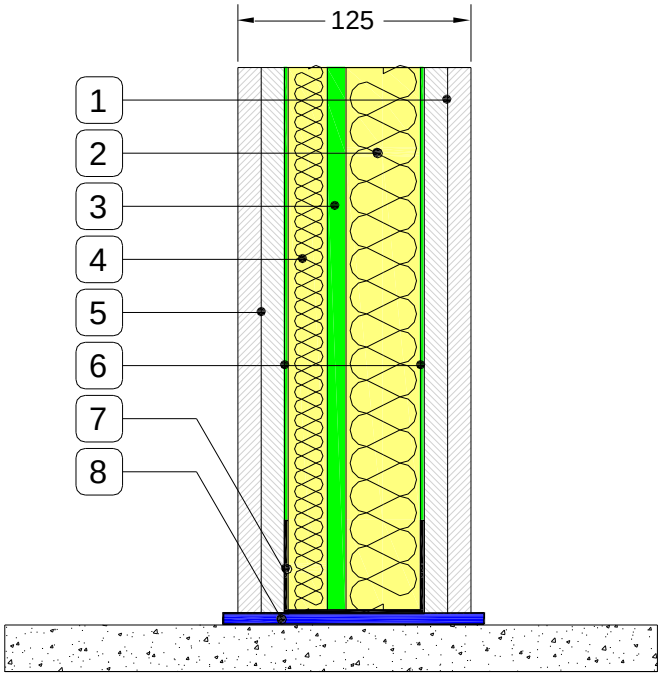


1. Plasterboard double layer, 25 mm thickness
2. **Airborne Noise Insulation in 48 mm thick laminated panels. The central panel is made of fiber and granules of SBR and EPDM rubber a thickness of 8 mm; on either side there are two panels in rock wool of thickness 20 mm each. Panels dimensions: 1.00 m in length and 0.625 m in width**
3. Air cavity, 10 mm thickness
4. **Airborne Noise Insulation in 48 mm thick laminated panels. The central panel is made of fiber and granules of SBR and EPDM rubber a thickness of 8 mm; on either side there are two panels in rock wool of thickness 20 mm each. Panels dimensions: 1.00 m in length and 0.625 m in width**
5. Plasterboard double layer, 25 mm thickness
6. Metal frame, 50 mm thickness
7. **Acoustic insulation in strips 3 mm thick produced using fibers and granules of SBR rubber. Stripes dimensions: 20 m length**

Product	*R_w (dB)*	*U (W/m^2K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Mineral 48 RM	65	0.33	Page 117	Page 147	Page 174	Page 195	

Walls insulation

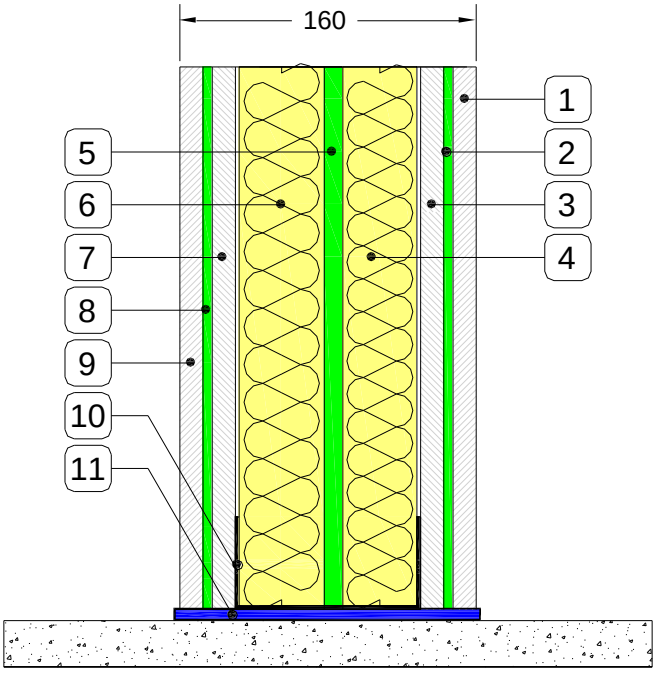
125 mm gypsum wall



1. Plasterboard double layer, 25 mm thickness
2. **Acoustic and thermal insulation in 40 mm thick made in rock wool; density 70 kg/m³.**
3. **10 mm acoustic insulation supplied in panels and produced using fibers and granules of SBR and EPDM compacted using a polyurethane adhesive in a hot process. A non-woven, non-stretch synthetic membrane is applied on both sides for added protection. Density of 800 kg/m³**
4. **Acoustic and thermal insulation in 25 mm thick made in rock wool; density 110 kg/m³.**
5. Plasterboard double layer, 25 mm thickness
6. **Acoustic insulation in strips 5 mm thick produced using fibers and granules of SBR rubber glue to metal frame**
7. Metal frame, 75 mm thickness
8. **Acoustic insulation in strips 3 mm thick produced using fibers and granules of SBR rubber. Stripes dimensions: 20 m length**

Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Mustwall 10	58	0.40	Page 118	Page 134	Page 174	Page 196	

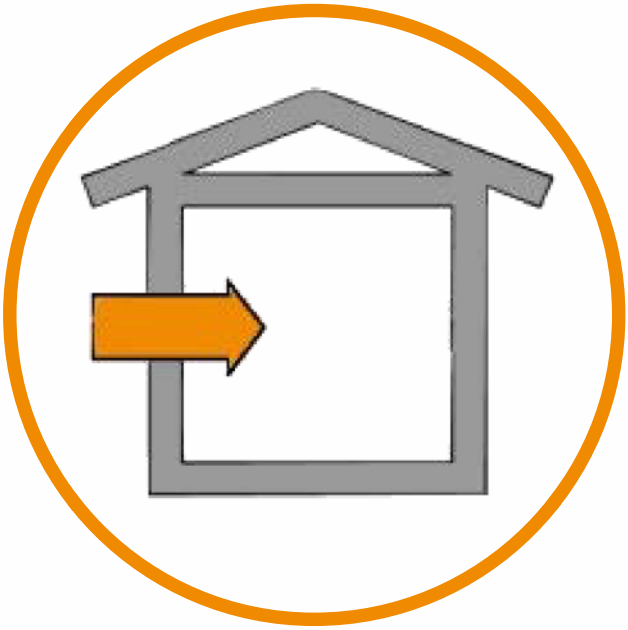
160 mm gypsum wall



1. Plasterboard, 12.5 mm thickness
2. **Acoustic insulation 5 mm thick produced using fibres and granules of SBR rubber**
3. Plasterboard, 12.5 mm thickness
4. **Acoustic and thermal insulation in 40 mm thick made in rock wool; density 70 kg/m³.**
5. **10 mm acoustic insulation supplied in panels and produced using fibers and granules of SBR and EPDM compacted using a polyurethane adhesive in a hot process. A non-woven, non-stretch synthetic membrane is applied on both sides for added protection. Density of 800 kg/m³**
6. **Acoustic and thermal insulation in 50 mm thick made in rock wool; density 110 kg/m³.**
7. Plasterboard, 12.5 mm thickness
8. **Acoustic insulation 5 mm thick produced using fibers and granules of SBR rubber**
9. Plasterboard, 12.5 mm thickness
10. Metal frame, 75 mm thickness
11. **Acoustic insulation in strips 3 mm thick produced using fibres and granules of SBR rubber. Stripes dimensions: 20 m lenght**

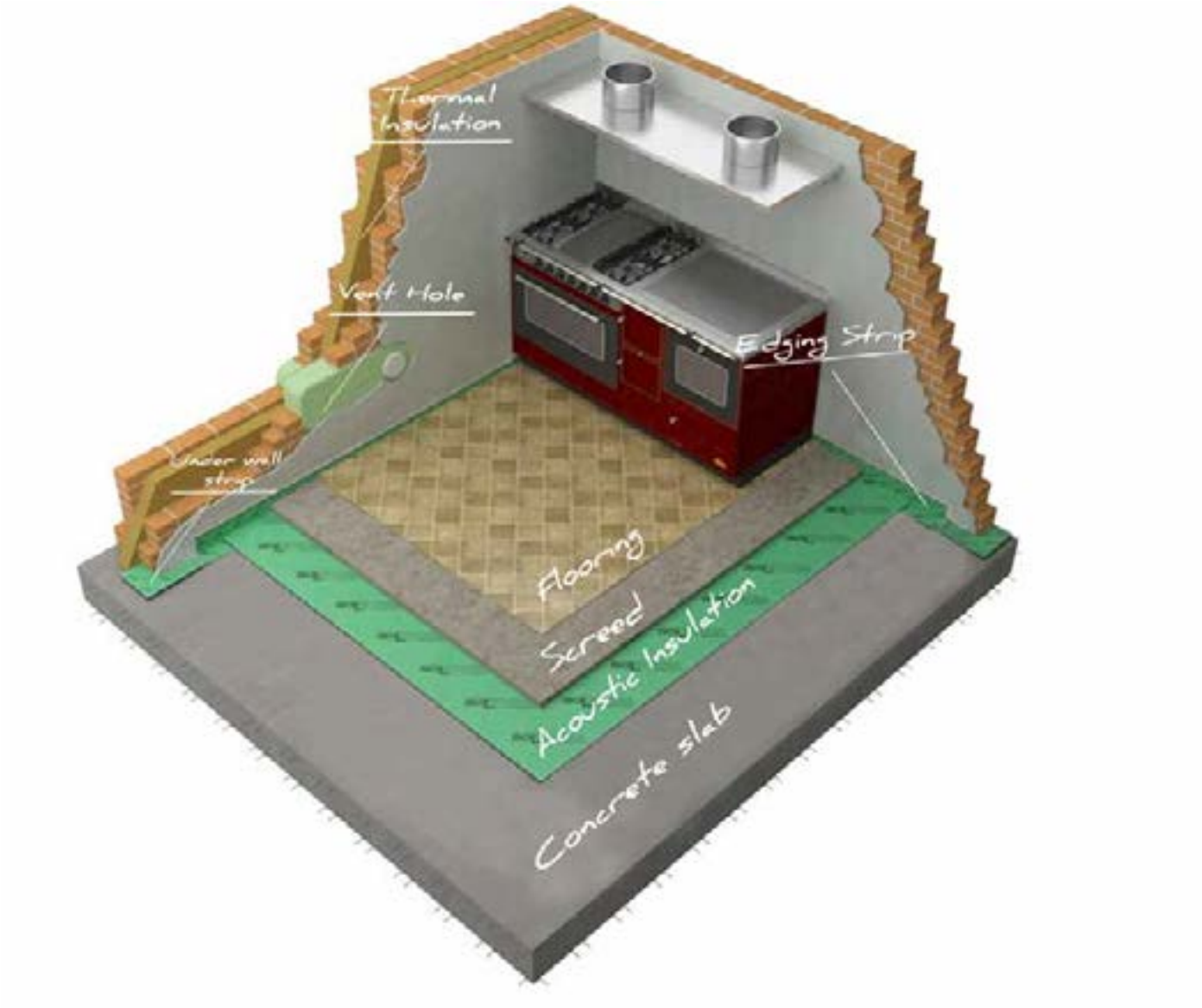
Product	*R_w (dB)*	*U (W/m²K)*	*Calculation*	*Product data*	*Installation*	*Lab test*	*Site test*
Mustwall 10 – Syl 5	62	0.30	Page 118	Page 134 – 126	Page 174		

FACADES INSULATION



Facades insulation

Ventilation hole



Façade wall acoustic insulation not only involves the wall itself but any element of the façade such as doors, windows, balconies etc.
All these wall elements contribute to the façade insulation. Here we focus on the ventilation hole element which is often the acoustic weak point of a façade wall.

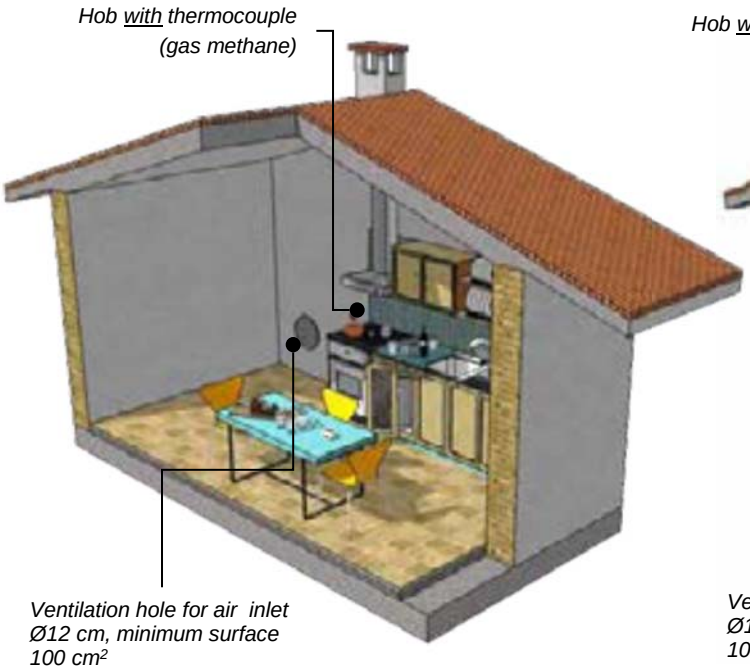
Façade Wall: generally the external wall does not need to be acoustically insulated since the mass and the thickness of the wall will automatically achieve the correct airborne insulation as per the relevant national building regulations.
Acoustic issues can occur in weak areas like windows or ventilation holes. Here we assume that the windows are of a high standard from an acoustic point of view.

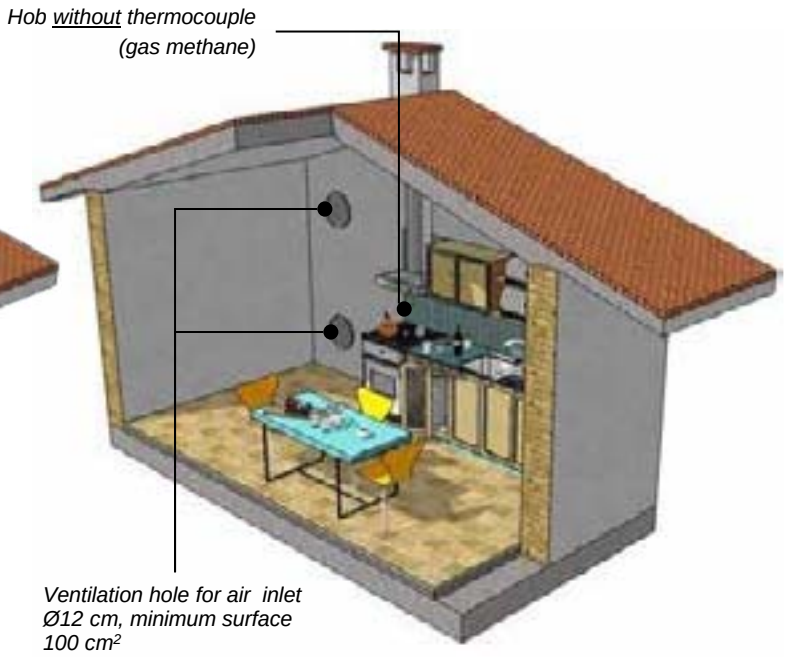
Silencer for Ventilation holes: Ventilation holes in the kitchen should be treated with a proper acoustic sound silencer to maintain the levels of sound insulation as per the relevant national building regulations.

Ventilation hole

According to UNI 7129 kitchen rooms need ventilation holes in the facades, to grant a correct combustion of gas. Holes should have the following requirements:

- net air flow section at least 6 cm^2 for 1 kW of installed thermal capacity, with a minimum section of 100 cm^2;
- if the hob is without thermocouple, (a device that prevents the release of gas, when the flame is extinguished accidentally), it is necessary to install a further hole, to reach a minimum ventilation section of 200 cm^2.





This solution, very important for safety, can bring problems in the airborne sound insulation of the facade. The ventilation hole in the external partition brings a noise leakage wich affects the global insulation of the facade.

To keep the sound insulation of the facade between regulation parameters, silencers should be used on the ventilation holes.

The silencer has two functions:

- it grants a linear air flow with a free surface of 100 cm^2
- it avoids the facades' insulation losses due to the ventilation holes

Ventilation hole

The following is an acoustic insulation calculation showing the influence of the ventilation hole Sylencer in a facade wall.

FACADE (Yellow coloured):
Surface
Sw = 10.8 m^2
Airbone sound insulation level:
Rw = 55 dB

WINDOW
Surface
Sf = 2,00 m^2
Airborne sound insulation level:
Rw = 35 dB

Volume of the kitchen:
V = 43.2 m^3

Facade wall

$D_{2m, nT,w}$ 56 dB

with the window

$D_{2m, nT,w}$ 41 dB

with the ventilation hole

$D_{2m, nT,w}$ **29 dB**

with acoustic insulation for vent holes

$D_{2m, nT,w}$ **41 dB**

Calculation of the weighted index of airborne sound insulation of facades, according to the standard EN 12354-3.

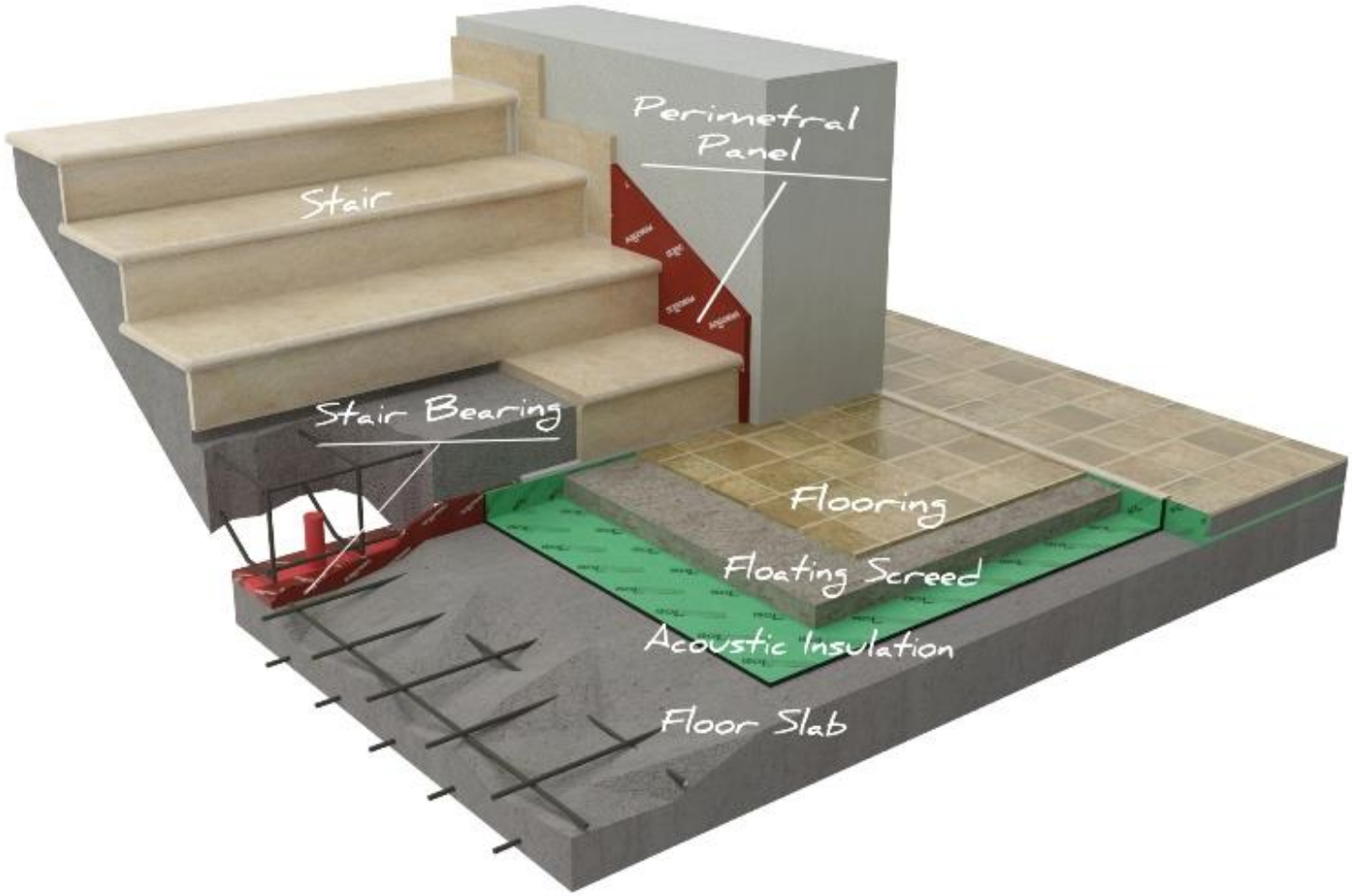
$$R'_w = -10 \cdot \log\left[\sum_{i=1}^{n} \frac{S_i}{S} \cdot 10^{\frac{-R_{wi}}{10}} + \sum_{i=1}^{n} \frac{A_0}{S} \cdot 10^{\frac{-D_{n,e,wi}}{10}}\right] - K$$

$$D_{2m,nT,w} = R'_w + \Delta L_{fs} + 10 \cdot \log\left[\frac{V}{6 \cdot T_0 \cdot S}\right]$$

STRUCTURAL INSULATION

Structural insulation

Stairs

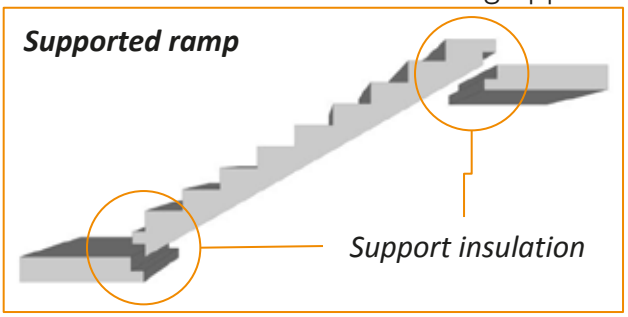


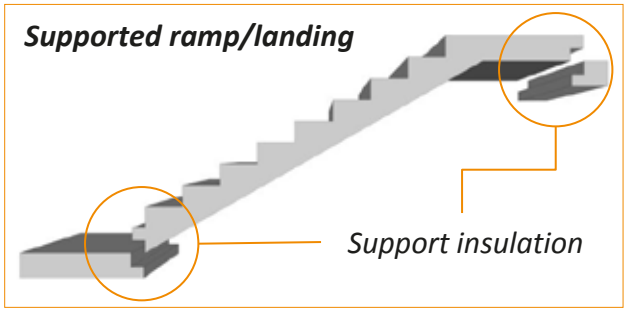
In buildings it is possible to improve their acoustic insulation by installing elastomeric joints and structural bearings. This avoids the propagation of sound and vibration along the structural frame of the building.
The most common structural bearing application is under the foundations or structural walls and along the stair joints.

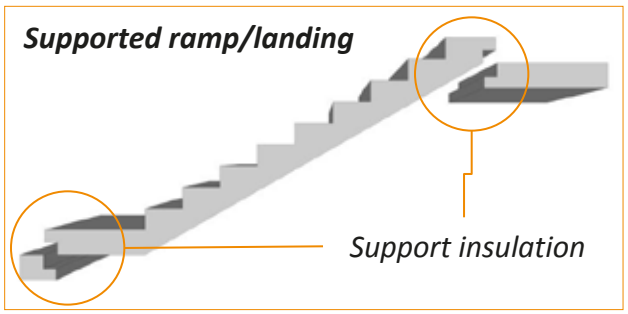
Stabe Stair Bearing: At the bottom and top footing point of the stairs an elastic bearing must be installed to prevent footfall vibrations on the stairs propagating to the neighbouring rooms and houses.

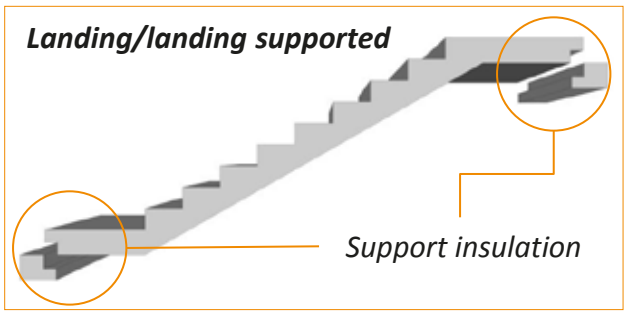
Structural insulation

Impact sound or noise is propagated by the structural building frame. In the case of stairs is not possible to achieve an efficient floating step system therefore the insulation is applied at the stair fixings.
More precisely the stair is physically disconnected from the bottom and top footing area, with the STABE bearing, ensuring that the noise and vibration from impact sound on the stairs is not transmitted and propagated into the whole building structure.
See below for various stair bearing applications:





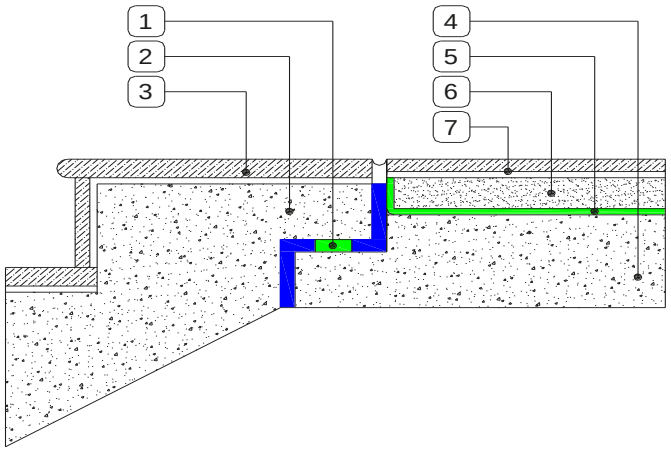




The STABE stair bearing can be used for precast stair units as well as in-situ construction. In the latter case the stair bottom and top footing have to be constructed first and then the stair itself can be built over the STABE bearings.

Application detail

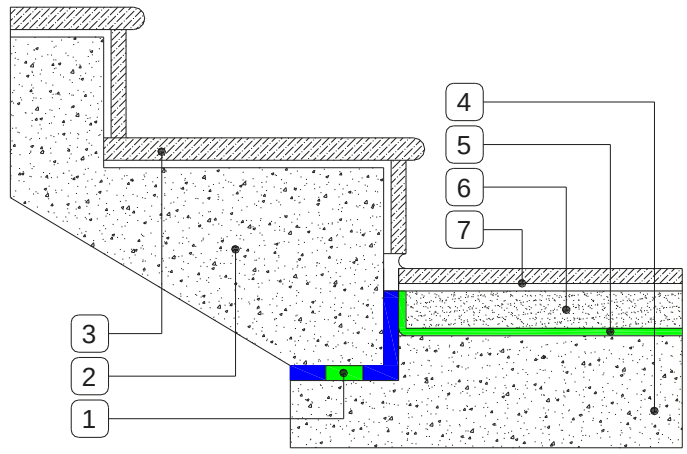
STABE Z



1. **Acoustic & Vibration Insukation made of pre-assembled strips on which a rubber inner part of 10mm or 20 mm is located.**
2. Concrete Stairs
3. Stair finishing of 3 cm thickness
4. Concrete slab of the building of 15 cm thickness
5. **Acostic layer installed under a floating screed**
6. Floating screed or equivalent layer of 5 cm thickness.
7. Ceramic floor finishing of maximum 2 cm

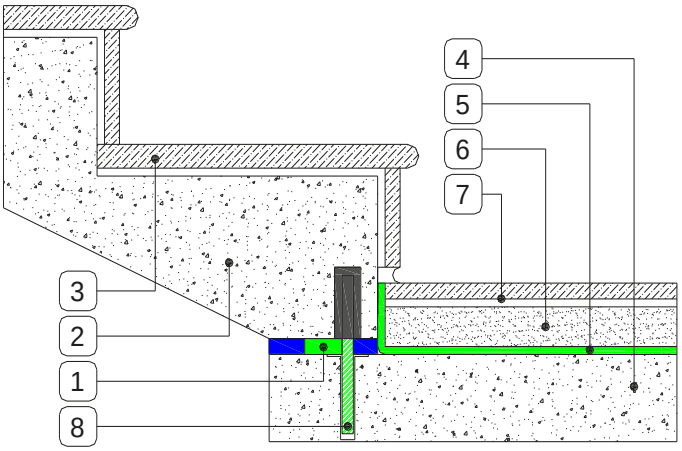
Structural insulation

Stabe L



1. **Acoustic & Vibration Insukation made of pre-assembled strips on which a rubber inner part of 10mm or 20 mm is located**
2. Concrete Stairs
3. Stair finishing of 3 cm thickness
4. Concrete slab of the building of 15 cm thickness
5. **Acostic layer installed under a floating screed**
6. Floating screed or equivalent layer of 5 cm thickness.
7. Ceramic floor finishing of maximum 2 cm

Stabe I



1. **Acoustic & Vibration Insukation made of pre-assembled strips on which a rubber inner part of 10mm or 20 mm is located**
2. Concrete Stairs
3. Stair finishing of 3 cm thickness
4. Concrete slab of the building of 15 cm thickness
5. **Acostic layer installed under a floating screed**
6. Floating screed or equivalent layer of 5 cm thickness.
7. Ceramic floor finishing of maximum 2 cm
8. **Stabe Pin**

Stabe Type	Stair Weight (Kg)	Vibration Insulation (%)	Vibration Insulation (dB)
STABE 10 LOW Z – L – I	1000 ÷ 1500	91	-23,5
	1500 ÷ 2000	91	-23,5
	2000 ÷ 2500	91	-23,5
	2500 ÷ 3000	91	-23,5
	3000 ÷ 3500	91	-23,5
	3500 ÷ 4000	91	-23,9
	4000 ÷ 4500	91	-23,9
	4500 ÷ 5000	92	-24,3
STABE 20 LOW Z – L – I	1000 ÷ 1500	94,6	-28,5
	1500 ÷ 2000	94,6	-28,5
	2000 ÷ 2500	94,6	-28,5
STABE HIGH Sp. 20 Z – L – I	2500 ÷ 3000	94,6	-28,5
	3000 ÷ 3500	94,9	-29,0
	3500 ÷ 4000	95,1	-29,5
	4000 ÷ 4500	95,4	-30,0
	4500 ÷ 5000	95,6	-30,5

Insulation values calculated by means of transmissibility formulas for vibrations, with reference source Frequency of 100 Hz.

Underwall

Impact noise as well as airborne noise propagate themselves through the structures of the building in the form of vibration and after will re-irradiate noise in the rooms near the noise source.
An efficient solution to block this transmission of vibration noise is to separate any structural wall with anti-vibration elements. This is the case with partition walls and any separating wall which can be disconnected from the base with a Stywall strip underneath the wall. The Stywall strip stops impact sound and airborne sound transmission to the floor slab, improving the airborne noise insulation of the walls and the impact noise insulation with the under stair floor.

Depending on the wall load, the natural frequency of the wall/strip system can be evaluated and the insulation of the disturbing frequencies can be calculated. The following are examples of wall load ranges:

HEAVY WALLS: are made of concrete, concrete blocks or high density blocks

Wall weight: 400 – 600 kg/m^2
Load on the strip: 0,04 – 0,06 N/mm^2

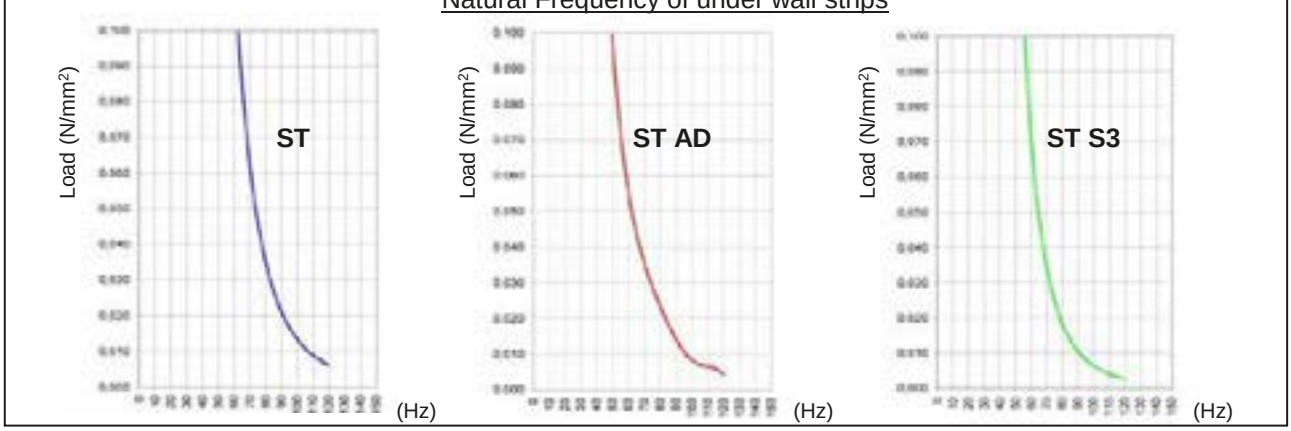
HEAVY BLOCK WALLS: are made of heavy hollow blocks or similar type block

Wall weight: 200 – 400 kg/m^2
Load on the strip: 0,02 – 0,04 N/mm^2

LIGHT WALLS: are made of light hollow blocks

Wall weight: : 100 – 200 kg/m^2
Load on the strip: 0,01 – 0,02 N/mm^2

Natural Frequency of under wall strips



SYSTEMS INSULATION

Systems insulation

Pipes

The main problem of the piping in dwellings is the outflow pipe of the waste water, which connects bathrooms at different floors; the outflow creates different types of noise, that have to be treated separately.

Noise from the water fall

It is the noise caused by the water falling down inside the pipes.

Noise of the water impact

It is caused by the direct impact of the falling water on the pipes' junctions, in curves. The water hits the pipe and the water outflow slower.

Noise from outflow

It is caused by the horizontal water outflow inside the pipes. Generally it is silenced, but can be disturbing when the pipe changes directions.

To improve the pipes insulation it is necessary to **cover the pipeing** with an elastic high density product, such as **Stywall S3-A** (fig. 1); **the improvement is at least 10 dB**. In the case of piping fixed with metal fastenings, insert the **Stywall S3-A** to reduce the structure borne sound(fig. 2)

PIPES INSULATION

Fig. 1

Fig. 2

VIBRATION INSULATION

Vibration insulation

Foundation

Vibration and noise that involve a building can arise from inside, butalso from external environment; in particular the proximity to roads, railways and metros can create vibration, that through the ground are transmitted to the building structures. To reduce and prevent this disturb, the foundation of the building can be insulated with an anti-vibration system.

Under foundation: in general before making the foundation of a building, the dig is realized and a first layer of lean concrete substrate is placed , as a planar base for future execution of the foundation. In this case the antivibration product is placed on the substrate.

Antivibration mat: the aim of the antivibration mat is to decouple the building from the ground; it is positioned at the base and adges of the foundation.

Foundation: the ground slab foundation can be cast over the antivibration layer with the normal site procedures.

Foundation

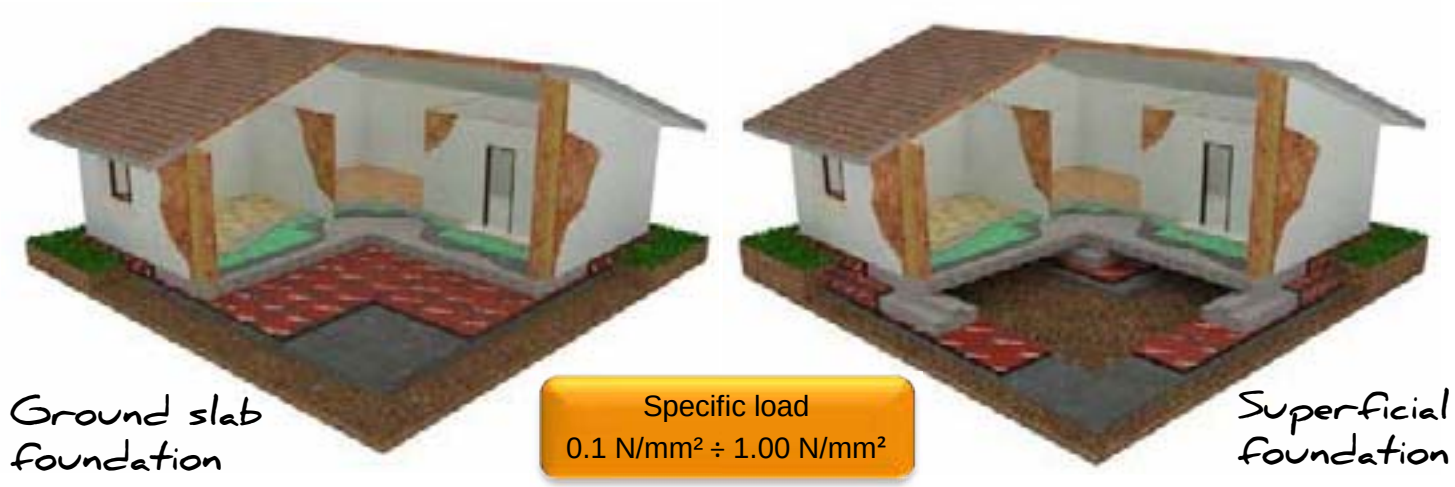
The insulating system consists in the insertion of the antivibration mat under the foundation of the building. The product decouples the building from the ground and avoids the transmission of the vibration coming from external infrastructures (roads, railways, metros...)

The type of insulation has to be designed depending on the load; in fact the system can be applied to all types of foundation:

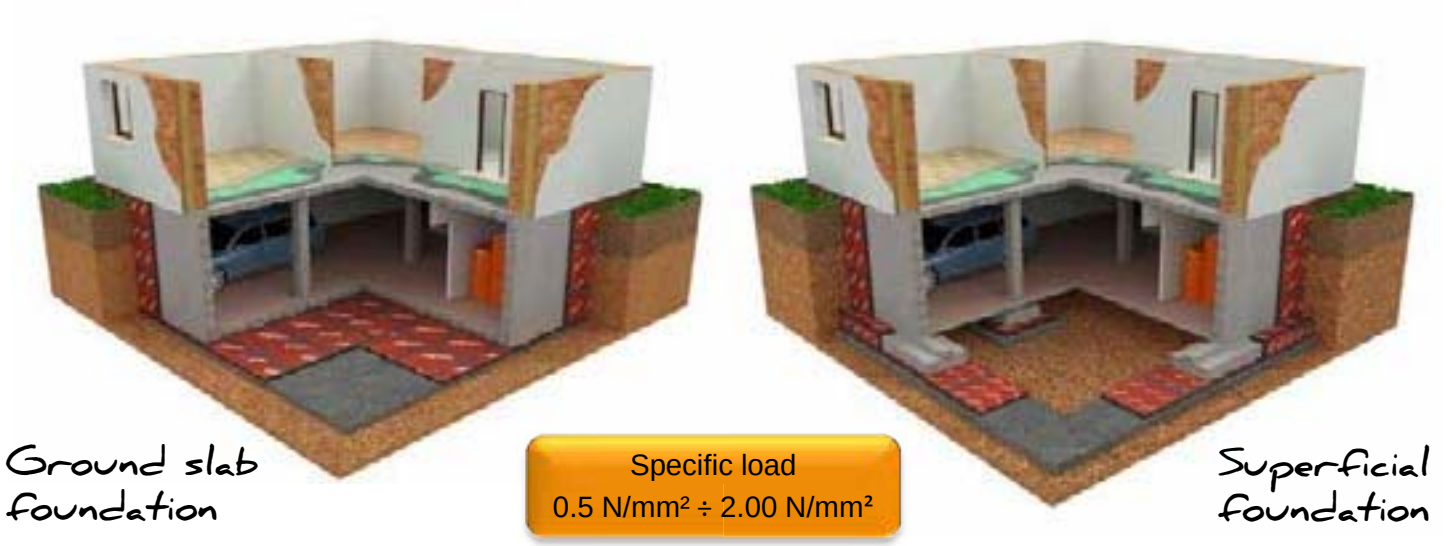
- Punctual foundation: structural columns
- Superficial foundation: foundation beam
- Ground foundation

Deeper foundations are excluded from this application (pile foundation) because for structural reasons have to be connected to the structure.

Small and medium size buildings



Big size buildings



Isolgomma have developed the MEGAMAT Line for these applications and industrial applications; for more information refer to technical and commercial documentation of this Line.

Vibration insulation

Vibrating machines

In the construction industry it is very common to centralise the thermal regulation of buildings with large HVAC machinery and also emergency power generators. These machines produce a high quantity of airborne noise and an enormous flow of vibrations.
This is why they are generally located on dedicated "Technological" floors that have a very thick floating slab system. In other cases they are located on the roofs of buildings fixed over a floating concrete slab. The following examples are the most common types of applications using the Megamat range of anti-vibration products.

Light Machines (fig. 1): the feet of the machine are placed on *Megamat Anti-Vibration Pads.*

Machines on Steel Beams (fig. 2): the machine beams are placed over two *Megamat Anti-Vibration Strips.*

Heavy Machines (fig.3): in this case the HVAC unit is placed directly on a floating concrete slab over a *Megamat Anti-Vibration Mat.*

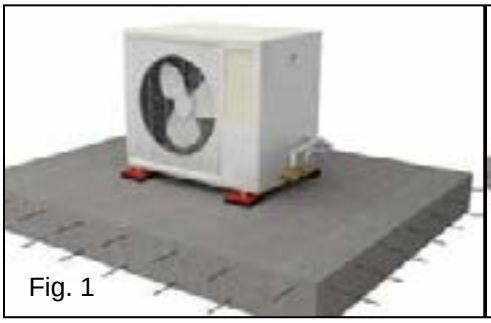


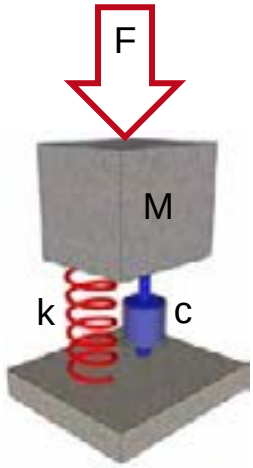
Fig. 1


Fig. 2


Fig. 3

PARAMETER

Vibration:	it defines the motion of a body oscillating around an equilibrium position, resulting in a force which varies in time
Frequency:	it is the times that the motion of the system shows the same characteristics in a target range, represents the number of cycles completed in time
Natural Frequency (f_0):	it is the frequency at which the syste vibrates in the absence of external forces
Work frequency (f):	it depends on the external force F (t), if any, acting on the system with variability dependent on time



MASS-SPRING SYSTEM

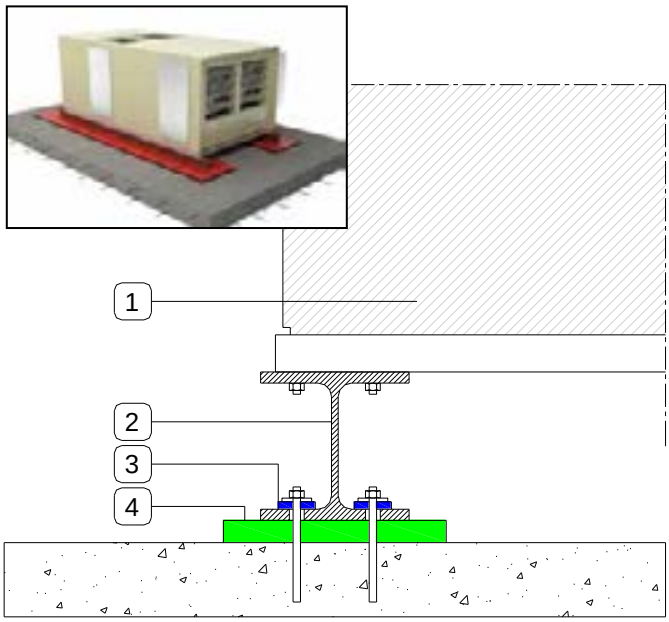
We consider a force vibration F, applied to the mass M, of harmonic sinusoidal type. Through the spring system, with stiffness k and damping c, is transmitted to the support structure a force with the same frequency f (same period tp) but different amplitude (Ft). The effect of damping system can be expressed through the transmission factor:

$$T = Ft / Fp$$

The spring system is efficient when T <1, when the force transmitted is less than the disturbing force

Isolgomma developed the MEGAMAT Line to specifically solve any vibration problems on HVAC units, Generators or any other machine with vibration problems. For detailed information on this line and field please refer to the specific Megamat literature.

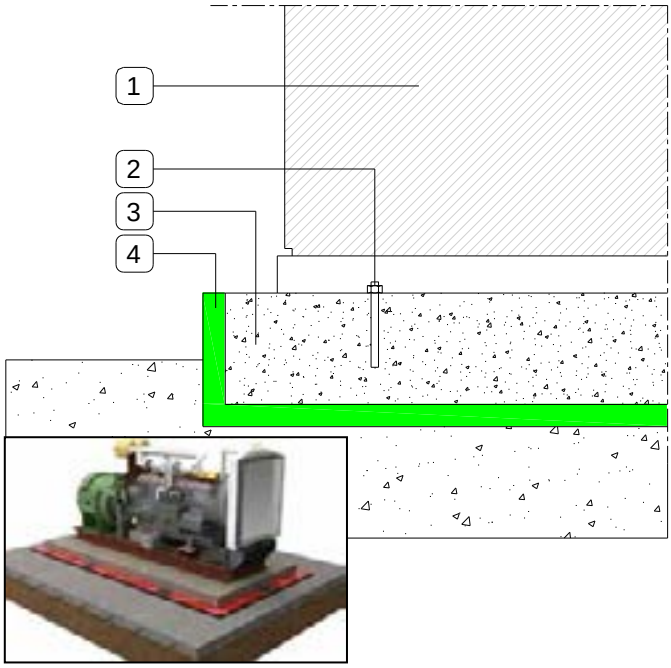
Vibrating machines



1. Vibrating machine: it can be an HVAC, a refrigerating unit, a chiller or other types of machines used for the air conditioning in buildings
2. Steel beam (IPE o HE) to support the machine
3. OPTION: fastening of the machine to the ground with anchor bolts insulated with rubber plates
4. **Antivibration in panels with thickness 20/30/40/50 mm made of selected fibers and granules of SBR (Styrene Butadiene Rubber) and granules of EPDM rubber (Ethylene Propylene Diene Monomer), fixed to a non-woven tear-resistant backing and hot pressed with polyurethane binder; density ..... kg/m³. The panels' dimensions are length 1 m, width 1 m.**

machine weight: 5000 kg
bearing dimensions: 2 beams 2 m long and 20 cm large
disturbing frequency: 50 Hz

Product	*Percent insulation efficiency*	*Attenuation value (dB)*	*Technical data*
Megamat ME20/500	80%	14.3	Pag.158
Megamat ME40/500	91%	20.5	Pag.158
Megamat ME80/500	96%	27.3	Pag.158

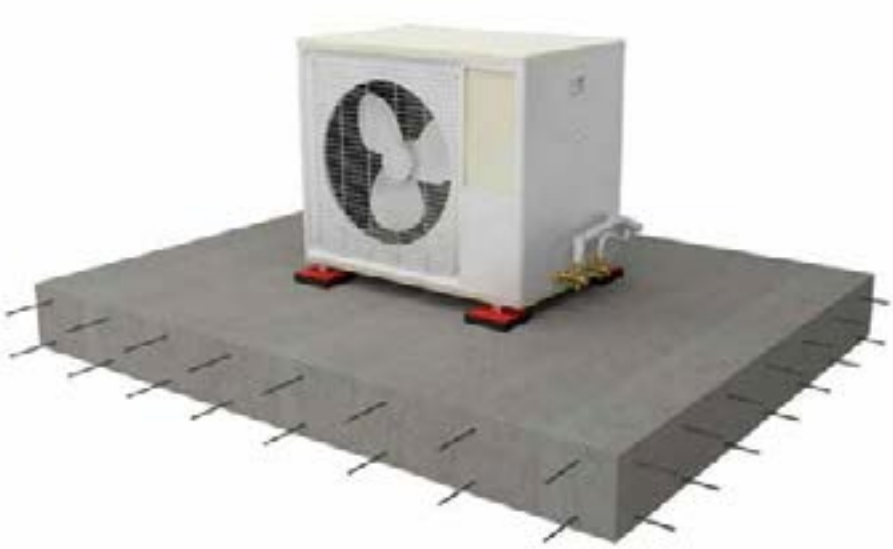


1. Vibrating machine: it can be a generator, an HVAC, a refrigerating unit, a chiller or other types of machines used for air conditioning in buildings
2. Fastening of the machine to the basement with anchor bolts
3. Concrete basement
4. **Antivibration in panels with thickness 20/30/40/50 mm made of selected fibers and granules of SBR (Styrene Butadiene Rubber) and granules of EPDM rubber (Ethylene Propylene Diene Monomer), fixed to a non-woven tear-resistant backing and hot pressed with polyurethane binder; density ..... kg/m³. The panels' dimensions are length 1 m, width 1 m.**

machine weight + basement weight: 2000 + 3000 kg
loading surface: 5 m²
disturbing frequency: 50 Hz

Product	*Percent insulation efficiency*	*Attenuation value (dB)*	*Technical data*
Megamat ME30/500	81%	14.5	Pag.158
Megamat ME50/500	91%	20.8	Pag.158
Megamat ME80/500	96%	27.4	Pag.158

As an example, the following calculation shows the influence of the vibration insulation :



Dimensions of the machine
Length 3000 mm
Width 1200 mm
Height 1060 mm

Dimensions of bearings
Length 200 mm
Width 200 mm
Number of bearings: 4

Weight of machine: 1000 kg

Working frequency (f): 50 Hz

Calculation of the antivibration solution:

Pressure on the antivibration bearings (n. 4 bearings 200 mm x 200 mm): 0.0613 N/mm²

Choice of the product:

Isolgomma Megamat ME 50/500

f_0 (0.0613 N/mm²) = 11.8 Hz

Calculation of the transmissibility

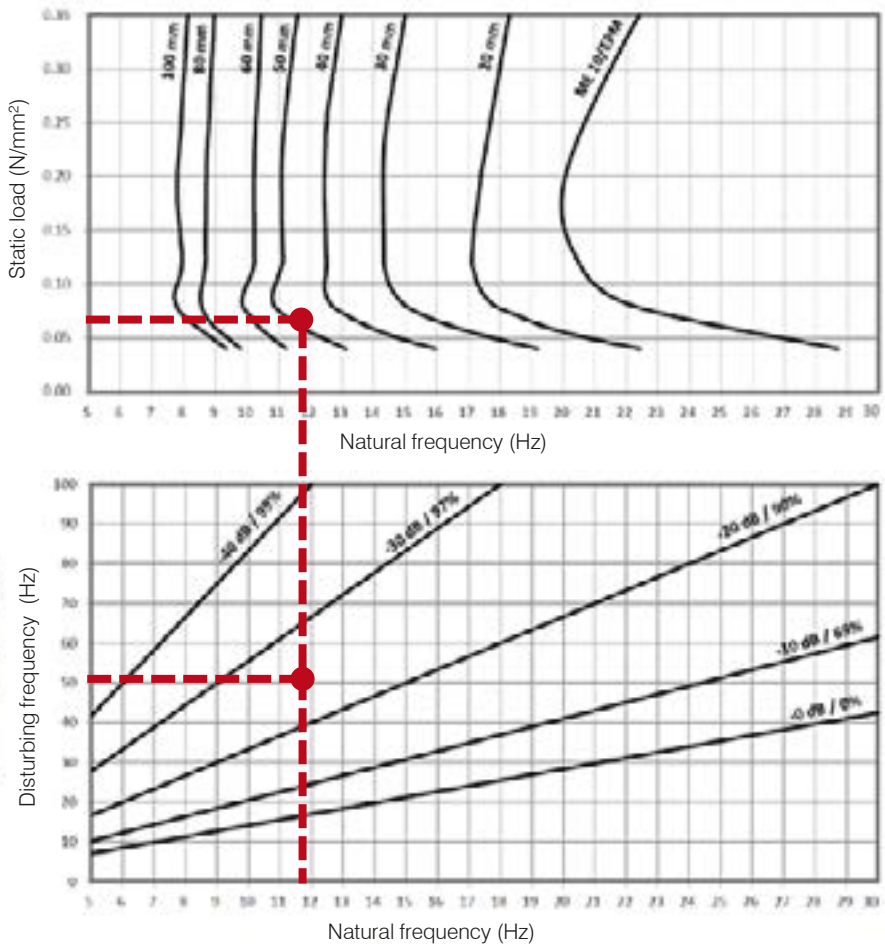
$$T = \sqrt{\frac{1+\left(2\xi\cdot\frac{f}{f_0}\right)^2}{\left[1-\left(\frac{f}{f_0}\right)^2\right]^2+\left(2\xi\cdot\frac{f}{f_0}\right)^2}} < 0.0913$$

Percent insulation efficiency (%):

$$A_{\%} = 100\cdot(1-T) = 90\%$$

Attenuation value(dB)

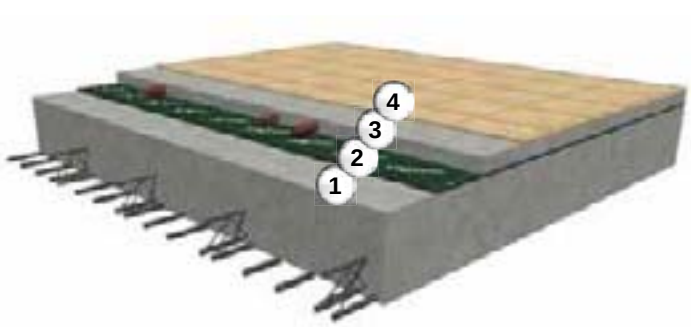
$$A_{dB} = 20\cdot\log(T) = -22.8dB$$

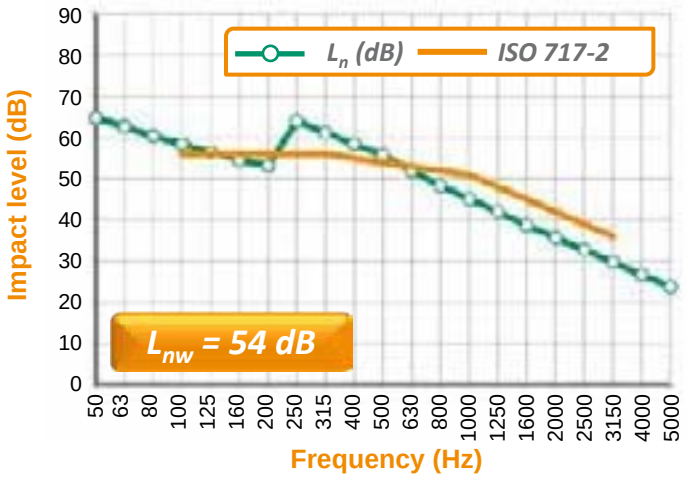


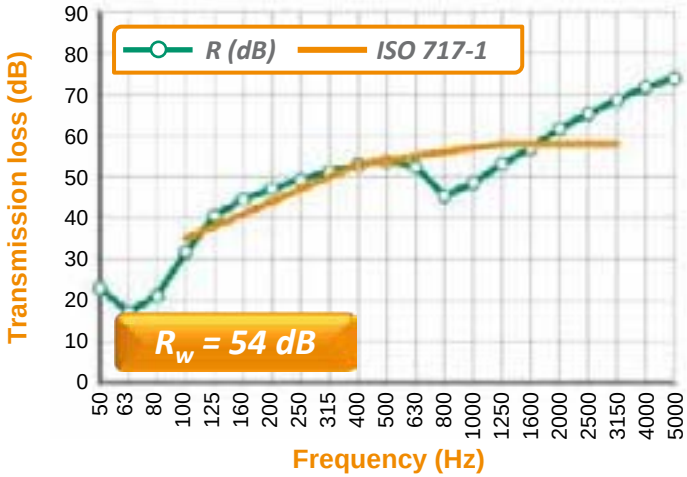
ACOUSTIC CALCULATIONS

120 mm concrete slab

n	description	mm
1	Concrete slab	120
2	**Grei 5**	5
3	Sand and cement screed	50
4	Ceramic tile floor finish	15
		190

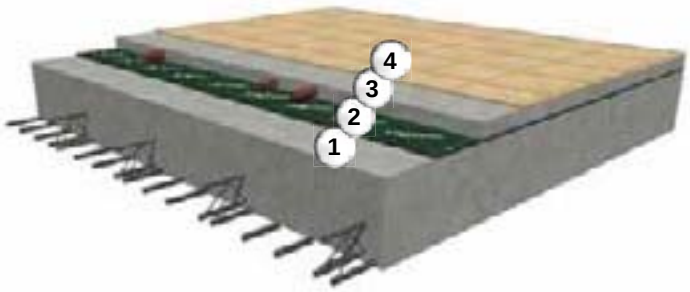


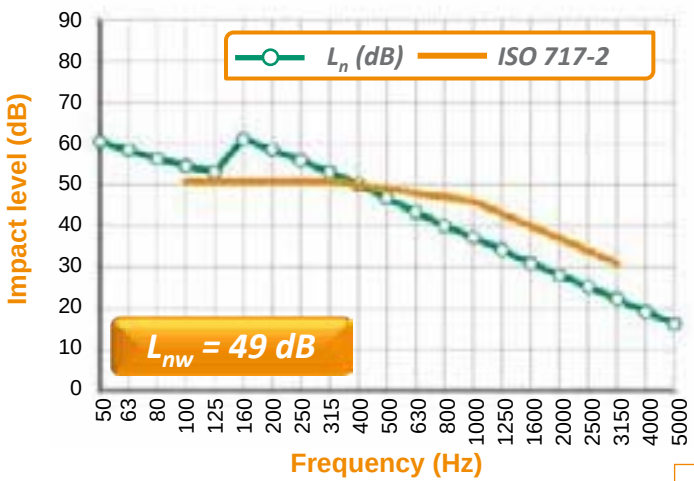


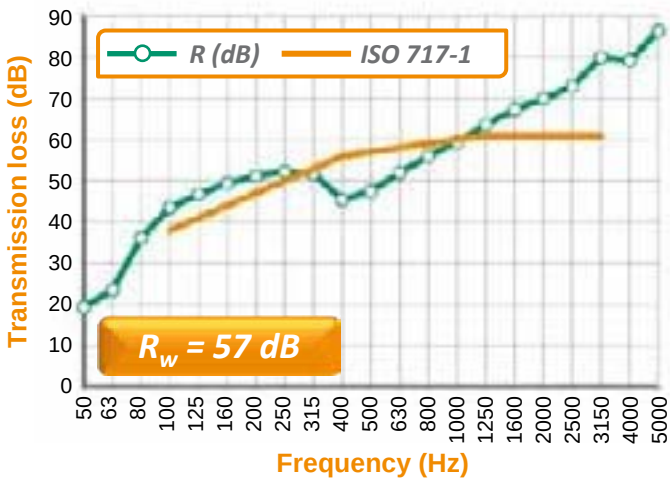


180 mm concrete slab

n	description	mm
1	Concrete slab	180
2	**Grei 8**	8
3	Sand and cement screed	50
4	Ceramic tile floor finish	15
		253



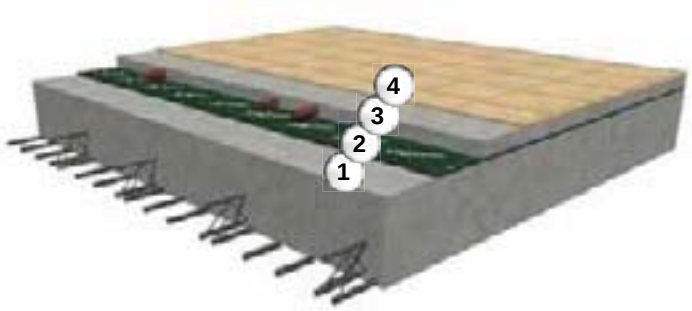


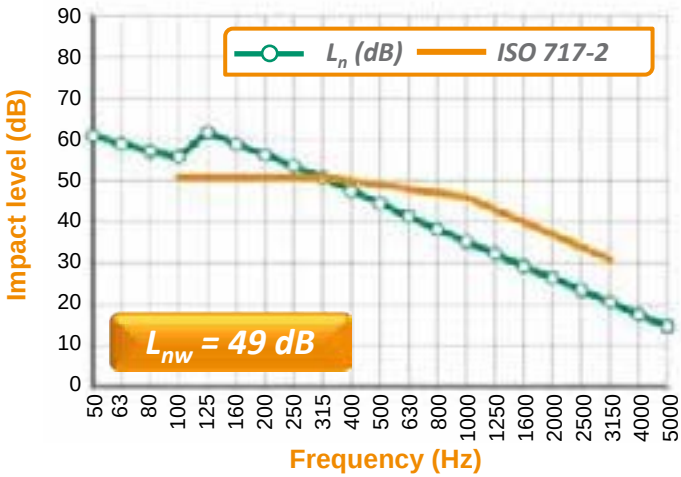


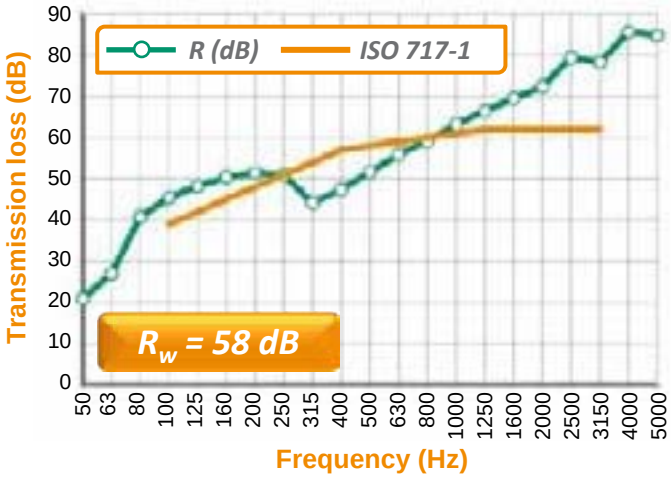
Floating Screed

200 mm concrete slab

n	description	mm
1	Concrete slab	200
2	**Roll 10**	10
3	Sand and cement screed	50
4	Ceramic tile floor finish	15
		275

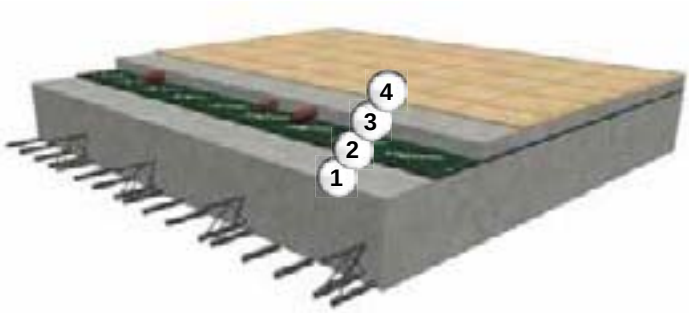


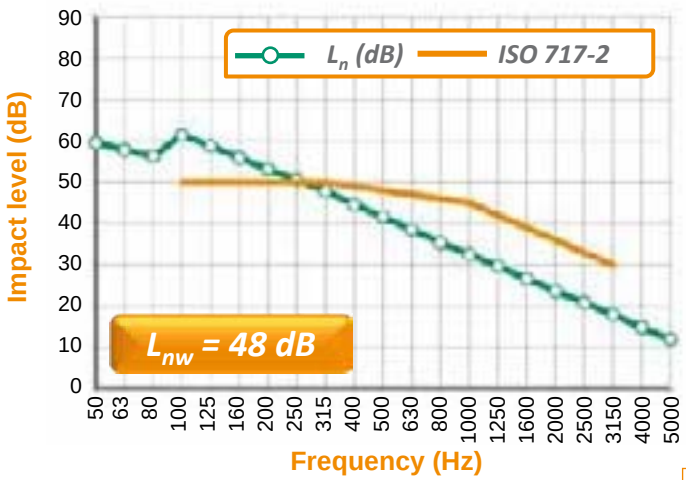


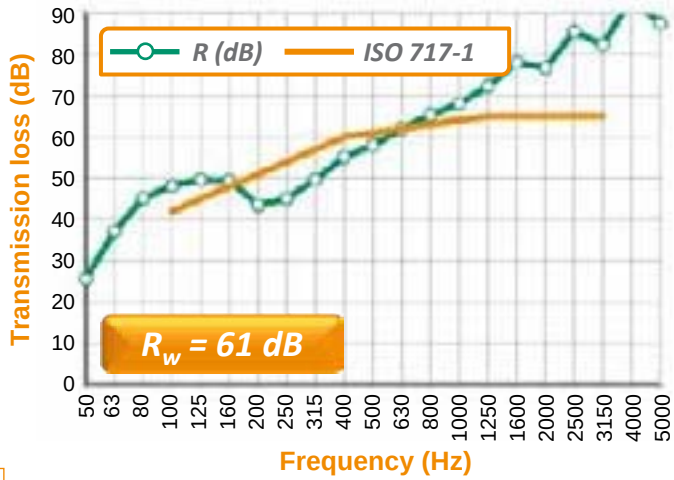


250 mm concrete slab

n	description	mm
1	Concrete slab	250
2	**Roll 7**	7
3	Sand and cement screed	50
4	Ceramic tile floor finish	15
		322

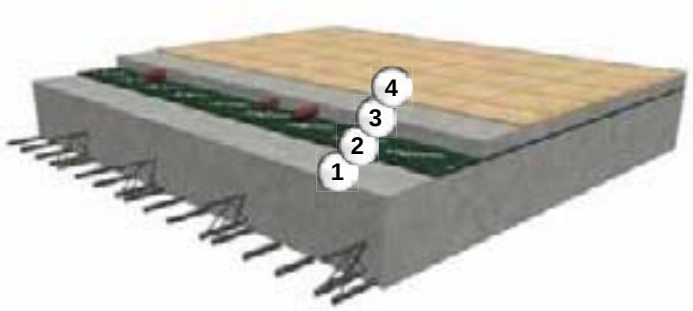


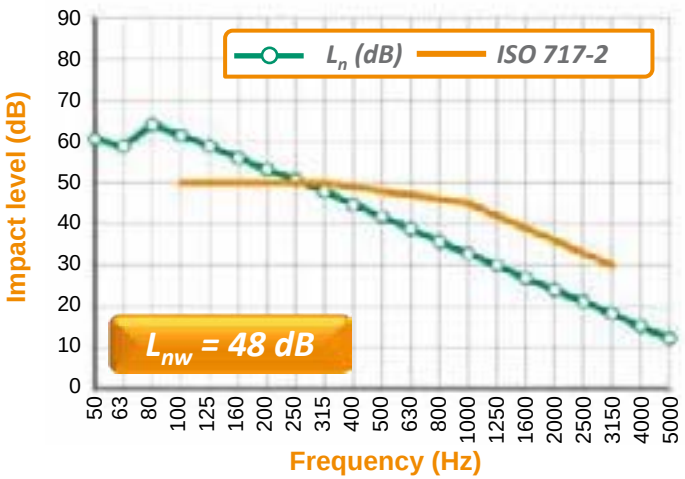


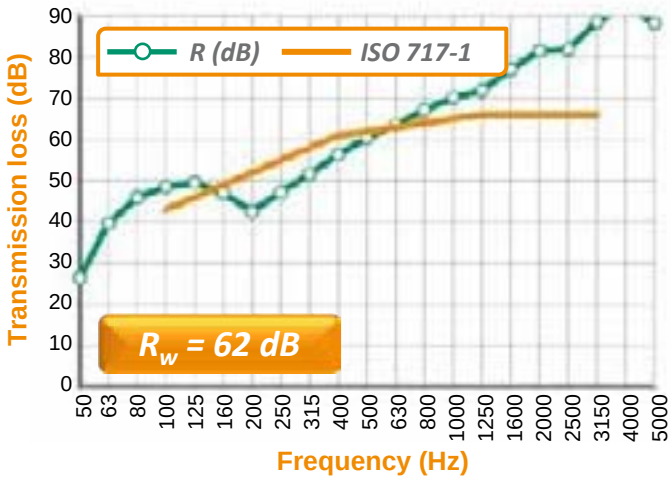


280 mm concrete slab

n	description	mm
1	Concrete slab	280
2	**Roll 5**	5
3	Sand and cement screed	50
4	Ceramic tile floor finish	15
		350

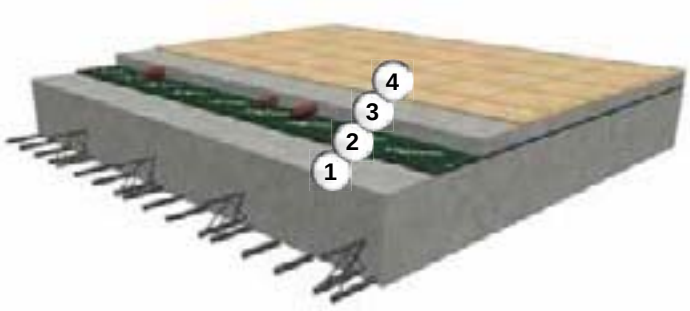


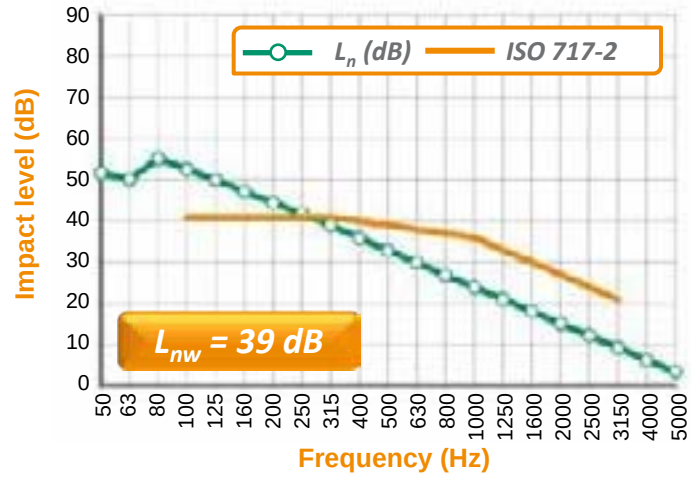


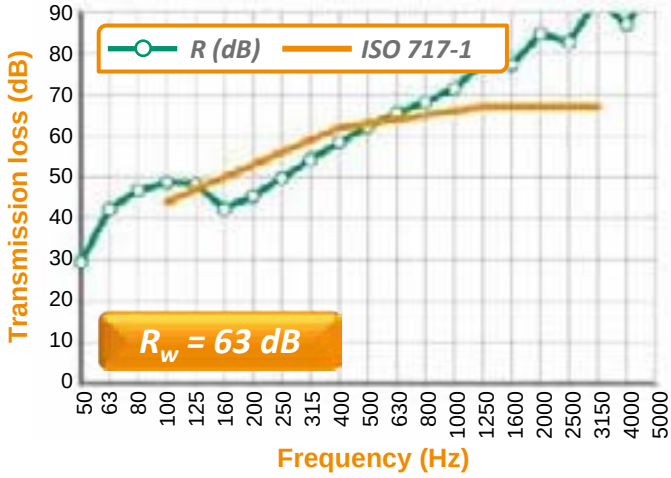


300 mm concrete slab

n	description	mm
1	Concrete slab	300
2	**Upgrei 8**	8
3	Sand and cement screed	50
4	Ceramic tile floor finish	15
		373



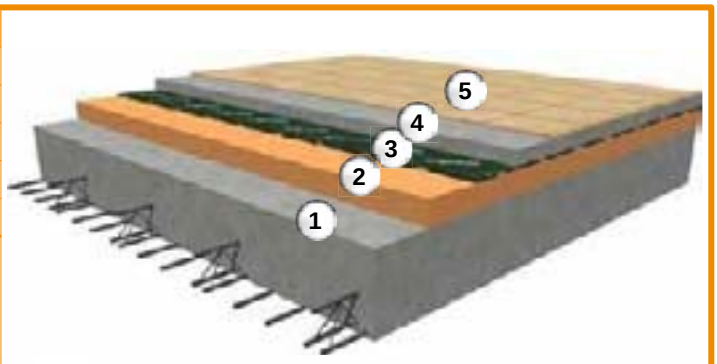


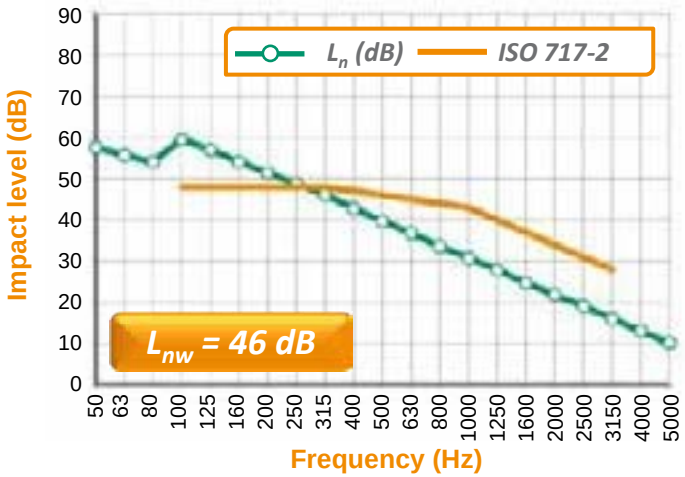


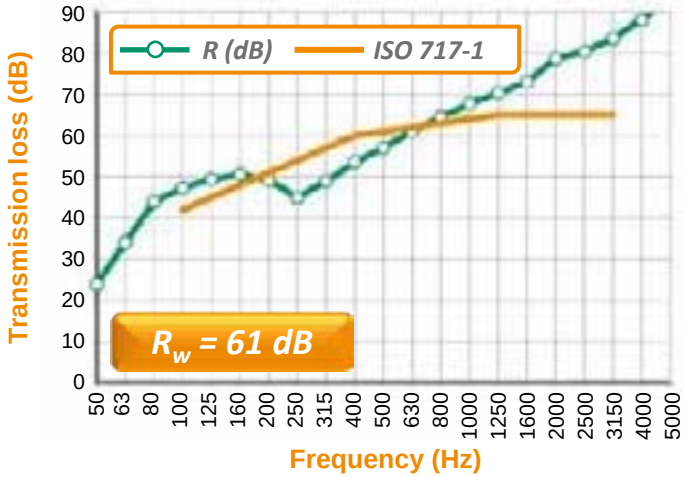
Floating Screed

250 mm concrete slab with thermal insulation

n	description	mm
1	Concrete slab	250
2	Thermal insulation	50
3	**Grei 5**	5
4	Sand and cement screed	50
5	Ceramic tile floor finish	15
		370

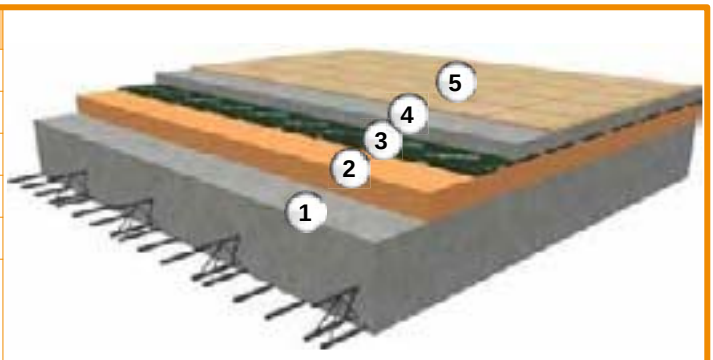


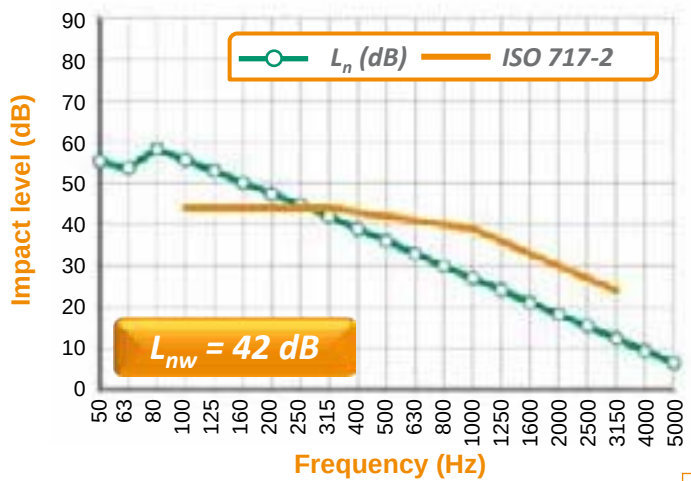


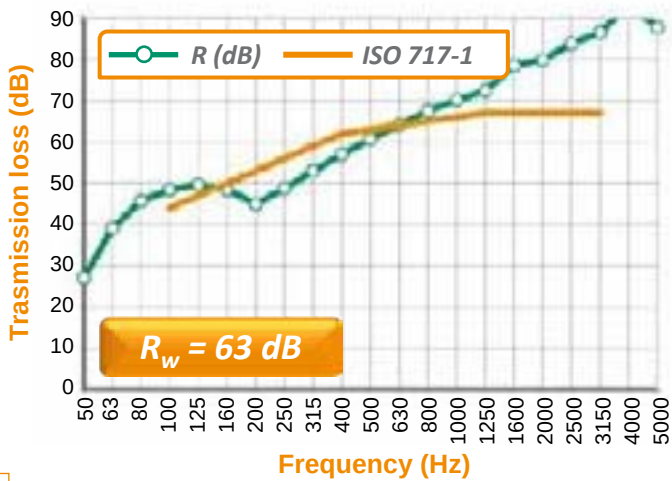


300 mm concrete slab with thermal insulation

n	description	mm
1	Concrete slab	300
2	Thermal insulation	50
3	**Grei 8**	8
4	Sand and cement screed	50
5	Ceramic tile floor finish	15
		423

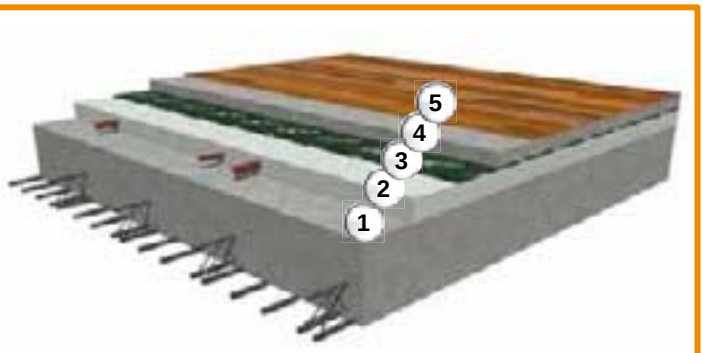


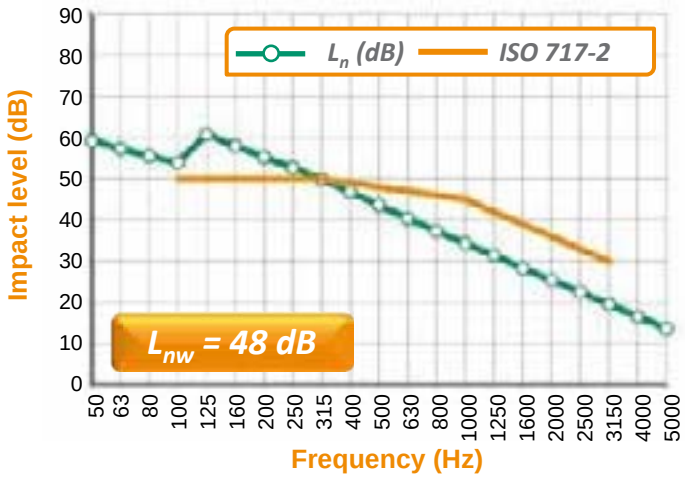


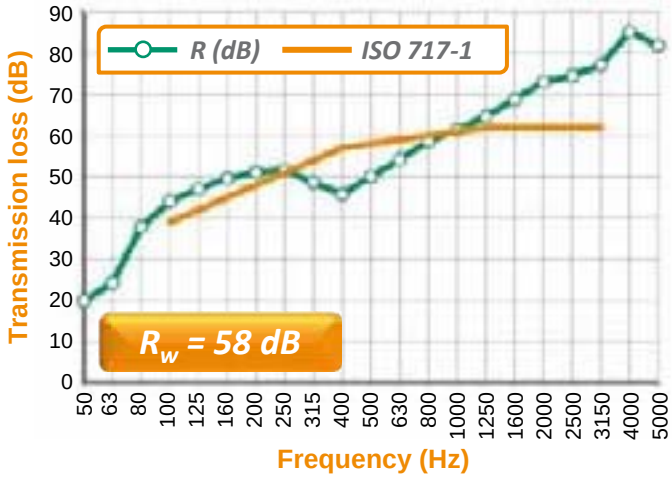


180 mm concrete slab with levelling screed

n	description	mm
1	Concrete slab	180
2	Levelling screed	50
3	**Grei 8**	8
4	Sand and cement screed	50
5	Parquet flooring	10
		298

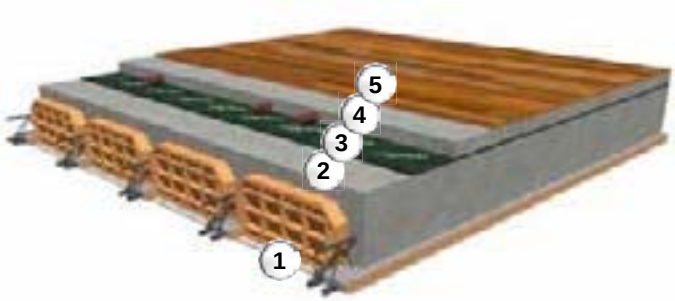


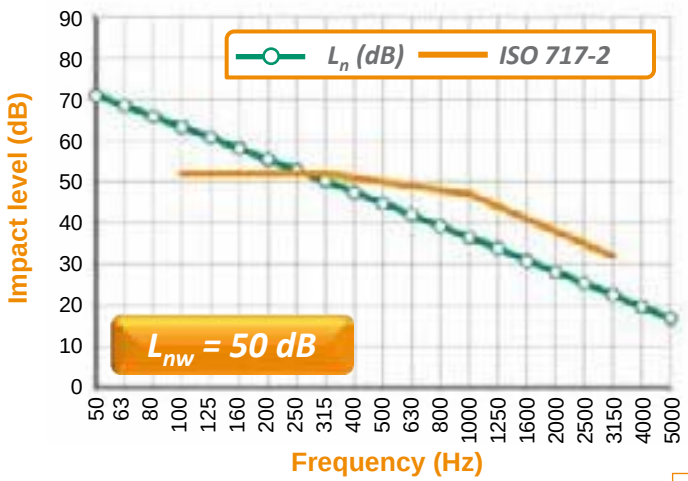


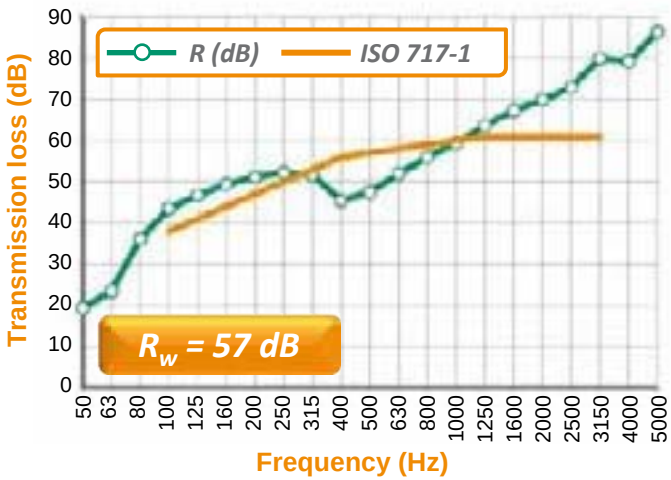


320 mm Hollow brick slab

n	description	mm
1	Plaster	10
2	Hollow brick slab	320
3	**Grei 8**	8
4	Sand and cement screed	50
5	Parquet flooring	8
		396



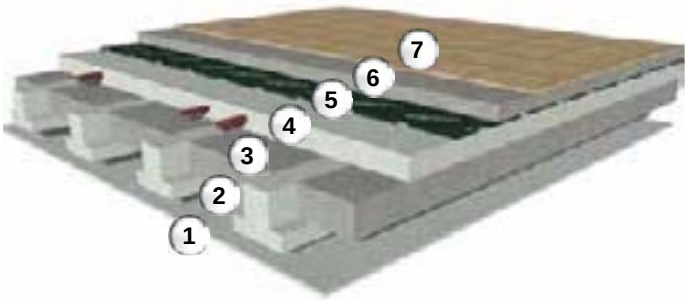


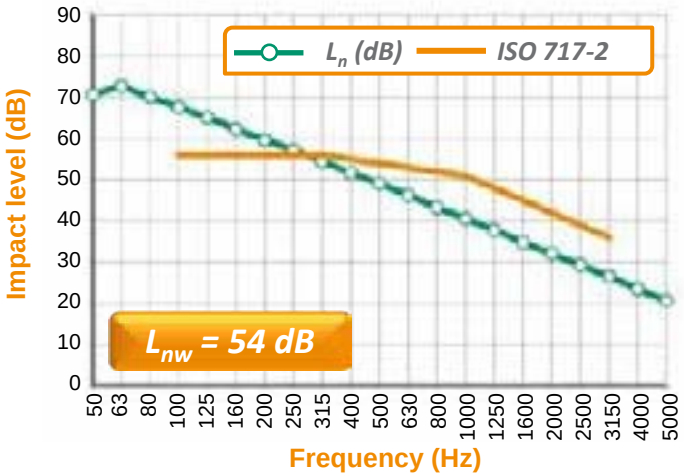


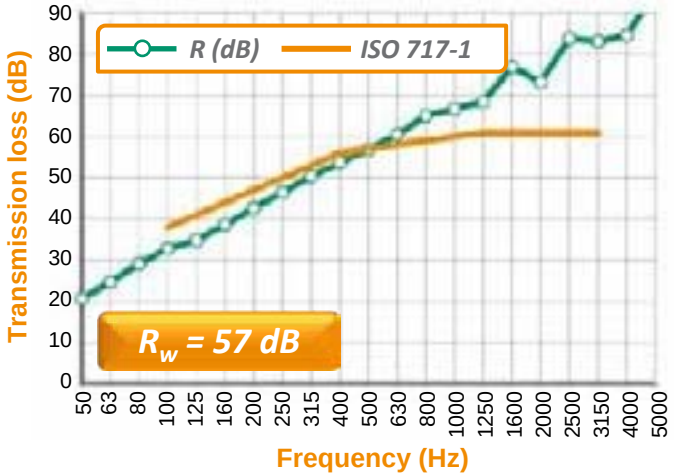
Floating Screed

Beam and block floor

n	description	mm
1	Gypsum board	12.5
2	Air cavity	50
3	Beam and block floor	150
4	Sand and cement screed	50
5	**Grei 5**	5
6	Sand and cement screed	50
7	Ceramic tiles floor finish	15
		332.5

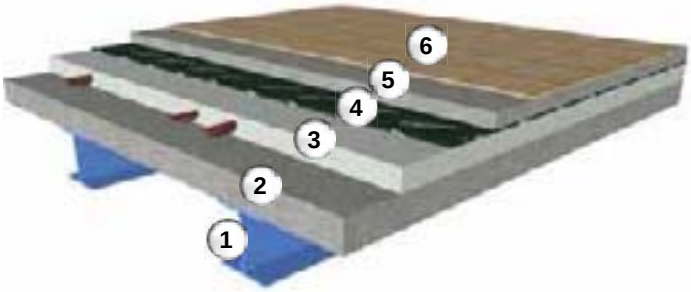


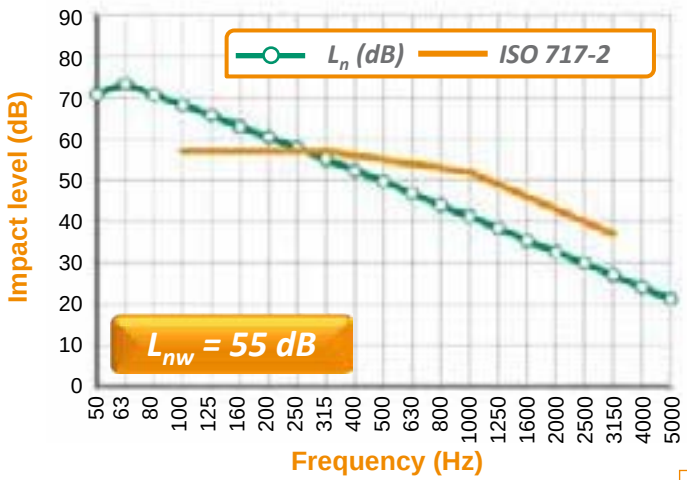


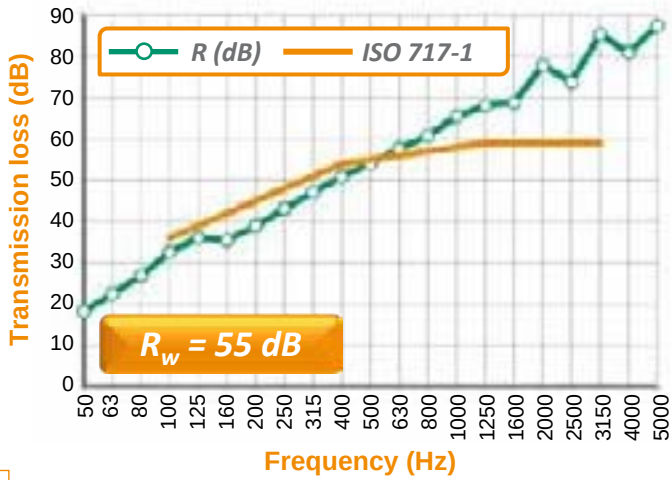


Steel beam and concrete slab

n	description	mm
1	Steel beam	210
2	Concrete slab	100
3	Levelling screed	100
4	**Grei 8**	8
5	Floating screed	50
6	Ceramic tile floor finish	15
		483

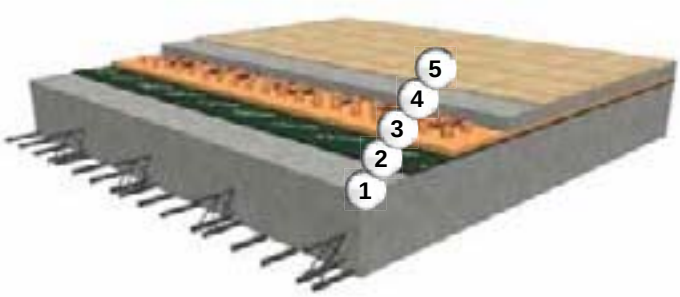


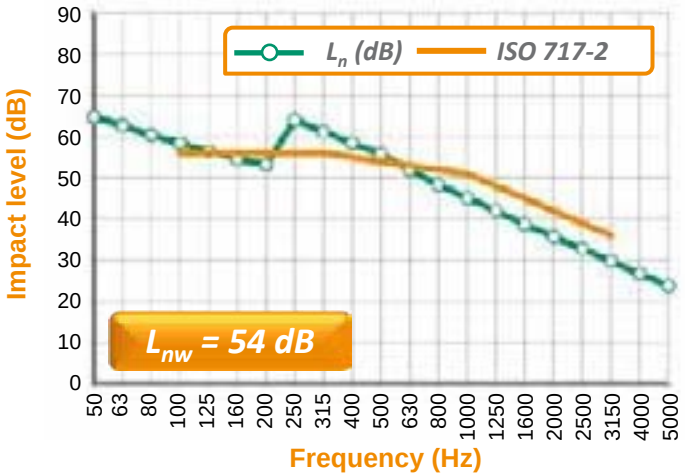


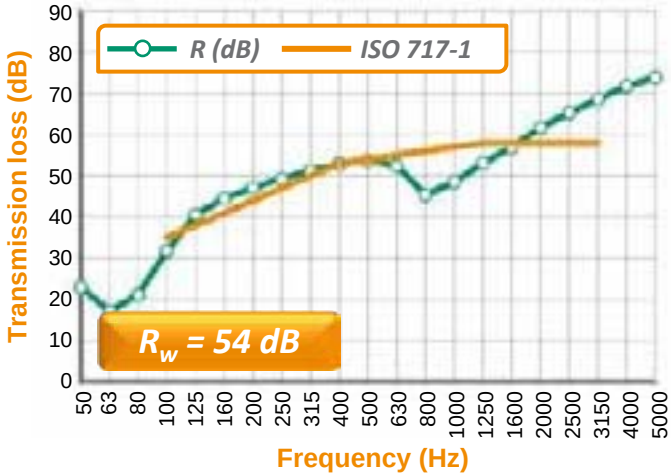


120 mm concrete slab

n	description	mm
1	Concrete slab	120
2	**Roll 10**	10
3	Heating system	50
4	Sand and cement screed	50
5	Ceramic tiles floor finish	15
		245

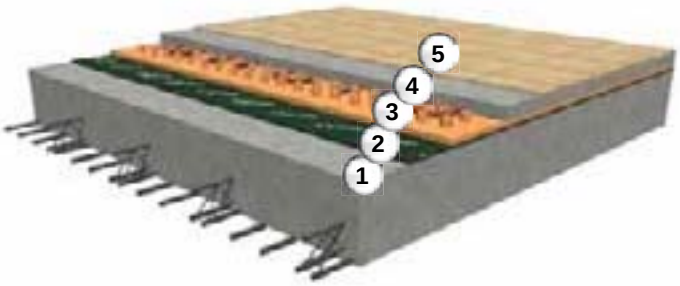


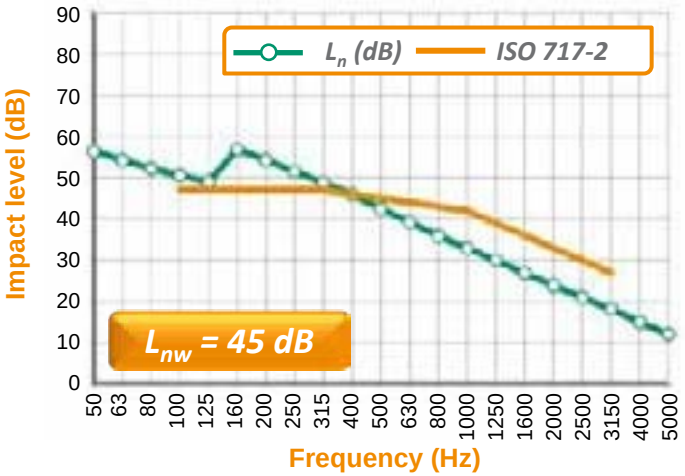


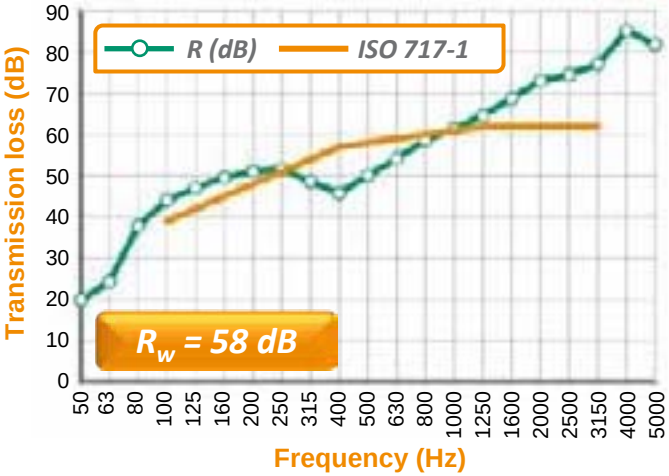


200 mm concrete slab

n	description	mm
1	Concrete slab	200
2	**Upgrei 8**	8
3	Heating system	50
4	Sand and cement screed	50
5	Ceramic tiles floor finish	15
		323



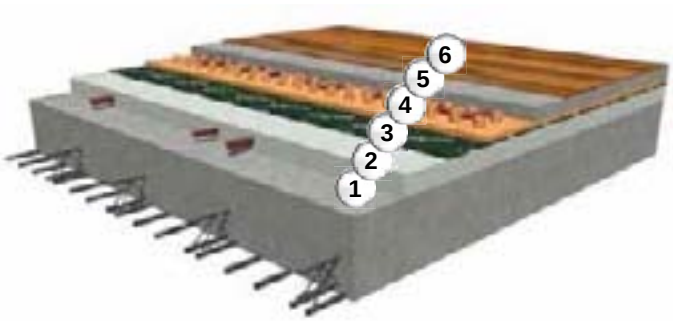


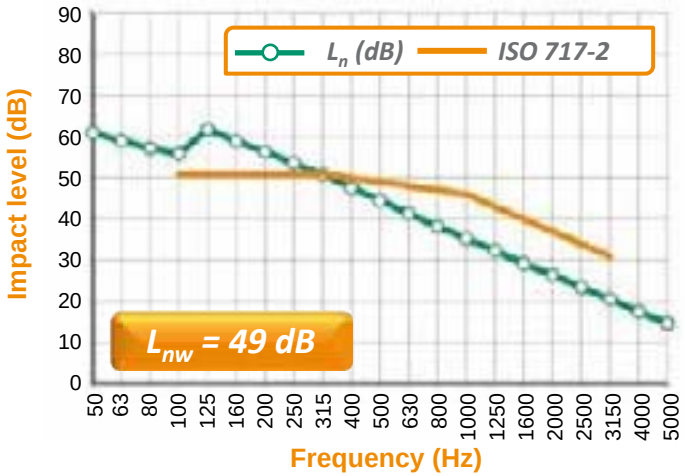


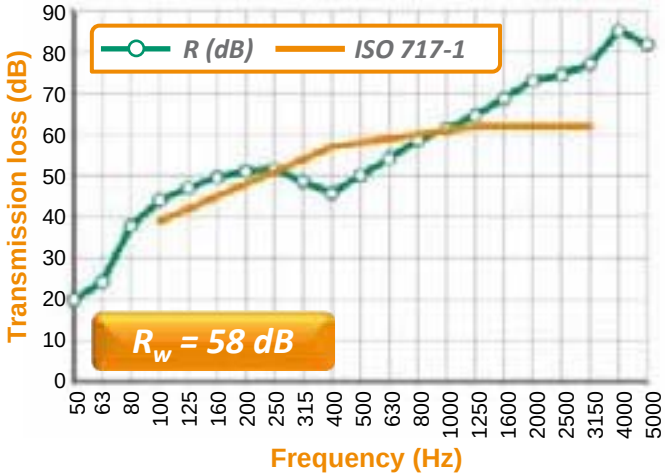
Underfloor heating

180 mm concrete slab with levelling screed

n	description	mm
1	Concrete slab	180
2	Levelling screed	50
3	**Grei 5**	5
4	Heating system	50
5	Sand and cement screed	50
6	Parquet flooring	10
		345

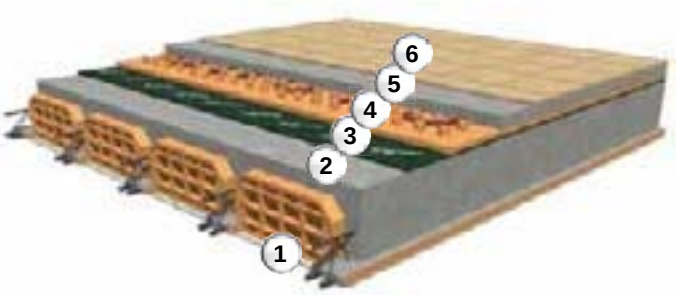


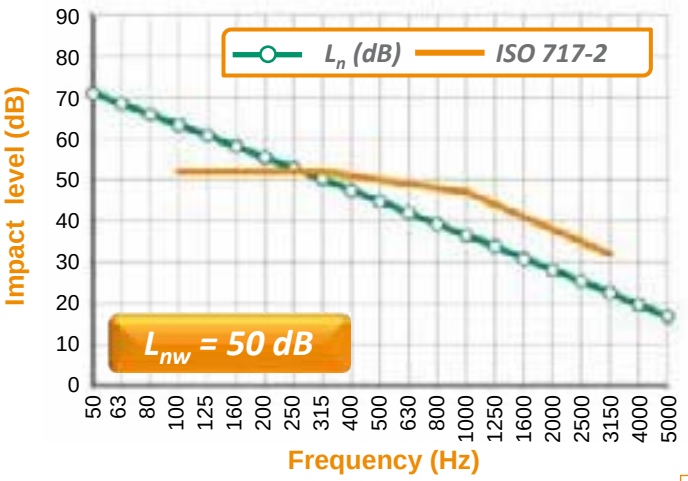


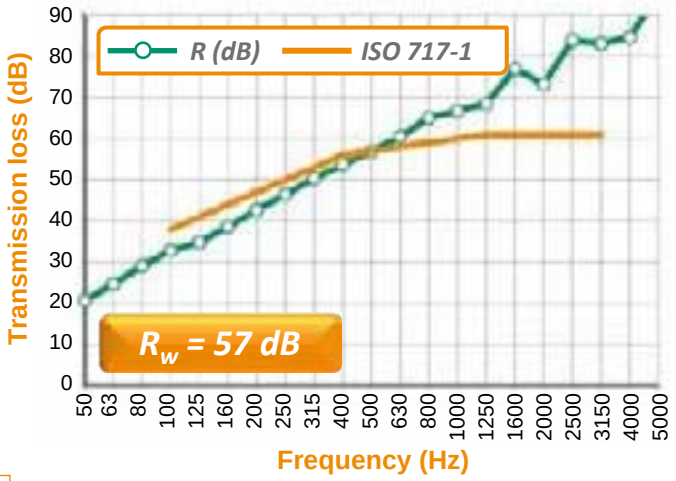


320 mm Hollow brick slab

n	description	mm
1	Plaster	10
2	Hollow brick slab	320
3	**Grei 8**	8
4	Heating system	50
5	Sand and cement screed	50
6	Ceramic tiles floor finish	15
		453

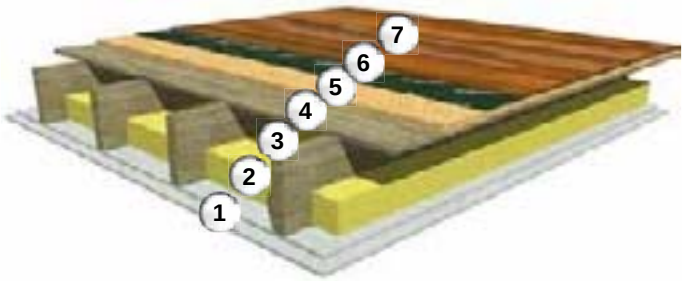


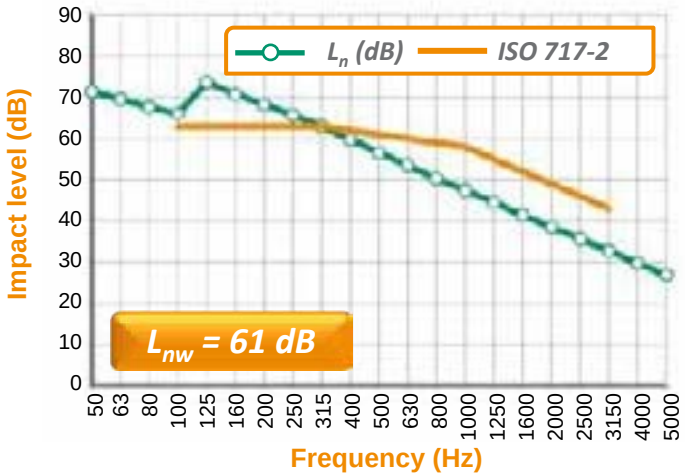


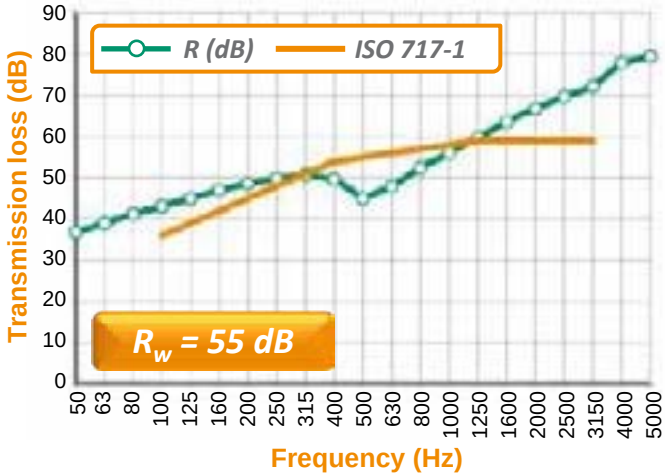


Timber framed floor with under wooden floor and ceiling

n	description	mm
1	Gypsum board double layer	25
2	Rock wool panel	100
3	Air cavity	125
4	Plywood flooring	18
5	OSB panel	20
6	**Syl 5**	5
7	Parquet flooring	8
		301

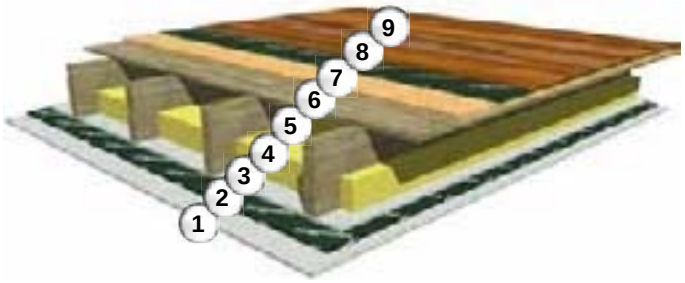


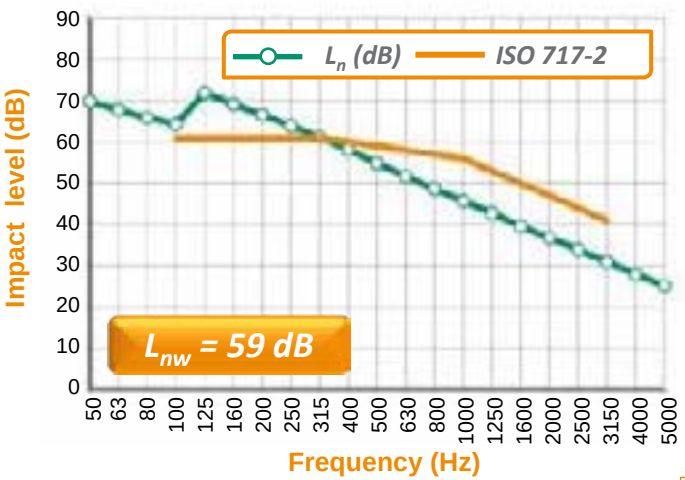


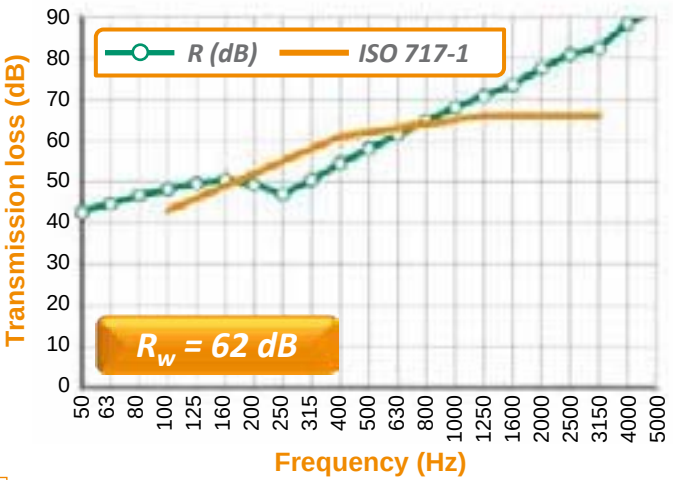


Timber framed floor with under wooden floor and ceiling

n	description	mm
1	Gypsum board	12.5
2	**Mustwall 10**	10
3	Gypsum board	12.5
4	Rock wool panel	100
5	Air cavity	125
6	Plywood flooring	18
7	OSB panel	20
8	**Syl 5**	5
9	Parquet flooring	8
		311



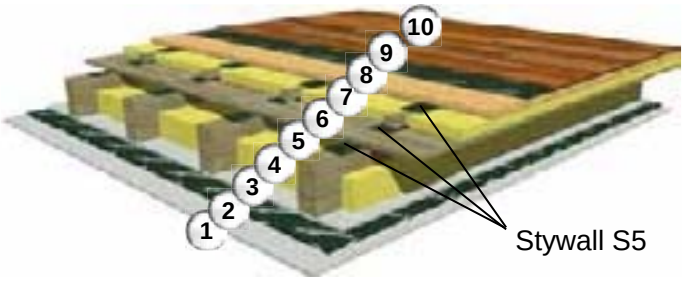


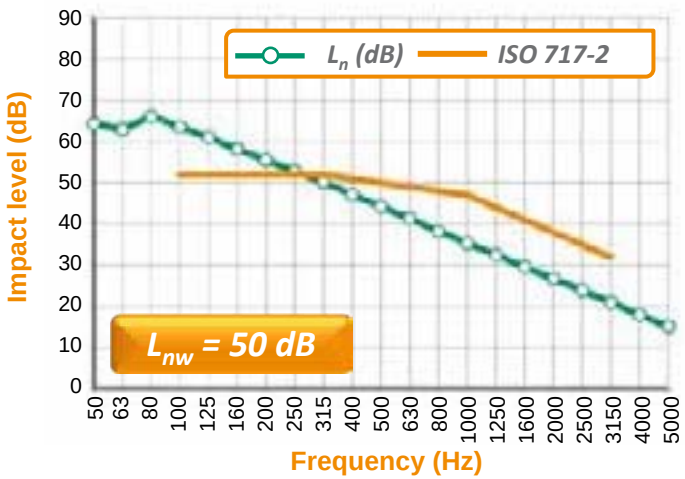


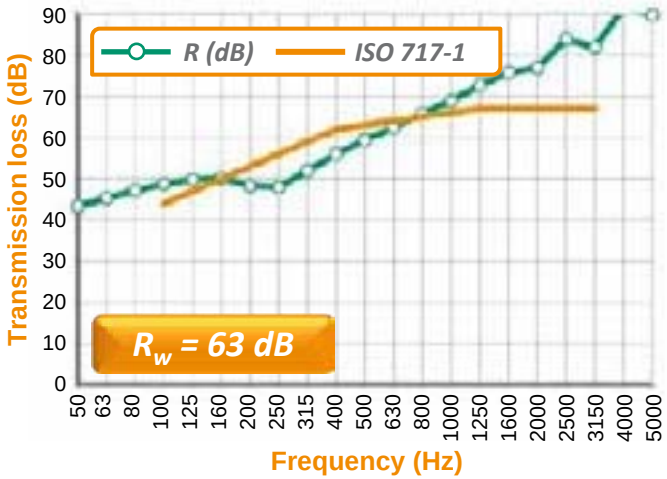
Wooden slab structure

Timber framed floor with timber joinst and ceiling

n	description	mm
1	Gypsum board	12.5
2	**Mustwall 10**	10
3	Gypsum board	12.5
4	Rock wool panel	100
5	Air cavity	65
6	OSB panel	22
7	Rock wool into wooden beam	30
8	OSB panel	22
9	**Syl 5**	5
10	Parquet flooring	8
		287

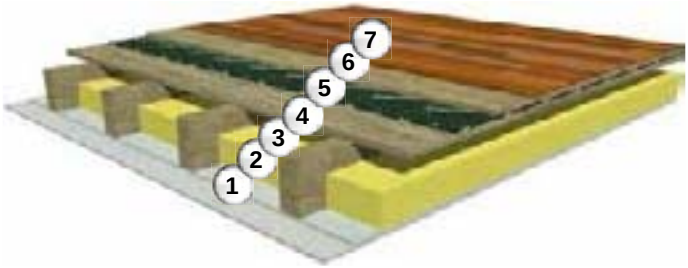


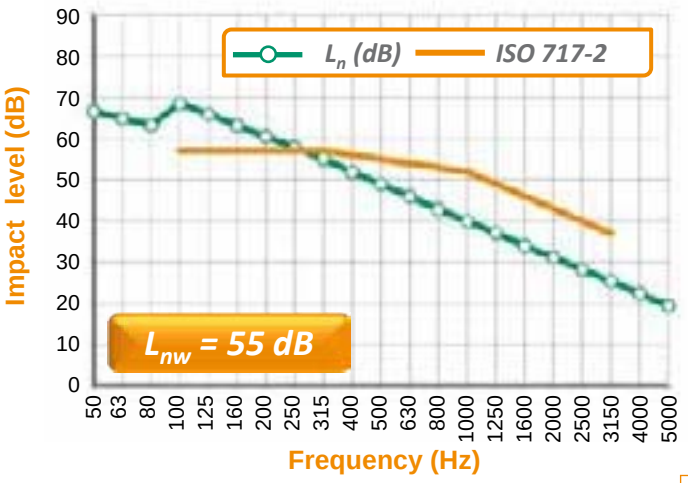


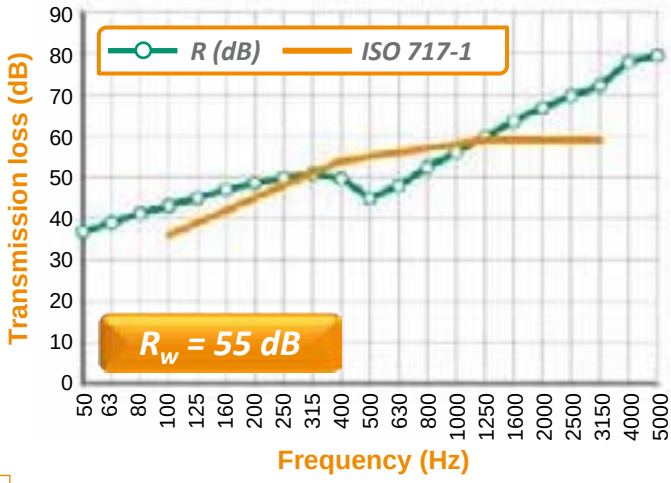


Timber framed floor with floating plywood and ceiling

n	description	mm
1	Gypsum board double layer	25
2	Rock wool panel	100
3	Air cavity	65
4	Wooden board	25
5	**Roll 10**	10
6	Wooden board	19
7	Parquet flooring	8
		252

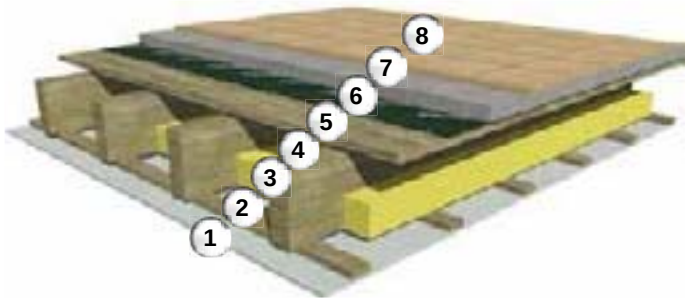


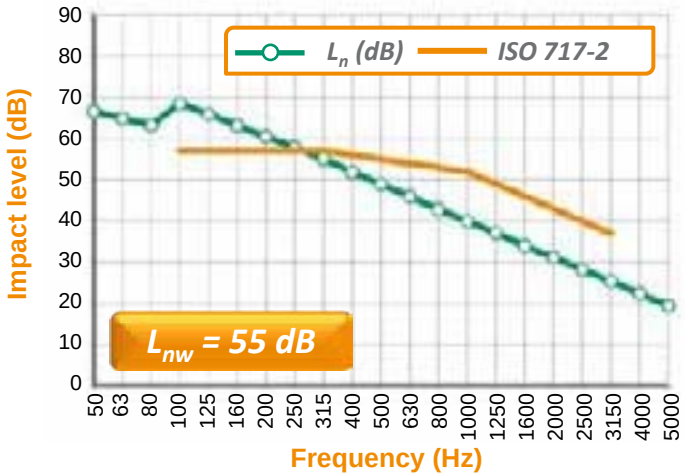


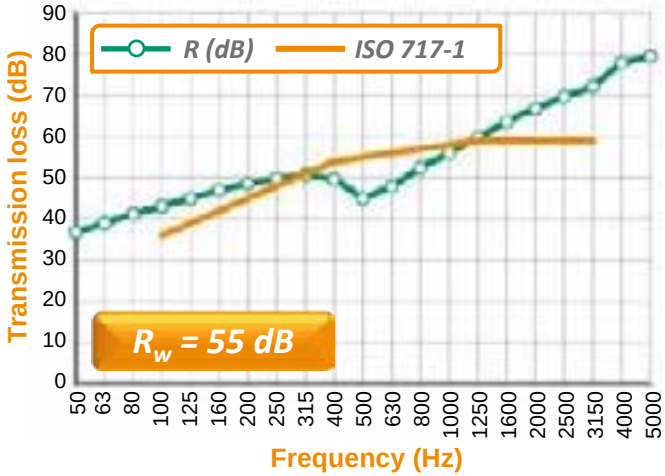


Timber framed floor with floating screed and ceiling

n	description	mm
1	Gypsum board	12.5
2	Air cavity	24
3	Rock wool panel	100
4	Air cavity	120
5	OSB panel	22
6	**Grei 5**	5
7	Sand and cement screed	50
8	Ceramic floor finish	10
		344

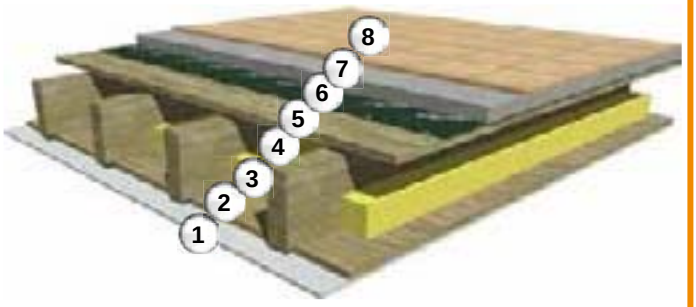


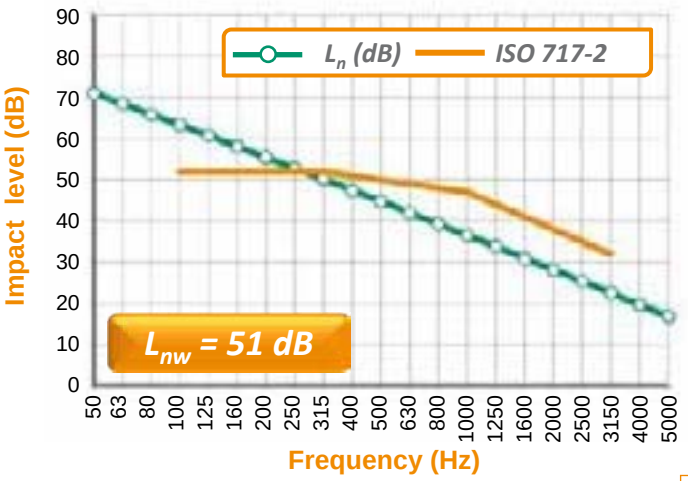


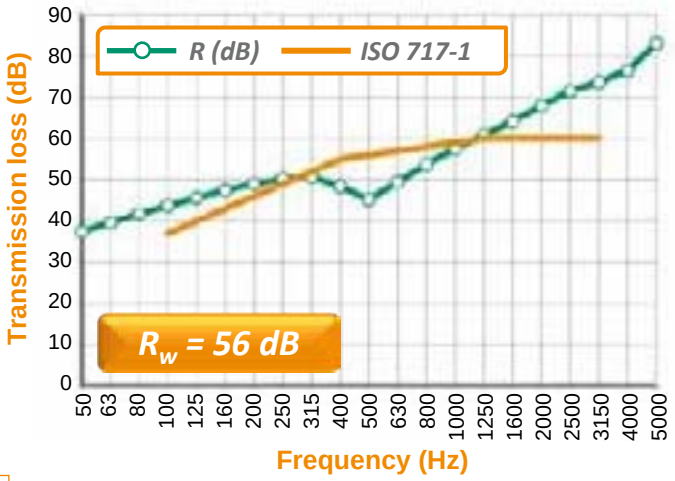


Timber framed floor with floating screed and ceiling

n	description	mm
1	Gypsum board	12.5
2	Wooden plank	50
3	Rock wool panel	100
4	Air cavity	120
5	Wooden plank	32
6	**Grei 5**	5
7	Sand and cement screed	50
8	Ceramic floor finish	10
		380



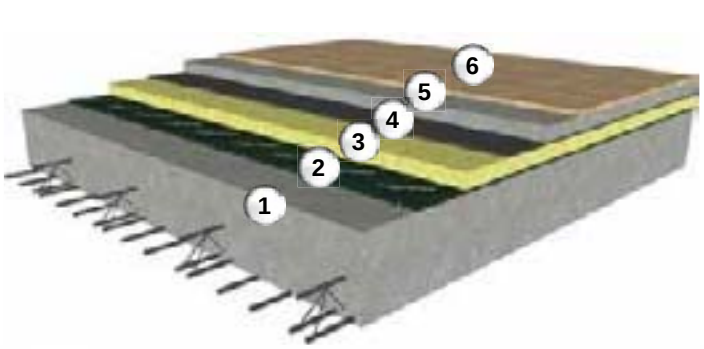


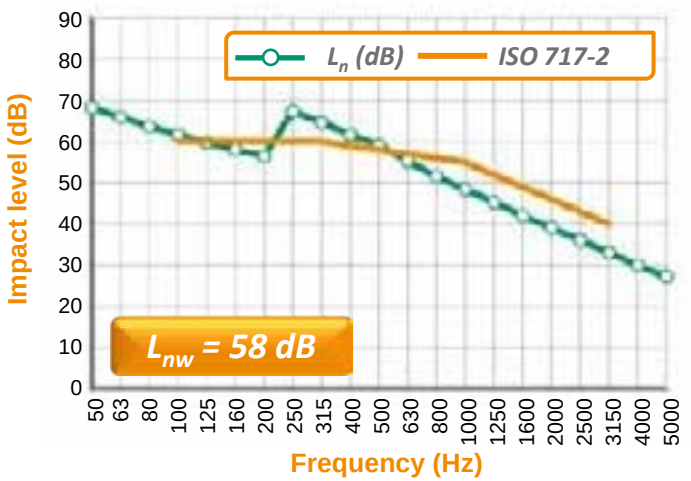


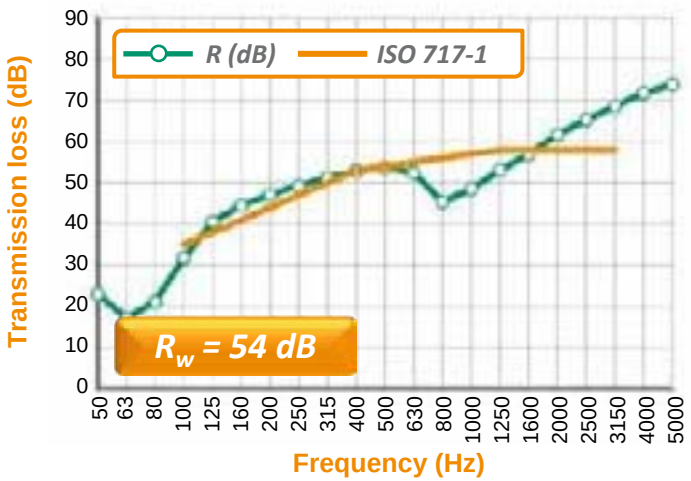
Terrace

120 mm concrete slab

n	description	mm
1	Concrete slab	120
2	**Roll 5**	5
3	Thermal insulation	50
4	Waterproof membrane	10
5	Sand and cement screed	50
6	Ceramic tile floor finish	15
		250

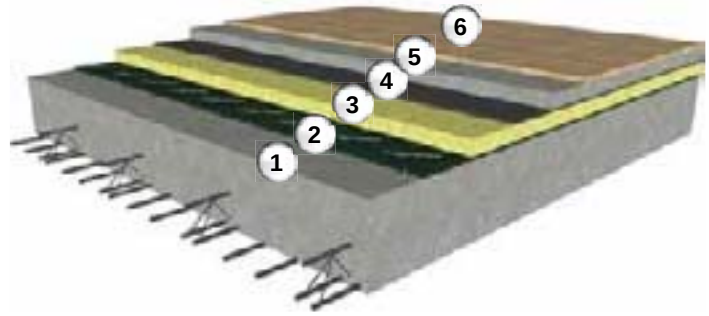


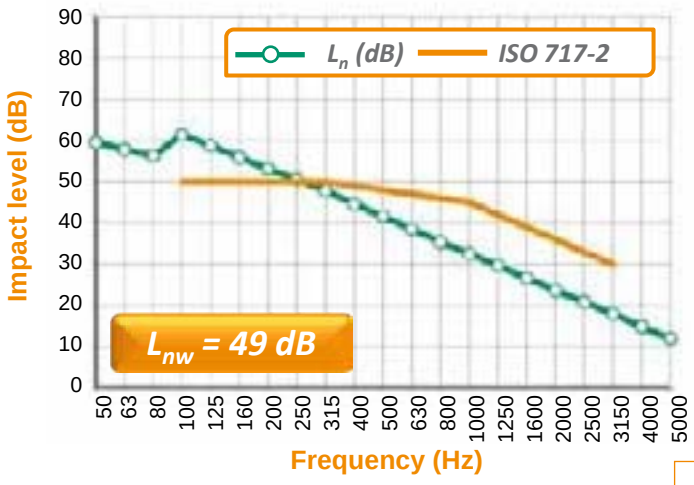


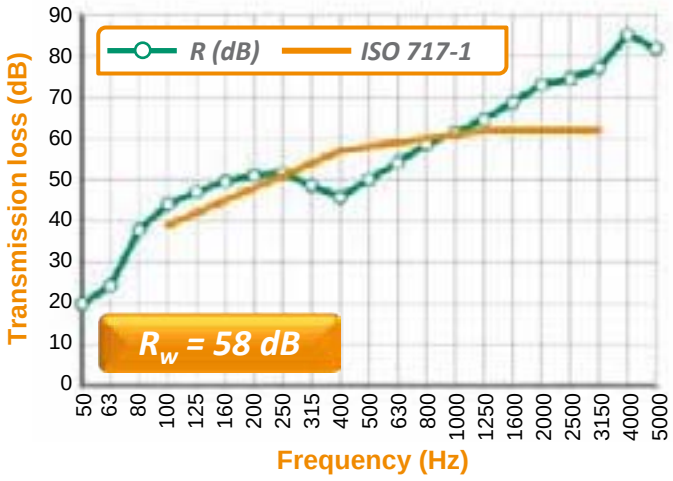


200 mm concrete slab

n	description	mm
1	Concrete slab	200
2	**Roll 5**	5
3	Thermal insulation	50
4	Waterproof membrane	10
5	Sand and cement screed	50
6	Ceramic tile floor finish	15
		330

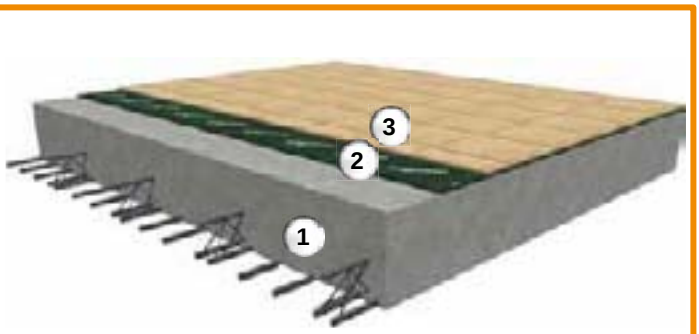


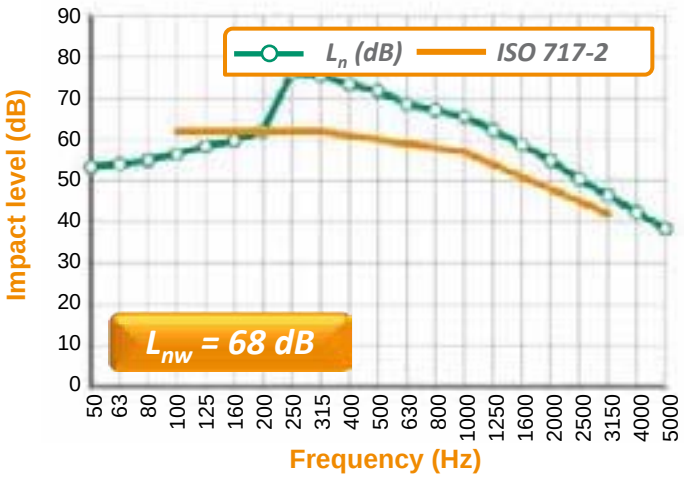


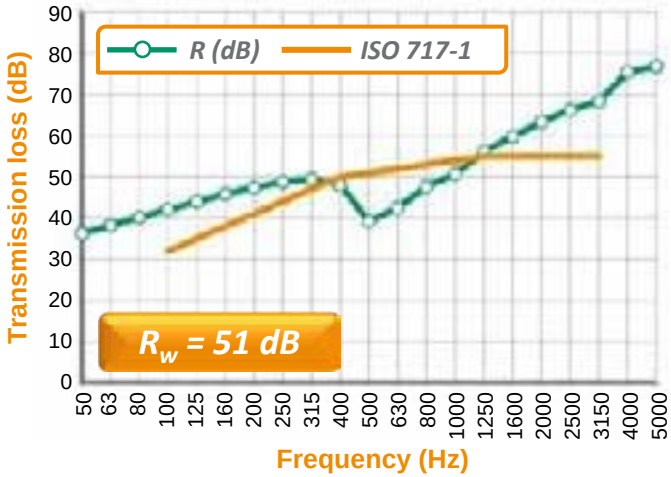


120 mm concrete slab

n	description	mm
1	Concrete slab	120
2	**Sylcer 3**	3
3	Ceramic tile floor finish	10
		133

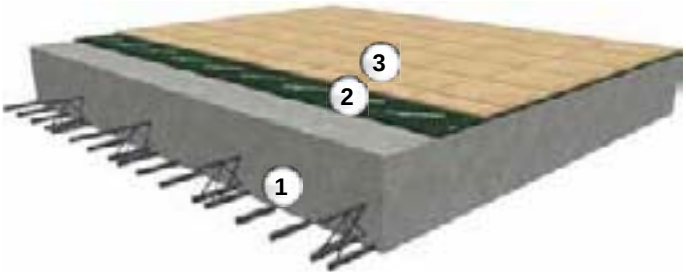


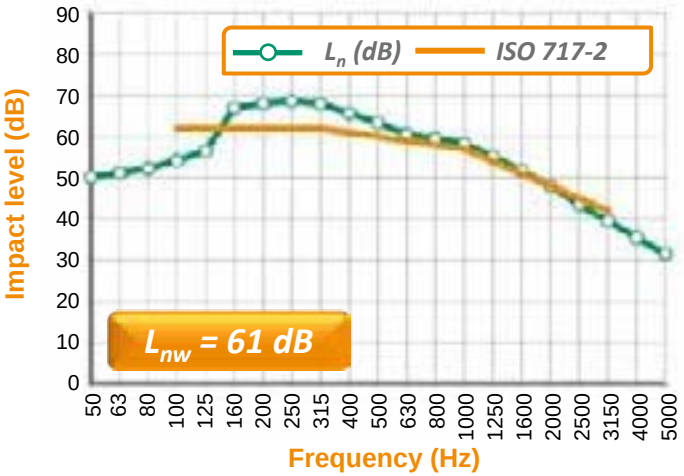


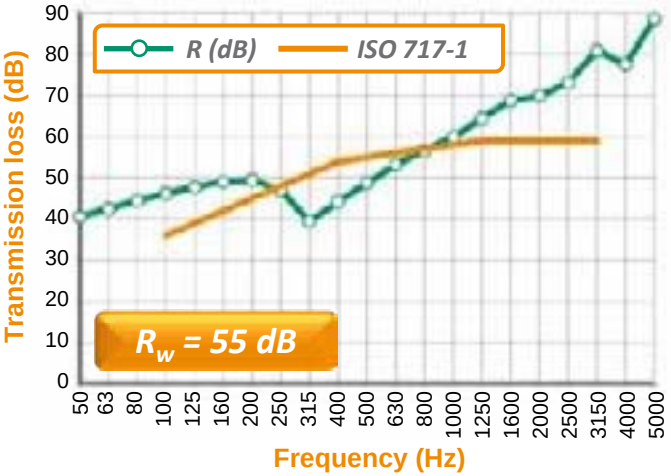


200 mm concrete slab

n	description	mm
1	Concrete slab	200
2	**Sylcer 3**	3
3	Ceramic tile floor finish	10
		213



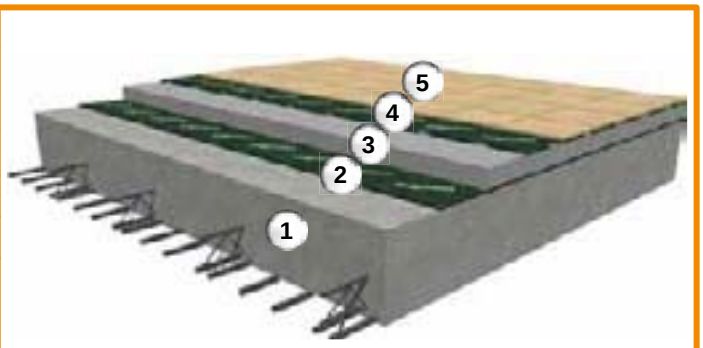


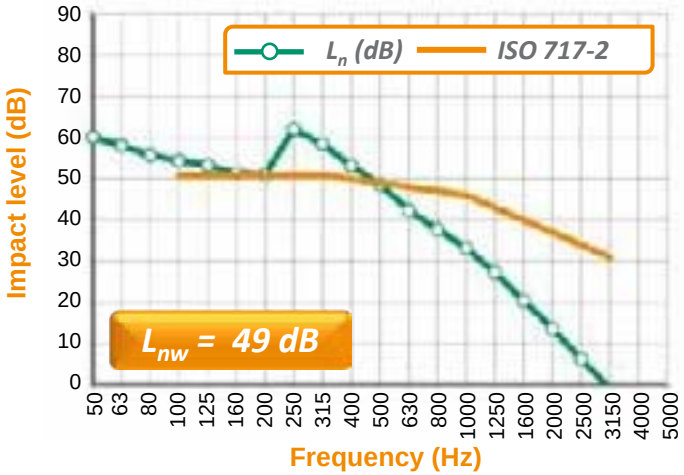


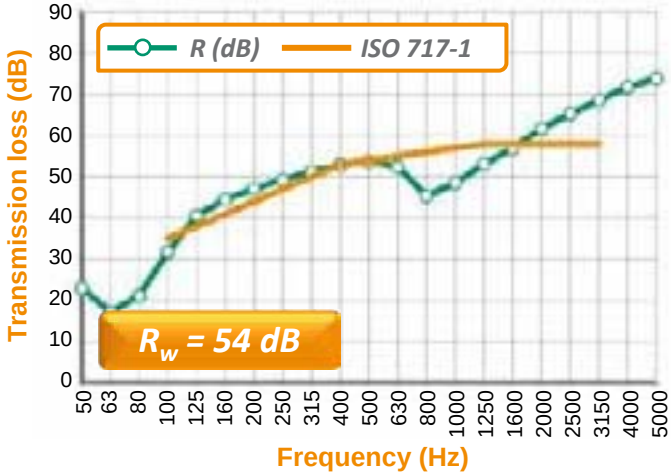
Under ceramic floor

120 mm concrete slab with floating screed

n	description	mm
1	Concrete slab	120
2	**Upgrei 8**	8
3	Sand and cement screed	50
4	**Sylcer 3**	3
5	Ceramic tile floor finish	15
		196

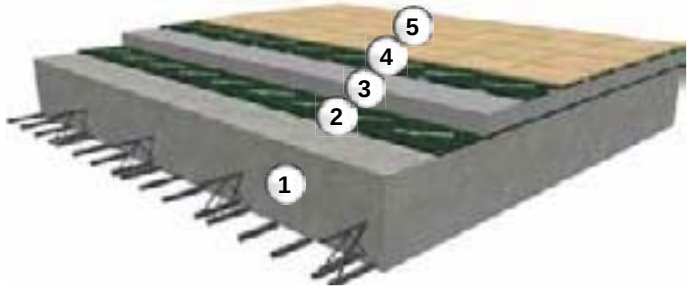


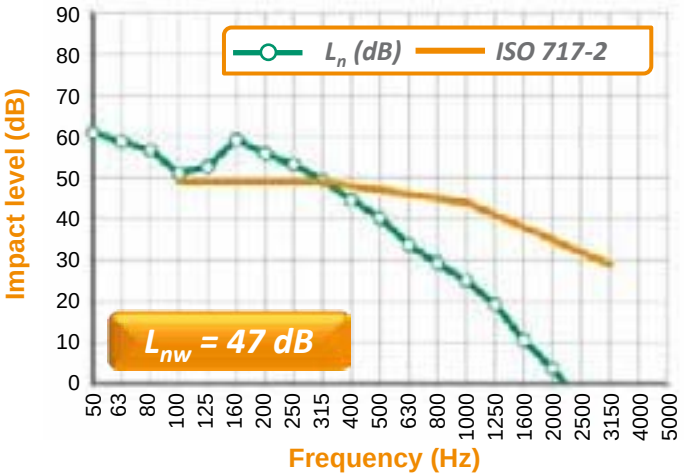


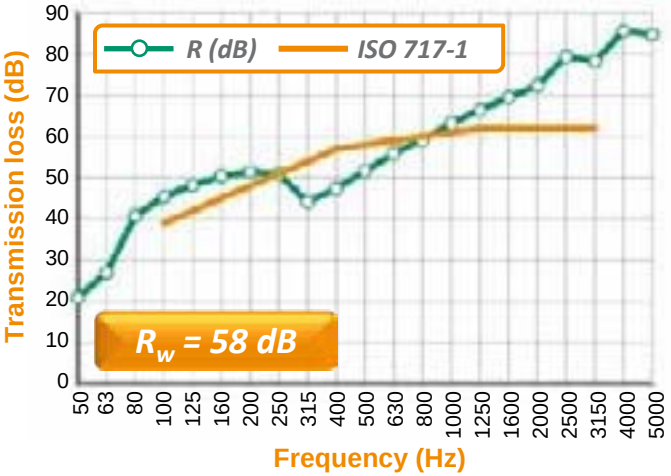


200 mm concrete slab with floating screed

n	description	mm
1	Concrete slab	200
2	**Grei 5**	5
3	Sand and cement screed	50
4	**Sylcer 3**	3
5	Ceramic tile floor finish	15
		273

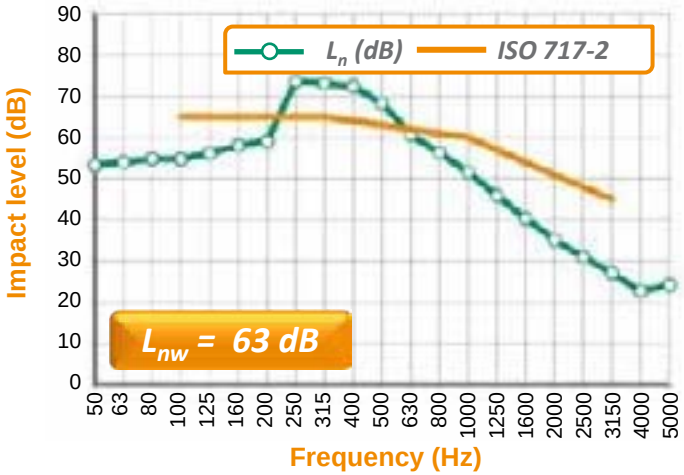


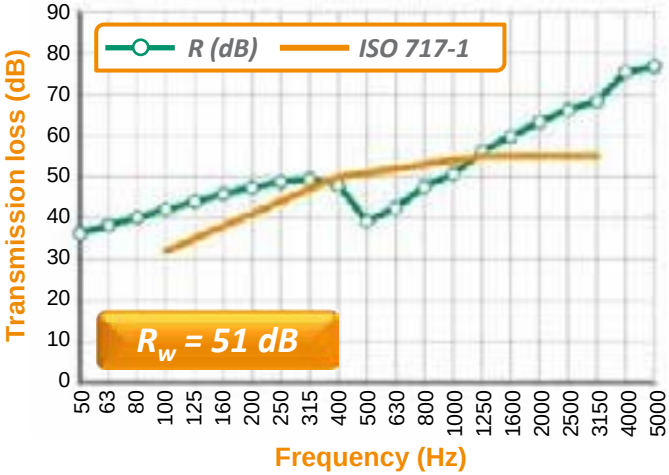




120 mm concrete slab with floating screed

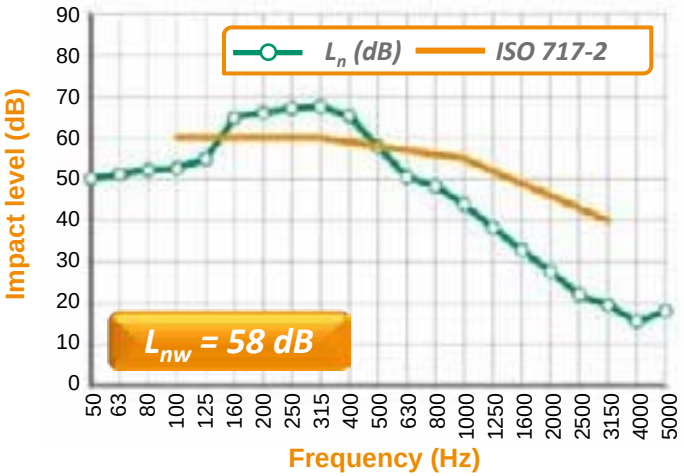
n	description	mm
1	Concrete slab	120
2	**Sylwood 3 (dry installation)**	3
3	Parquet floor finish	10
		133

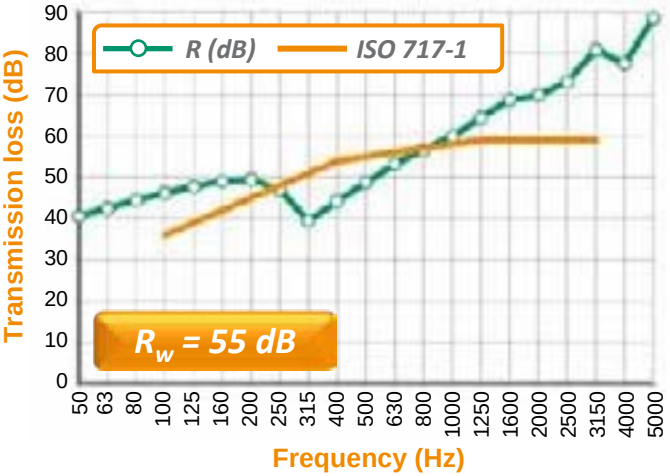




200 mm concrete slab with floating screed

n	description	mm
1	Concrete slab	200
2	**Sylwood 5 (dry installation)**	5
3	Parquet floor finish	10
		215

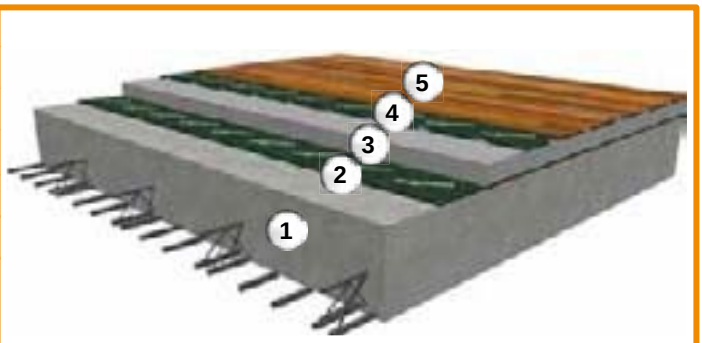


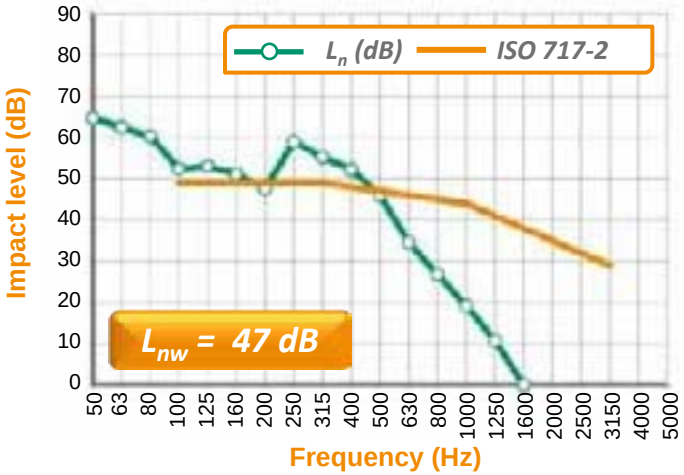


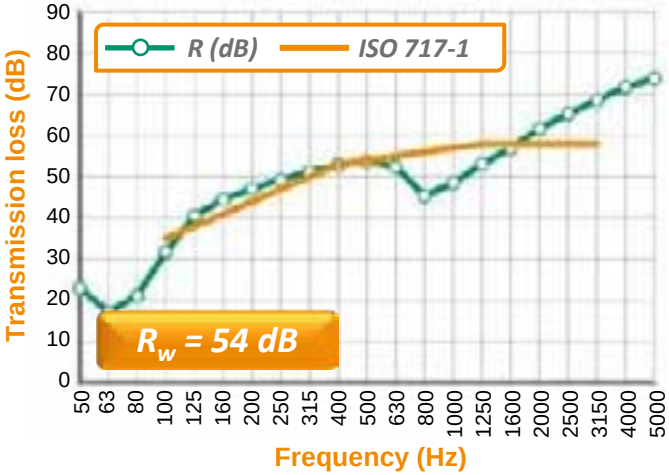
Under wooden floor

120 mm concrete slab with floating screed

n	description	mm
1	Concrete slab	120
2	**Grei 8**	8
3	Sand and cement screed	50
4	**Sylwood 5 (dry installation)**	5
5	Parquet floor finish	10
		196

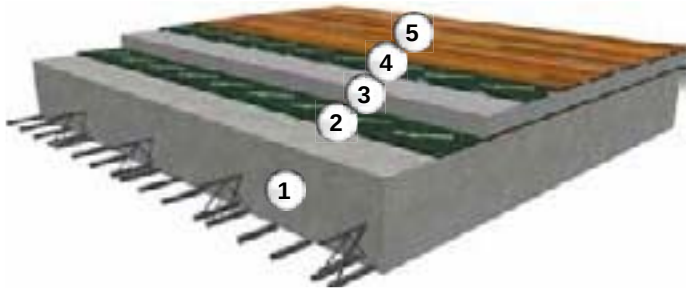


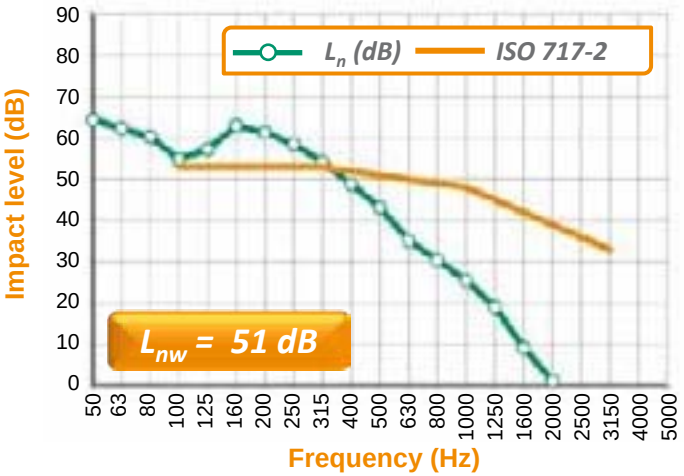


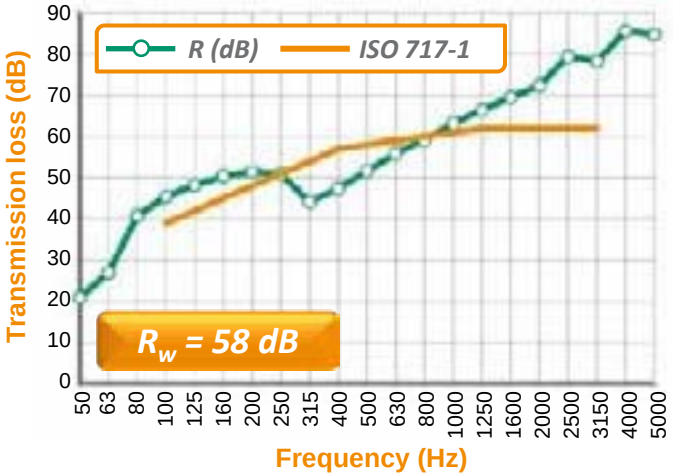


200 mm concrete slab with floating screed

n	description	mm
1	Concrete slab	200
2	**Roll 7**	7
3	Sand and cement screed	50
4	**Sylwood 3 (glue installation)**	3
5	Parquet floor finish	10
		270

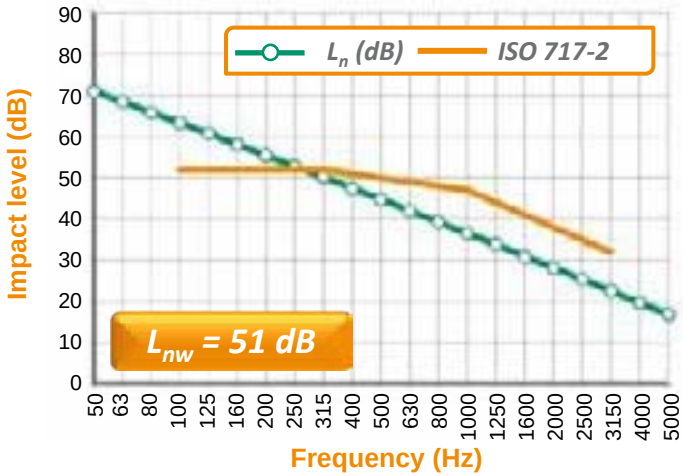


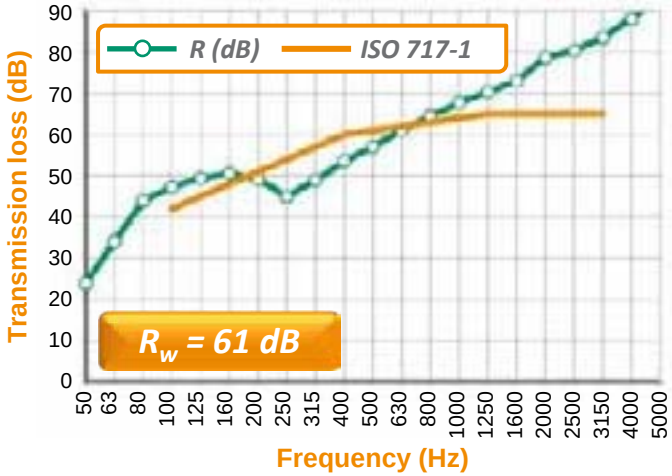




120 mm concrete slab

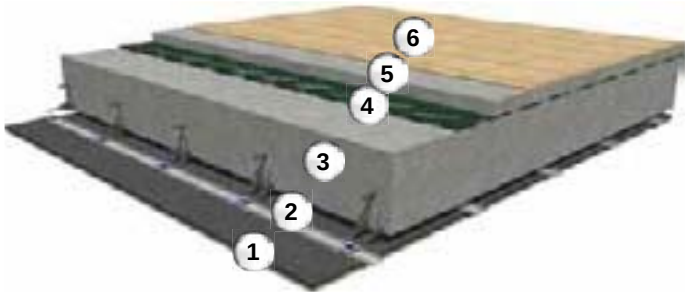
n	description	mm
1	**Mustwall 33B**	33
2	Air cavity	42
3	Concrete slab	120
4	**Grei 5**	5
5	Sand and cement screed	50
6	Ceramic tile floor finish	10
		260

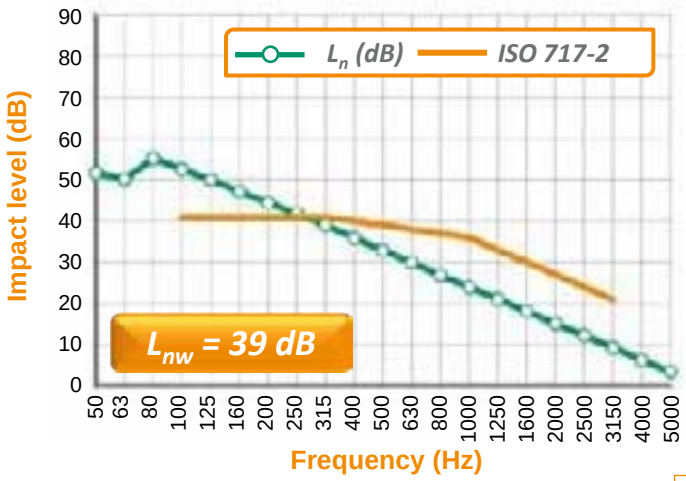


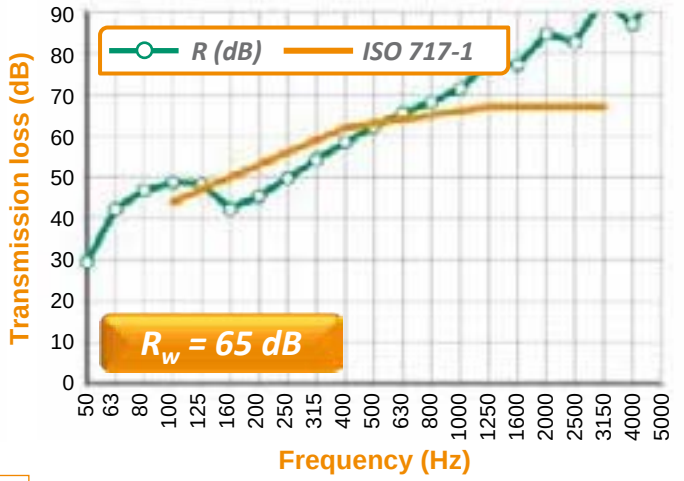


200 mm concrete slab

n	description	mm
1	**Mustwall 33B**	33
2	Air cavity	42
3	Concrete slab	200
4	**Upgrei 8**	8
5	Sand and cement screed	50
6	Ceramic tile floor finish	10
		343



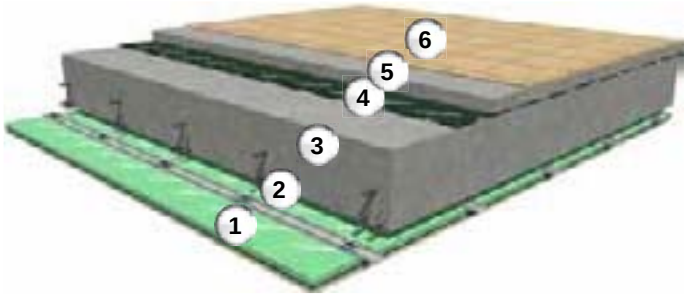


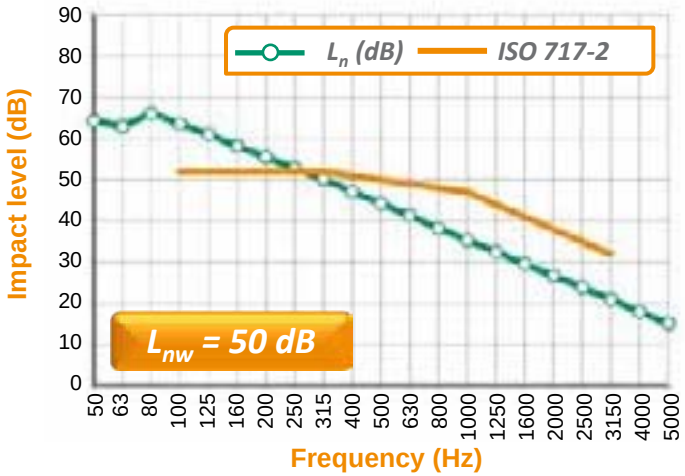


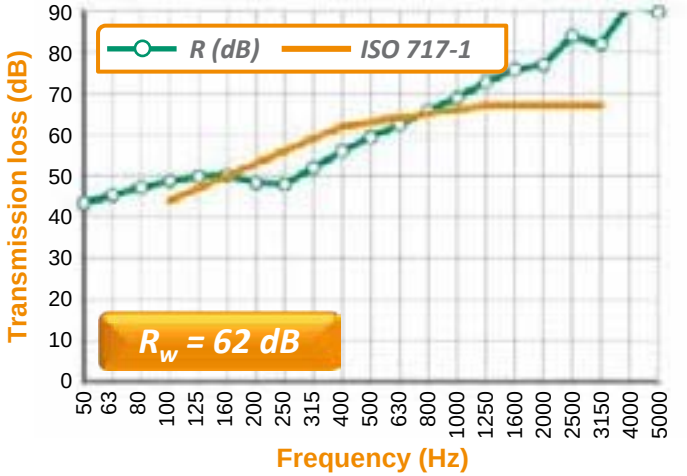
Coated ceiling

120 mm concrete slab

n	description	mm
1	**Rewall 40**	40
2	Air cavity	44
3	Concrete slab	120
4	**Grei 5**	5
5	Sand and cement screed	50
6	Ceramic tile floor finish	10
		269

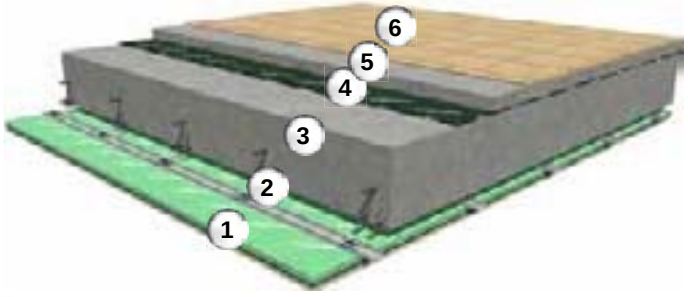


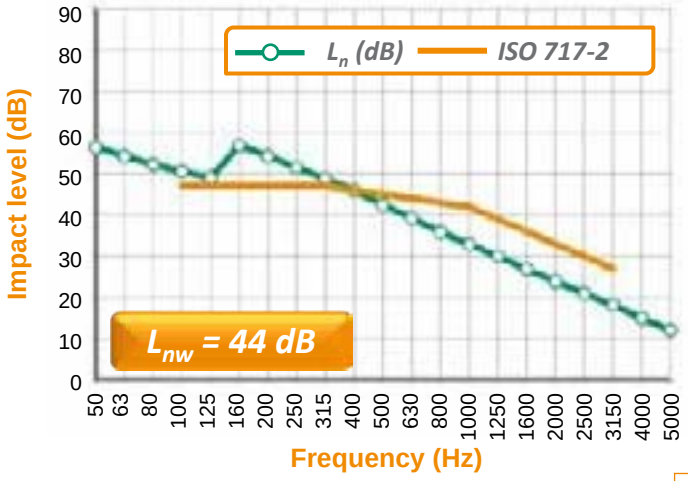


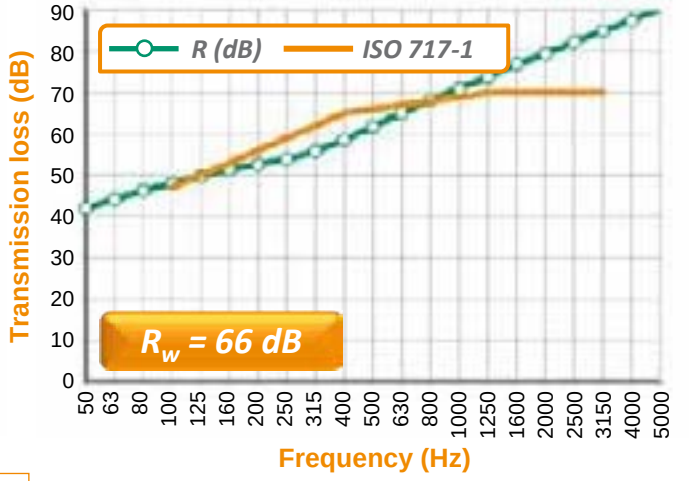


200 mm concrete slab

n	description	mm
1	**Rewall 40**	40
2	Air cavity	44
3	Concrete slab	200
4	**Roll 7**	7
5	Sand and cement screed	50
6	Ceramic tile floor finish	10
		351

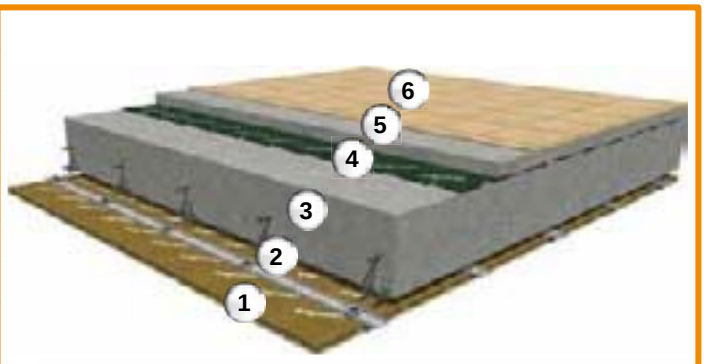


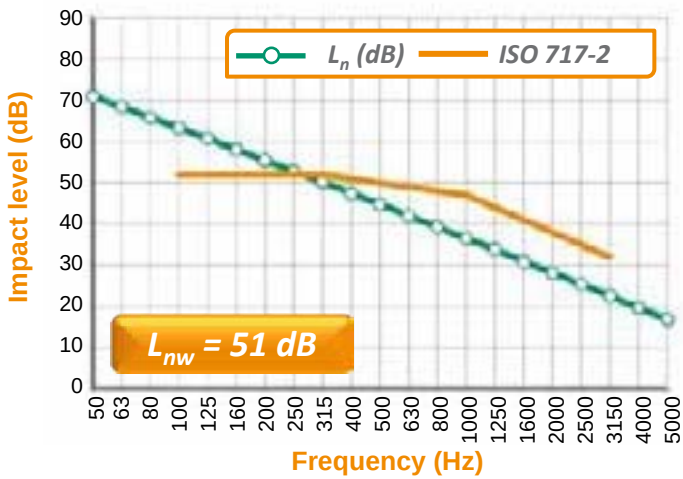


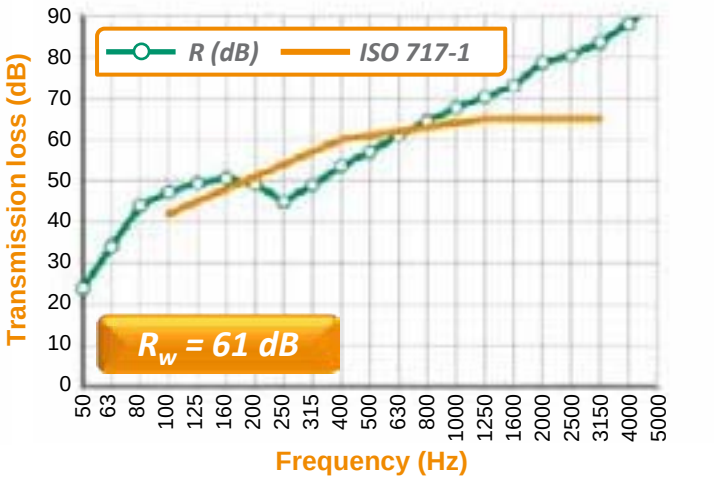


120 mm concrete slab

n	description	mm
1	**Natur 33B**	33
2	Air cavity	44
3	Concrete slab	120
4	**Grei 5**	5
5	Sand and cement screed	50
6	Ceramic tile floor finish	10
		262

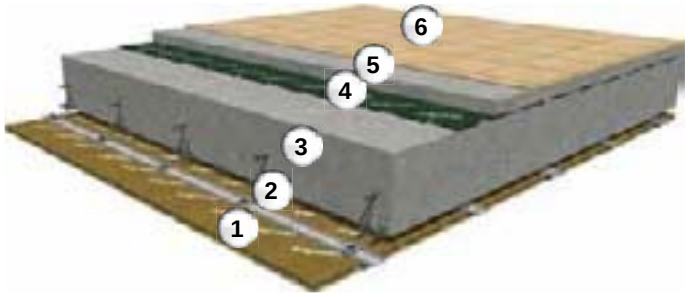


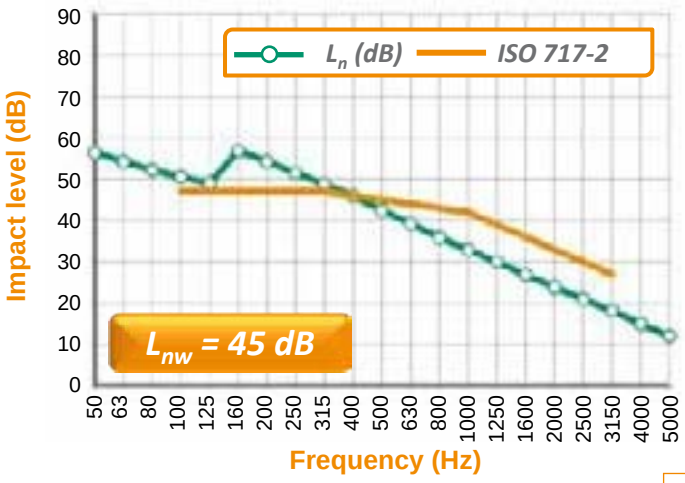


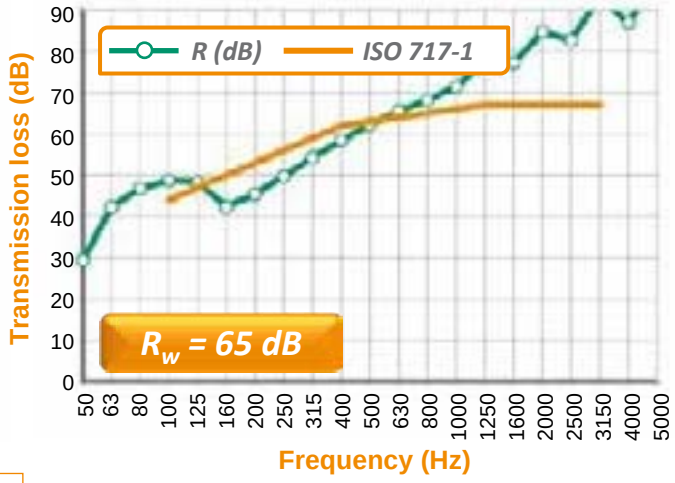


200 mm concrete slab

n	description	mm
1	**Natur 33B**	33
2	Air cavity	44
3	Concrete slab	200
4	**Roll 7**	7
5	Sand and cement screed	50
6	Ceramic tile floor finish	10
		344



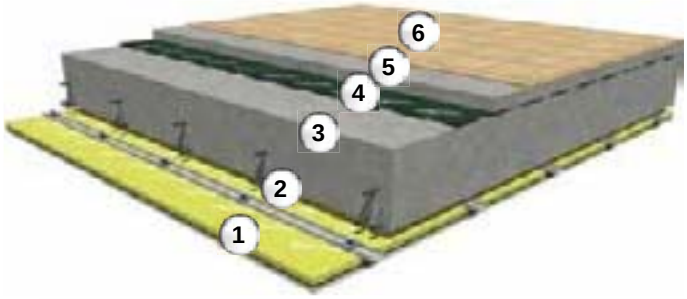


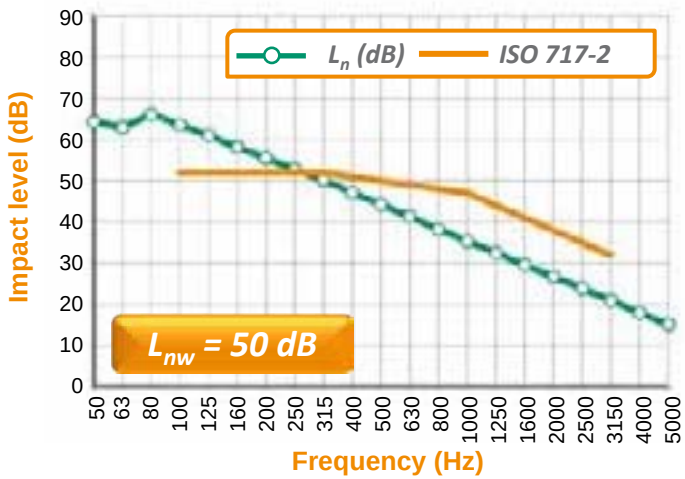


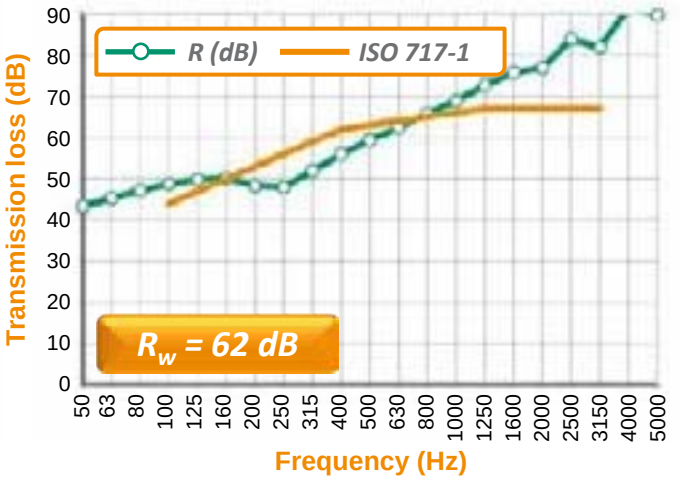
Coated ceiling

120 mm concrete slab

n	description	mm
1	**Mineral 40RB**	40
2	Air cavity	44
3	Concrete slab	120
4	**Grei 5**	5
5	Sand and cement screed	50
6	Ceramic tile floor finish	10
		269

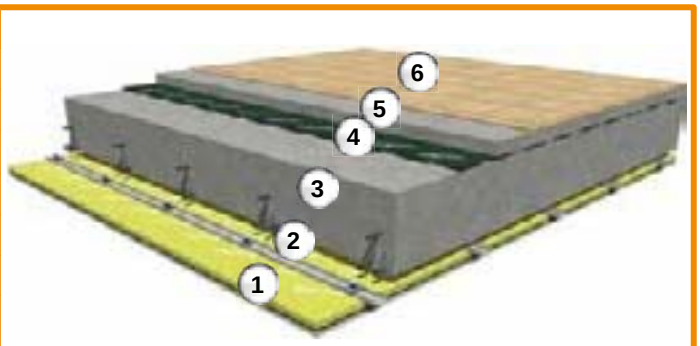


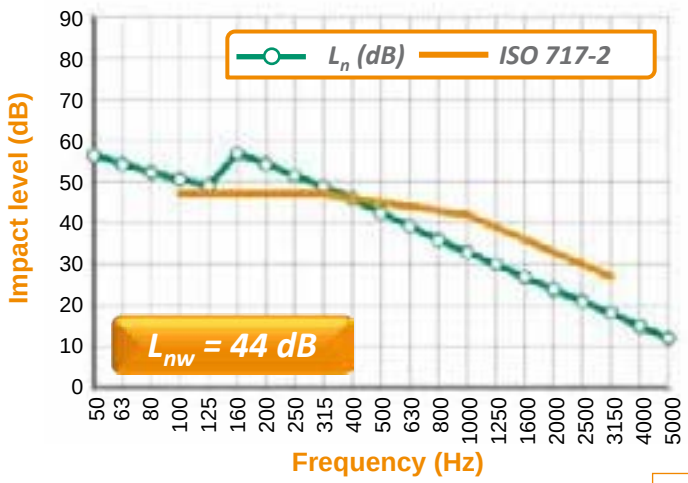


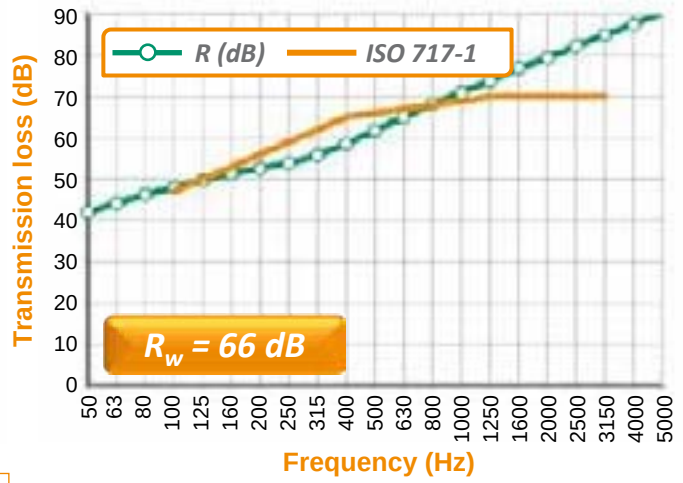


200 mm concrete slab

n	description	mm
1	**Mineral 40RB**	40
2	Air cavity	44
3	Concrete slab	200
4	**Roll 7**	7
5	Sand and cement screed	50
6	Ceramic tile floor finish	10
		351

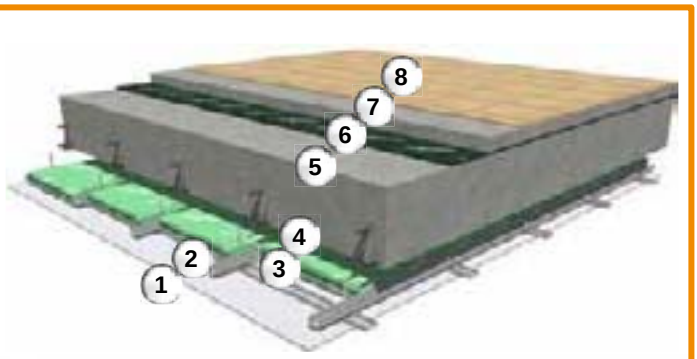


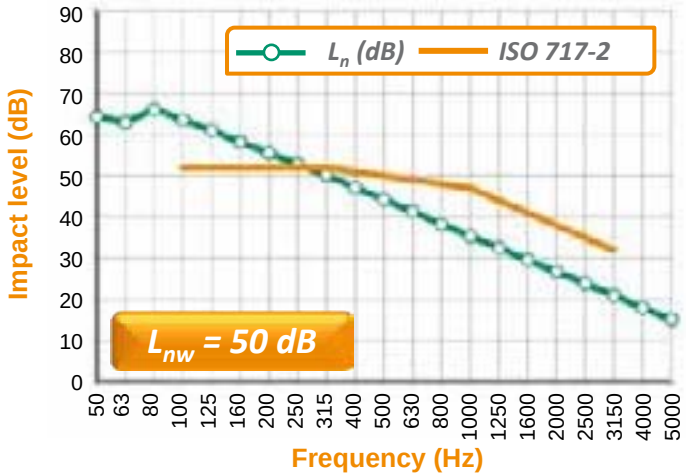


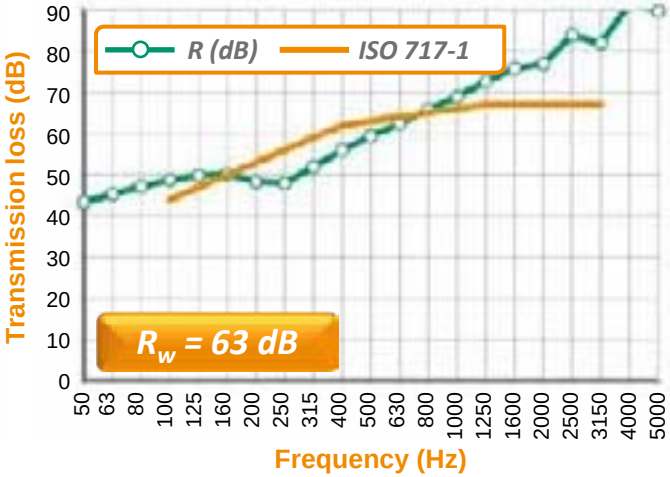


120 mm concrete slab

n	description	mm
1	Gypsum board layer	12.5
2	Air cavity (metal frame)	35
3	**Trywall 48**	48
4	Air cavity	105
5	Concrete slab	120
6	**Grei 5**	5
7	Sand and cement screed	50
8	Ceramic tile floor finish	10
		386

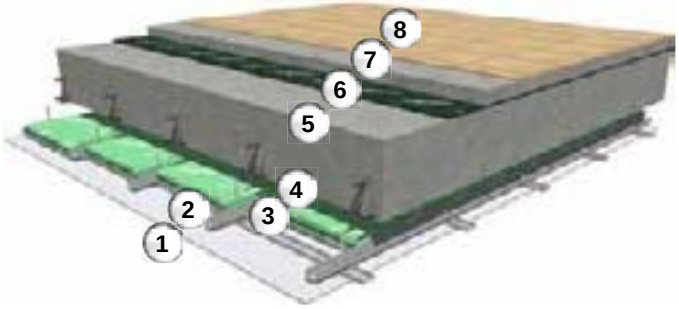


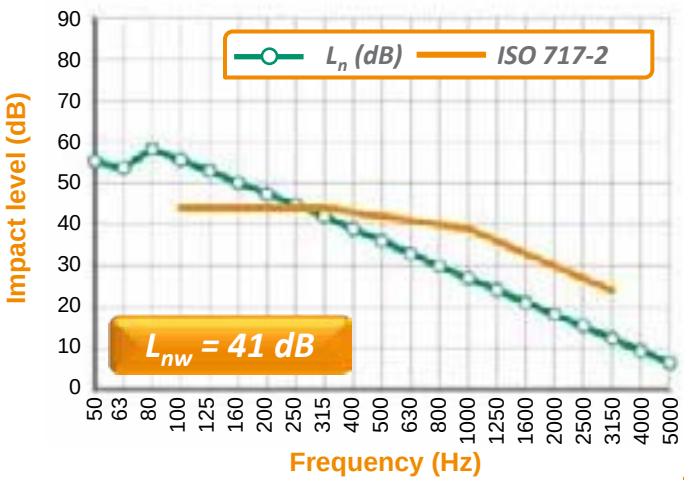


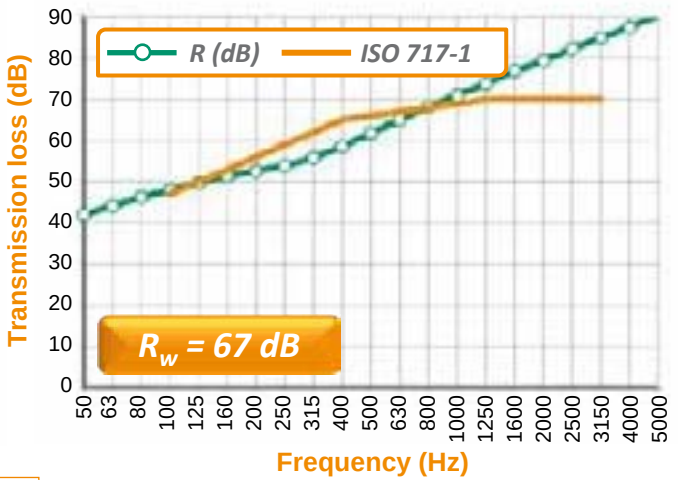


200 mm concrete slab

n	description	mm
1	Gypsum board layer	12.5
2	Air cavity (metal frame)	35
3	**Trywall 48**	48
4	Air cavity	105
5	Concrete slab	200
6	**Grei 5**	5
7	Sand and cement screed	50
8	Ceramic tile floor finish	10
		466



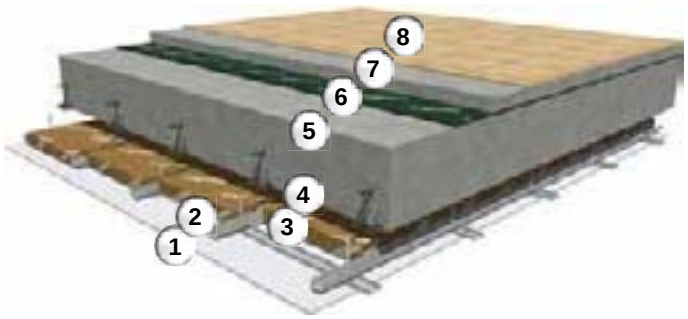


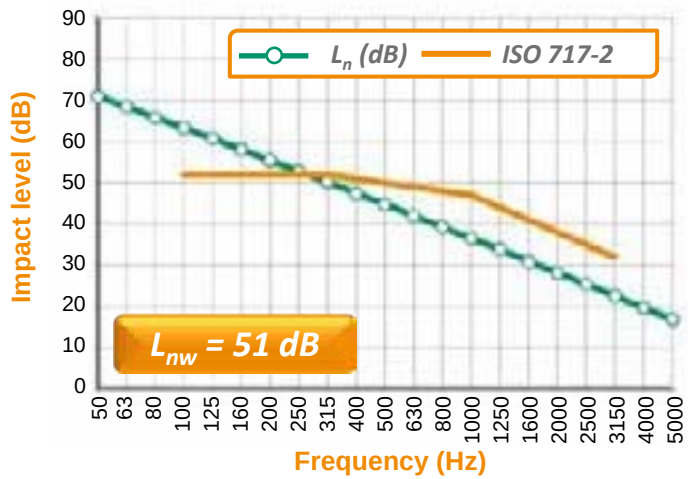


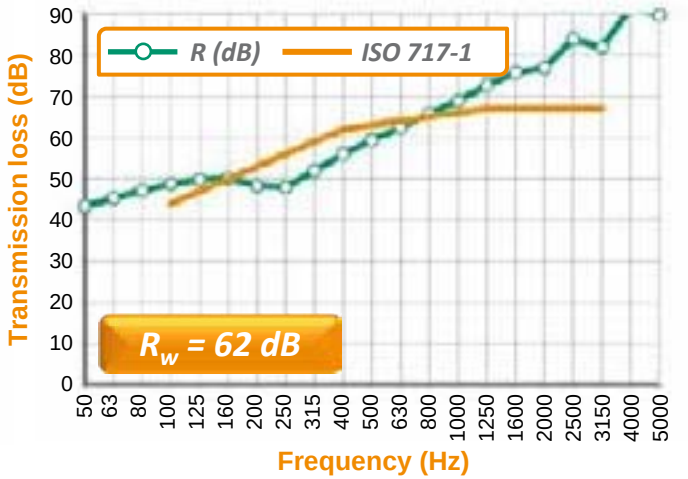
Suspended ceiling

120 mm concrete slab

n	description	mm
1	Gypsum board layer	12.5
2	Air cavity (metal frame)	35
3	**Natur 50**	50
4	Air cavity	102.5
5	Concrete slab	120
6	**Grei 5**	5
7	Sand and cement screed	50
8	Ceramic tile floor finish	10
		385

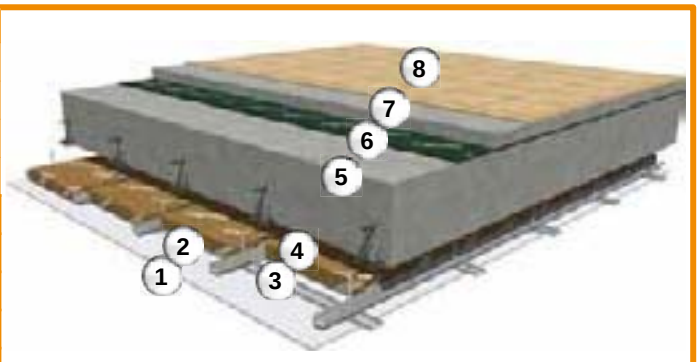


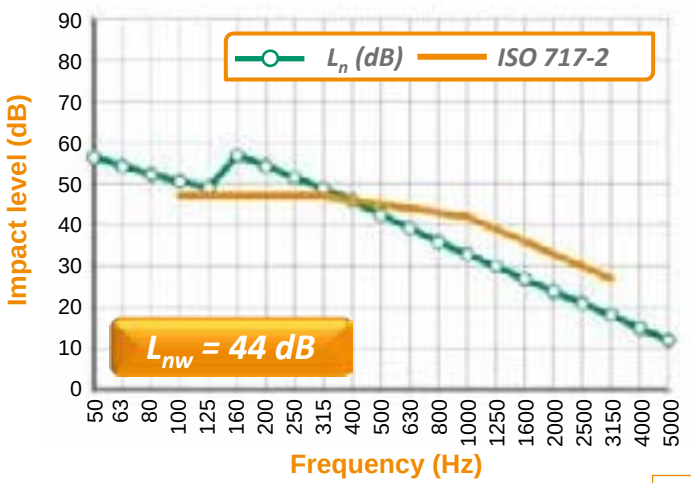


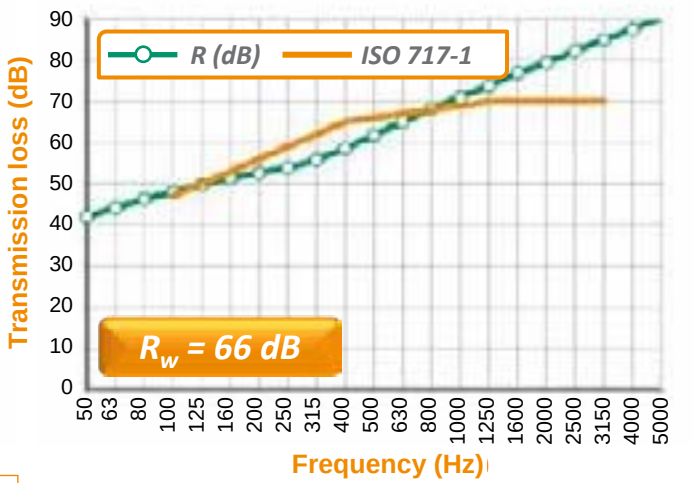


200 mm concrete slab

n	description	mm
1	Gypsum board layer	12.5
2	Air cavity (metal frame)	35
3	**Natur 50**	50
4	Air cavity	102.5
5	Concrete slab	200
6	**Roll 7**	7
7	Sand and cement screed	50
8	Ceramic tile floor finish	10
		467

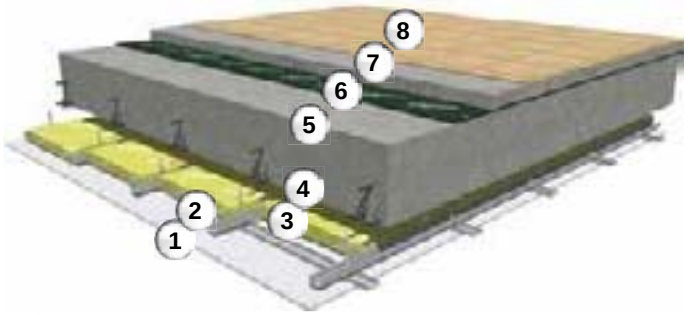


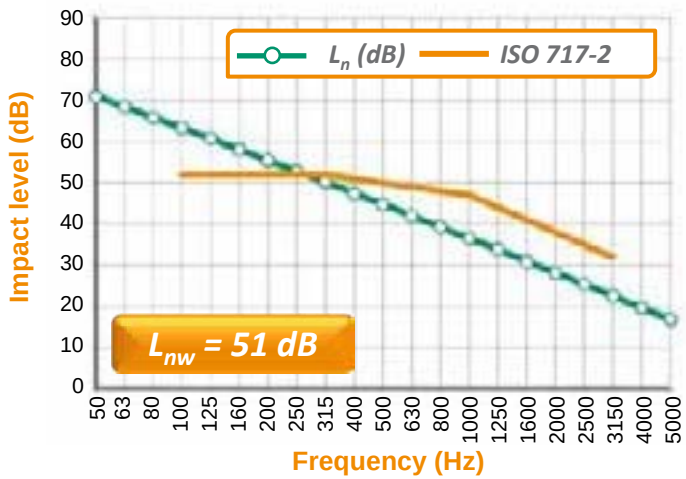


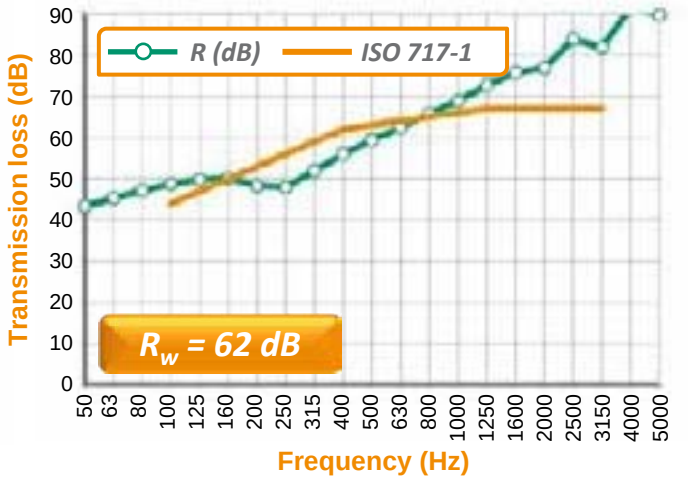


120 mm concrete slab

n	description	mm
1	Gypsum board layer	12.5
2	Air cavity (metal frame)	35
3	**Mineral 50-70**	50
4	Air cavity	102.5
5	Concrete slab	120
6	**Grei 5**	5
7	Sand and cement screed	50
8	Ceramic tile floor finish	10
		385

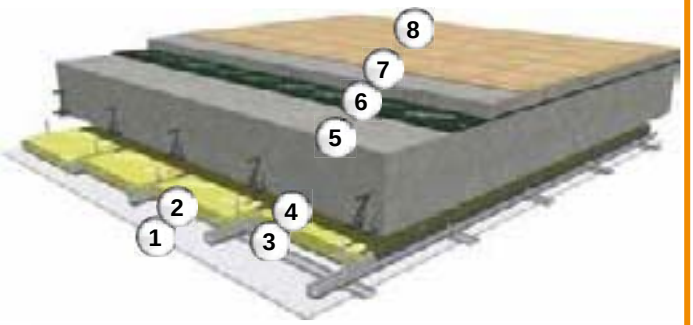


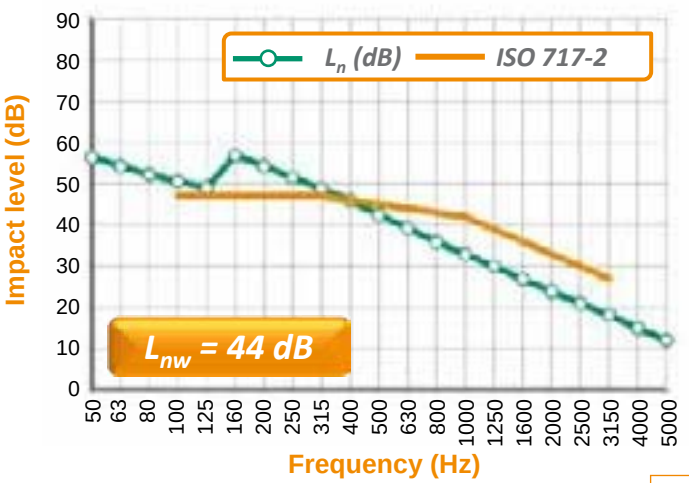


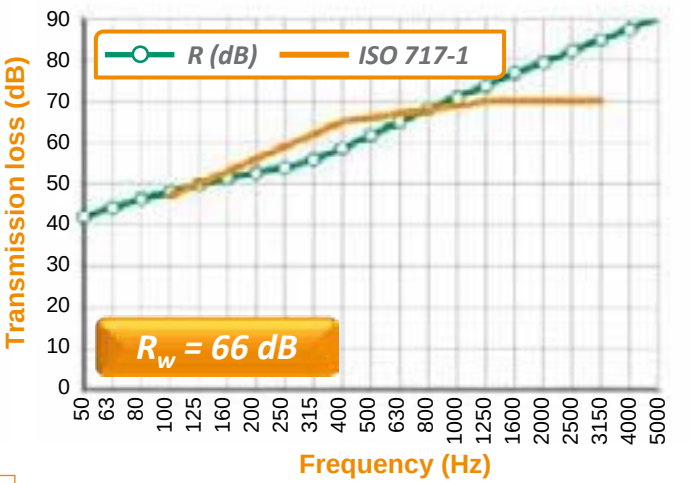


200 mm concrete slab

n	description	mm
1	Gypsum board layer	12.5
2	Air cavity (metal frame)	35
3	**Mineral 50-70**	50
4	Air cavity	102.5
5	Concrete slab	200
6	**Roll 7**	7
7	Sand and cement screed	50
8	Ceramic tile floor finish	10
		467



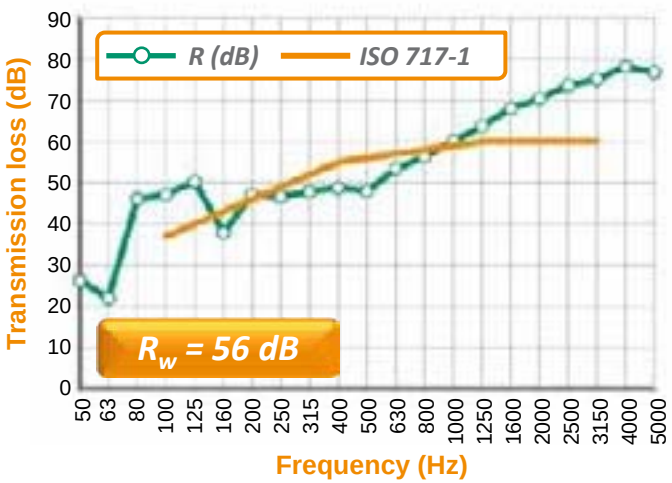


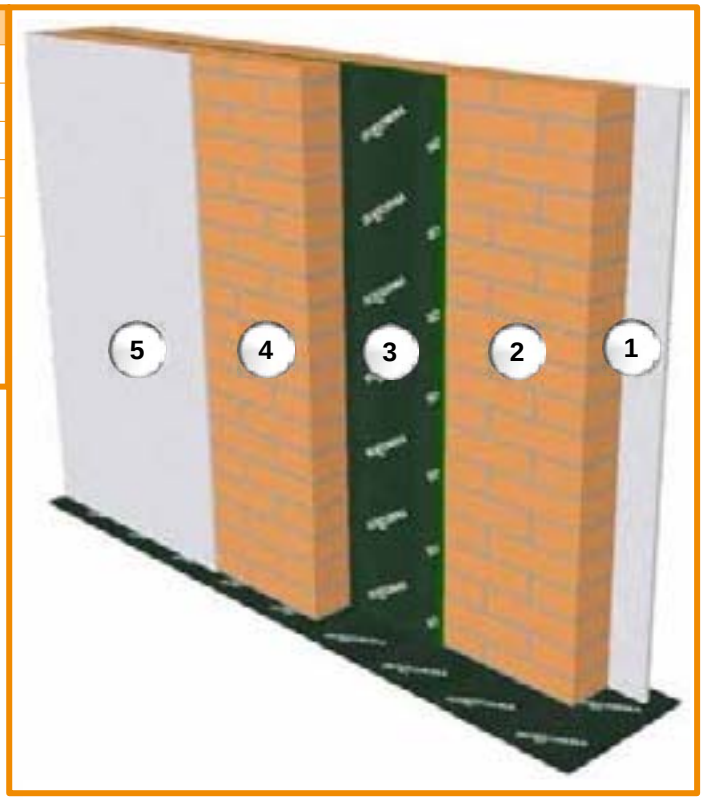


Double wall

Double brick wall

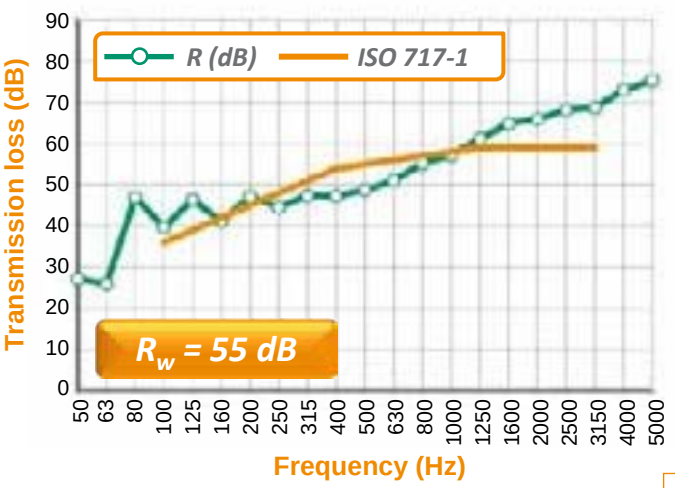
n	description	mm
1	Plaster	15
2	Brick wall	120
3	**Biwall 40**	40
4	Brick wall	120
5	Plaster	15
		310

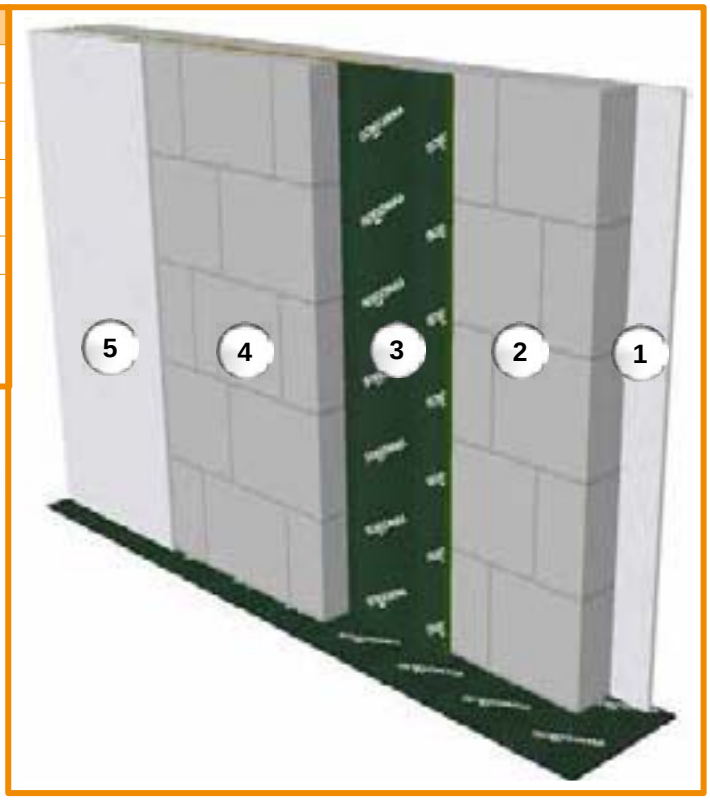




Double light concrete wall

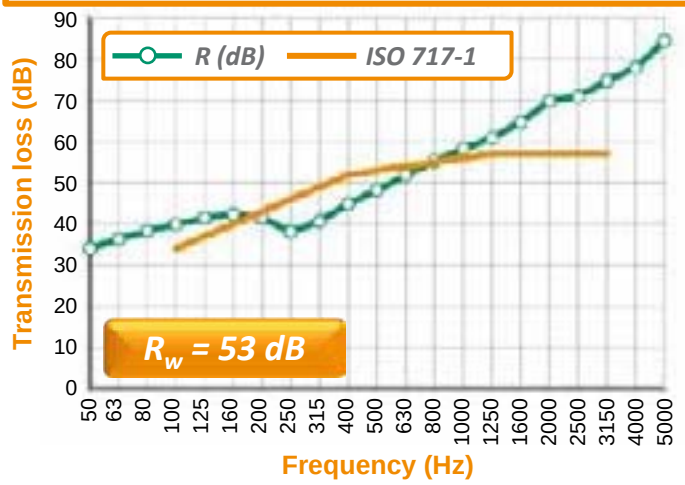
n	description	mm
1	Plaster	15
2	Cellular concret wall	120
3	**Biwall 40**	40
4	Cellular concret wall	120
5	Plaster	15
		310

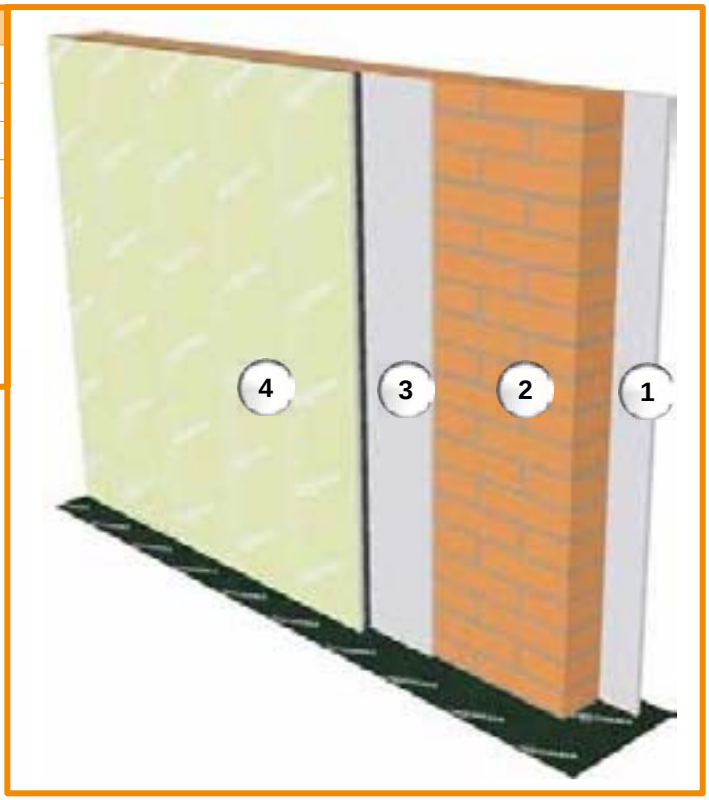




120 mm brick wall

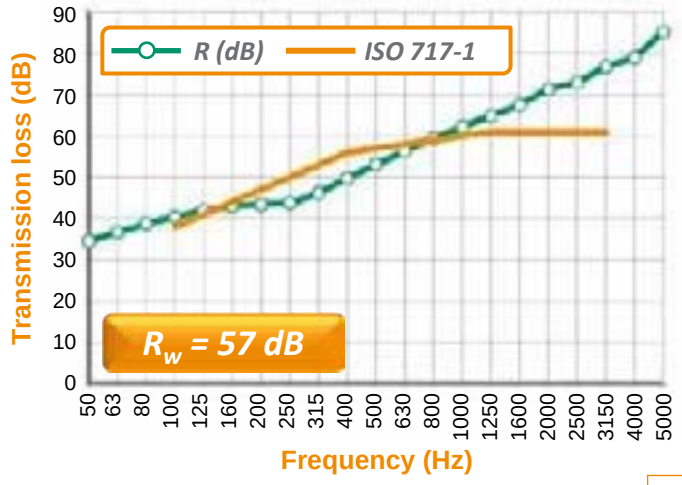
n	description	mm
1	Plaster	15
2	Brick wall	120
3	Plaster	15
4	**Mustwall 33B**	33
		183

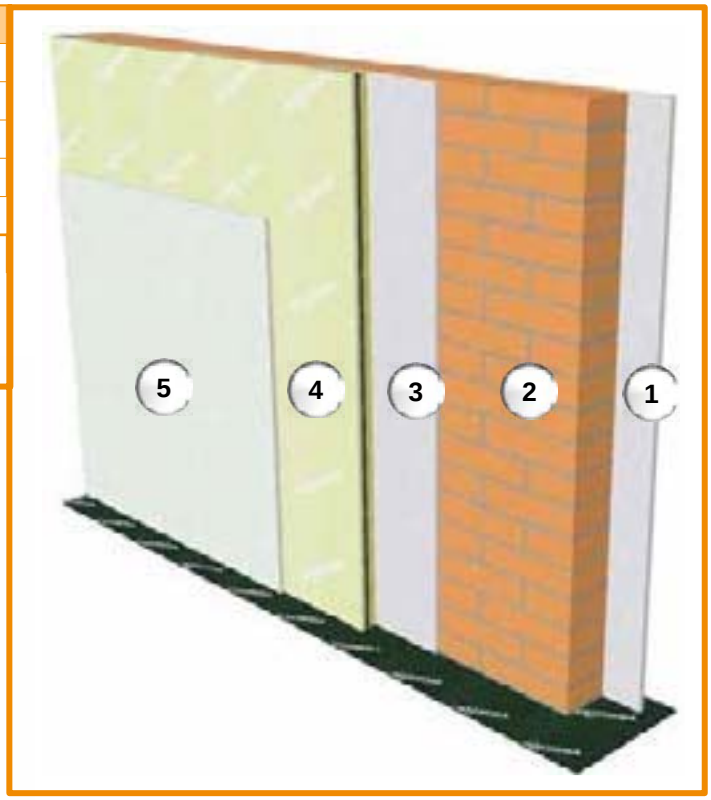




120 mm brick wall with plasterboard

n	description	mm
1	Plaster	15
2	Brick wall	120
3	Plaster	15
4	**Mineral 40RB**	40
5	Gypsum board layer	12.5
		202.5

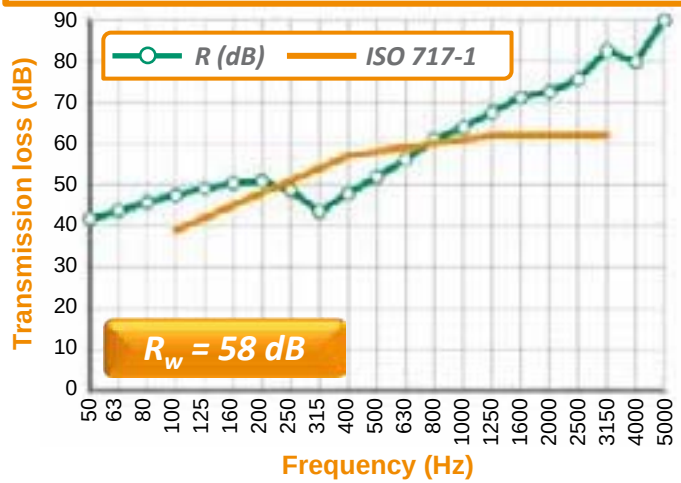


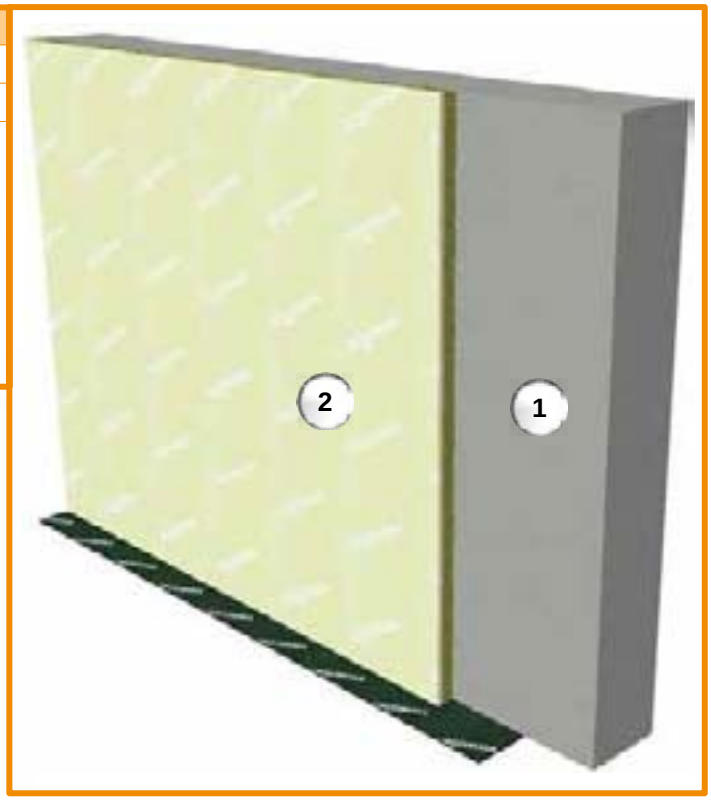


Coated wall

200 mm concrete wall

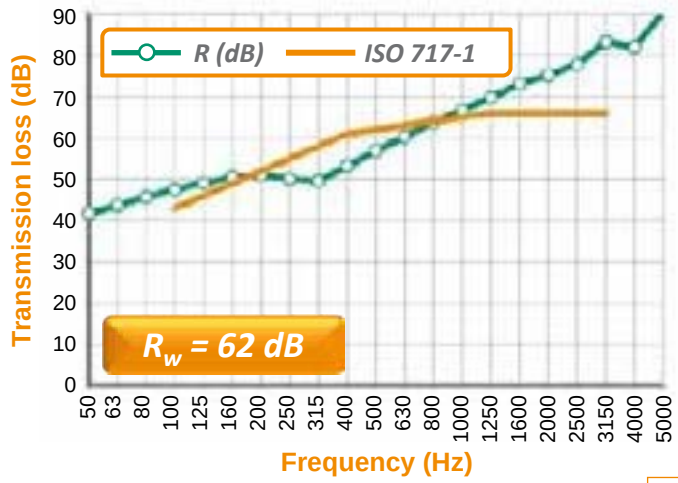
n	description	mm
1	Concrete wall	200
2	**Natur 33B**	33
		233

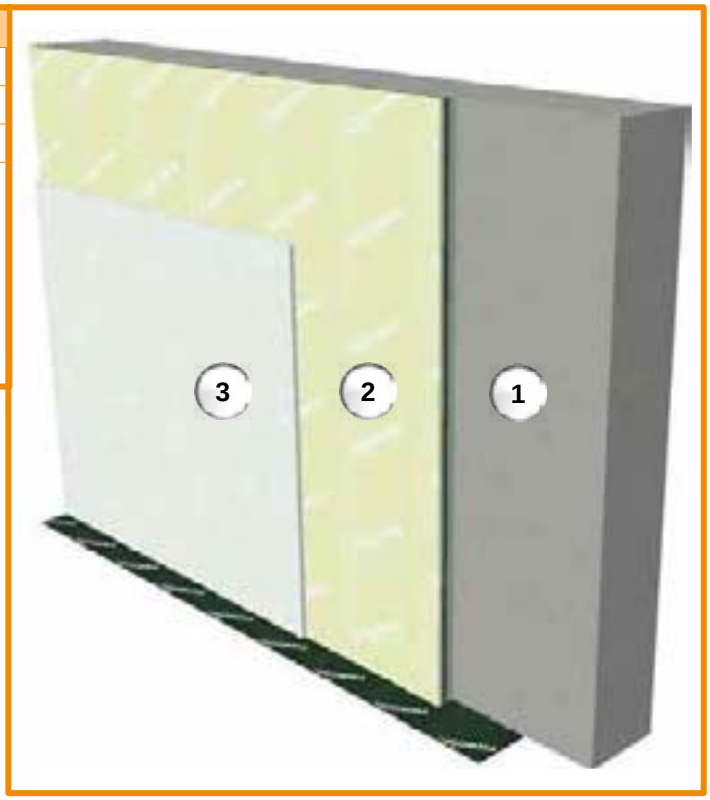




200 mm concrete wall with plasterboard

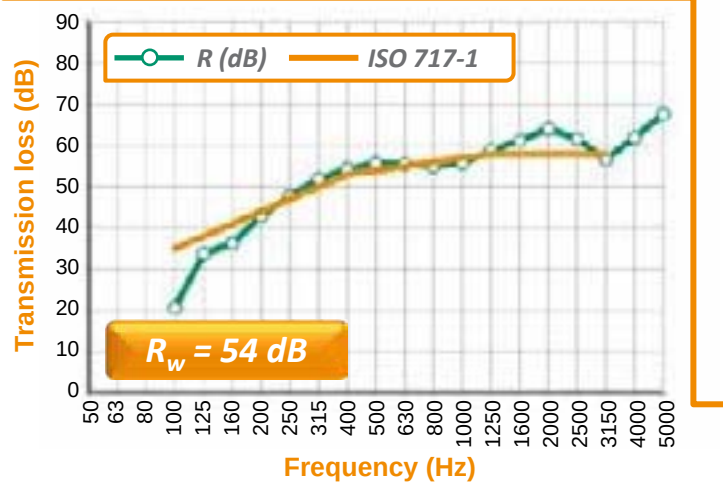
n	description	mm
1	Concrete wall	200
2	**Rewall 40**	40
3	Gypsum board layer	12.5
		252.5





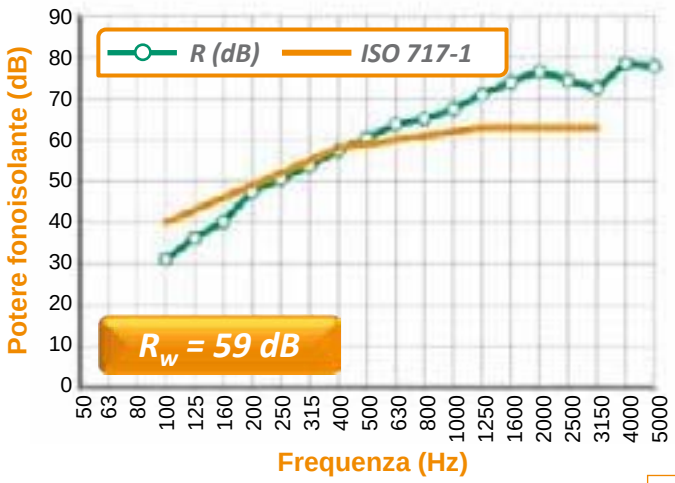
100 mm gypsum wall

n	description	mm
1	Plasterboard double layer	25
2	**Trywall** (50 mm metal frame)	**50**
3	Plasterboard double layer	25
		100



160 mm gypsum wall

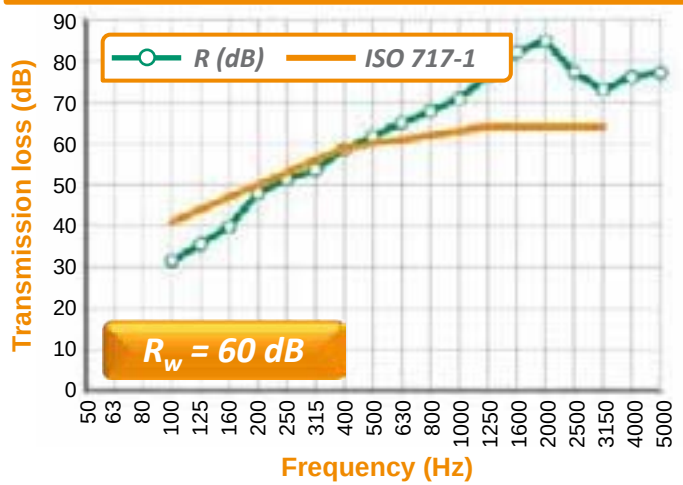
n	description	mm
1	Plasterboard double layer	25
2	**Trywall** (50 mm metal frame)	**50**
3	Air cavity (50 mm metal frame and 10 mm distance between metal frame)	60
4	Plasterboard double layer	25
		160

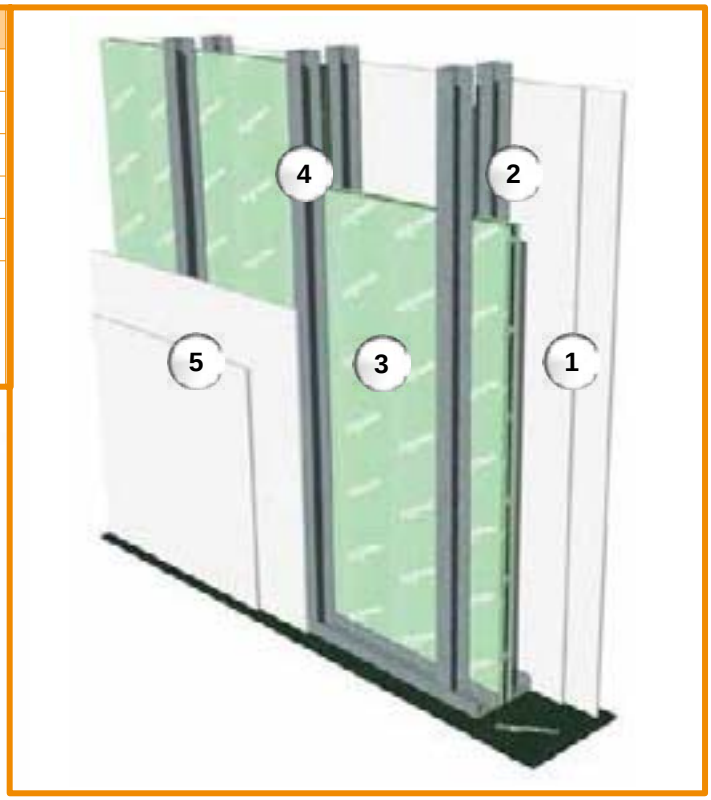


Plasterboard wall

200 mm gypsum wall

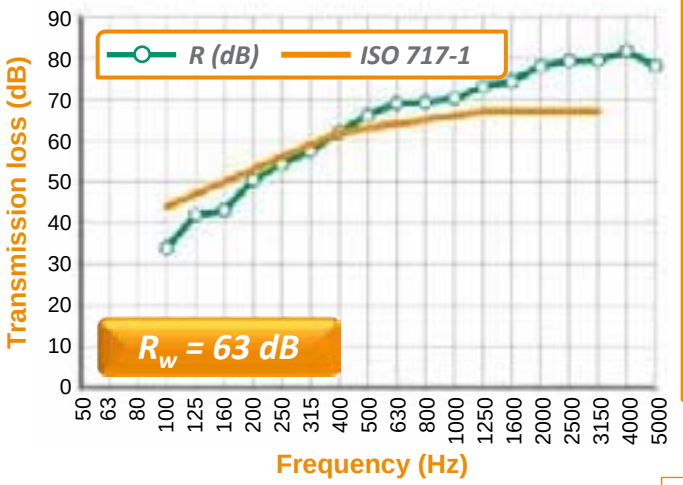
n	description	mm
1	Plasterboard double layer	25
2	Air cavity (50 mm metal frame)	50
3	**Trywall**	**48**
4	Air cavity (50 mm metal frame)	50
5	Plasterboard double layer	25
		198

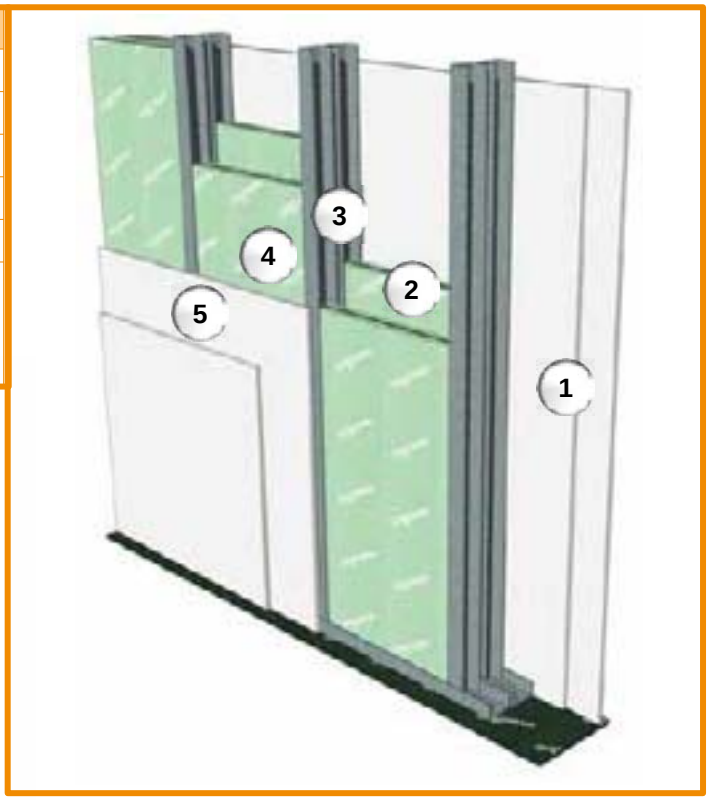




160 mm gypsum wall

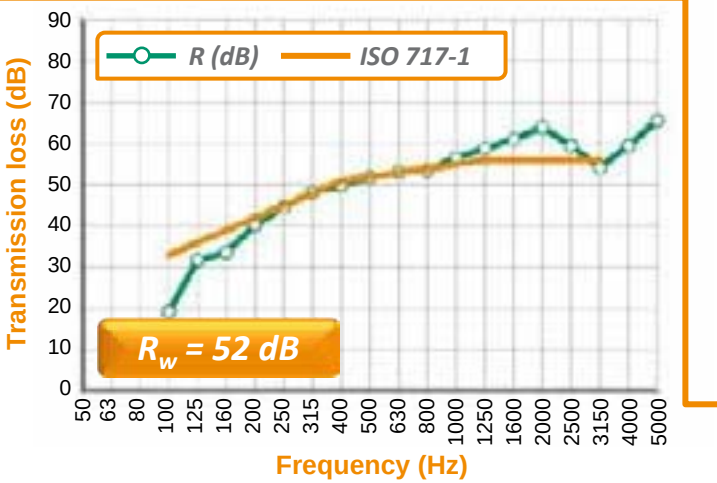
n	description	mm
1	Plasterboard double layer	25
2	**Trywall** (50 mm metal frame)	50
3	Air cavity	10
4	**Trywall** (50 mm metal frame)	50
5	Plasterboard double layer	25
		160

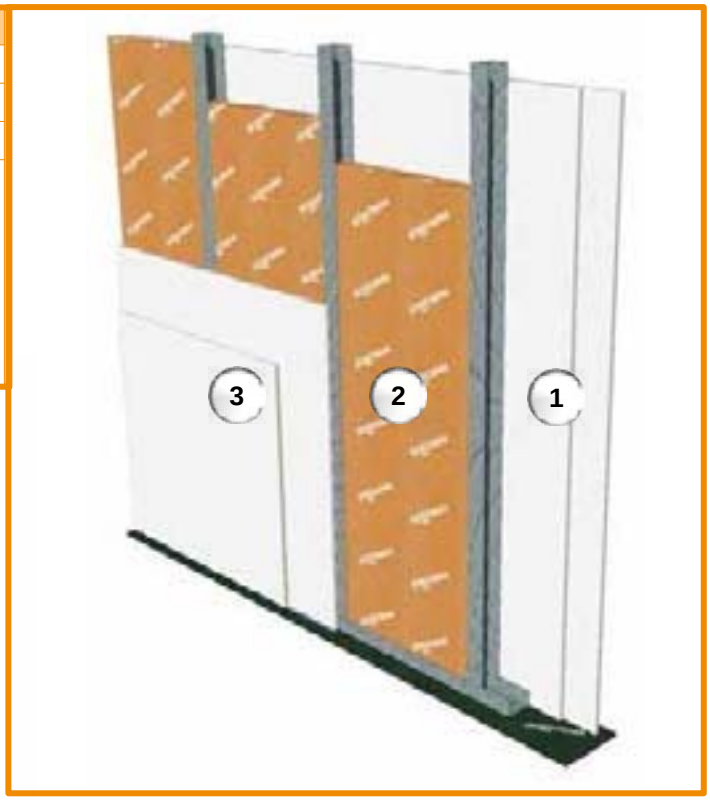




100 mm gypsum wall

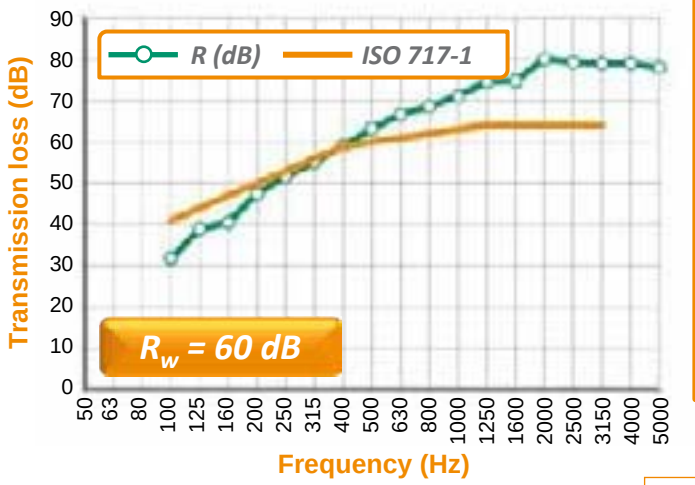
n	description	mm
1	Plasterboard double layer	25
2	**Natur 30** (50 mm metal frame)	**50**
3	Plasterboard double layer	25
		100

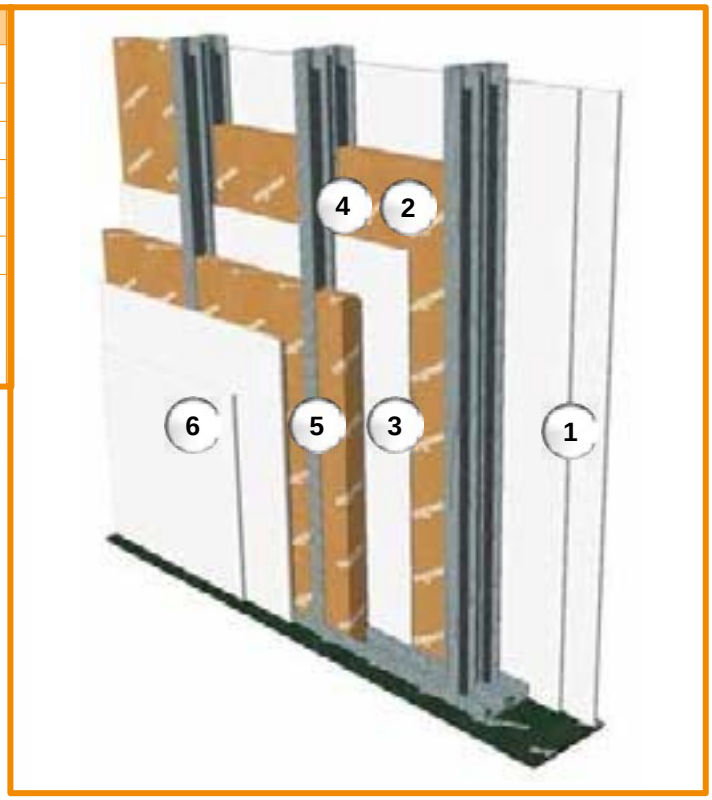




170 mm gypsum wall

n	description	mm
1	Plasterboard double layer	25
2	**Natur 30** (50 mm metal frame)	**50**
3	Plasterboard layer	12.5
4	Air cavity	10
5	**Natur 30** (50 mm metal frame)	**50**
6	Plasterboard double layer	25
		170

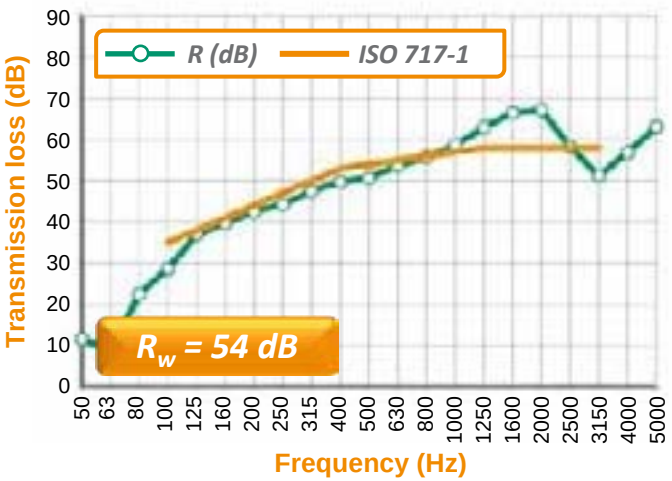


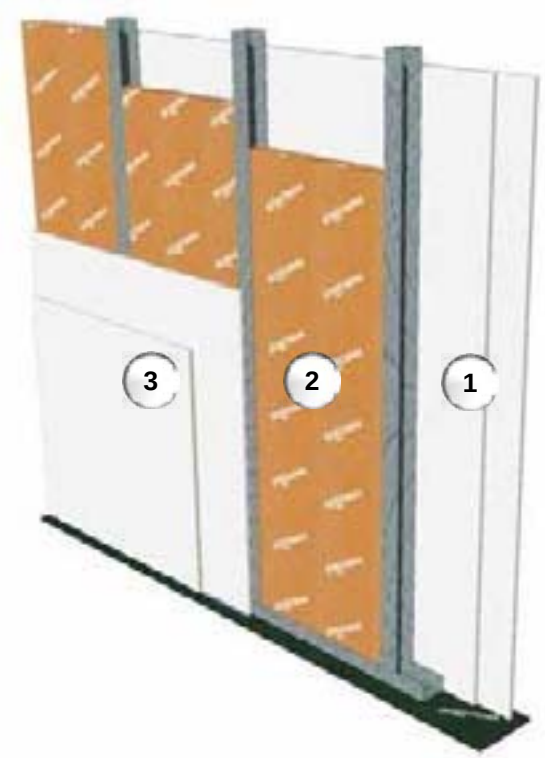


Plasterboard wall

125 mm gypsum wall

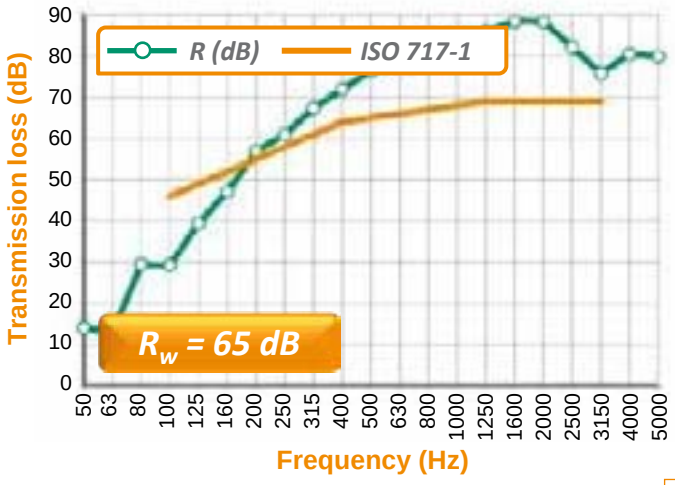
n	description	mm
1	Plasterboard double layer	25
2	**Natur 50** (75 mm metal frame)	**75**
3	Plasterboard double layer	25
		125

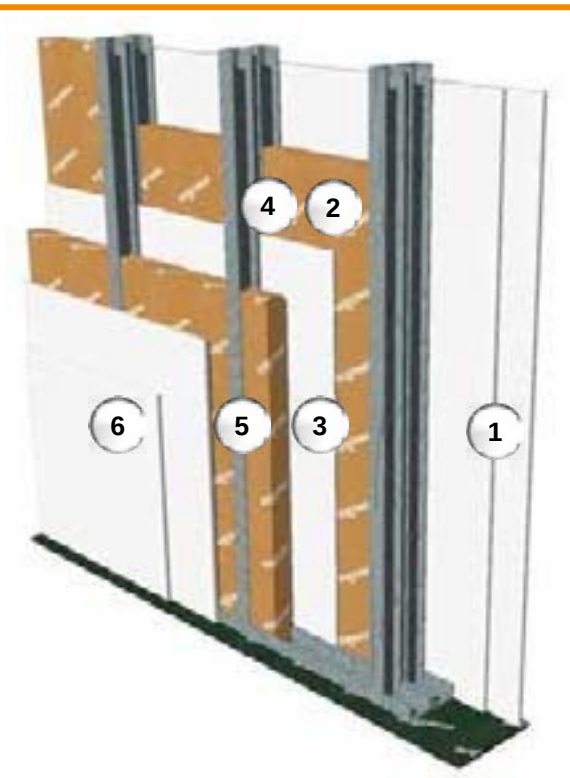




220 mm gypsum wall

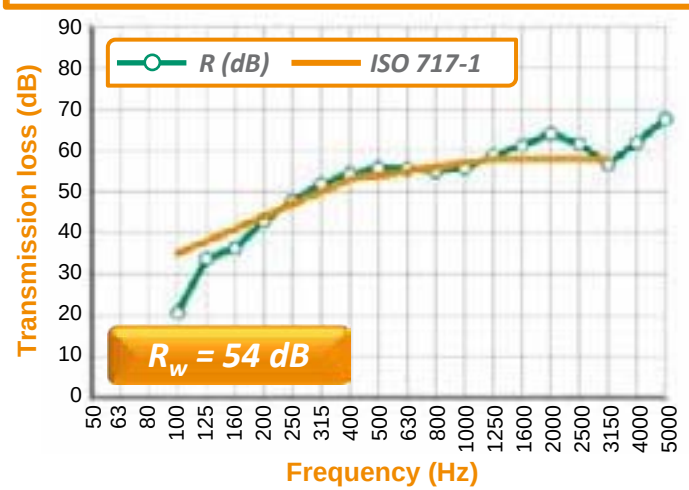
n	description	mm
1	Plasterboard double layer	25
2	**Natur 50** (75 mm metal frame)	**75**
3	Plasterboard layer	12.5
4	Air cavity	10
5	**Natur 50** (75 mm metal frame)	**75**
6	Plasterboard double layer	25
		220





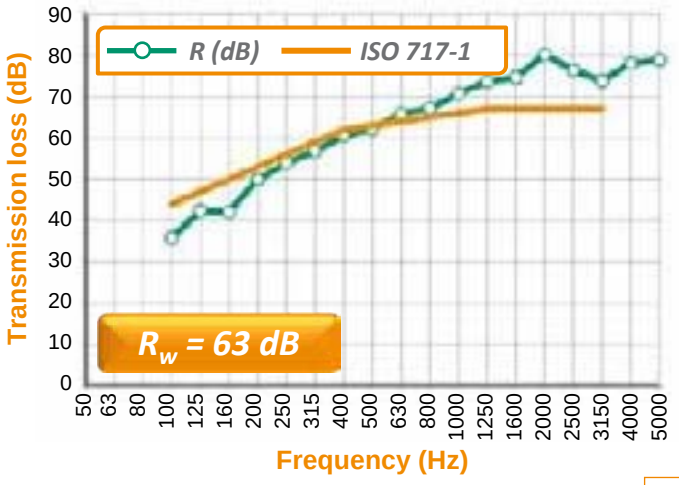
100 mm gypsum wall

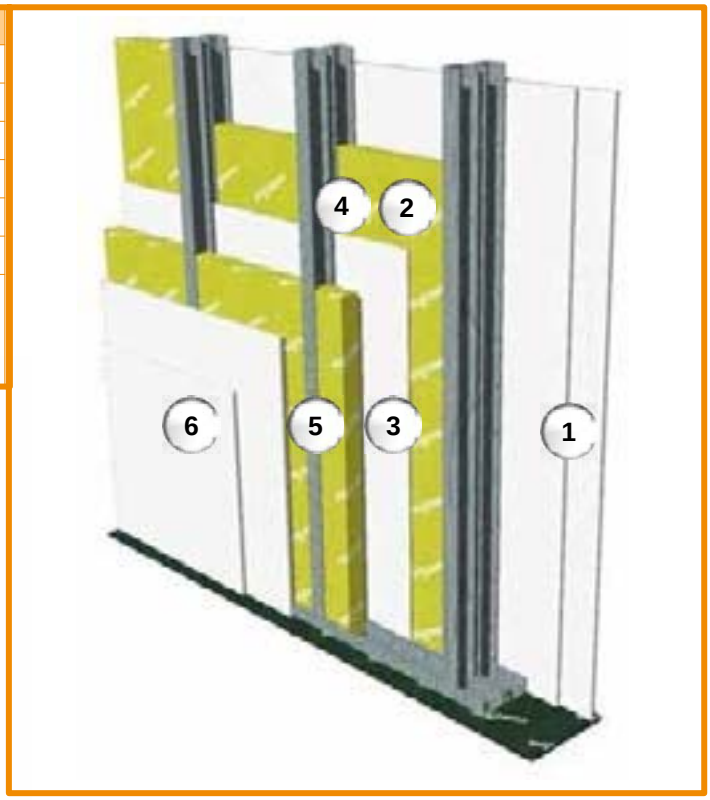
n	description	mm
1	Plasterboard double layer	25
2	**Mineral 50/70** (50 mm metal frame)	**50**
3	Plasterboard double layer	25
		100



170 mm gypsum wall

n	description	mm
1	Plasterboard double layer	25
2	**Mineral 50/70** (50 mm metal frame)	**50**
3	Plasterboard layer	12.5
4	Air cavity	10
5	**Mineral 50/70** (50 mm metal frame)	**50**
6	Plasterboard double layer	25
		170

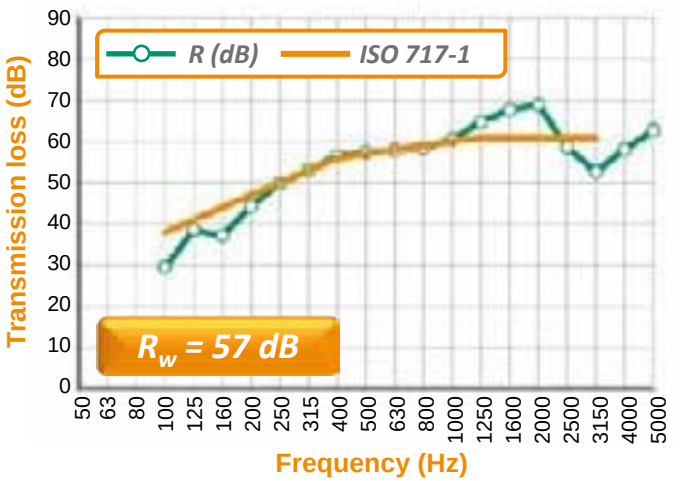


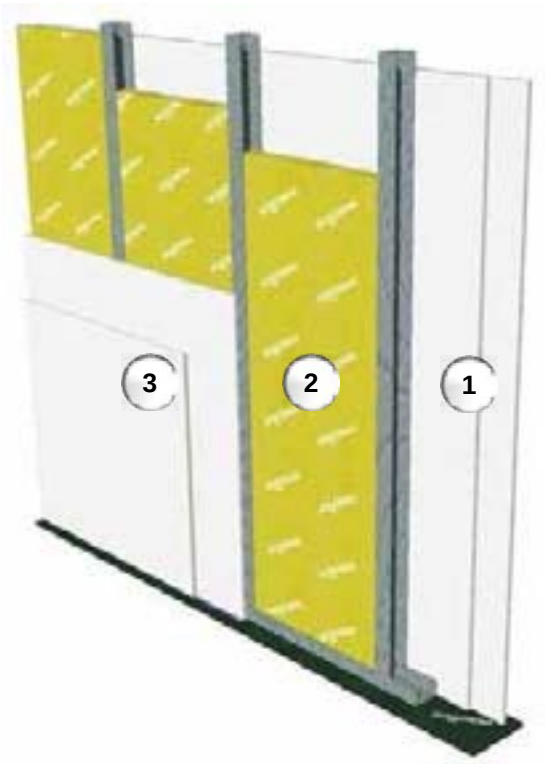


Plasterboard wall

125 mm gypsum wall

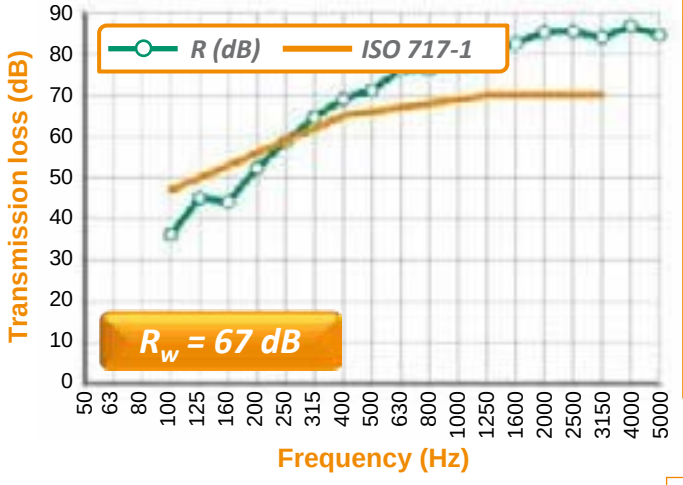
n	description	mm
1	Plasterboard double layer	25
2	**Mineral 60-70** (75 mm metal frame)	**75**
3	Plasterboard double layer	25
		125

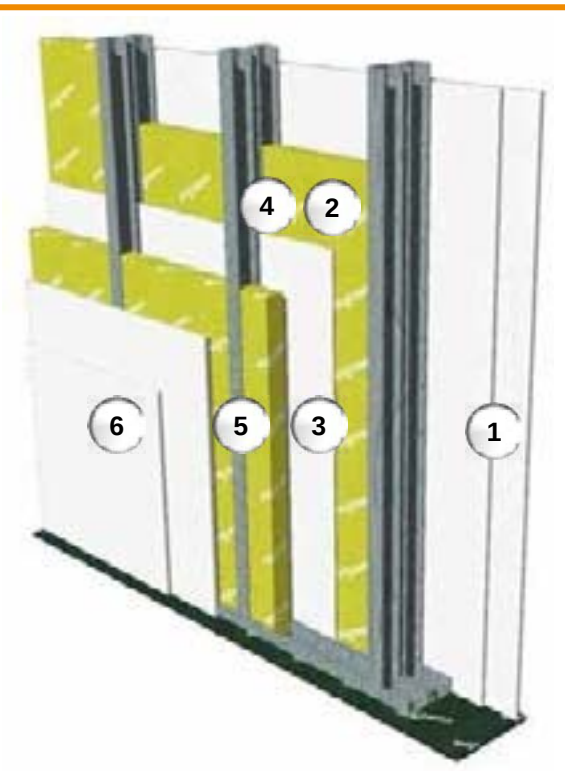




220 mm gypsum wall

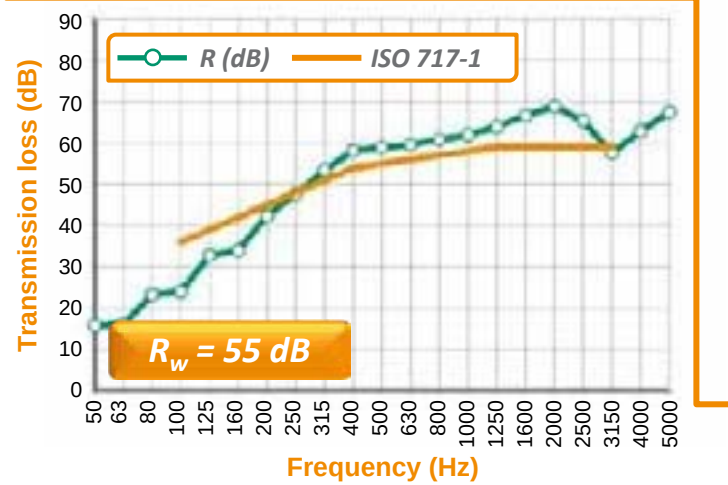
n	description	mm
1	Plasterboard double layer	25
2	**Mineral 60-70** (75 mm metal frame)	**75**
3	Plasterboard layer	12.5
4	Air cavity	10
5	**Mineral 60-70** (75 mm metal frame)	**75**
6	Plasterboard double layer	25
		220





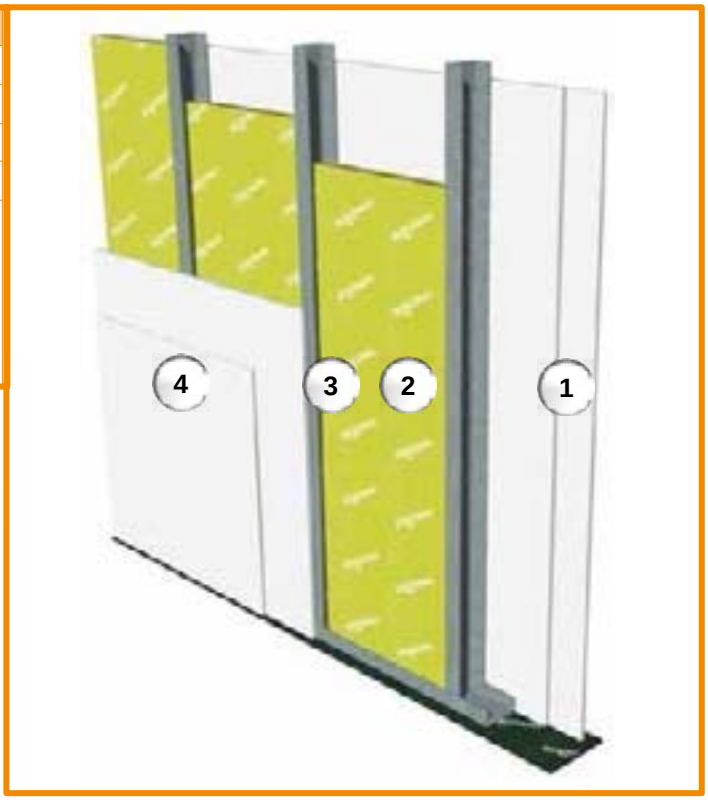
100 mm gypsum wall

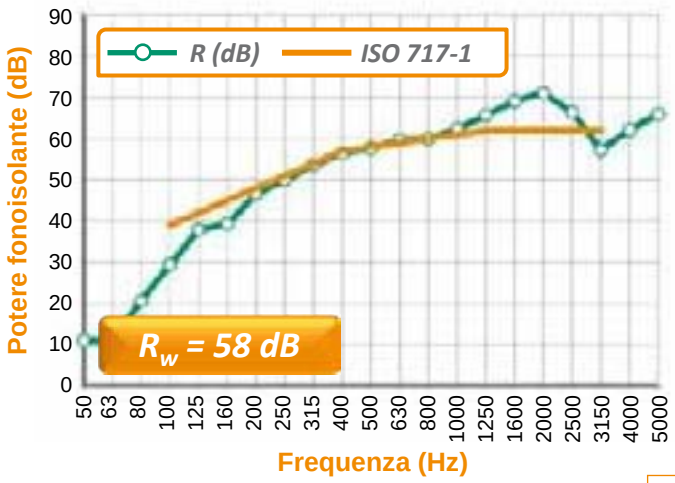
n	description	mm
1	Plasterboard double layer	25
2	**Mineral 48 RM** (50 mm metal frame)	**50**
3	Plasterboard double layer	25
		100



125 mm gypsum wall

n	description	mm
1	Plasterboard double layer	25
2	**Mineral 48 RM** (75 mm metal frame)	**48**
3	Air cavity (25 mm metal frame)	25
4	Plasterboard double layer	25
		125

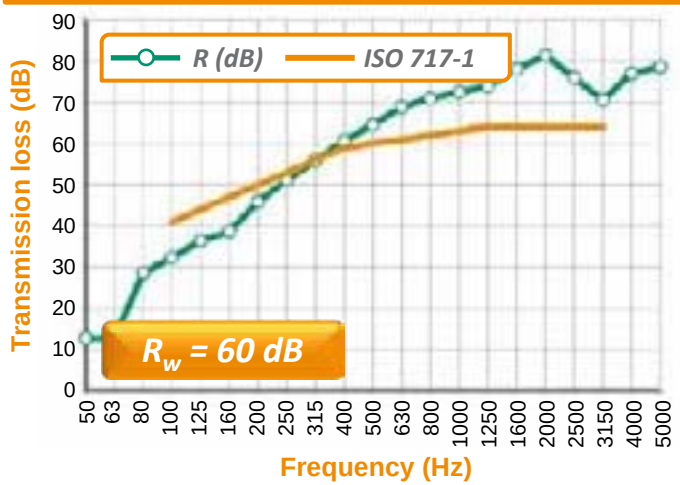




Plasterboard wall

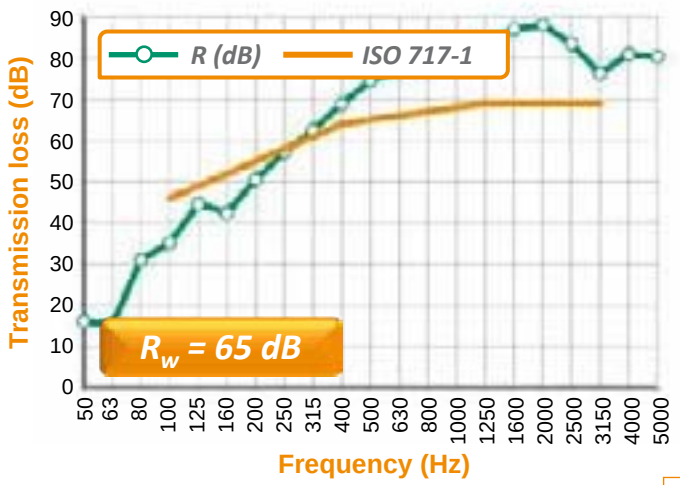
160 mm gypsum wall

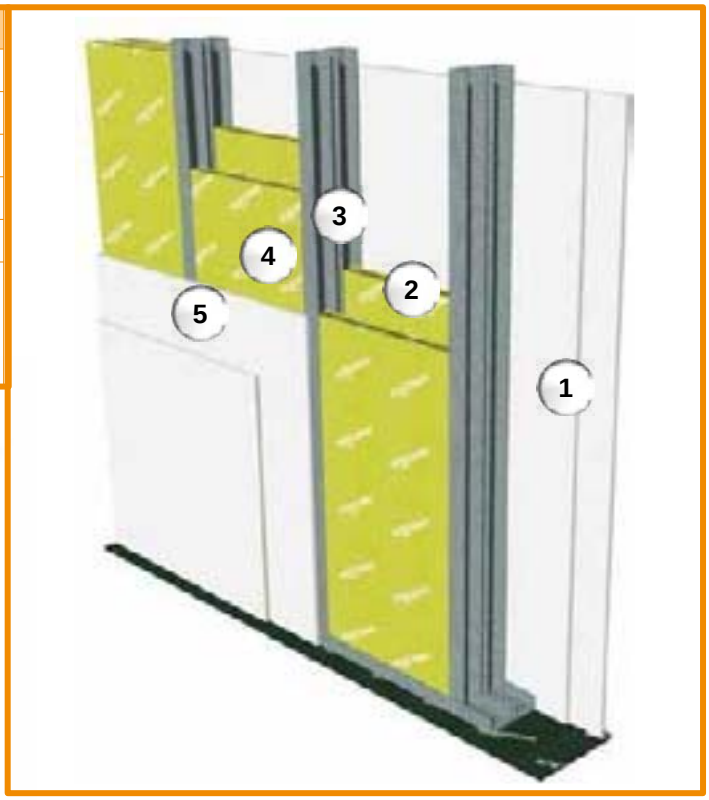
n	description	mm
1	Plasterboard double layer	25
2	**Mineral 48 RM** (50 mm metal frame)	50
3	Air cavity	10
4	Air cavity (50 mm metal frame)	50
5	Plasterboard double layer	25
		160



160 mm gypsum wall

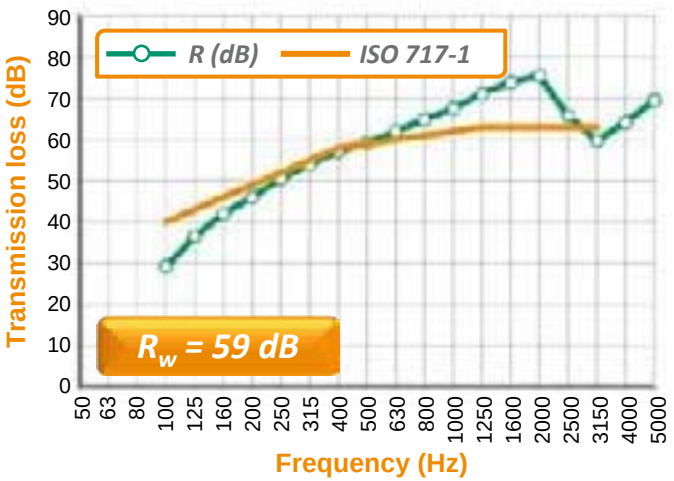
n	description	mm
1	Plasterboard double layer	25
2	**Mineral 48 RM** (50 mm metal frame)	50
3	Air cavity	10
4	**Mineral 48 RM** (50 mm metal frame)	50
5	Plasterboard double layer	25
		160

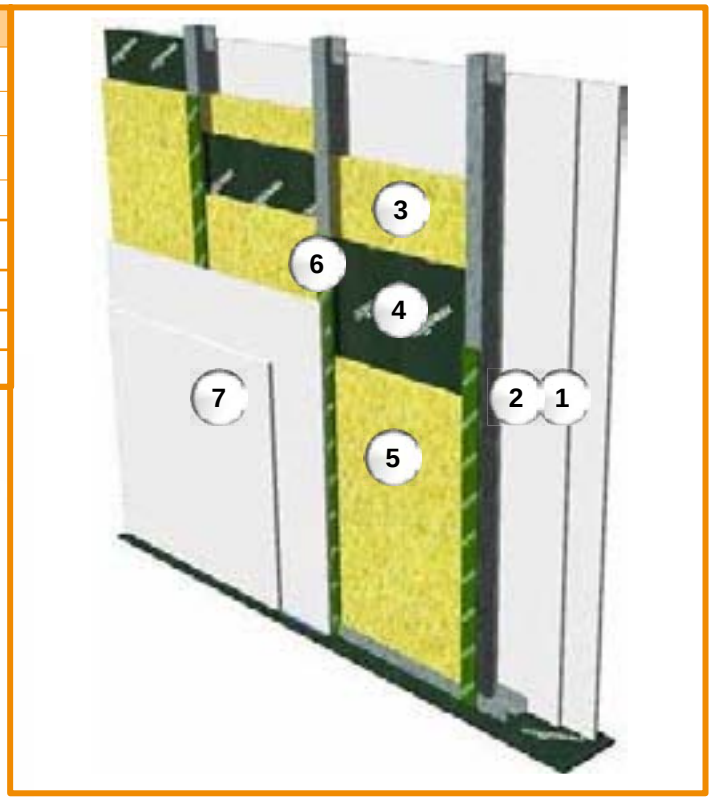




125 mm gypsum wall

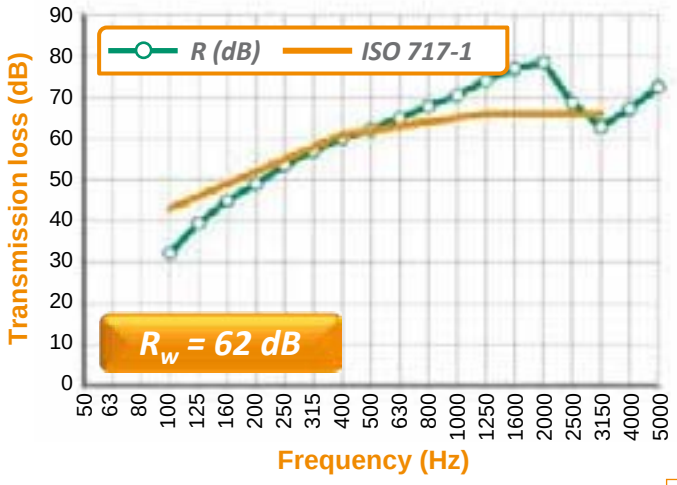
n	description	mm
1	Plasterboard double layer	25
2	**Stywall S3-A**	3
3	Rock wool (70kg/m³ density)	40
4	**Mustwall 10**	10
5	Rock wool (110kg/m³ density)	25
6	**Stywall S3-A**	3
7	Plasterboard double layer	25
		131

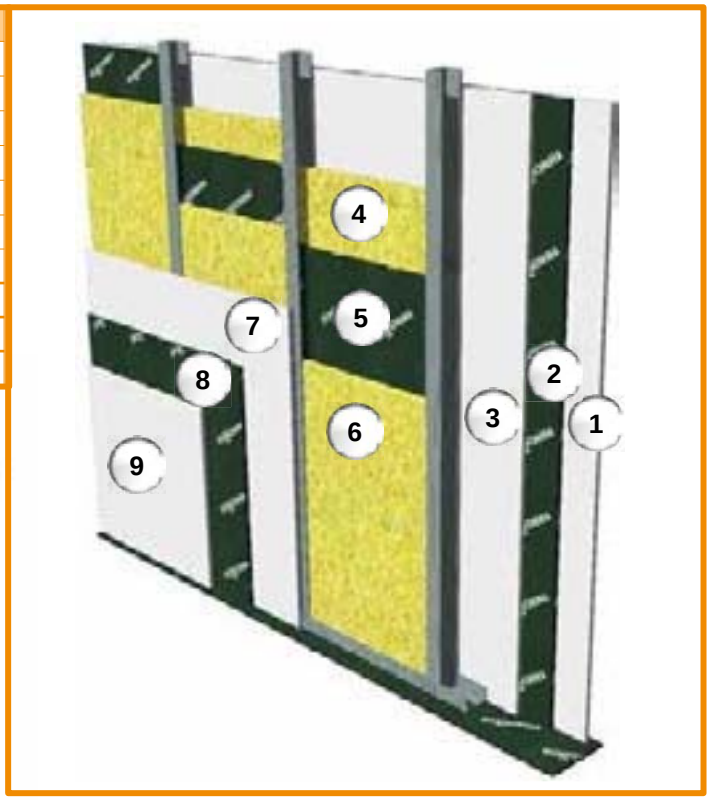




160 mm gypsum wall

n	description	mm
1	Plasterboard layer	12.5
2	**Syl 5**	5
3	Plasterboard layer	12.5
4	Rock wool (70kg/m³ density)	40
5	**Mustwall 10**	10
6	Rock wool (110kg/m³ density)	50
7	Plasterboard layer	12.5
8	**Syl 5**	5
9	Plasterboard layer	12.5
		160





TECHNICAL DATA SHEETS

The suggestions and technical information given above represent our knowledge regarding the properties and the product's uses. ISOLGOMMA reserve the right to modify or update this data without prior notice. This document is the property of ISOLGOMMA and all rights are therefore reserved.

TECHNICAL DATA SHEET *Roll*

Sound insulation for floating floors

Product description and Technical Specification

..... mm acoustic insulation rolls, made of SBR (Stirene Butadiene Rubber) fibres and granules rubber, compacted using a latex binder in a hot process. A blue synthetic, 90 g/m² non woven anti-stretch backing is applied on one side. The dimensions of the roll are: 500 cm lenght, 104 cm width including 4 cm adhesive side border for rolls overlapping during installation. The total mass surface is ..... kg/m² and dynamic stiffness (s') is ..... MN/m³.

PTB Version: waterproof non woven anti-stretch backing for liquid screed

- high acoustic insulation performance in reduced thickness
- quick, simple and precise laying of the product
- resistant to humidity

PHYSICAL CHARACTERISTICS	Standard	Unit	Roll 5	Roll 7	Roll 10	Tolerance
Nominal thickness [1]	EN 12431	mm	5	7	10	+ 20%
Length		m	5,00			+ 5%
Width (including 4 cm of the overlapping flap)		m	1,04			+ 1%
Backing superficial mass		g/m²	90 standard; 110 PTB			
Overall Superficial mass		kg/m²	1,8	2,4	2,8	+ 11%
Colour			black/blue			

ACOUSTIC CHARACTERISTICS	Standard	Unit	Roll 5	Roll 7	Roll 10	Tolerance
Dynamic stiffness (s')	EN 29052/1	MN/m³	50	39	33	± 2
Dynamic stiffness for dry application[2]	EN 29052/1	MN/m³	29	20	18	± 2
Improvement of impact insulation class (Δ IIC)	ASTM E 2179-03	dB	22	24	27	
Impact sound reduction improvement (ΔLw) - by laboratory test	EN ISO 10140	dB	18	21	23	
Impact sound reduction improvement (ΔLw) - calculated [3]	EN 12354/2	dB	24	26	27	

TECHNICAL CHARACTERISTICS	Standard	Unit	Roll 5	Roll 7	Roll 10	Tolerance
Compression at 10% strain	EN 826	kPa	1,64	2,36	4,18	± 5%
Compression strain (dL - 250 Pa)	EN 12431	mm	5,9	8,4	10,8	
Compression strain (dF - 2000 Pa)	EN 12431	mm	4,9	7,6	9,7	
Compression strain (dB - 50000 → 2000 Pa)	EN 12431	mm	4,4	7,0	9,0	
Thermal conductivity coefficient (λ)	EN 12667	W/mK	0,099			
Resistance factor to water vapour (μ)	EN 12086		10 standard; 5000 PTB			
Fire grade	2000/147/CE		F			

PACKING AND STORING

Each pallet is wrapped and protected with waterproof polythene film. Inside storage is recommended to avoid possible wet storing

[1] Product thickness measured according to norm EN 12431 equal to the value of "Compression strain (dB - 50000 → 2000 Pa)"

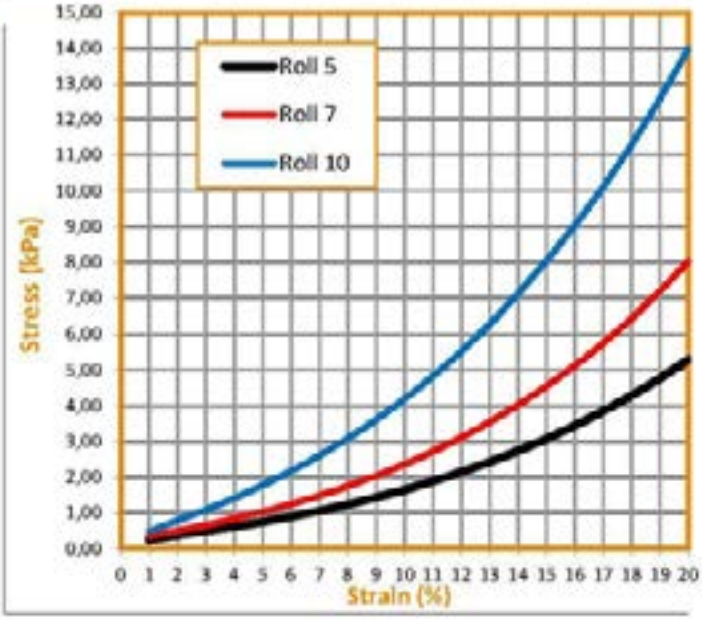
[2] Measurement executed in deviation from norm EN 29052-1, without applying plaster on the test piece

[3] Value calculated with dynamic stiffness for dry-mount applications and a screed weight equal to 75 kg/m²

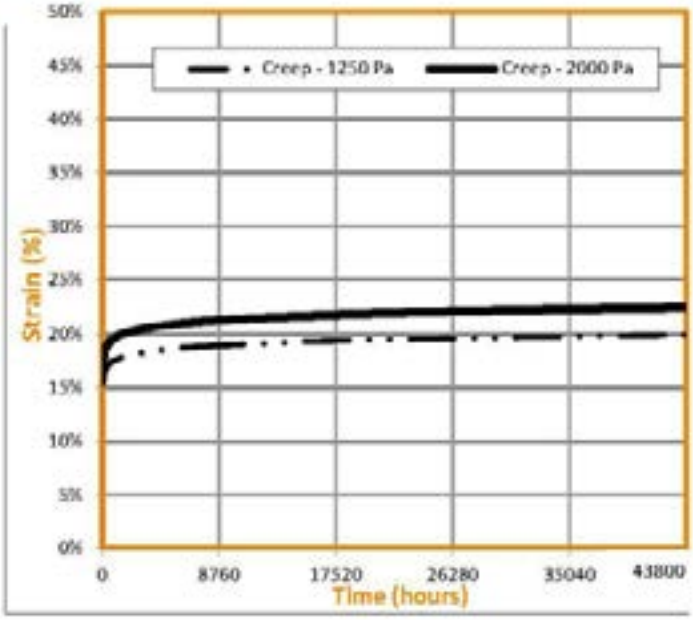
Roll

Sound insulation for floating floors

Determination of compression - EN 826 [4]



Creep test - EN 1606 [4]



[4] The initial thickness of the product during testing is equal to the value of pag. 1 "Compression strain (dL - 250 Pa)"; use this value to evaluate the crush rate of the material according to the specified norm

TECHNICAL DATA SHEET

Grei

Sound insulation for floating floors

Product description and Technical Specification

..... mm acoustic insulation rolls, made of EPDM (Ethylene Propylene Diene Monomer) rubber granules compacted using a latex binder in a hot process. A grey synthetic, 100g/m² non woven anti-stretch backing is applied on one side. The dimensions of the roll are: 500 cm lenght, 104 cm width including 4 cm adhesive side border for rolls overlapping during installation. The total mass surface is ..... kg/m² and dynamic stiffness (s') is ..... MN/m³.

PTB Version: waterproof non woven anti-stretch backing for liquid screed

- high sound insulation performance
- quick, simple and precise laying of product
- resistant to humidity

PHYSICAL CHARACTERISTICS	Standard	Unit	Grei 5	Grei 8	Tolerance
Nominal thickness [1]	EN 12431	mm	5	8	± 20%
Length		m	5.00		± 5%
Width (including 4 cm of the overlapping flap)		m	1.04		± 1%
Backing superficial mass		g/m²	100 standard; 120 PTB		
Overall Superficial mass		kg/m²	2.4	2.9	± 10%
Colour			grey		

ACOUSTIC CHARACTERISTICS	Standard	Unit	Grei 5	Grei 8	Tolerance
Dynamic stiffness (s')	EN 29052/1	MN/m³	26	17	± 2
Dynamic stiffness for dry application [2]	EN 29052/1	MN/m³	15	11	± 2
Improvement of impact insulation class (Δ IIC)	ASTM E 2179-03	dB	25	25	
Impact sound reduction improvement (ΔLw) - by laboratory test	EN ISO 10140	dB	23	24	
Impact sound reduction improvement (ΔLw) - calculated [3]	EN 12354/2	dB	29	30	

TECHNICAL CHARACTERISTICS	Standard	Unit	Grei 5	Grei 8	Tolerance
Compression at strain 10%	EN 826	kPa	2.55	2.25	± 5%
Compression strain (dL - 250 Pa)	EN 12431	mm	7.3	9.6	
Compression strain (dF - 2000 Pa)	EN 12431	mm	6.3	8.7	
Compression strain (dB - 50000 → 2000 Pa)	EN 12431	mm	5.9	8.3	
Thermal conductivity coefficient (λ)	EN 12667	W/mK	0.067		
Resistance factor to the spread of water vapour (μ)	EN 12086		10 standard; 5000 PTB		
Fire grade	2000/147/CE		E		

PACKING AND STORING

Each pallet is wrapped and protected with waterproof polythene film. Inside storage is recommended to avoid possible wet storing.

[1] Product thickness measured according to norm EN 12431 equal to the value of "Compression strain (dB - 50000 → 2000 Pa)"

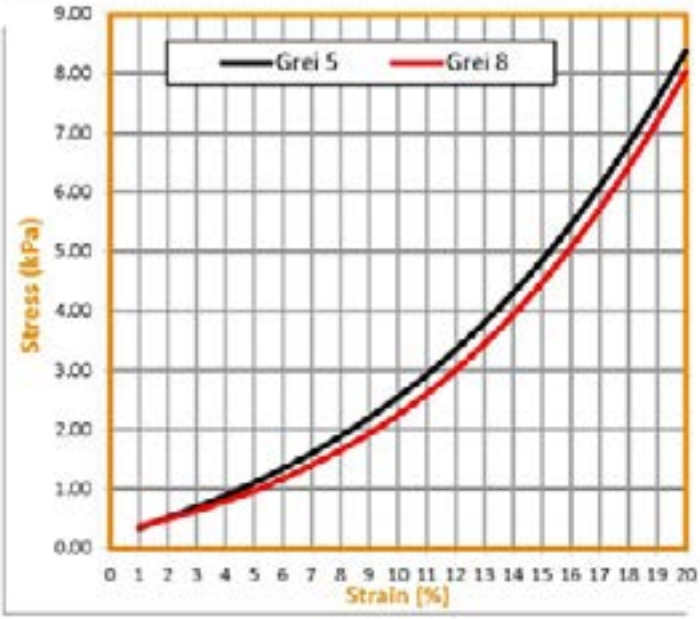
[2] Measurement executed in deviation from norm EN 29052-1, without applying plaster on the test piece

[3] Value calculated with dynamic stiffness for dry-mount applications and a screed weight equal to 75 kg/m²

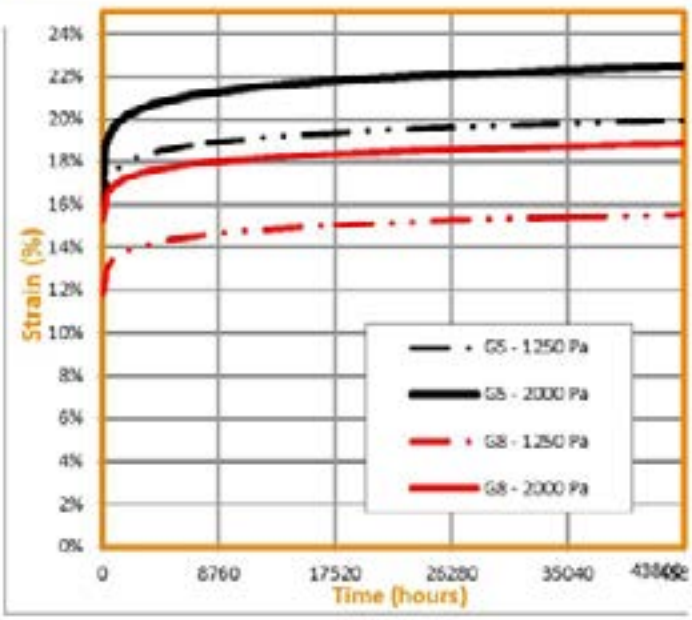
Grei

Sound insulation for floating floors

Determination of compression - EN 826 [4]



Creep test - EN 1606 [4]



[4] The initial thickness of the product during testing is equal to the value of pag. 1 "Compression strain (dL - 250 Pa)"; use this value to evaluate the crush rate of the material according to the specified norm

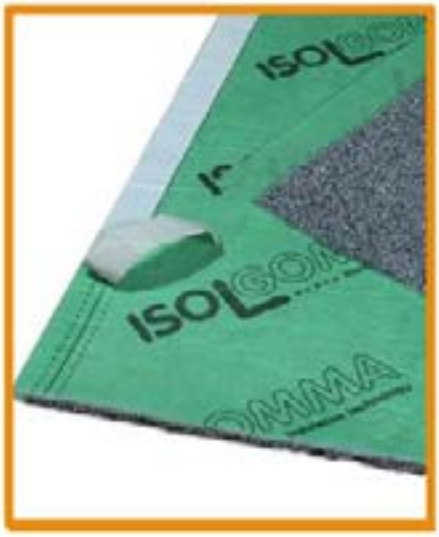
TECHNICAL DATA SHEET

Upgrei

Sound insulation for floating floors

Product description and Technical Specification

8 mm-thick acoustic insulation rolls, made of EPDM (Ethylene Propylene Diene Monomer) rubber granules that are anchored with carboxylate latex binder to a backing, made with 80 g/m² non-woven, green-coloured, anti-stretch film and 200 g/m² polyester fibre. Each roll is 500 cm lenght x 104 cm width including a 4 cm adhesive side border for rolls overlapping during installation. The total mass surface is 2.60 kg/m² and the dynamic stiffness (s') is 12 MN/m³.



PTB Version: waterproof non woven anti-stretch backing for liquid screed

- very high acoustic and thermal performance
- extremely easy to lay
- eco-compatible

PHYSICAL CHARACTERISTICS	Standard	Unit	Upgrei 8	Tolerance
Nominal thickness [1]	EN 12431	mm	8	± 10%
Length		m	5,00	± 5%
Width (including 4 cm of the overlapping flap)		m	1,04	± 1%
Backing superficial mass		g/m²	80 standard; 100 PTB	
Overall Superficial mass		kg/m²	2,60	± 10%
Colour			grey/green	

ACOUSTIC CHARACTERISTICS	Standard	Unit	Upgrei 8	Tolerance
Dynamic stiffness (s')	EN 29052/1	MN/m³	12	± 1
Dynamic stiffness for dry application[2]	EN 29052/1	MN/m³	9	± 1
Improvement of impact insulation class (Δ IIC)	ASTM E 2179-03	dB	25	
Impact sound reduction improvement (ΔLw) - by laboratory test	EN ISO 10140	dB	26	
Impact sound reduction improvement (ΔLw) - calculated [3]	EN 12354/2	dB	32	

TECHNICAL CHARACTERISTICS	Standard	Unit	Upgrei 8	Tolerance
Compression at strain 10%	EN 826	kPa	1,75	± 5%
Compression strain (dL - 250 Pa)	EN 12431	mm	10,7	
Compression strain (dF - 2000 Pa)	EN 12431	mm	9,1	
Compression strain (dB - 50000 → 2000 Pa)	EN 12431	mm	7,5	
Thermal conductivity coefficient (λ)	EN 12667	W/mK	0,047	
Resistance factor to the spread of water vapour (μ)	EN 12086		9	
Fire grade	2000/147/CE		F	

PACKING AND STORING

Each pallet is wrapped and protected with waterproof polythene film. Inside storage is recommended to avoid possible wet storing

[1] Product thickness measured according to norm EN 12431 equal to the value of "Compression strain (dB - 50000 → 2000 Pa)"

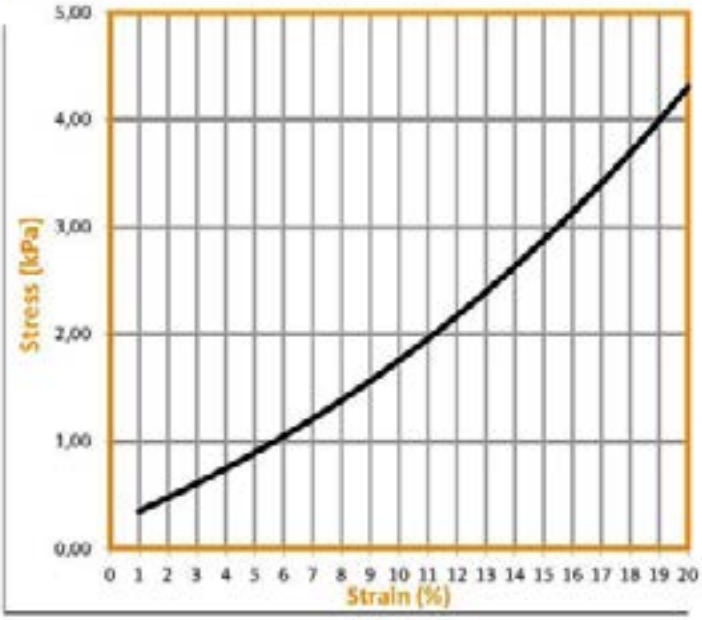
[2] Measurement executed in deviation from norm EN 29052-1, without applying plaster on the test piece

[3] Value calculated with dynamic stiffness for dry-mount applications and a screed weight equal to 75 kg/m²

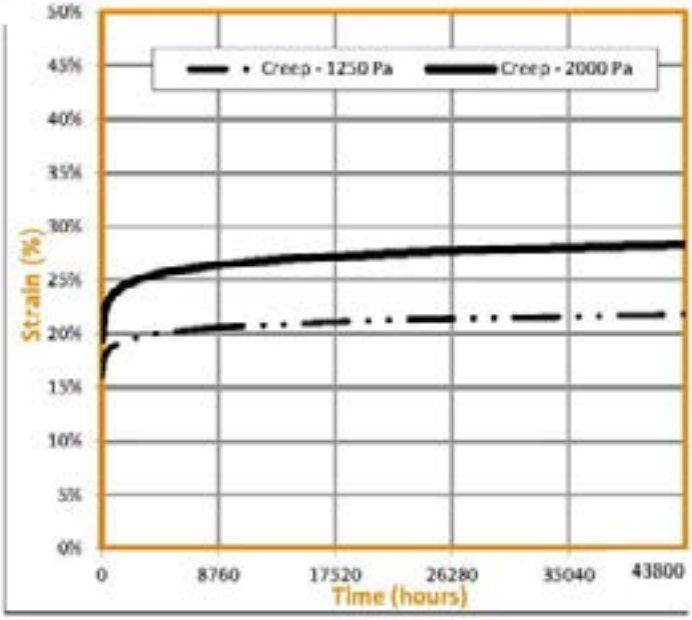
Upgrei

Sound insulation for floating floors

Determination of compression - EN 826 [4]



Creep test - EN 1606 [4]



[4] The initial thickness of the product during testing is equal to the value of pag. 1 "Compression strain (dL - 250 Pa)"; use this value to evaluate the crush rate of the material according to the specified norm

TECHNICAL DATA SHEET

Syl

Sound insulation for floating floors

Product description and Technical Specification

..... mm acoustic insulation rolls, made of SBR (Stirene Butadiene Rubber) fibres and granules rubber compacted with a polyurethane binder in a hot process. The colour of the product is black and it is supplied in rolls ..... m lenght, 1.00 m width. Density is 730 kg/m³ and the dynamic stiffness (s') is ..... MN/m³.

- high density for special applications
- good acoustic insulation in reduced thickness
- long-lasting also in presence of water

PHYSICAL CHARACTERISTICS	Standard	Unit	3	4	5	6	8	10	Tolerance
Nominal thickness [1]	EN 12431	mm	3	4	5	6	8	10	± 20%
Length		m	20		10		8	6	± 5%
Width		m	1,00						± 1%
Density		kg/m³	730						
Overall Superficial mass		kg/m²	2,2	2,9	3,7	4,4	5,8	7,3	± 11%
Colour			black						

ACOUSTIC CHARACTERISTICS	Standard	Unit	3	4	5	6	8	10	Tolerance
Dynamic stiffness for dry application[2]	EN 29052/1	MN/m³	77	70	63	62	49	47	± 2
Improvement of impact insulation class (Δ IIC)	ASTM E 2179-03	dB	-	26	-	-	-	-	
Impact sound reduction improvement (ΔLw) - by laboratory test	EN ISO 10140	dB	-	22	-	-	-	-	
Impact sound reduction improvement (ΔLw) - calculated [3]	EN 12354/2	dB	18	19	20	20	21	22	

TECHNICAL CHARACTERISTICS	Standard	Unit	3	4	5	6	8	10	Tolerance
Compression at strain 10%	EN 826	kPa	102	98	82	133	118	179	± 5%
Compression strain (dL - 250 Pa)	EN 12431	mm	2,8	4,0	5,2	6,0	7,9	9,7	
Compression strain (dF - 2000 Pa)	EN 12431	mm	2,7	3,9	5,1	5,8	7,8	9,6	
Compression strain (dB - 50000 → 2000 Pa)	EN 12431	mm	2,6	3,9	5,1	5,8	7,7	9,5	
Hardness	DIN 53505	Shore A	40						
Thermal conductivity coefficient (λ)	EN 12667	W/mK	0,12						
Fire grade	DIN 4102		B2						

PACKING AND STORING

Each pallet is wrapped and protected with waterproof polythene film. Inside storage is recommended to avoid possible wet storing

[1] Product thickness measured according to norm EN 12431 equal to the value of "Compression strain (dB - 50000 → 2000 Pa)"

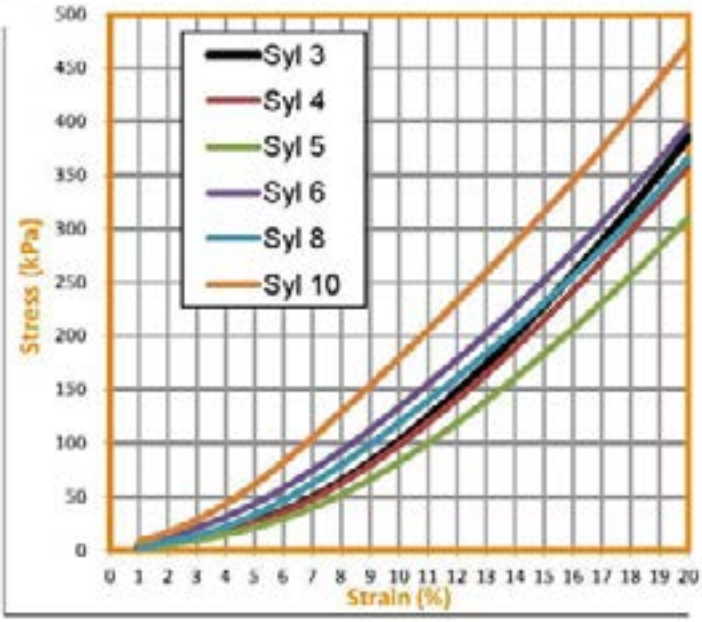
[2] Measurement executed in deviation from norm EN 29052-1, without applying plaster on the test piece

[3] Value calculated with dynamic stiffness for dry-mount applications and a screed weight equal to 75 kg/m²

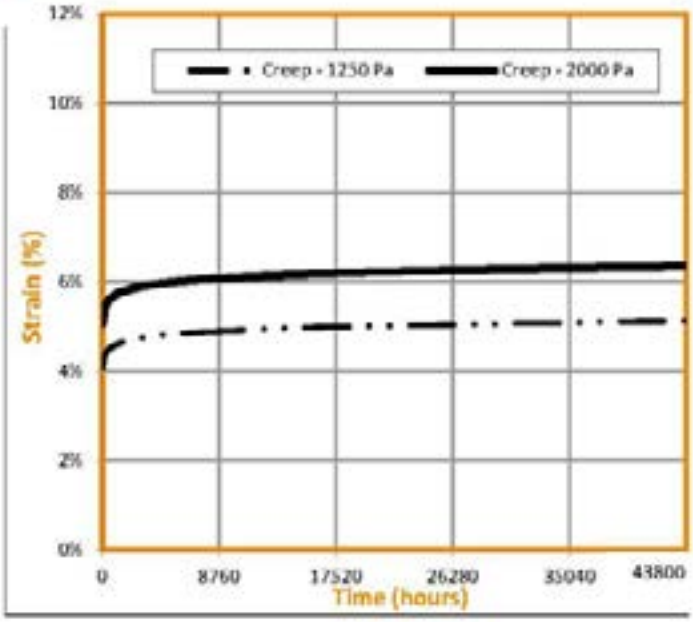
Syl

Sound insulation for floating floors

Determination of compression - EN 826 [4]



Creep test - EN 1606 [4]



[4] The initial thickness of the product during testing is equal to the value of pag. 1 "Compression strain (dL - 250 Pa)"; use this value to evaluate the crush rate of the material according to the specified norm

TECHNICAL DATA SHEET

Sylpro

Sound insulation for floating floors

Product description and Technical Specification

..... mm acoustic insulation rolls, made of SBR (Stirene Butadiene Rubber) fibres and granules rubber compacted with a polyurethane binder in a hot process. The colour of the product is black and it is supplied in rolls ..... m lenght, 1.00 m width. Density is 730 kg/m³ and the dynamic stiffness (s') is ..... MN/m³.

- high density for special applications
- good acoustic insulation in reduced thickness
- long-lasting also in presence of water

PHYSICAL CHARACTERISTICS	Standard	Unit	3	4	5	6	8	10	Tolerance
Nominal thickness [1]	EN 12431	mm	3	4	5	6	8	10	± 20%
Length		m	20		10		8	6	± 5%
Width		m	1,05			1,25			± 1%
Density		kg/m³	730						
Overall Superficial mass		kg/m²	2,2	2,9	3,7	4,4	5,8	7,3	± 11%
Colour			black						

ACOUSTIC CHARACTERISTICS	Standard	Unit	3	4	5	6	8	10	Tolerance
Dynamic stiffness for dry application[2]	EN 29052/1	MN/m³	77	70	63	62	49	47	± 2
Improvement of impact insulation class (Δ IIC)	ASTM E 2179-03	dB	-	-	26	-	-	-	
Impact sound reduction improvement (ΔLw) - by laboratory test	EN ISO 10140	dB	-	-	22	-	-	-	
Impact sound reduction improvement (ΔLw) - calculated [4]	EN 12354/2	dB	18	19	20	20	21	22	

TECHNICAL CHARACTERISTICS	Standard	Unit	3	4	5	6	8	10	Tolerance
Compression at strain 10%	EN 826	kPa	102	98	82	133	118	179	± 5%
Compression strain (dL - 250 Pa)	EN 12431	mm	2,8	4,0	5,2	6,0	7,9	9,7	
Compression strain (dF - 2000 Pa)	EN 12431	mm	2,7	3,9	5,1	5,8	7,8	9,6	
Compression strain (dB - 50000 → 2000 Pa)	EN 12431	mm	2,6	3,9	5,1	5,8	7,7	9,5	
Tensile strength	ISO 1798	MPa	0,42						
Hardness	DIN 53505	Shore A	48-52						
Thermal conductivity coefficient (λ)	EN 12667	W/mK	0,12						
Fire grade	DIN 4102		B2						

PACKING AND STORING

Each pallet is wrapped and protected with waterproof polythene film. Inside storage is recommended to avoid possible wet storing

[1] Product thickness measured according to norm EN 12431 equal to the value of "Compression strain (dB - 50000 → 2000 Pa)"

[2] Measurement executed in deviation from norm EN 29052-1, without applying plaster on the test piece

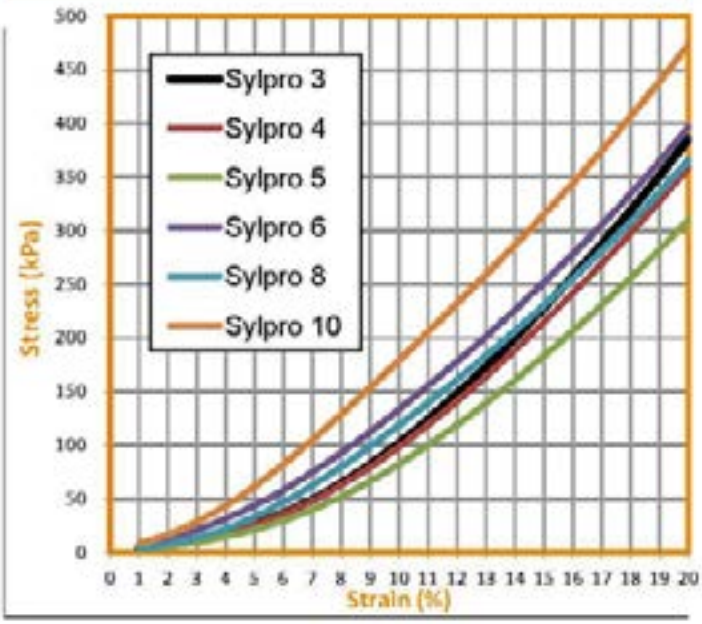
[3] Test Report n. 2008_0097.04 of 2008 in MA39 of Vienna; floating parquet

[4] Value calculated with dynamic stiffness for dry-mount applications and a screed weight equal to 85 kg/m²

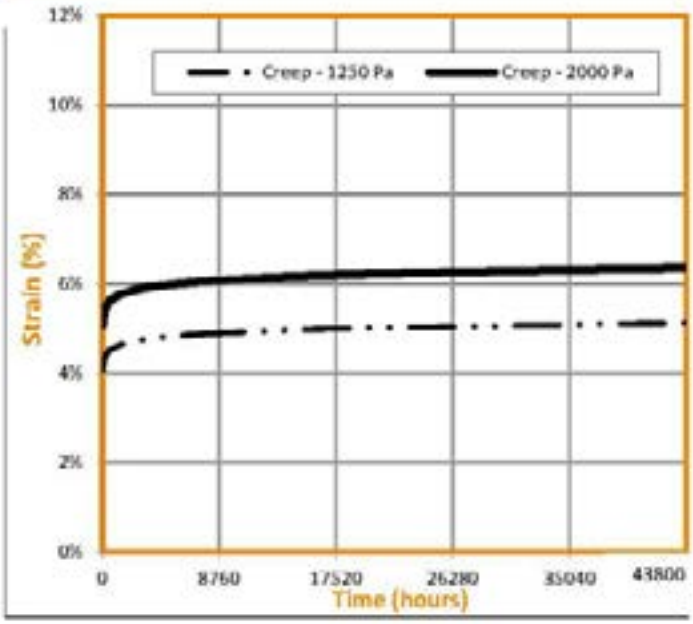
Sylpro

Sound insulation for floating floors

Determination of compression - EN 826 (s)



Creep test - EN 1606 (s)



(s) The initial thickness of the product during testing is equal to the value of pag. 1 "Compression strain (dL - 250 Pa)"; use this value to evaluate the crush rate of the material according to the specified norm

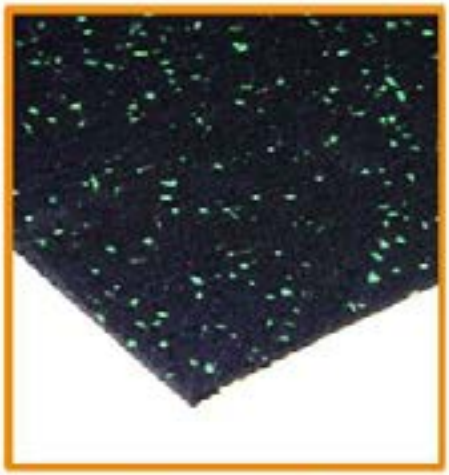
TECHNICAL DATA SHEET

Sylcer

Sound insulation beneath ceramic or stone floor tiles

Product description and Technical Specification

3 mm acoustic insulation rolls, made of SBR (Stirene Butadiene Rubber) granules rubber and EPDM (Ethylene Propylene Diene Monomer) granules rubber compacted using a polyurethane binder in a hot process. The colour of the product is black and it is supplied in rolls 20 m lenght, 1.00 m width. Density is 820 kg/m³.



- minimal thickness
- easy to install
- direct application over existing floorings

PHYSICAL CHARACTERISTICS	Standard	Unit	Sylcer 3	Tolerance
Nominal thickness [1]	EN 12431	mm	3	± 0.3
Length		m	20	± 1.5%
Width		m	1,00	± 1.5%
Density		kg/m³	820	± 5%
Overall Superficial mass		kg/m²	2,46	± 5%
Colour			black/green	

ACOUSTIC CHARACTERISTICS	Standard	Unit	Sylcer 3	Tolerance
Dynamic stiffness (s')	EN 29052/1	MN/m³	460	± 20
Dynamic stiffness for dry application[2]	EN 29052/1	MN/m³	180	± 20
Improvement of impact insulation class (Δ IIC)	ASTM E 2179-03	dB	21	
Impact sound reduction improvement (ΔLw) - by laboratory test	EN ISO 10140	dB	17	

TECHNICAL CHARACTERISTICS	Standard	Unit	Sylcer 3	Tolerance
Compression at strain 10%	EN 826	kPa	376	± 5%
Compression strain (dL - 250 Pa)	EN 12431	mm	3,3	
Compression strain (dF - 2000 Pa)	EN 12431	mm	3,2	
Compression strain (dB - 50000 → 2000 Pa)	EN 12431	mm	3,1	
Hardness	DIN 53505	Shore A	55	± 5
Thermal conductivity coefficient (λ)	EN 12667	W/mK	0,12	
Resistance factor to the spread of water vapour (μ)	ISO 12572		14	
Fire grade	2000/147/CE		B2	

PACKING AND STORING

Each pallet is wrapped and protected with waterproof polythene film. Inside storage is recommended to avoid possible wet storing

[1] Product thickness measured according to norm EN 12431 equal to the value of "Compression strain (dB - 50000 → 2000 Pa)"

[2] Measurement executed in deviation from norm EN 29052-1, without applying plaster on the test piece

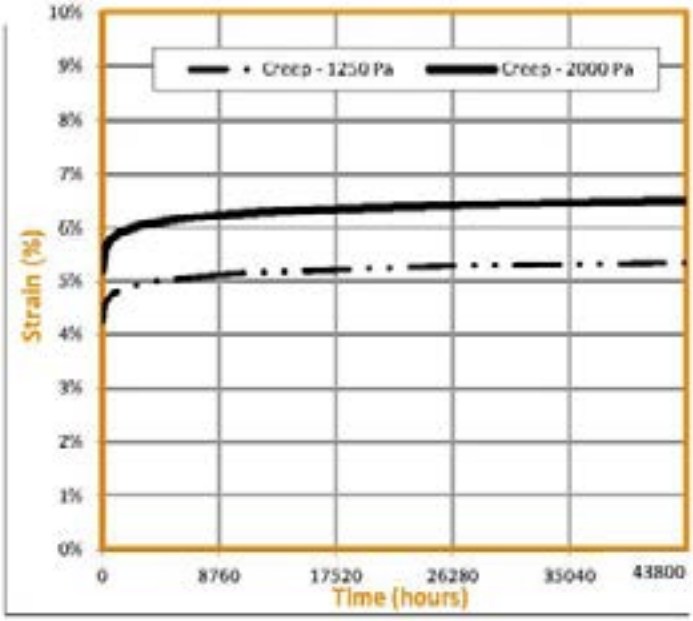
[3] Test report: concrete slab 14 cm, screed in sand and cement 5 cm, SylCer glue on screed, ceramic tiles 1 cm glue on SylCer

Sylcer

Sound insulation beneath ceramic or stone floor tiles

Determination of compression - EN 826 [4]

Creep test - EN 1606 [4]



[4] The initial thickness of the product during testing is equal to the value of pag. 1 "Compression strain (dL - 250 Pa)"; use this value to evaluate the crush rate of the material according to the specified norm

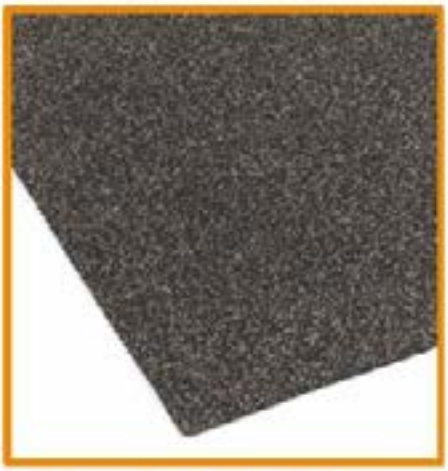
TECHNICAL DATA SHEET

Sylwood

Acoustic insulation for reducation of impact sound/noise under wood floors

Product description and Technical Specification

..... mm-thick acoustic insulation rolls, made of SBR (Stirene Butadiene Rubber) rubber granules and cork granules that are anchored and hot pressed with polyurethane adhesive. Each roll is ..... m lenght x 1,00 m width. Density is 700 kg/m³.



- good acoustic insulation in reduced thickness
- easy to install
- suitable for application onto existing floors

PHYSICAL CHARACTERISTICS	Standard	Unit	Sylwood 3	Sylwood 5	Tolerance
Nominal thickness [1]	EN 12431	mm	3	5	± 0.3
Length		m	20	10	± 1.5%
Width		m	1,00		± 1.5%
Density		kg/m³	700		± 5%
Overall Superficial mass		kg/m²	2,1	3,5	± 5%
Colour			black/cork		

ACOUSTIC CHARACTERISTICS	Standard	Unit	Sylwood 3	Sylwood 5	Tolerance
Dynamic stiffness (s')	EN 29052/1	MN/m³	625	485	± 20
Dynamic stiffness for dry application[2]	EN 29052/1	MN/m³	235	225	± 20
Improvement of impact insulation class (Δ IIC)[3]	ASTM E 2179-03	dB	24	24	
Impact sound reduction improvement (ΔLw)[3]	EN ISO 10140	dB	20	20	
Impact sound reduction improvement (ΔLw)[4]	EN ISO 10140	dB	17	-	

TECHNICAL CHARACTERISTICS	Standard	Unit	Sylwood 3	Sylwood 5	Tolerance
Compression at strain 10%	EN 826	kPa	357	519	± 5%
Compression strain (dL - 250 Pa)	EN 12431	mm	3,2	5,0	
Compression strain (dF - 2000 Pa)	EN 12431	mm	3,1	4,9	
Compression strain (dB - 50000 → 2000 Pa)	EN 12431	mm	3,1	4,9	
Hardness	DIN 53505	Shore A	55		± 5
Thermal conductivity coefficient (λ)	EN 12667	W/mK	0,12		
Resistance factor to the spread of water vapour (μ)	ISO 12572		14		
Fire grade	DIN 4102		B2		

PACKING AND STORING

Each pallet is wrapped and protected with waterproof polythene film. Inside storage is recommended to avoid possible wet storing

[1] Product thickness measured according to norm EN 12431 equal to the value of "Compression strain (dB - 50000 → 2000 Pa)"

[2] Measurement executed in deviation from norm EN 29052-1, without applying plaster on the test piece

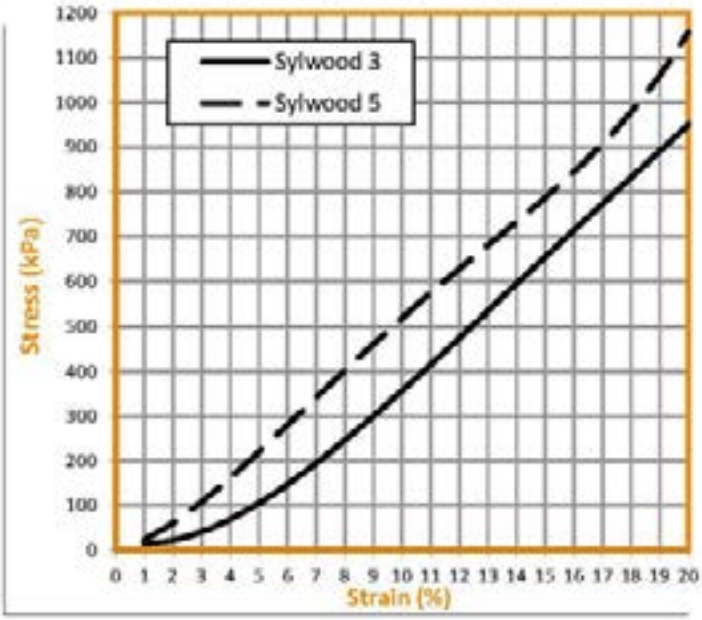
[3] Test report: CA floor 14 cm, sand-cement screed 5 cm, dry-mounted Sylwood, 1.5 cm parquet dry-mounted on Sylwood

[4] Test report: CA floor 14 cm, sand-cement screed 5 cm, Sylwood glued to screed, 1.5 cm parquet glued to Sylwood.

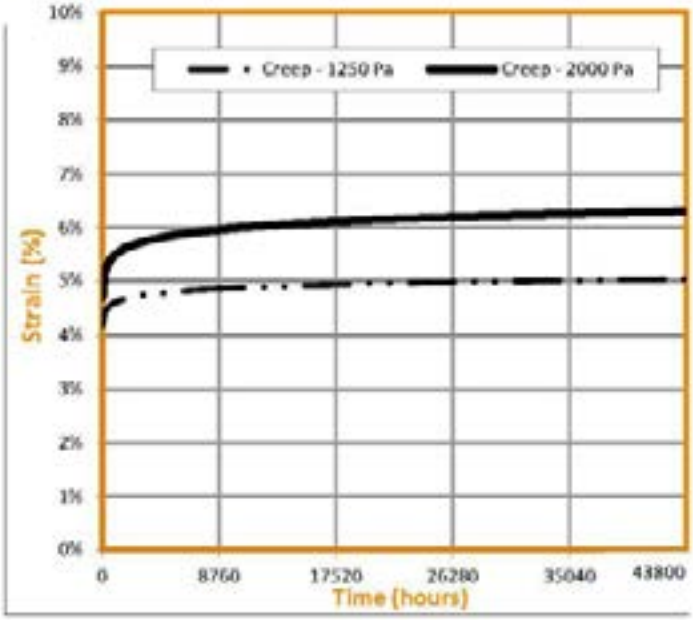
Sylwood

Acoustic insulation for reduction of impact sound/noise under wood floors

Determination of compression - EN 826 [5]



Creep test - EN 1606 [5]



[5] The initial thickness of the product during testing is equal to the value of pag. 1 "Compression strain (dL - 250 Pa)"; use this value to evaluate the crush rate of the material according to the specified norm

TECHNICAL DATA SHEET — *Mustwall M*

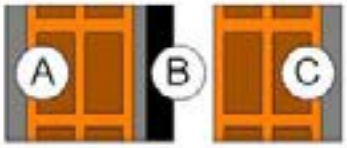
Sound insulation for walls

Product description and Technical Specification

..... mm acoustic insulation panels, made of SBR (Stirene Butadiene Rubber) rubber granules and EPDM (Ethylene Propylene Diene Monomer) rubber granules compacted using a polyurethane binder in a hot process. A non-woven, non-stretch synthetic backing is applied on both sides for added protection. The panels dimensions are 1,2 m lenght and 1 m width with a density of ..... kg/m³.

- durable material
- easy to install
- high resistance to humidity and condensation

PHYSICAL CHARACTERISTICS	Standard	Unit	10	15	20	30	Tolerance
Nominal thickness		mm	10	15	20	30	± 1
Length		m	1,20				± 0.01
Width		m	1,00				± 0.01
Density		kg/m³	800	700			± 5%
Overall Superficial mass		kg/m²	8,0	10,5	14,0	21,0	± 5%
Colour			grey / black				

ACOUSTIC CHARACTERISTICS	Standard	Unit	10	15	20	30
Wall composition - 260 mm thick A: plaster 15 mm, hollow brick 80 mm, plaster 10 mm B: Mustwall and air cavity C: hollow brick 80 mm, plaster 15 mm						
Transmission loss (Rw)	EN ISO 10140	dB	53 (1)	-	55 (2)	-

TECHNICAL CHARACTERISTICS	Standard	Unit	10	15	20	30
Thermal conductivity coefficient (λ)	EN 12667	W/mK	0,109			
Fire grade	2000/147/CE		F			

PACKING AND STORING

Each pallet is wrapped and protected with a polythene film. Although the wrapping is waterproof, inside storage is recommended to avoid possible wet storing

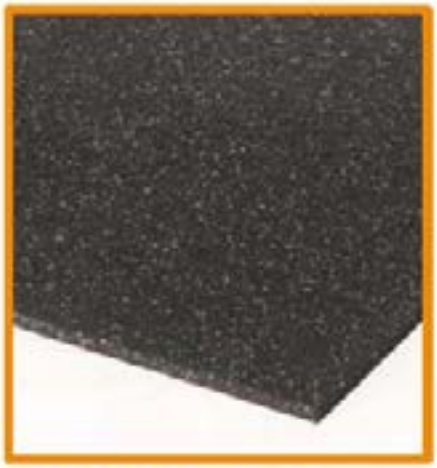
(1) *Test Report n. 3903/RP/05 of 2005; ITC of San Giuliano Milanese (MI)*
(2) *Test Report n. 4267/RP/06 of 2006; ITC of San Giuliano Milanese (MI)*

TECHNICAL DATA SHEET — *Mustwall M AD*

Sound insulation for walls

Product description and Technical Specification

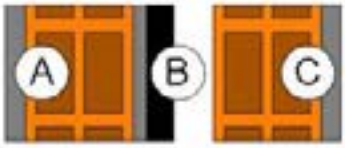
..... mm acoustic insulation panels, made of SBR (Stirene Butadiene Rubber) fibres and granules compacted using a polyurethane binder in a hot process. A black non-woven backing, non-stretch synthetic is applied on one side for added protection. The panels dimensions are 1,2 m lenght and 1 m width with a density of 800 kg/m³.



- high acoustic insulation in reduced thickness
- easy to install
- high resistance to humidity and condensation

PHYSICAL CHARACTERISTICS	Standard	Unit	10 AD	15 AD	20 AD	30 AD	40 AD	Tolerance
Nominal thickness		mm	10	15	20	30	40	± 1
Length		m	1,20					± 0.01
Width		m	1,00					± 0.01
Density		kg/m³	800					± 5%
Overall Superficial mass		kg/m²	8,0	12,0	16,0	24,0	32,0	± 5%
Colour			black					

ACOUSTIC CHARACTERISTICS	Standard	Unit	10 AD	15 AD	20 AD	30 AD	40 AD	
Wall composition - 260 mm thick A: plaster 15 mm + hollow brick 80 mm + plaster 10 mm B: Mustwall and air cavity C: hollow brick 80 mm + plaster 15 mm								
Transmission loss (Rw) [1]	EN 12354-1	dB	54	55	56	56,5	57	



TECHNICAL CHARACTERISTICS	Standard	Unit	10 AD	15 AD	20 AD	30 AD	40 AD	
Thermal conductivity coefficient (λ)	EN 12667	W/mK	0,12					
Fire grade	DIN 4102		B2					

PACKING AND STORING

Each pallet is wrapped and protected with a polythene film. Although the wrapping is waterproof, inside storage is recommended to avoid possible wet storing

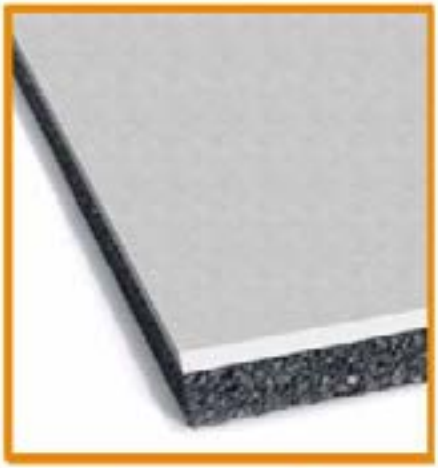
[1] Calculated value with EN 12354-1

TECHNICAL DATA SHEET — *Mustwall 33B*

Acoustic and thermal insulation for line existing walls and ceilings

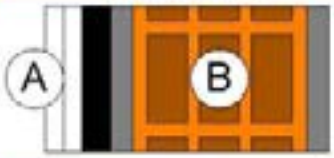
Product description and Technical Specification

33 mm-thick acoustic insulation pre-assembled panels, made of a 20 mm-thick SBR (Stirene Butadiene Rubber) rubber granules, density 500 kg/m³ couple with a 12.5 mm-thick plasterboard. The panels dimensions are 1.20 m width x 2.00 m lenght.



- thermal and sound insulating
- long term durability and stability
- eco-compatible

PHYSICAL CHARACTERISTICS	Norm	Unit	Mustwall 33B	Tolerance
Nominal thickness		mm	33	± 1
Length		m	2,00	± 0.005
Width		m	1,20	± 0.005
Overall Superficial mass		kg/m²	19,5	± 5%
Colour			black / white	

ACOUSTIC CHARACTERISTICS	Norm	Unit	Mustwall 33B
Wall composition 19.5 cm thick - certified A: coating made with: Mustwall 33B + 12.5 mm plasterboard B: 12 cm hollow block wall (12/25/50) + 1.5 cm plaster on both sides			
Transmission loss (Rw)	EN ISO 10140	dB	54 (1)
Wall composition 17.1 cm thick- certified A: coating made with: Mustwall 33B + 12.5 mm plasterboard B: 8 cm hollow block wall (8/25/50) C: coating made with: Mustwall 33B + 12.5 mm plasterboard			
Transmission loss (Rw)	EN ISO 10140	dB	53 (1)

TECHNICAL CHARACTERISTICS	Norm	Unit	Mustwall 33B
Thermal resistance (R)	EN 12667	m² K/W	0,229
Fire grade	EN 13501-1		F

PACKING AND STORING

Each pallet is wrapped and protected with a polythene film. Although the wrapping is waterproof, inside storage is recommended to avoid possible wet storing

(1) *Values obtained in Isolgomma acoustic laboratory*

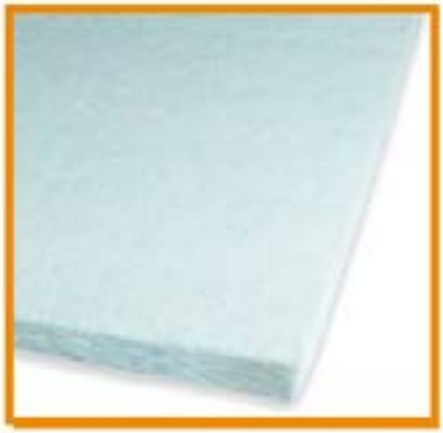
TECHNICAL DATA SHEET

Fybro

Thermal and acoustic insulation for walls and ceilings

Product description and Technical Specification

Airborne noise insulation in ..... mm thick made of polyester fibre; density 40 kg/m³. The panels dimensions are 120 cm lenght, 60 cm width.



- hypoallerginic
- eco-compatible
- not putrefying

PHYSICAL CHARACTERISTICS	Unit	FYBRO 30	FYBRO 50	Tolerance
Nominal thickness	mm	30	50	± 10%
Length	m	1,20		± 0.005
Width	m	0,60		± 0.005
Density	kg/m³	40		± 10%
Overall Superficial mass	kg/m²	1,2	2,0	± 10%
Colour		green		

ACOUSTIC CHARACTERISTICS	Norm	Unit	FYBRO 30	FYBRO 50
Wall composition - 29 cm thick *A: plaster 1,5 cm + hollow brick 12 cm + plaster 1.0 cm* *B: Fybro 50* *C: hollow brick 8 cm + plaster 1,5 cm*				
Transmission loss (Rw)	EN ISO 10140	dB	-	54 [1]
Wall composition - 12.5 cm thick *A: gypsum board double layer + 1.25x2 cm ifixed to 75 mm metal frame* *B: Fybro 30 double layer into metal frame* *C: gypsum board double layer + 1.25x2 cm ifixed to 75 mm metal frame*				
Transmission loss (Rw)	EN ISO 10140	dB	56 [1]	-

TECHNICAL CHARACTERISTICS	Norm	Unit	FYBRO 30	FYBRO 50
Thermal conductivity coefficient (λ)	EN 12667	W/mK	0,036	
Resistance factor to the spread of water vapour (μ)	EN 12086		3,2	
Fire grade	EN 13501-1		B - s2 - d0	

PACKING AND STORING

Each pallet is wrapped and protected with a polythene film. Although the wrapping is waterproof, inside storage is recommended to avoid possible wet storing

[1] *Values obtained in Isolgomma acoustic laboratory*

TECHNICAL DATA SHEET — *Biwall*

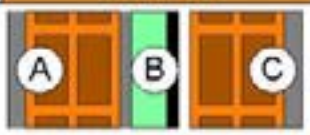
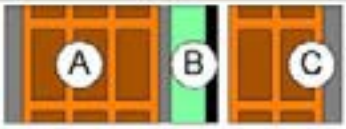
Acoustic and thermal walls and ceilings insulation

Product description and Technical Specification

Airborne noise insulation in 40 mm thick pre-assembled panels made of a panel 10 mm thickness SBR (Stirene Butadiene Rubber) rubber granules and EPDM (Ethylene Propylene Diene Monomer) rubber granules anchored to a non-woven anti-stretch synthetic backing and hot pressed with polyurethane binder, density of 800 kg/m³; a 3 cm thick polyesther fibre panel with density 40 kg/m³. The panels dimensions are 1.20 m length and 1 m width.

- high acoustic insulation value
- high thermal insulation value
- easy to lay

PHYSICAL CHARACTERISTICS	Unit	Biwall 40	Tolerance
Nominal thickness	mm	40	± 2
Length	m	1,20	± 0.01
Width	m	1,00	± 0.01
Density *(rubber panel + polyester panel)*	kg/m³	800 + 40	± 5%
Overall Superficial mass	kg/m²	9,20	± 5%
Colour		green	

ACOUSTIC CHARACTERISTICS	Standard	Unit	Biwall 40
Wall composition - 25 cm thick *A: plaster 1,5 cm + hollow brick 8 cm +plaster 1.0 cm* *B: Biwall 40* *C: hollow brick 8 cm + plaster 1,5 cm*			
Transmission loss (Rw)	EN ISO 10140	dB	54 [1]
Wall composition - 28 cm thick *A: plaster 1,5 cm + hollow brick 12 cm + plaster 1.0 cm* *B: Biwall 40* *C: hollow brick 8 cm + plaster 1,5 cm*			
Transmission loss (Rw)	EN ISO 10140	dB	55 [2]

TECHNICAL CHARACTERISTICS	Standard	Unit	Biwall 40
Thermal conductivity coefficient (λ)	EN 12667	W/mK	0,047
Fire grade	2000/147/CE		F

PACKING AND STORING

Each pallet is wrapped and protected with a polythene film. Although the wrapping is waterproof, inside storage is recommended to avoid possible wet storing

[1] *Test Report n. 4266/RP/06 of 2006; ITC of San Giuliano Milanese (MI)*
[2] *Test Report n. 4268/RP/06 of 2006; ITC of San Giuliano Milanese (MI)*

TECHNICAL DATA SHEET

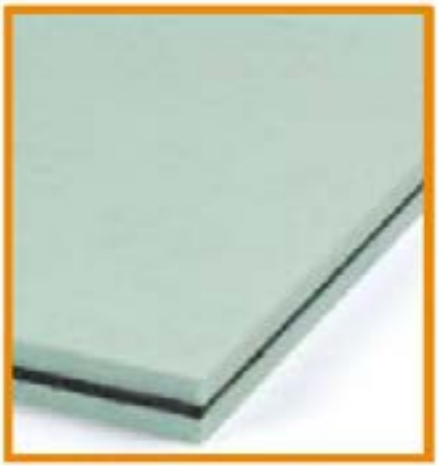
Trywall

Thermal and acoustic insulation for light walls and ceilings

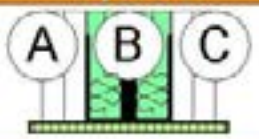
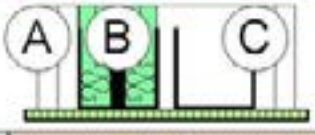
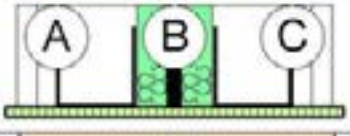
Product description and Technical Specification

Airborne noise Insulation in 48 mm thick pre-assembled panels made of a central panel SBR (Stirene Butadiene Rubber) rubber granules and EPDM (Ethylene Propylene Diene Monomer) rubber granules thickness 8 mm, density 800 kg/m³ , hot pressed with an polyurethane binder; on both external sides there are two panels in polyester fibre thickness 20 mm each, density 60 kg/m³. The panels dimensions are: 1,2 m length and 0,6 m width.

- high thermal and acoustic insulation value
- excellent resistance with humidity
- excellent resistance to fire



PHYSICAL CHARACTERISTICS	Unit	Trywall 48	Tolerance
Nominal thickness	mm	48	± 2
Length	m	1,20	± 0.01
Width	m	0,60	± 0.01
Density	kg/m³	60 + 800 + 60	± 5%
Overall Superficial mass	kg/m²	8,80	± 5%
Colour		green	

ACOUSTIC CHARACTERISTICS	Standard	Unit	Trywall 48
Wall composition - 100 mm thick *A: Gypsum-board double layer, 12.5mm x2* *B: Trywall panel, inside the metal structure 50 mm* *C: Gypsum-board double layer, 12.5mm x2*			
Transmission loss (Rw)	EN ISO 10140	dB	54 (1)
Wall composition - 160 mm thick *A: Gypsum-board double layer + 12.5mm x2 fixed to an 50 mm metal structure* *B: Trywall panel, inside the metal structure 50 mm* *C: Gypsum-board double layer + 12.5mm x2 fixed to an 50 mm metal structure*			
Transmission loss (Rw)	EN ISO 10140	dB	59 (1)
Wall composition - 200 mm thick *A: Gypsum-board double layer + 12.5mm x2 fixed to an 50 mm metal structure* *B: Trywall panel* *C: Gypsum-board double layer + 12.5mm x2 fixed on an 50 mm metal structure*			
Transmission loss (Rw)	EN ISO 10140	dB	60 (1)

TECHNICAL CHARACTERISTICS	Standard	Unit	Trywall 48
Thermal conductivity coefficient (λ)	EN 12667	W/mK	0,047
Fire grade	EN 13501-1		F

PACKING AND STORING

Each pallet is wrapped and protected with a polythene film. Although the wrapping is waterproof, inside storage is recommended to avoid possible wet storing

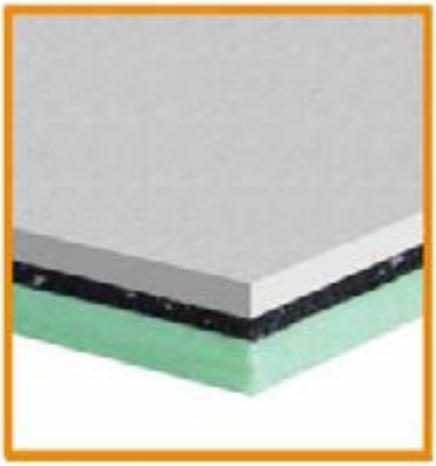
(1) *Values obtained in Isolgomma acoustic laboratory.*

TECHNICAL DATA SHEET — *Rewall 40*

Acoustic and thermal insulation for line existing walls and ceilings

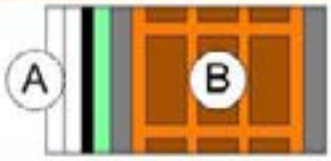
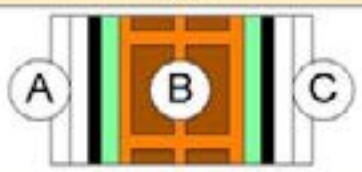
Product description and Technical Specification

Airborne noise insulation in 40 mm-thick pre-assembled panels, made of a 8 mm-thick SBR (Stirene Butadiene Rubber) rubber granules hot pressed with polyurethane binder, density of 800 kg/m³, a 20 mm-thick polyester fiber panel, density of 100 kg/m³, and a 12.5 mm-thick plasterboard. The panels dimensions are 1.20 m width x 2.00 m length.



- thermal and sound insulating
- long term durability and stability
- eco-compatible

PHYSICAL CHARACTERISTICS	Standard	Unit	Rewall 40	Tolerance
Nominal thickness		mm	40	± 1
Length		m	2,00	± 0.005
Width		m	1,20	± 0.005
Overall Superficial mass		kg/m²	18	± 5%
Colour			green / black / white	

ACOUSTIC CHARACTERISTICS	Standard	Unit	Rewall 40	
Wall composition 205 mm thick- certified A: coating made with: Rewall 40 + 12.5 mm plasterboard B: 120 mm hollow block wall (12/25/50) + 15 mm plaster on both sides				
Transmission loss (Rw) [1]	EN ISO 10140	dB	57 [1]	
Wall composition 18,5 cm thick - certified A: coating made with: Rewall 40 + 12.5 mm plasterboard B: 80 mm hollow block wall (8/25/50) C: coating made with: Rewall 40 + 12.5 mm plasterboard				
Transmission loss (Rw) [1]	EN ISO 10140	dB	60 [1]	

TECHNICAL CHARACTERISTICS	Standard	Unit	Rewall 40	
Thermal resistance (R)	EN 12667	m² K/W	0,761	
Fire grade	EN 13501-1		F	

PACKING AND STORING

Each pallet is wrapped and protected with a polythene film. Although the wrapping is waterproof, inside storage is recommended to avoid possible wet storing

[1] *Values obtained in Isolgomma acoustic laboratory.*

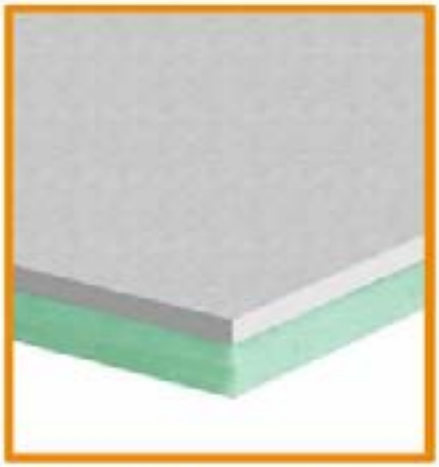
TECHNICAL DATA SHEET

Rewall 33B

Acoustic and thermal insulation for line existing walls and ceilings

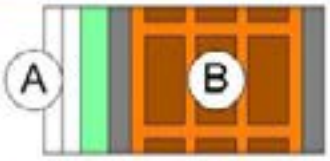
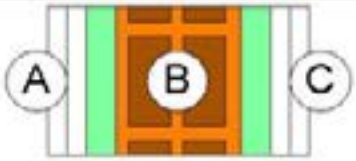
Product description and Technical Specification

Airborne noise insulation in 33 mm-thick pre-assembled panels, made of a 20 mm-thick polyester fiber panel, density of 100 kg/m³ and a 12.5 mm-thick plasterboard slab. The panels dimensions are 1.20 m width x 2.00 m lenght.



- thermal and sound insulating
- long term durability and stability
- eco-compatible

PHYSICAL CHARACTERISTICS	Standard	Unit	Rewall 33B	Tolerance
Nominal thickness		mm	33	± 1
Length		m	2,00	± 0.005
Width		m	1,20	± 0.005
Overall Superficial mass		kg/m²	11,5	± 5%
Colour			green / white	

ACOUSTIC CHARACTERISTICS	Standard	Unit	Rewall 33B	Tolerance
Wall composition 195 mm thick - certified A: coating made with: Rewall 33B + 12.5 mm plasterboard B: 120 mm hollow block wall (12/25/50)+ 15 mm plaster on both sides				
Transmission loss (Rw) (1)	EN ISO 10140	dB	56 (1)	
Wall composition 171 mm thick - certified A: coating made with: Rewall 33B + 12.5 mm plasterboard B: 80 mm hollow block wall (8/25/50) C: coating made with: Rewall 33B + 12.5 mm plasterboard				
Transmission loss (Rw) (1)	EN ISO 10140	dB	54 (1)	

TECHNICAL CHARACTERISTICS	Standard	Unit	Rewall 33B	Tolerance
Thermal resistance (R)	EN 12667	m² K/W	0,688	
Fire grade	EN 13501-1		F	

PACKING AND STORING

Each pallet is wrapped and protected with a polythene film. Although the wrapping is waterproof, inside storage is recommended to avoid possible wet storing

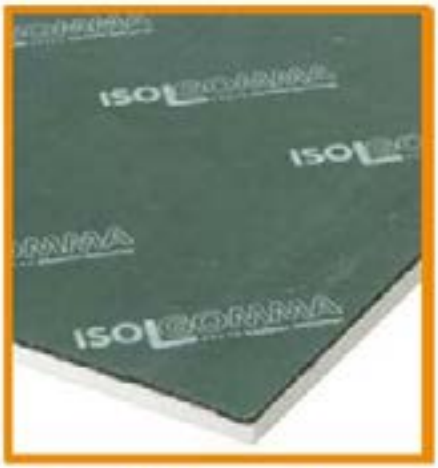
(*) Values obtained in Isolgomma acoustic laboratory.

TECHNICAL DATA SHEET — *Rewall 28R*

Acoustic and thermal insulation for line existing walls and ceilings

Product description and Technical Specification

Airborne noise insulation in 28 mm-thick pre-assembled panels, made of a 8 mm-thick SBR (Stirene Butadiene Rubber) rubber granules hot pressed with polyurethane binder, density of 800 kg/m³ and a 20 mm-thick polyester fiber panel, density of 100 kg/m³. The panels dimensions are 1.20 m width x 1.00 m lenght.



- thermal and sound insulating
- long term durability and stability
- eco-compatible

PHYSICAL CHARACTERISTICS	Standard	Unit	Rewall 28R	Tolerance
Nominal thickness		mm	28	± 1
Length		m	1,00	± 0.005
Width		m	1,20	± 0.005
Overall Superficial mass		kg/m²	8,4	± 5%
Colour			green / black	

ACOUSTIC CHARACTERISTICS	Standard	Unit	Rewall 28R	
Wall composition 20.5 cm thick - certified A: coating made with: Rewall 28R + 2x12.5 mm plasterboard B: 120 mm hollow block wall (12/25/50) + 1.5 cm plaster on both sides				
Transmission loss (Rw) (1)	EN ISO 10140	dB	57 (1)	
Wall composition 18.5 cm thick - certified A: coating made with: Rewall 28R + 2x12.5 mm plasterboard B: 80 cm hollow block wall (8/25/50) C: coating made with: Rewall 28R + 2x12.5 mm plasterboard				
Transmission loss (Rw) (1)	EN ISO 10140	dB	60 (1)	

TECHNICAL CHARACTERISTICS	Standard	Unit	Rewall 28R	Tolerance
Thermal resistance (R)	EN 12667	m² K/W	0,700	
Fire grade	EN 13501-1		F	

PACKING AND STORING

Each pallet is wrapped and protected with a polythene film. Although the wrapping is waterproof, inside storage is recommended to avoid possible wet storing

(1) Values obtained in Isolgomma acoustic laboratory.

TECHNICAL DATA SHEET

Natur

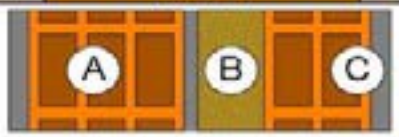
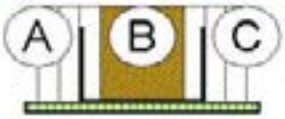
Thermal - acoustic insulation for walls and ceilings

Product description and Technical Specification

Airborne noise insulation panel in .... mm made of Kenaf fibers, mixed with a fiber cross-linking, and compacted by a hot-mechanical process; density 50 kg/m³. The panels dimensions are 1,2 m length and 0,6 m width.

- high acoustic and thermal insulation value
- eco-compatible
- high breathability

PHYSICAL CHARACTERISTICS	Unit	Natur 30	Natur 50	Tolerance
Nominal thickness	mm	30	50	± 10%
Length	m	1,20		± 0.01
Width	m	0,60		± 0.01
Density	kg/m³	50		± 10%
Overall Superficial mass	kg/m²	1,5	2,5	± 10%
Colour		brown		

ACOUSTIC CHARACTERISTICS	Norm	Unit	Natur 50
Wall composition - 29 cm thick *A: plaster 1,5 cm + hollow brick 12 cm + plaster 1.0 cm* *B: Natur 50* *C: hollow brick 8 cm + plaster 1,5 cm*			
Transmission loss (Rw)	EN ISO 10140	dB	54 [1]
Wall composition - thickness 12.5 cm *A: gypsum board double layer + 1.25 cm x 2 fixed to 75 mm metal frame* *B: Natur 50 in 75 mm metal frame* *C: gypsum board double layer + 1.25 cm x 2 fixed to 75 mm metal frame*			
Transmission loss (Rw)	EN ISO 10140	dB	54 [1]
Wall composition - thickness 22 cm *A: gypsum board double layer + 1.25 cm x 2 fixed to 75 mm metal frame* *B: Natur 50 into 75mm metal frame + 1.25 cm gypsum board layer* *C: Natur 50 into 75 mm metal frame*			
Transmission loss (Rw)	EN ISO 10140	dB	65 [1]

TECHNICAL CHARACTERISTICS	Norm	Unit	Natur 30	Natur 50
Thermal conductivity coefficient (λ)	EN 12667	W/mK	0,035	
Resistance factor to the spread of water vapour (μ)	EN 12086		2,3	
Fire grade	EN 13501-1		F	

PACKING AND STORING

Each pallet is wrapped and protected with a polythene film. Although the wrapping is waterproof, inside storage is recommended to avoid possible wet storing

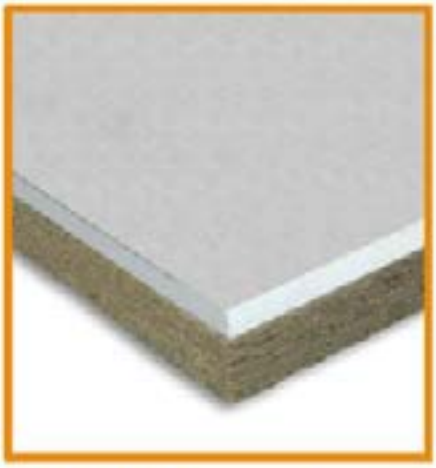
[1] *Values obtained in Isolgomma acoustic laboratory*

TECHNICAL DATA SHEET — *Natur 33B*

Acoustic and thermal insulation for line existing walls and ceilings

Product description and Technical Specification

Airborne noise insulation in 33 mm-thick pre-assembled panels made of a 20 mm-thick Kenaf fiber panel, density of 100 kg/m³ and a 12.5 mm thick plasterboard slab. The panels dimensions are 1.20 m width x 2.00 m lenght.



- thermal and sound insulating
- long term durability and stability
- eco-compatible

PHYSICAL CHARACTERISTICS	Unit	Natur 33B	Tolerance
Nominal thickness	mm	33	± 1
Length	m	2,00	± 0.005
Width	m	1,20	± 0.005
Overall Superficial mass	kg/m²	11,5	± 5%
Colour		brown / white	

ACOUSTIC CHARACTERISTICS	Norm	Unit	Natur 33B
Wall composition 19.5 cm thick - certified *A: coating made with: Natur 33B + 12.5 mm plasterboard* *B: 12 cm hollow block wall (12/25/50) + 1.5 cm plaster on both sides*			
Transmission loss (Rw)	EN ISO 10140	dB	56 [1]

TECHNICAL CHARACTERISTICS	Norm	Unit	Natur 33B
Thermal resistance (R)	EN 12667	m² K/W	0.729 [2]
Fire grade	EN 13501-1		F

PACKING AND STORING

Each pallet is wrapped and protected with a polythene film. Although the wrapping is waterproof, inside storage is recommended to avoid possible wet storing

[1] *Values obtained in Isolgomma acoustic laboratory.*
[2] *Calculated value with thermal conductivity coefficient by the individual component*

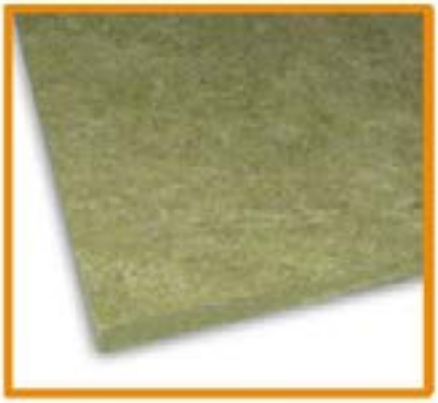
TECHNICAL DATA SHEET

Mineral

Thermal - acoustic insulation for walls and ceilings

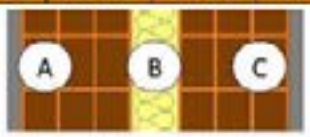
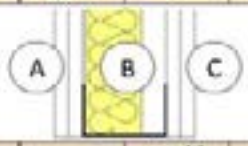
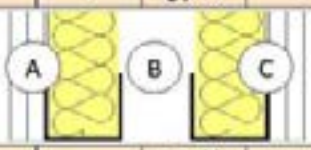
Product description and Technical Specification

Airborne noise and thermal insulation in ..... mm thick made of rock wool; density ..... kg/m³. The panels dimensions are: 1 m length, 0,6 m width.



- high acoustic and thermal insulation value
- easy to install
- fire resistance

PHYSICAL CHARACTERISTICS	Unit	40-40	50-50	50-70	60-70	Tolerance
Nominal thickness	mm	40	50	50	60	-1/+3
Length	m	1,00				± 2%
Width	m	0,60				± 1.5%
Density	kg/m³	40	50	70		± 10%
Overall Superficial mass	kg/m²	1,6	2,5	3,5	4,2	± 10%
Colour		yellow				

ACOUSTIC CHARACTERISTICS	Norm	Unit	40-40	50-50	50-70	60-70	
Wall composition - 32 cm thick *A: plaster 1,5 cm + hollow brick 12 cm* *B: Mineral 50-50* *C: hollow brick 12 cm, plaster*							
Transmission loss (Rw)	EN ISO 10140	dB	-	52 (1)	-	-	
Wall composition - 12.5 cm thick *A: gypsum board double layer + 1.25 cm x 2 fixed to 75 mm metal frame* *B: Mineral 50-70 into 75 mm metal frame* *C: gypsum board double layer + 1.25 cm x 2 fixed to 75 mm metal frame*							
Transmission loss (Rw)	EN ISO 10140	dB	-	-	57 (1)	-	
Wall composition - 20 cm thick *A: gypsum board double layer + 1.25 cm x 2 fixed to 50 mm metal frame with Mineral 50-70* *B: 5 cm air cavity* *C: gypsum board double layer + 1.25 cm x 2 fixed to 50 mm metal frame with Mineral 50-70*							
Transmission loss (Rw)	EN ISO 10140	dB	-	-	64 (1)	-	

TECHNICAL CHARACTERISTICS	Norm	Unit	40-40	50-50	50-70	60-70	
Thermal conductivity coefficient (λ)	EN 12667	W/mK	0,037	0,035			
Resistance factor to the spread of water vapour (μ)	EN 12086		1				
Fire grade	EN 13501-1		A1				

PACKING AND STORING

Each pallet is wrapped and protected with a polythene film. Although the wrapping is waterproof, inside storage is recommended to avoid possible wet storing

(1) *Values obtained in Isolgomma acoustic laboratory*

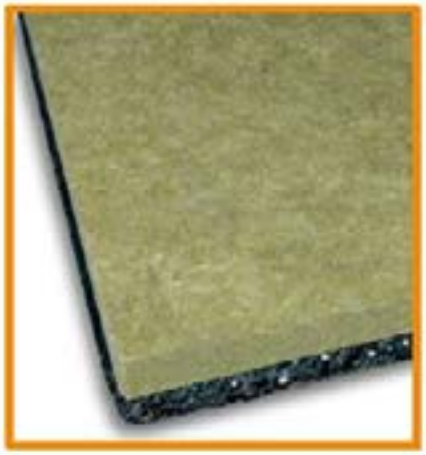
TECHNICAL DATA SHEET — *Mineral 50R*

Thermal - acoustic insulation for walls and ceilings

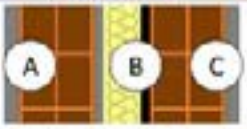
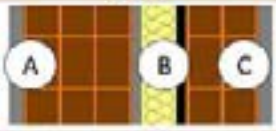
Product description and Technical Specification

Airborne noise and thermal insulation in 40 mm thick pre-assembled panels made of a 10 mm thick panel in SBR (Stirene Butadiene Rubber) rubber granules and EPDM (Ethylene Propylene Diene Monomer) granules rubber anchored to a non-woven anti stretch synthetic baking and hot pressed with polyurethane binder, density 800 kg/m³; a 4 cm thick rock wool panel, density 40 kg/m³. The panels dimensions are 1.20 m length and 1 m width.

- high acoustic insulation value
- high thermal insulation value
- easy to lay



PHYSICAL CHARACTERISTICS	Unit	Mineral 50R	Tolerance
Nominal thickness	mm	50	± 2
Length	m	1,20	± 0.01
Width	m	1,00	± 0.01
Density *(rubber panel + rock wool panel)*	kg/m³	800 + 40	± 5%
Overall Superficial mass	kg/m²	9,60	± 5%
Colour		black/yellow	

ACOUSTIC CHARACTERISTICS	Standard	Unit	Mineral 50R
Wall composition - 25 cm thick *A: plaster 1,5 cm + hollow brick 8 cm + plaster 1.0 cm* *B: Mineral 50R* *C: hollow brick 8 cm + plaster 1,5 cm*			
Transmission loss (Rw)	EN 12354-1	dB	54 (1)
Wall composition - 28 cm thick *A: plaster 1,5 cm + hollow brick 12 cm + plaster 1.0 cm* *B: Mineral 50R* *C: hollow brick 8 cm + plaster 1,5 cm*			
Transmission loss (Rw)	EN 12354-1	dB	55 (1)

TECHNICAL CHARACTERISTICS	Standard	Unit	Mineral 50R
Thermal resistance (R)	EN 12667	m² K/W	1.173 (2)
Fire grade	EN 13501-1		F

PACKING AND STORING

Each pallet is wrapped and protected with a polythene film. Although the wrapping is waterproof, inside storage is recommended to avoid possible wet storing

(1) *Calculated value according to EN 12354-1*
(2) *Calculated value with thermal conductivity coefficient by the individual component*

TECHNICAL DATA SHEET

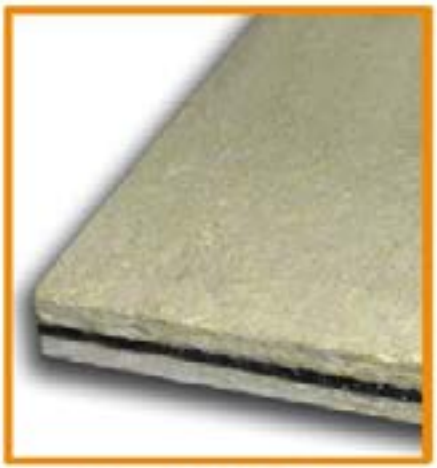
Mineral 48RM

Thermal-acoustic insulation for light walls and ceilings

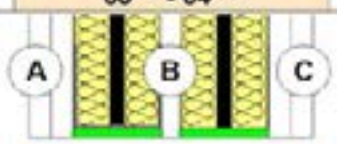
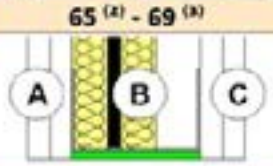
Product description and Technical Specification

Airborne noise Insulation in 48 mm thick pre-assembled panels made of a central panel SBR (Stirene Butadiene Rubber) rubber granules and EPDM (Ethylene Propylene Diene Monomer) rubber granules thickness 8 mm, density 800 kg/m³, hot pressed with an polyurethane binder; on both external sides there are two panels in rock wool thickness 20 mm each, density 100 kg/m³. The panels dimensions are: 1,0 m length and 0,625 m width.

- high thermal and acoustic insulation value
- excellent resistance with humidity
- excellent resistance to fire



PHYSICAL CHARACTERISTICS	Unit	Mineral 48 RM	Tolerance
Nominal thickness	mm	48	± 2
Length	m	1.00	± 0.01
Width	m	0.625	± 0.01
Density (rock wool panel + rubber panel + rock wool panel)	kg/m³	100 + 800 + 100	± 5%
Overall Superficial mass	kg/m²	10.4	± 5%
Colour		yellow/black	

ACOUSTIC CHARACTERISTICS	Standard	Unit	Mineral 48 RM
Wall composition - 100 mm thick *A: Gypsum-board double layer - 12.5mm x2 fixed to an 50 mm metal structure* *B: Mineral 48 RM, inside metal structure 50 mm* *C: Gypsum-board double layer - 12.5mm x2 fixed on an 50 mm metal structure*			
Transmission loss (Rw) [1]	EN ISO 10140	dB	55 [2] - 55 [3]
Wall composition - 160 mm thick *A: Gypsum-board double layer + 12.5mm x2 fixed to an 50 mm metal structure* *B: Mineral 48 RM, inside of first metal structure 50 mm* *C: Gypsum-board double layer + 12.5mm x2 fixed to an 50 mm metal structure*			
Transmission loss (Rw) [1]	EN ISO 10140	dB	60 [2] - 64 [3]
Wall composition - 160 mm thick *A: Gypsum-board double layer + 12.5mm x2 fixed to an 50 mm metal structure* *B: Mineral 48 RM, inside to both metal structure 50 mm* *C: Gypsum-board double layer + 12.5mm x2 fixed to an 50 mm metal structure*			
Transmission loss (Rw) [1]	EN ISO 10140	dB	65 [2] - 69 [3]
Wall composition - 125 mm thick *A: Gypsum-board double layer - 12.5mm x2 fixed to an 75 mm metal structure* *B: Mineral 48 RM, inside metal structure 75 mm* *C: Gypsum-board double layer - 12.5mm x2 fixed on an 75 mm metal structure*			
Transmission loss (Rw) [1]	EN ISO 10140	dB	58 [2] - 59 [3]

TECHNICAL CHARACTERISTICS	Standard	Unit	Mineral 48 RM
Thermal conductivity coefficient (λ)	EN 12667	W/m K	0.040
Fire grade	EN 13501-1		F

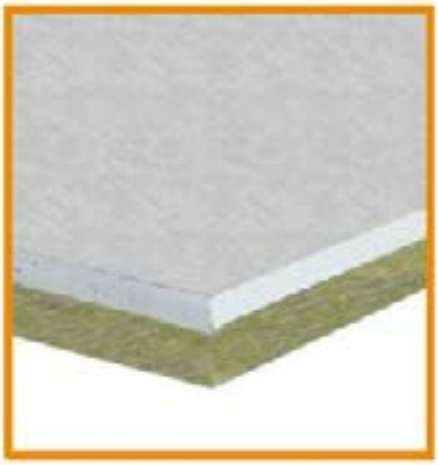
[1] Values obtained in Isolgomma acoustic laboratory. [2] Gypsum board density 700 kg/m³ [3] Gypsum board density 850 kg/m³

TECHNICAL DATA SHEET — *Mineral 33B*

Acoustic and thermal walls and ceilings insulation

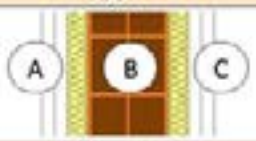
Product description and Technical Specification

Airborne noise insulation in 33 mm-thick pre-assembled panels made of: a 20 mm-thick rock wool panel, density of 100 kg/m³ and a 12.5 mm-thick plasterboard. The panels dimensions are 1.20 m width x 2.00 m lenght.



- thermal and sound insulating
- long term durability and stability
- easy to install

PHYSICAL CHARACTERISTICS	Unit	Mineral 33B	Tolerance
Nominal thickness	mm	33	± 1
Length	m	2,00	± 0.005
Width	m	1,20	± 0.005
Overall Superficial mass	kg/m³	11,5	± 5%
Colour		yellow / white	

ACOUSTIC CHARACTERISTICS	Norm	Unit	Mineral 33B
Wall composition 19.5 cm thick - certified *A: coating made with: Mineral 33B + 12.5 mm plasterboard* *B: 12 cm hollow block wall (12/25/50) + 1.5 cm plaster on both sides*			
Transmission loss (Rw)	EN 12354-1	dB	56 (1)
Wall composition 17.1 cm thick - certified *A: coating made with: Mineral 33B + 12.5 mm plasterboard* *B: 8 cm hollow block wall (8/25/50)* *C: coating made with: Mineral 33B + 12.5 mm plasterboard*			
Transmission loss (Rw)	EN 12354-1	dB	54 (1)

TECHNICAL CHARACTERISTICS	Norm	Unit	Mineral 33B
Thermal resistance (R)	EN 12667	m² K/W	0.634 (2)
Fire grade	EN 13501-1		A2-s1-d0

PACKING AND STORING

Each pallet is wrapped and protected with a polythene film. Although the wrapping is waterproof, inside storage is recommended to avoid possible wet storing

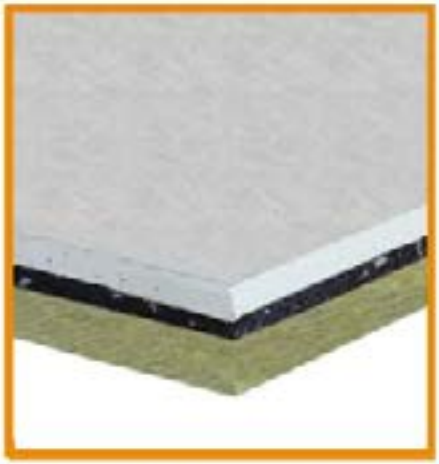
(1) *Calculated value according to EN 12354-1*
(2) *Calculated value with thermal conductivity coefficient by the individual component*

TECHNICAL DATA SHEET — *Mineral 40RB*

Acoustic and thermal walls and ceilings insulation

Product description and Technical Specification

Airborne noise insulation in 40 mm-thick pre-assembled panels made of a 8 mm-thick SBR (Stirene Butadiene Rubber) rubber granules hot pressed with polyurethane binder, density of 800 kg/m³, a 20 mm-thick rock wool pane, density of 100 kg/m³ and a 12.5 mm-thick plasterboard slab. The panels dimensions are 1.20 m width x 2.00 m lenght.



- thermal and sound insulating
- long term durability and stability
- easy to install

PHYSICAL CHARACTERISTICS	Unit	Mineral 40RB	Tolerance
Nominal thickness	mm	40	± 1
Length	m	2,00	± 0.005
Width	m	1,20	± 0.005
Overall Superficial mass	kg/m²	18	± 5%
Colour		yellow / black / white	

ACOUSTIC CHARACTERISTICS	Norm	Unit	Mineral 40RB
Wall composition 20.5 cm thick - certified *A: coating made with: Mineral 40RB + 12.5 mm plasterboard* *B: 12 cm hollow block wall (12/25/50)+ 1.5 cm plaster on both sides*			
Transmission loss (Rw)	EN 12354-1	dB	57 (1)
Wall composition 18.5 cm thick - certified *A: coating made with: Mineral 40RB + 12.5 mm plasterboard* *B: 8 cm hollow block wall (8/25/50)* *C: coating made with: Mineral 40RB + 12.5 mm plasterboard*			
Transmission loss (Rw)	EN 12354-1	dB	60 (1)

TECHNICAL CHARACTERISTICS	Norm	Unit	Mineral 40RB
Thermal resistance (R)	EN 12667	m² K/W	0.707 (2)
Fire grade	EN 13501-1		F

PACKING AND STORING

Each pallet is wrapped and protected with a polythene film. Although the wrapping is waterproof, inside storage is recommended to avoid possible wet storing

(1) Calculated value according to EN 12354-1
(2) Calculated value with thermal conductivity coefficient by the individual component

TECHNICAL DATA SHEET

Stywall - Stywall AD

Under wall strip

Product description and Technical Specification

STYWALL: Acoustic insulation in stripes 8 mm thick made of SBR (Stirene Butadiene Rubber) rubber granules hot pressed between two 50 g/m² non-woven, unstretched backing using an hureic adhesive. Density 700 kg/m³. Stripes dimensions: m 1 lenght, cm 10, 15, 20, 25, 33, 40 width.

STYWALL AD: Acoustic insulation in stripes 6 mm thick made of SBR (Stirene Butadiene Rubber) fibres and granules rubber hot pressed with a polyurethane binder to a 50 g/m² non-woven, unstretched backing. Density 750 kg/m³. Stripes dimensions: m 7.5 lenght, cm 10, 15, 20, 25, 33, 40 width.

- Structural junction underwall
- Extremely easy to be installed
- High acoustic and vibration insulation

PHYSICAL CHARACTERISTICS	Standard	Unit	STYWALL	STYWALL AD	Tolerance
Nominal thickness	EN 12431	mm	8	6	± 0.5
Length		m	1,0	7,5	± 1%
Width		cm	10 - 15 - 20 - 25 - 33 - 40		± 0.5
Density		kg/m³	700	750	± 5%
Backing superficial mass		g/m²	50		
Overall Superficial mass		kg/m²	7,0	4,5	± 5%
Colour			black		

ACOUSTIC CHARACTERISTICS	Standard	Unit	STYWALL	STYWALL AD	Tolerance
Dynamic stiffness for dry application[2]	EN 29052/1	MN/m³	55	96	± 2
Natural frequency (fn)		Hz	84	111	

TECHNICAL CHARACTERISTICS	Standard	Unit	STYWALL	STYWALL AD	Tolerance
Static Modulus of Elasticity (Es) - strain 10%	EN 826	N/mm²	2,9	2,82	
Compression at strain 10%	EN 826	kPa	290	282	± 5%
Compression strain (dL - 250 Pa)	EN 12431	mm	8,0	6,8	
Compression strain (dF - 2000 Pa)	EN 12431	mm	7,7	6,7	
Compression strain (dB - 50000 → 2000 Pa)	EN 12431	mm	7,5	6,6	
Hardness	DIN 53505	Shore A	-	50	
Thermal conductivity coefficient (λ)	EN 12667	W/mK	0,109	0,12	
Fire grade	2000/147/CE - DIN 4102		F	B2	

PACKING AND STORING

Each pallet is wrapped and protected with waterproof polythene film. Inside storage is recommended to avoid possible wet storing

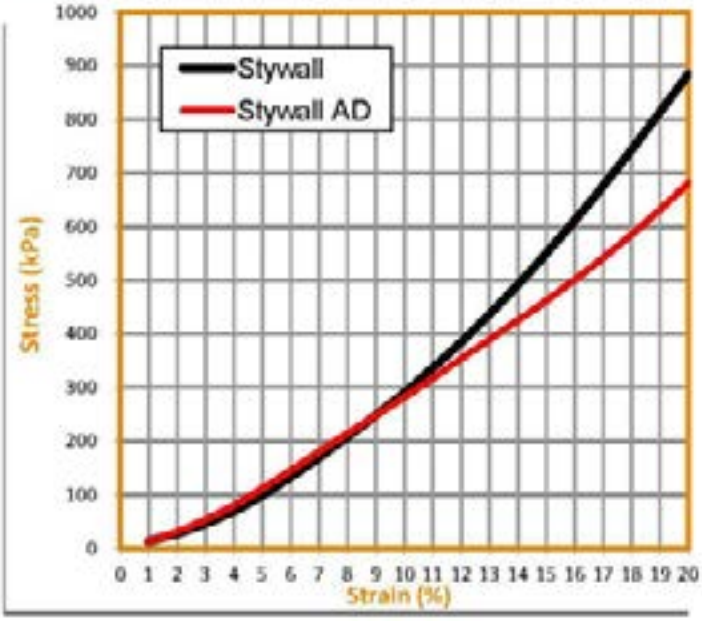
[2] *Measurement executed in deviation from norm EN 29052-1, without applying plaster on the test piece*

TECHNICAL DATA SHEET

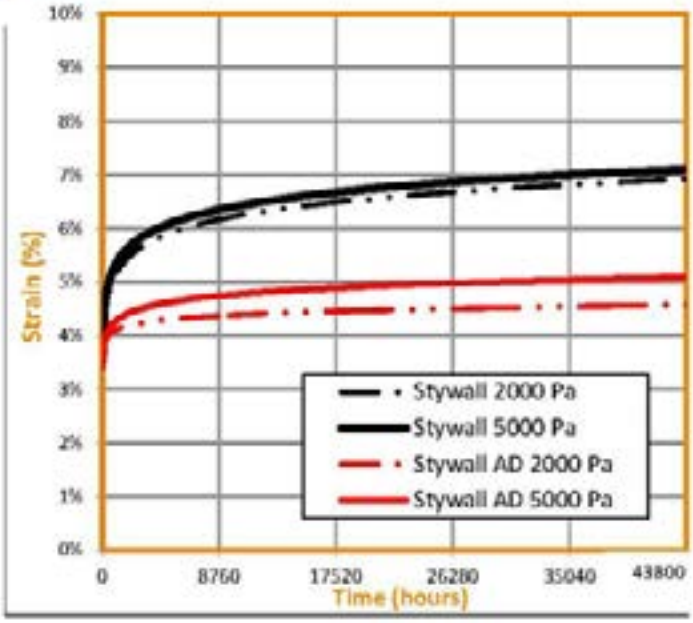
Stywall - Stywall AD

Under wall strip

Determination of compression - EN 826 [4]



Creep test - EN 1606 [4]



[4] The initial thickness of the product during testing is equal to the value of pag. 1 "Compression strain (dL - 250 Pa)"; use this value to evaluate the crush rate of the material according to the specified norm

TECHNICAL DATA SHEET — *Stywall S3*

Under wall strip

Product description and Technical Specification

Acoustic insulation in stripes 3 mm thick made of SBR (Stirene Butadiene Rubber) fibres and granules rubber hot pressed using an hureic binder. Density 730 kg/m³. Stripes dimensions: m 20 lenght, cm ... width. Recyclable product obtained with 95% recycled material.

- Structural junction underwall
- Extremely easy to be installed
- High acoustic and vibration insulation

PHYSICAL CHARACTERISTICS	Standard	Unit	Stywall S3	Tolerance
Nominal thickness	EN 12431	mm	3	± 0.5
Length		m	20	+ 1%
Width		mm	45-50-70-100-120-125 145-150-175-180-200 225-250-300-330-400	± 2
Density		kg/m³	730	± 5%
Overall Superficial mass		kg/m²	2,19	± 5%
Colour			black	

ACOUSTIC CHARACTERISTICS	Standard	Unit	Stywall S3	Tolerance
Dynamic stiffness for dry application[2]	EN 29052/1	MN/m³	77	± 2
Natural frequency (fn)		Hz	99	

TECHNICAL CHARACTERISTICS	Standard	Unit	Stywall S3	Tolerance
Static Modulus of Elasticity (Es) - strain 10%	EN 826	N/mm²	1,02	
Compression at strain 10%	EN 826	kPa	102	± 5%
Compression strain (dL - 250 Pa)	EN 12431	mm	2,8	
Compression strain (dF - 2000 Pa)	EN 12431	mm	2,7	
Compression strain (dB - 50000 → 2000 Pa)	EN 12431	mm	2,6	
Hardness	DIN 53505	Shore A	40	
Thermal conductivity coefficient (λ)	EN 12667		0,12	
Fire grade	DIN 4102		B2	

PACKING AND STORING

Each pallet is wrapped and protected with waterproof polythene film. Inside storage is recommended to avoid possible wet storing

[2] *Measurement executed in deviation from norm EN 29052-1, without applying plaster on the test piece*

TECHNICAL DATA SHEET

Stywall S4 - S6

Under wall strip

Product description and Technical Specification

Acoustic insulation in stripes ..... mm thick made of SBR (Stirene Butadiene Rubber) fibres and granules rubber hot pressed using an hureic binder. Density 730 kg/m³. Stripes dimensions: m 10 lenght, cm ... width. Recyclable product obtained with 95% recycled material.

- Structural junction underwall
- Extremely easy to be installed
- High acoustic and vibration insulation

PHYSICAL CHARACTERISTICS	Standard	Unit	Stywall S4	Stywall S6	Tolerance
Nominal thickness	EN 12431	mm	4	6	± 0.5
Length		m	10		± 1%
Width		mm	100-120-125-145-150-175-180-200-225-250-300		± 2
Density		kg/m³	730		± 5%
Overall Superficial mass		kg/m²	2,92	4,38	± 5%
Colour			black		

ACOUSTIC CHARACTERISTICS	Standard	Unit	Stywall S4	Stywall S6	Tolerance
Dynamic stiffness for dry application[2]	EN 29052/1	MN/m³	70	62	± 2
Natural frequency (fn)		Hz	94	89	

TECHNICAL CHARACTERISTICS	Standard	Unit	Stywall S4	Stywall S6	Tolerance
Static Modulus of Elasticity (Es) - strain 10%	FN 826	N/mm²	0,98	1,33	
Compression at strain 10%	FN 826	kPa	98	133	± 5%
Compression strain (dL - 250 Pa)	FN 12431	mm	4,0	6,0	
Compression strain (dF - 2000 Pa)	FN 12431	mm	3,9	5,8	
Compression strain (dB - 50000 → 2000 Pa)	EN 12431	mm	3,9	5,8	
Hardness	DIN 53505	Shore A	40		
Thermal conductivity coefficient (λ)	EN 12667		0,12		
Fire grade	DIN 4102		B2		

PACKING AND STORING

Each pallet is wrapped and protected with waterproof polythene film. Inside storage is recommended to avoid possible wet storing

[2] Measurement executed in deviation from norm EN 29052-1, without applying plaster on the test piece

TECHNICAL DATA SHEET

Sylencer

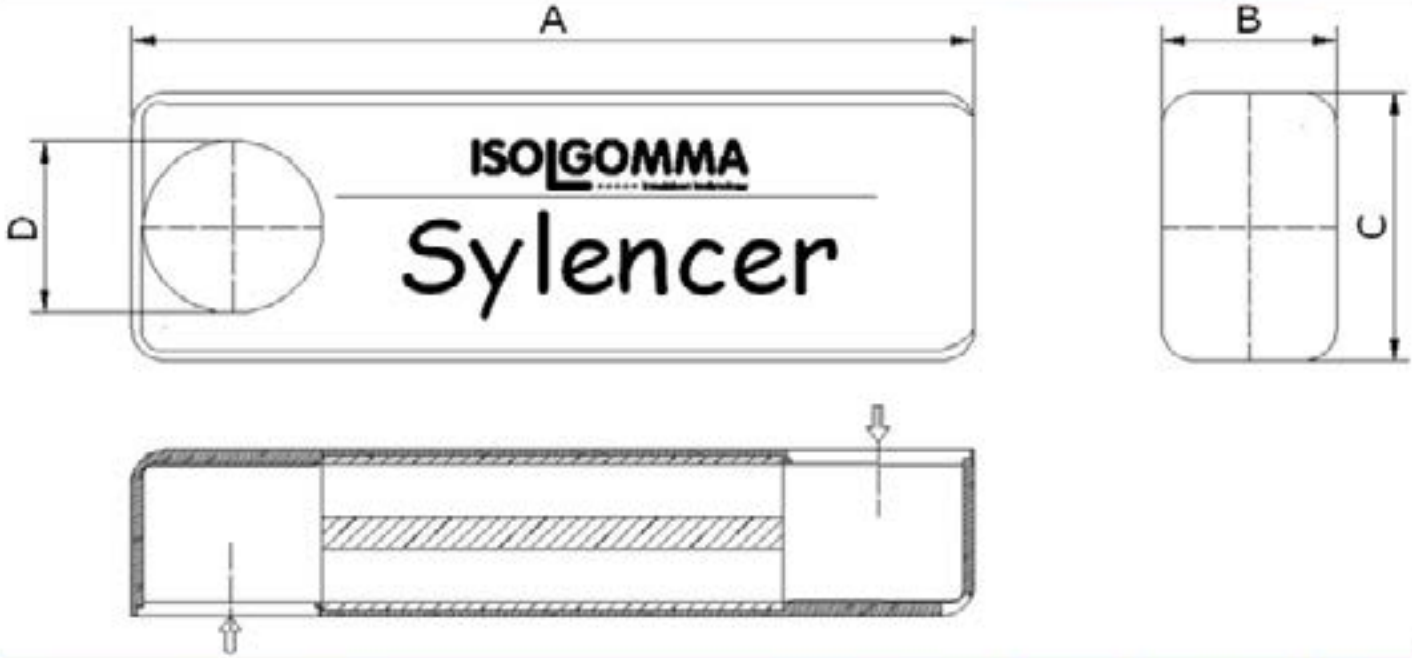
Ventilation hole

Product description and Technical Specification

Acoustic insulation for vent holes, to be installed on the facade walls, rectangular shaped, length 75 cm, width 15,5 cm, height 25 cm; it is made of high density expanded polypropylene (EEP), while the inner Cartridge is made of polyester fiber with a net free section of over 100 cm².

- high acoustic insulation
- easy to install
- durable material

PHYSICAL CHARACTERISTICS	Unit	Sylencer
Lenght (A)	mm	750
Width (B)	mm	155
Height (C)	mm	250
Hole diameter (D)	mm	160
Colour		white



ACOUSTIC CHARACTERISTICS	Norm	Unit	Sylencer
Acoustic insulation of Sylencer (Dn,e,w)	EN ISO 20140	dB	52

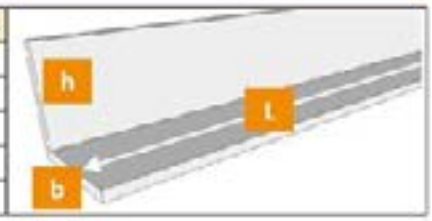
Edging stripes for floating floors

PROFYLE

Product description and Technical Specification

Edging stripes for floors screed made of polyethylene, grey colour, thickness ..... mm with adhesive on the two external sides. The dimensions are: base ..... cm, height ..... cm, density ..... kg/m³.

PHYSICAL CHARACTERISTICS	Unit	5/10	10/10	10/15	10/20	5/30	Tolerance
Nominal thickness	mm	6					± 1%
Length (L)	cm	150					± 1%
Height (h)	cm	10	10	15	20	30	± 0.5
Width (b)	cm	5	10			5	± 0.5
Density	kg/m³	23,5	31,5				± 1.5

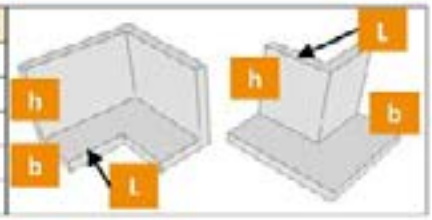


PROFYLE CORNER

Product description and Technical Specification

Acoustic Insulation Corners made of Polyethylene grey colour of 6 mm thickness, pre-shaped at 90° and 270° with adhesive on the two external sides. Base 5 cm, height 15 cm, lenght 10 cm; density 22÷25 kg/m³

PHYSICAL CHARACTERISTICS	Unit	90°	270°	Tolerance
Nominal thickness	mm	6		± 1%
Length (L)	cm	10		± 1%
Height (h)	cm	15		± 0.5
Width (b)	cm	5		± 0.5
Density	kg/m³	23,5		± 1.5

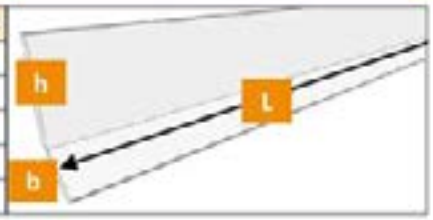


PROFYLE FLAT

Product description and Technical Specification

Acoustic Insulation strip available in rolls made of 6 mm thickness made of polyethylene grey colour, 22-25 kg/m³ density. It is flat with adhesive, pre-cut on the corner line in order to facilitate the strip bending . Base 5 cm, height 15 cm

PHYSICAL CHARACTERISTICS	Unit	FLAT	Tolerance
Nominal thickness	mm	6	± 1%
Length (L)	m	5	± 1%
Height (h)	cm	15	± 0.5
Width (b)	cm	5	± 0.5
Density	kg/m³	23,5	± 1.5



TECHNICAL DATA SHEET *Profyle Flat 1 - Profyle Flat 5*

Strip for skinting board

Product description and Technical Specification

Acoustic insulation strip for under skirting board made of polyethylene adhesive roll thickness of 1 mm, width 10 mm and length 20 m

- junction between the skirting board and floor
- easy to apply

PHYSICAL CHARACTERISTICS	Unit	FLAT 1	Tolerance
Nominal thickness	mm	1	± 5%
Width	mm	10	± 5%
Length	m	20	± 5%
Density	kg/m³	23,5	± 1.5
Colour		grey	

Strip for under flooring

Product description and Technical Specification

Acoustic insulating bands available in rolls made of polyethylene, white colour, thickness of 5 mm, with an adhesive band for easy application. Height 50 mm, density 22÷25 kg/m³.

- for under ceramic tiles
- for under parquet

PHYSICAL CHARACTERISTICS	Unit	FLAT 5	Tolerance
Nominal thickness	mm	5	± 5%
Width	mm	50	± 5%
Length	m	50	± 5%
Density	kg/m³	23,5	± 1.5
Colour		white	

TECHNICAL DATA SHEET

Stik - Stik WP

Adhesive tape

Stik

Product description and Technical Specification

Adhesive jointing tape made of non-woven anti-stretching polypropelene fabric 70 g/m². Supplied in rolls 6-10 cm x 50-100 m.

PHYSICAL CHARACTERISTICS	Unit	60	100	Tolerance
Width	mm	60	100	± 1%
Length	m	50-100		± 1%
Weigth	g/m²	70		± 10%
Colour		black		

Stik WP

Product description and Technical Specification

Adhesive jointing tape made of waterproof non-woven anti-stretching. Supplied in rolls 6-10 cm x 25 m.

PHYSICAL CHARACTERISTICS	Unit	60	100	Tolerance
Width	mm	60	100	± 1%
Length	m	25		± 1%
Weigth	g/m²	70		± 10%
Colour		grey		

TECHNICAL CHARACTERISTICS	Norm	Unit	60	100	Tolerance
Traction longitudinal resistance	EN 12311	N/mm	> 160		± 5%
Longitudinal elongation	EN 12311		0.65		± 5%
Traction transversal resistance	EN 12311	N/mm	> 90		± 5%
Transversal elongation	EN 12311		0.7		± 5%

INSTALLATION INSTRUCTIONS

Remove the protective film and seal the joints of the rolls, wall panels and Profyle

TECHNICAL DATA SHEET — *Megamat ME 500*

Vibration insulation

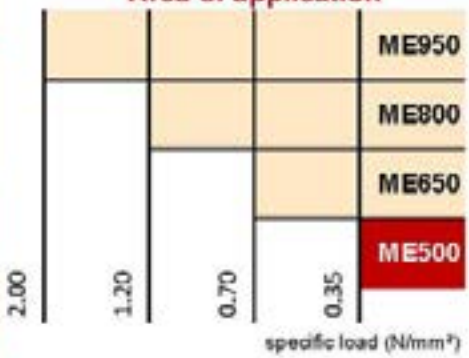
Product description and Technical Specification

Anti-vibration material supplied in panels, thickness 10[(*)]/20/30/40/50 mm, produced using fibres and granules of SBR rubber (Stirene Butadiene Rubber) and granules of EPDM rubber (Ethylene Propylene Diene Monomer), selected and compacted using a polyurethane glue in a hot process. A non-woven, non-stretch waperproof synthetic membrane is applied on one side of panel, for added protection; density 500 kg/m³. Panels dimensions are m 1 lenght, m 1 width.

- High performance in reduced thickness
- Easy to lay
- Durable material

Area of application	Compression load	Deflection
Static range of use *(static loads)*	0.05 N/mm²	10%
operating load range *(static plus dynamic loads)*	0.05 ÷ 0.35 N/mm²	10% ÷ 30%
load peaks *(short term, infrequent loads)*	1.00 N/mm²	50%

Area of application



PHYSICAL CHARACTERISTICS	Norm	Unit	ME 10/EPM	ME 500	Tolerance
Nominal thickness		mm	10	20-30-40-50	± 1
Length		m	1.00		± 1
Width		m	1.00		± 1
Density		kg/m³	700	500	± 5%
Backing superficial mass		g/m²	110		
Colour			grey/red	black/red	

TECHNICAL CHARACTERISTICS	Norm	Unit	ME 10/EPM	ME 500	Tolerance
Stress at strain 10%	UNI 11059	N/mm²	0.100	0.063	± 10%
Static Modulus of Elasticity (Es) - strain 10%	UNI 11059	N/mm²	1.020	0.623	± 10%
Dynamic Modulus of Elasticity (Ed) - strain 10%	UNI 11059	N/mm²	1.850	1.750	± 10%
Static Shear Modulus (Gs)	ISO 1827	N/mm²	-	0.164	± 10%
Loss factor (η)	UNI 11059		0.134	0.143	± 0.009

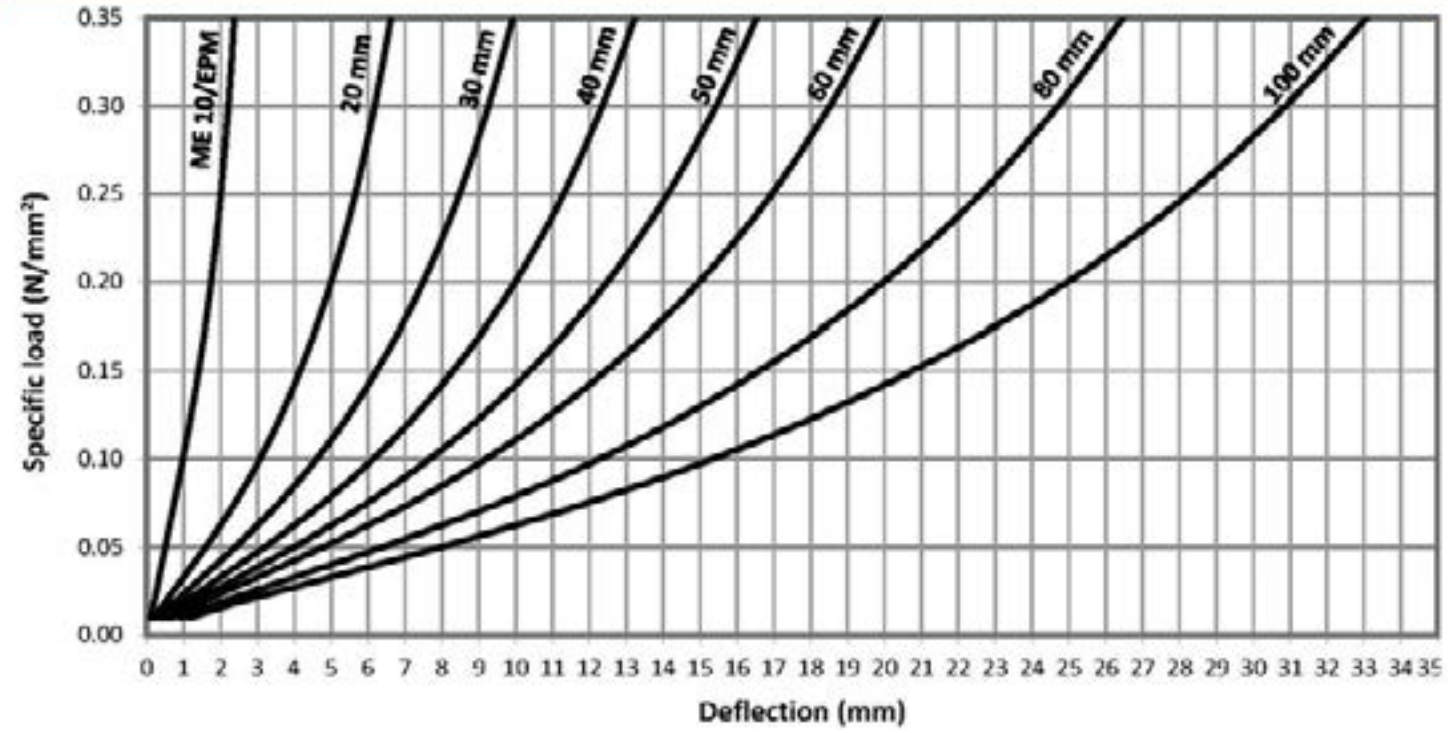
PHYSICAL AND CHEMICAL PROPERTIES	Norm	ME 10/EPM	ME 500	Tolerance
Temperature range of use		-20 °C / +110 °C		± 5%
Inflammability	DIN 4102	B2		

(*) The product ME10/EPM is composed completely of EPDM rubber granules; density 700 kg/m³, 10 mm thickness.

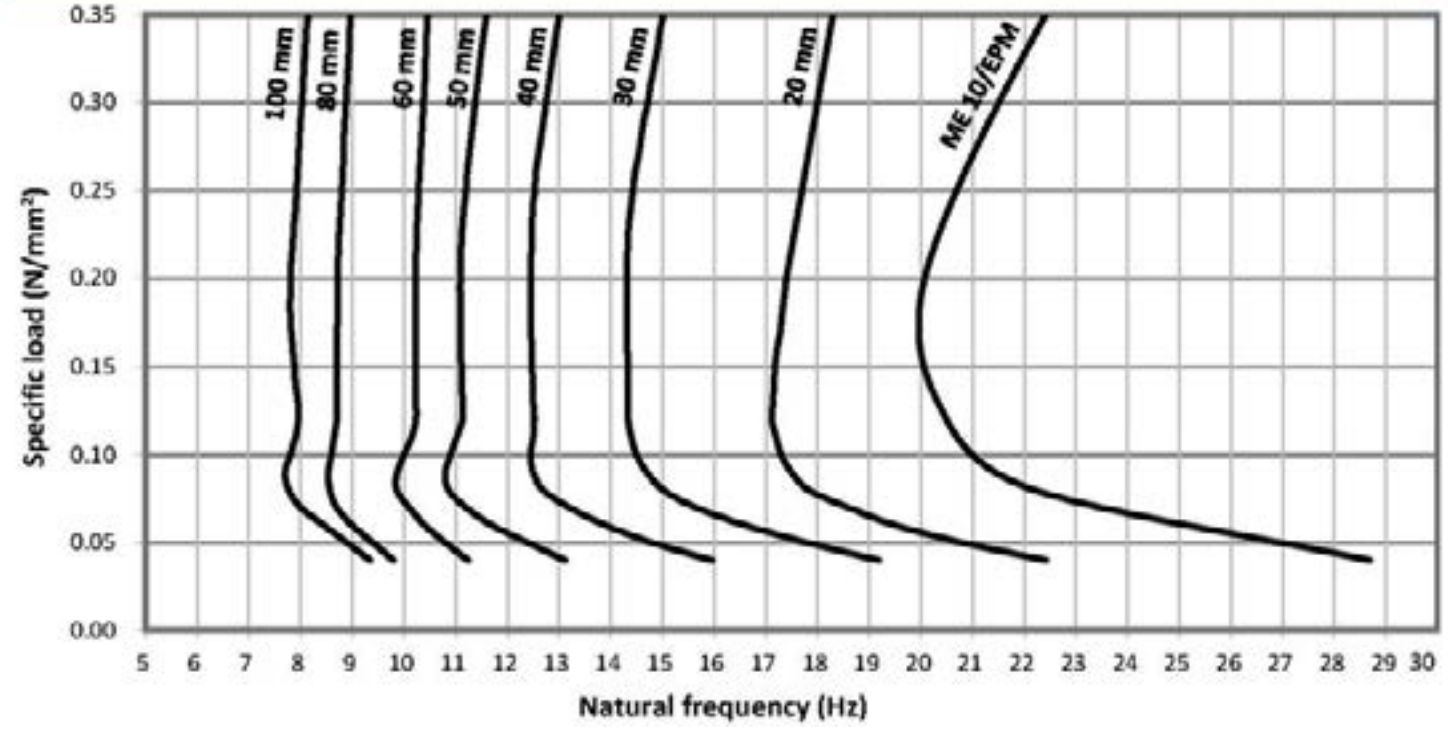
TECHNICAL DATA SHEET *Megamat ME 500*

Vibration insulation

Load deflection curve



Natural frequency



TECHNICAL DATA SHEET — *Megamat ME 650*

Vibration insulation

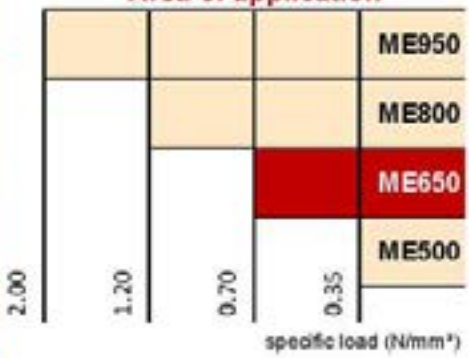
Product description and Technical Specification

Anti-vibration material supplied in panels, thickness 10/20/30/40/50 mm, produced using fibres and granules of SBR rubber (Stirene Butadiene Rubber) and granules of EPDM rubber (Ethylene Propylene Diene Monomer), selected and compacted using a polyurethane glue in a hot process. A non-woven, non-stretch synthetic waterproof membrane is applied on one side of panel, for added protection; density 650 kg/m³. Panels dimensions are m 1 lenght, m 1 width.

- High performance in reduced thickness
- Easy to lay
- Durable material

Area of application	Compression load	Deflection
Static range of use *(static loads)*	0.07 N/mm²	5%
operating load range *(static plus dynamic loads)*	0.07 ÷ 0.7 N/mm²	5% ÷ 30%
load peaks *(short term, infrequent loads)*	2.00 N/mm²	50%

Area of application



PHYSICAL CHARACTERISTICS	Norm	Unit	ME 650	Tolerance
Nominal thickness		mm	10-20-30-40-50	± 1
Length		m	1.00	± 1
Width		m	1.00	± 1
Density		kg/m³	650	± 5%
Backing superficial mass		g/m²	110	
Colour			black/red	

TECHNICAL CHARACTERISTICS	Norm	Unit	ME 650	Tolerance
Stress at strain 10%	UNI 11059	N/mm²	0.120	± 10%
Static Modulus of Elasticity (Es) - strain 10%	UNI 11059	N/mm²	1.23	± 10%
Dynamic Modulus of Elasticity (Ed) - strain 10%	UNI 11059	N/mm²	3.60	± 10%
Static Shear Modulus (Gs)	ISO 1827	N/mm²	-	± 10%
Loss factor (η)	UNI 11059		0.140	± 0.008

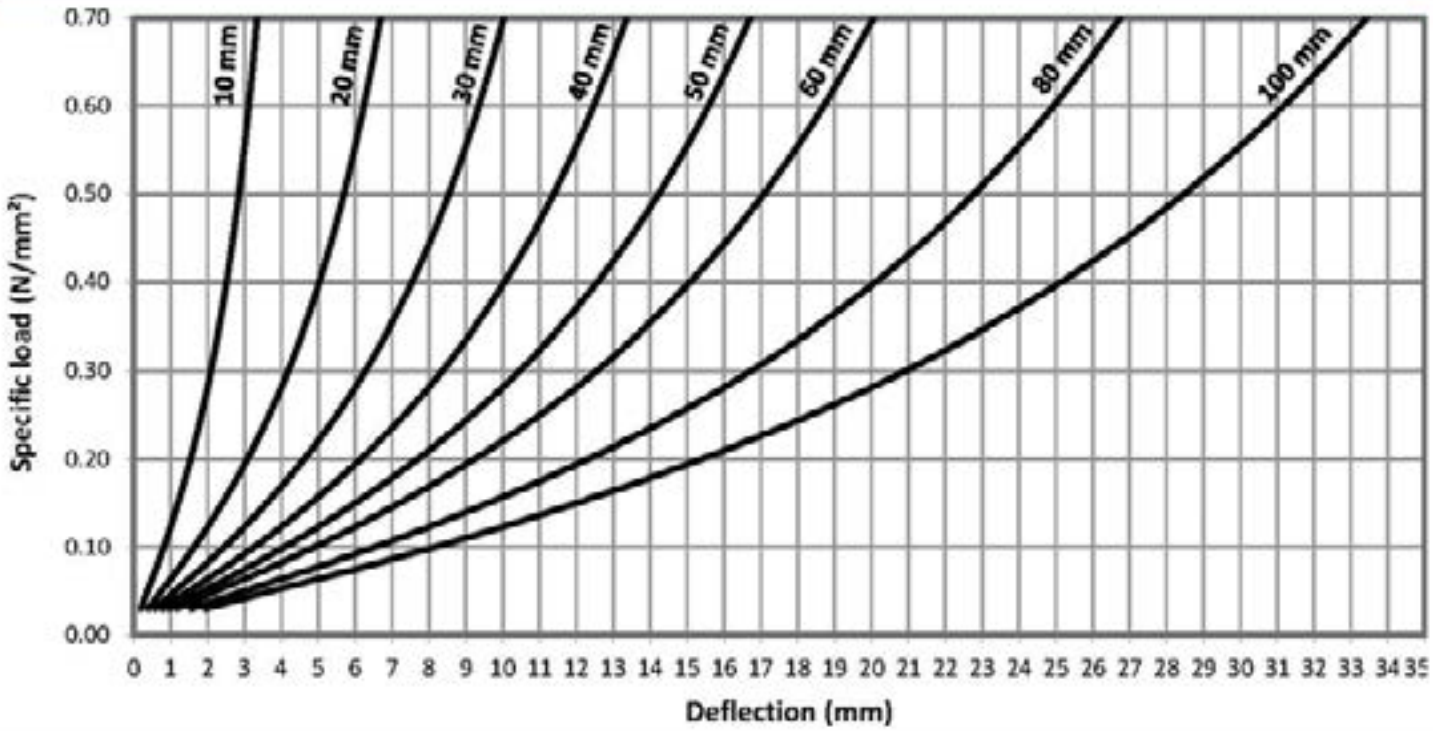
PHYSICAL AND CHEMICAL PROPERTIES	Norm	ME 650	Tolerance
Temperature range of use		-20 °C / +110 °C	± 5%
Inflammability	DIN 4102	B2	

TECHNICAL DATA SHEET

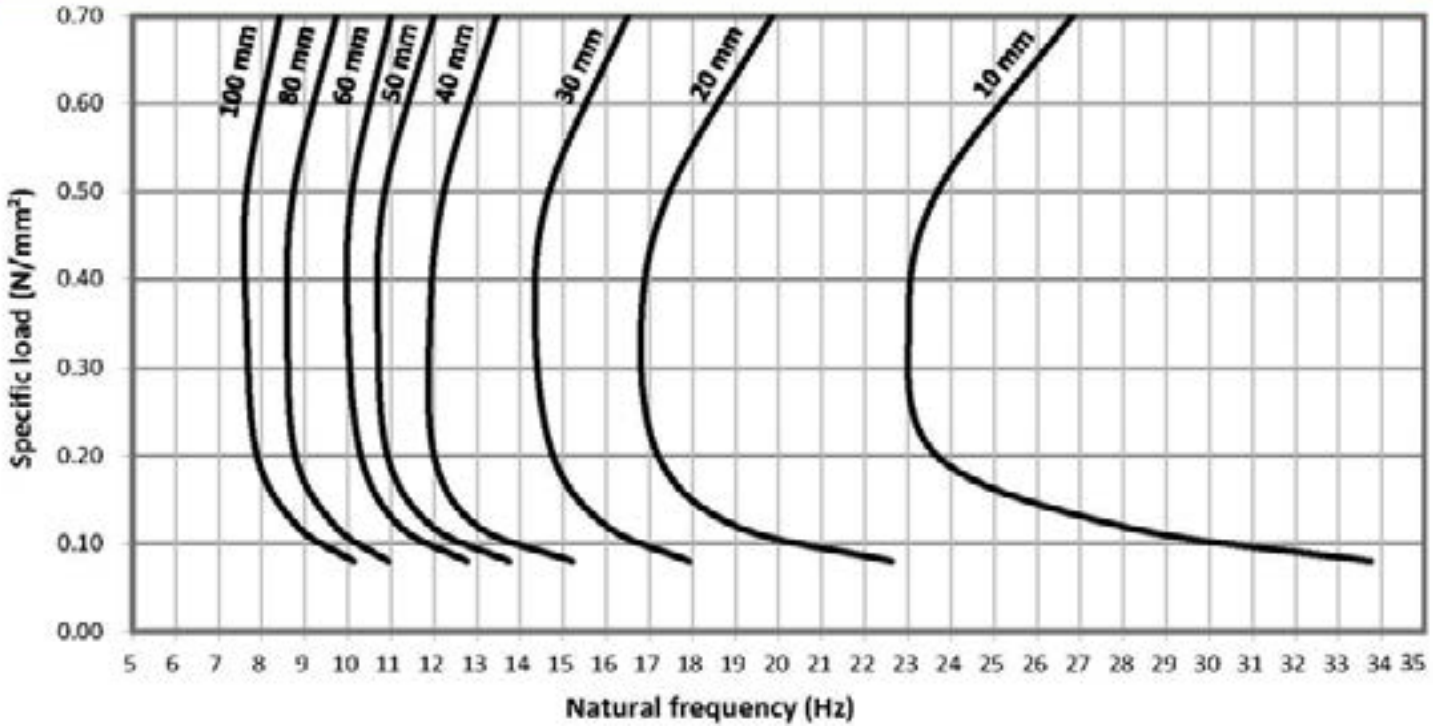
Megamat ME 650

Vibration insulation

Load deflection curve



Natural frequency



TECHNICAL DATA SHEET — *Megamat ME 800*

Vibration insulation

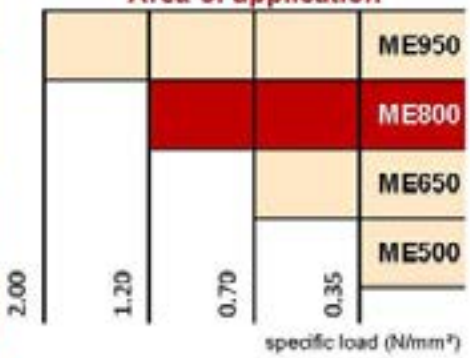
Product description and Technical Specification

Anti-vibration material supplied in panels, thickness 10/20/30/40/50 mm, produced using fibres and granules of SBR rubber (Stirene Butadiene Rubber) and granules of EPDM rubber (Ethylene Propylene Diene Monomer), selected and compacted using a polyurethane glue in a hot process. A non-woven, non-stretch synthetic waterproof membrane is applied on one side of panel, for added protection; density 800 kg/m³. Panels dimensions are m 1 lenght, m 1 width.

- High performance in reduced thickness
- Easy to lay
- Durable material

Area of application	Compression load	Deflection
Static range of use *(static loads)*	0.12 N/mm²	5%
operating load range *(static plus dynamic loads)*	0.12 ÷ 1.2 N/mm²	5% ÷ 30%
load peaks *(short term, infrequent loads)*	3.00 N/mm²	50%

Area of application



PHYSICAL CHARACTERISTICS	Norm	Unit	ME 800	Tolerance
Nominal thickness		mm	10-20-30-40-50	± 1
Length		m	1.00	± 1
Width		m	1.00	± 1
Density		kg/m³	800	± 5%
Backing superficial mass		g/m²	110	
Colour			black/red	

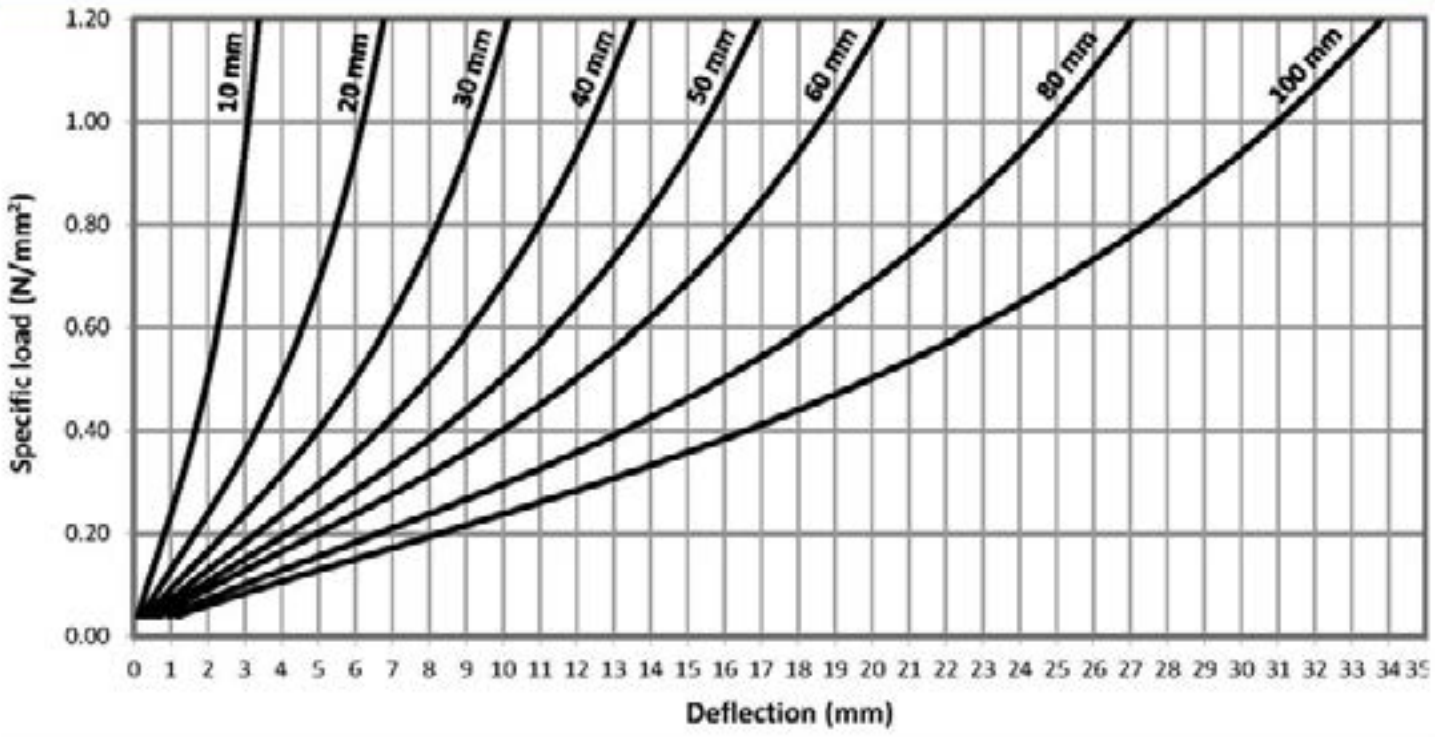
TECHNICAL CHARACTERISTICS	Norm	Unit	ME 800	Tolerance
Stress at strain 10%	UNI 11059	N/mm²	0.240	± 10%
Static Modulus of Elasticity (Es) - strain 10%	UNI 11059	N/mm²	2.40	± 10%
Dynamic Modulus of Elasticity (Ed) - strain 10%	UNI 11059	N/mm²	7.95	± 10%
Static Shear Modulus (Gs)	ISO 1827	N/mm²	0.34	± 10%
Loss factor (η)	UNI 11059		0.136	± 0.013

PHYSICAL AND CHEMICAL PROPERTIES	Norm	ME 800	Tolerance
Temperature range of use		-20 °C / +110 °C	± 5%
Inflammability	DIN 4102	B2	

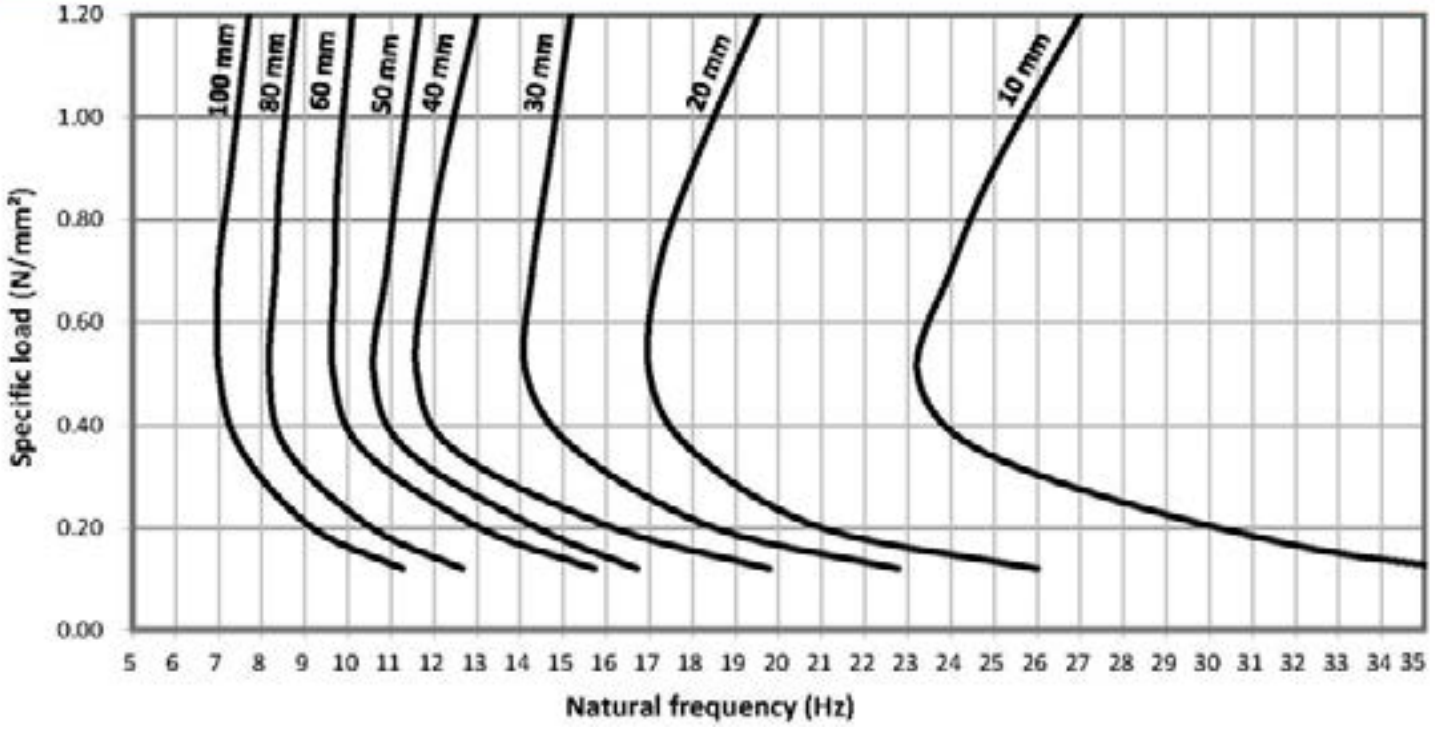
TECHNICAL DATA SHEET *Megamat ME 800*

Vibration insulation

Load deflection curve



Natural frequency



TECHNICAL DATA SHEET

Megamat ME 950

Vibration insulation

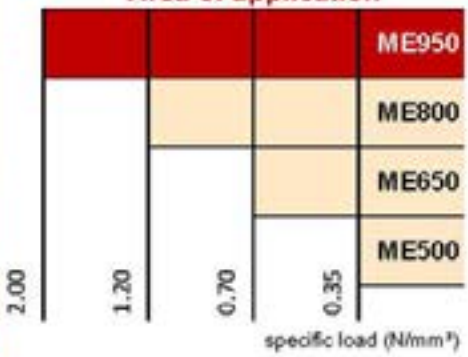
Product description and Technical Specification

Anti-vibration material supplied in panels, thickness 10/20/30/40/50 mm, produced using fibres and granules of SBR rubber (Stirene Butadiene Rubber) and granules of EPDM rubber (Ethylene Propylene Diene Monomer), selected and compacted using a polyurethane glue in a hot process. A non-woven, non-stretch synthetic waterproof membrane is applied on one side of panel, for added protection; density 950 kg/m³. Panels dimensions are m 1 lenght, m 1 width.

- High performance in reduced thickness
- Easy to lay
- Durable material

Area of application	Compression load	Deflection
Static range of use *(static loads)*	0.25 N/mm²	5%
operating load range *(static plus dynamic loads)*	0.25 ÷ 1.5 N/mm²	5% ÷ 25%
load peaks *(short term, infrequent loads)*	4.00 N/mm²	50%

Area of application



PHYSICAL CHARACTERISTICS	Norm	Unit	ME 950	Tolerance
Nominal thickness		mm	10-20-30-40-50	± 1
Length		m	1.00	± 1
Width		m	1.00	± 1
Density		kg/m³	950	± 5%
Backing superficial mass		g/m²	110	
Colour			black/red	

TECHNICAL CHARACTERISTICS	Norm	Unit	ME 950	Tolerance
Stress at strain 10%	UNI 11059	N/mm²	0.440	± 10%
Static Modulus of Elasticity (Es) - strain 10%	UNI 11059	N/mm²	4.45	± 10%
Dynamic Modulus of Elasticity (Ed) - strain 10%	UNI 11059	N/mm²	14.30	± 10%
Static Shear Modulus (Gs)	ISO 1827	N/mm²	-	± 10%
Loss factor (η)	UNI 11059		0.137	± 0.016

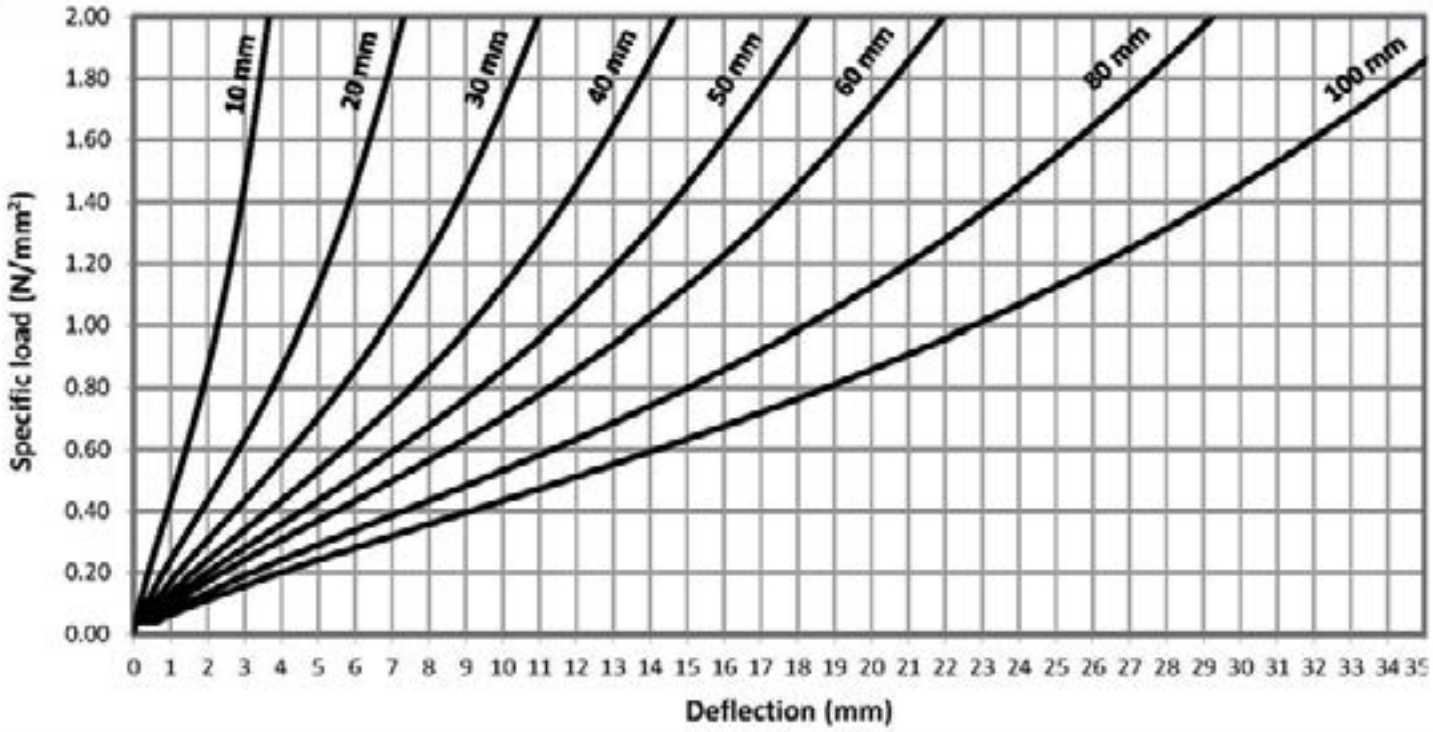
PHYSICAL AND CHEMICAL PROPERTIES	Norm	ME 950	Tolerance
Temperature range of use		-20 °C / +110 °C	± 5%
Inflammability	DIN 4102	B2	

TECHNICAL DATA SHEET

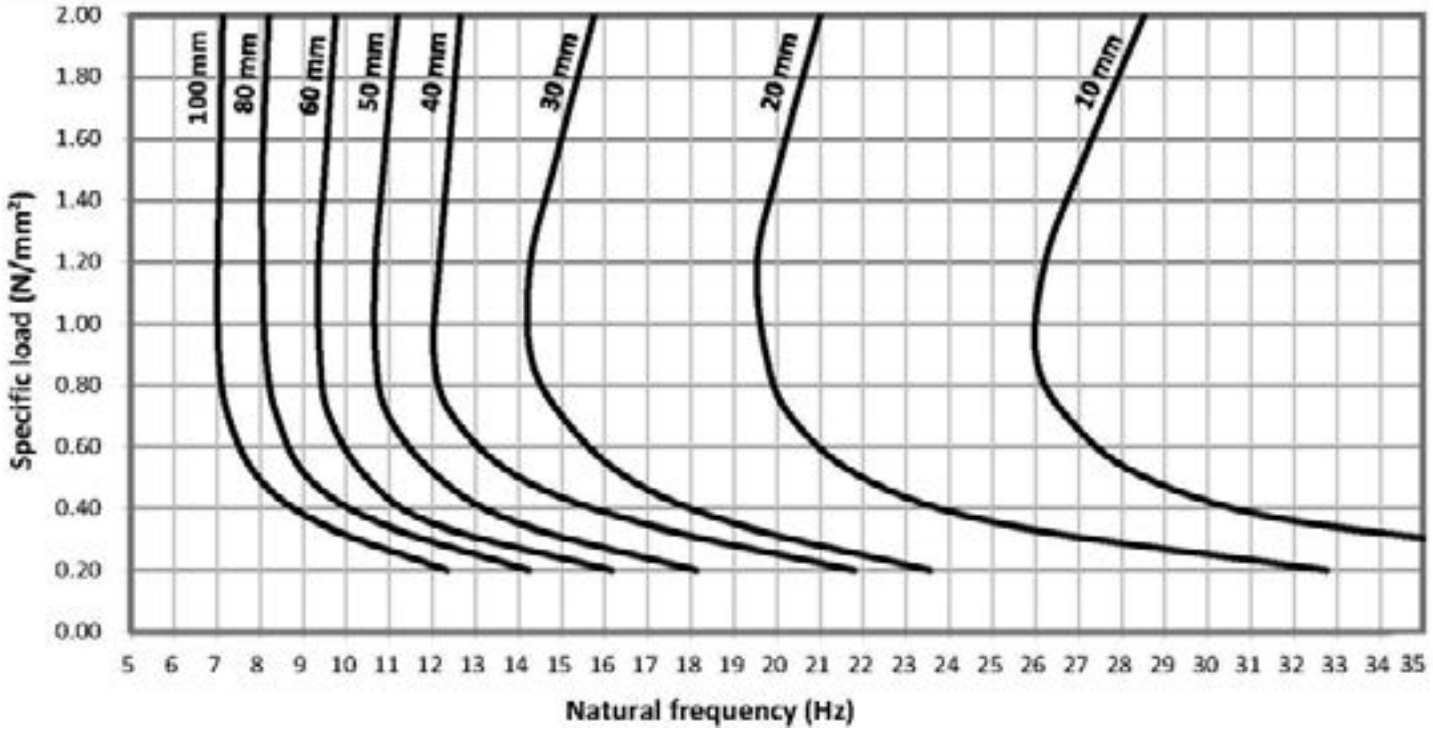
Megamat ME 950

Vibration insulation

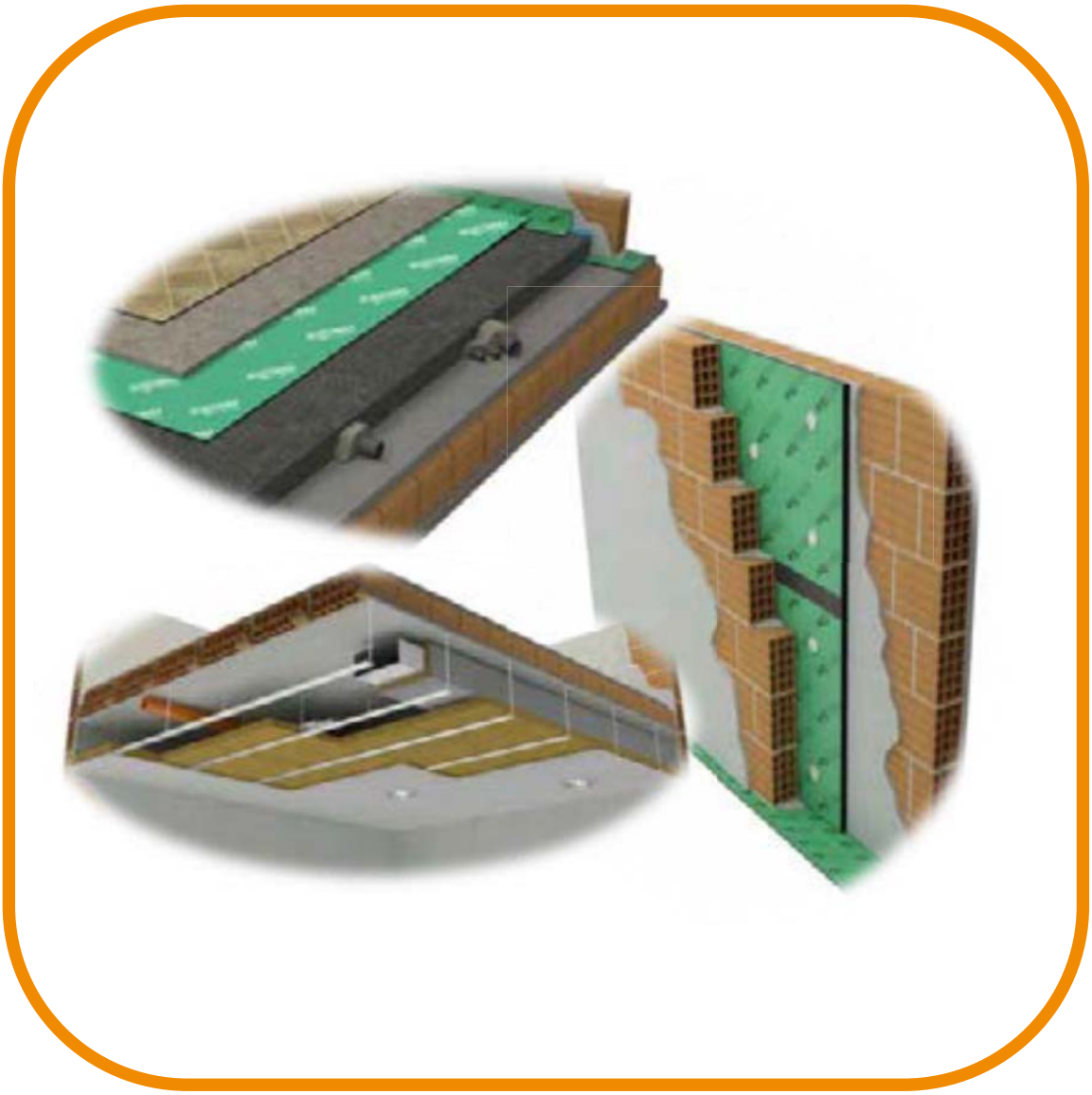
Load deflection curve



Natural frequency



INSTALLATION INSTRUCTIONS



The methodologies of laying reported here are of general purpose.
For more details, consult the ISOLGOMMA installation manual.

Roll - Grei - Upgrei

Insulate the concave corners with the "Profile" strip by cutting it as shown in the drawing.

Lay down the insulation layer on the floor surface with the rubber granules turned on the bottom floor side.

Seal the roll jointing borders by the adhesive flap available on the roll border. To do it properly follow the dotted end continues lines indication.

Melt the screed

Lay down the final floor covering (ceramic or wood).

When the flooring application is completed, cut the exceeding part of the edging strips.

Syl - Sylpro

Insulate the concave corners with the "Profile" strip by cutting it as shown in the drawing.

Lay down the insulation layer. Seal the roll border by using the adhesive stik tape.

Apply polyethylene layer with as protection film.

Melt the screed

Lay down the final floor covering (ceramic or wood).

When the flooring application is completed, cut the exceeding part of the edging strips.

Under flooring

Sylcer

Fix the Profyle Flat 5 around the bottom of the surrounding walls

Spread a thin layer of adhesive onto the floor, then glue the Sylcer

Tape all the Sylcer jointing borders with the Stik tape

Spread the bi-component concrete glue, layer the ceramic tiles over the adhesive glue.

Apply the grouting glue.

When the grouting starts to solidify the ceramic clean can be done.

Sylwood

Apply the Profyle Flat 5 all along the room perimeter.

DRY APPLICATION: lay down the Sylwood and seal the roll jointing borders with the adhesive stik tape; then apply the parquet boards.

GLUE APPLICATION: apply the mat glue, then lay down the Sylwood rolls by jointing the borders with the adhesive stik tape. Glue the parquet boards over the Sylwood mat with the indicated glue.

When the flooring application is completed, cut the

Mustwall 33B - Rewall 40 - Rewall 33B - Natur 33B - Mineral 33B - Mineral 40RB

COATED CEILING

Glue the adhesive strip Stywall S3A to the metal studs and fix them along the upper perimeter of the room

Calculate the distance of the metal studs of 50 cm and fix the acoustic bracket every 80 cm

Drill the ceiling e fix the acoustic bracket

Fix the metal stud to the acoustic bracket

Lean the Rewall panel to the metal frame

Fix the Rewall panel to the metal frame with 55 mm screws every 15 cm

Fill the possible gaps between panels

Apply the plastic mesh tape in the gypsum boards jointing lines and grouting

Suspended ceiling

Trywall - Fybro - Natur - Mineral - Mineral 48RM

SUSPENDED CEILING

Glue the adhesive strip Stywall S3A to the metal studs and fix them along the perimeter of the room at a fixed distance from the

Mark and fix the acoustic hangers

Fix to hangers the metal studs of primary grid

Fix the metal studs of primary grid along the perimeter channel

Insert the metal stud of secondary grid in the perimeter channel

Fix the metal stud of secondary grid to the primary grid with the appropriate connector

Place on top of the primary and secondary grid the insulation panels

Lean the gypsum board to the metal frame

Fix the gypsum board by screwing

Apply the plastic mesh tape in the gypsum boards jointing lines

Grouting

Mustwall - Biwall - Mineral 50R

Lay the under wall strip in the dry floor before to build the wall.

Build up the wall by caring to joint the blocks with mortar on both vertical and horizontal joints.

Apply in the first wall a layer of row mortar of about 1 cm thickness

GLUE APPLICATION

Apply the glue on the panel by spreading it on dots.

Apply the panel on the wall by forcing with homogeneous pressure.

NAILS APPLICATION

Place the panel on the right wall position and produce 5 holes per panel with the driller (one in the centre and one in the four corners)

Apply the five plastic nails with the hammer.

When all panels are fixed seal the panel joints with the "Stik" tape.

Build up the second wall by caring to joint the blocks with mortar on both vertical and horizontal joints.

Realize the final plastering

Double wall

Fybro - Natur - Mineral

DOUBLE WALL

Lay the under wall strip in the dry floor and build the wall.

Build up the wall by caring to joint the blocks with mortar on both vertical and horizontal joints.

Apply in the first wall a layer of row mortar of about 1 cm thickness.

Build the second wall with the same process of the first one and insert the panel in the cavity

Realize the final plastering.

Trywall - Fybro - Natur - Mineral - Mineral 48RM

Glue on the metal studs the adhesive strip type Stywall S3-A

Fix the metal studs on the floor, wall and ceilings.

Fix the vertical metal studs on the ceiling and bottom guides by screwing

Fix the gypsum boards on one side

Insert the Trywall panel

Complete the insulation application

Cover the insulation layer by screwing the second gypsum boards on the metal studs

Apply the plastic mesh tape in the gypsum boards jointing lines

Grouting

OPZION - DOUBLE STRUCTURE - Built up the second metal studs structure.

OPZION - STYWALL STRIPS: Apply the adhesive Stywall strips on the boards side of vertical metal studs

OPZION - DOUBLE GYPSUM BOARD - To improve structurally the dry wall apply a second board

Mustwall 33B - Rewall 40 - Rewall 33B- Natur 33B - Mineral 33B - Mineral 40RB

COATED WALL

GLUE APLLICATION

Lay the under wall strip

Apply the glue on the panel by spreading it on dots.

Apply the panel on the wall by forcing with homogeneous pressure.

NAILS APPLICATION

On each Rewall panel mark the holes points placed as per the drawing here shown

Proceed drilling the halls by a 10 mm driller and apply the nails

Apply the adhesive Syl strip between two nails

Fix the second gypsum board by gluing dots or screwing it on centre line and on the side borders with double thread screw. Offset

Apply the plastic mesh tape in the gypsum boards jointing lines

Grouting

Sylencer

Start to built the wall

Lay on mortar the Sylencer

Build the wall around the Sylencer and plaster onto the product with a plastic mesh

Cut or remove the cap and insert the grid in the hole of the Sylencer

Stywall - Stywall AD

Lay the under wall strip

Over the Stywall lay down a plaster bed in order to start to built up the wall

Accessories

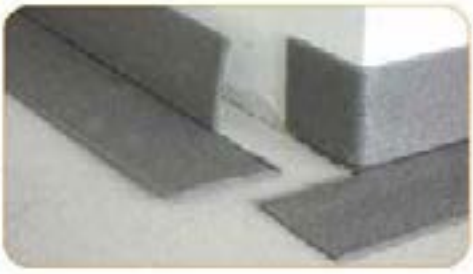
Profyle

Clean the applying surfaces from dirty and sharp parts

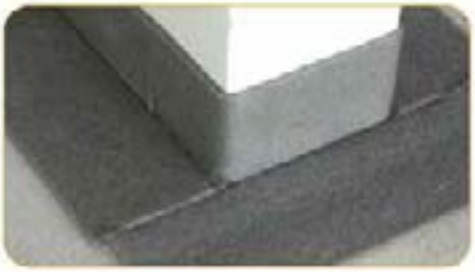
Remove the protection film

Glue the strip on both floor and wall surfaces by the external profile strip surfaces

Insulate the acute corners with the "Profile" strip by cutting it as shown in the drawing.



Insulate the obtuse corners with the "Profile" strip by cutting it as shown in the drawing.



Apply the Profyle all along the walls room perimeter, as shown in the drawing

Stik

Remove the protective film and seal the joints of the rolls, wall panels and Profyle

Profyle Flat 1

Remove the protective film and glue the strip along the perimeter of the room

Apply ceramic or wood baseboard to the wall above the Profyle Flat

Profyle Flat 5

Fix the Profyle Flat 5 around the bottom of the surrounding walls

When the flooring application is completed, cut the exceeding part of the edging strips.

Megamat

Build the containment foundation pit, taking care that the surfaces of the base and sides are clean and free of bumps.

Lay the Megamat panels taking care of placing them without leaving gaps or cavities along the edges of the joints.

Seal the horizontal joints carefully with the Stik tape.

Glue the panels on the sides of the trench by smearing glue on the entire surface or distributed by spots, install the panels side by side without leaving gaps or cavities along the edges of the joints.

Seal vertical joints carefully with the Stik tape.

Build the concrete foundation in the pit directly on the Megamat layer.

Megamat

Bearings

Place the Megamat plates or strips dry and place the machine on them.

Floating Base

Follow the installation instructions below.

Seal the joints carafully using Stik adhesive tape

Glue the panel on the vertical walls of the foundation and seal the joints of panel with Stik tape

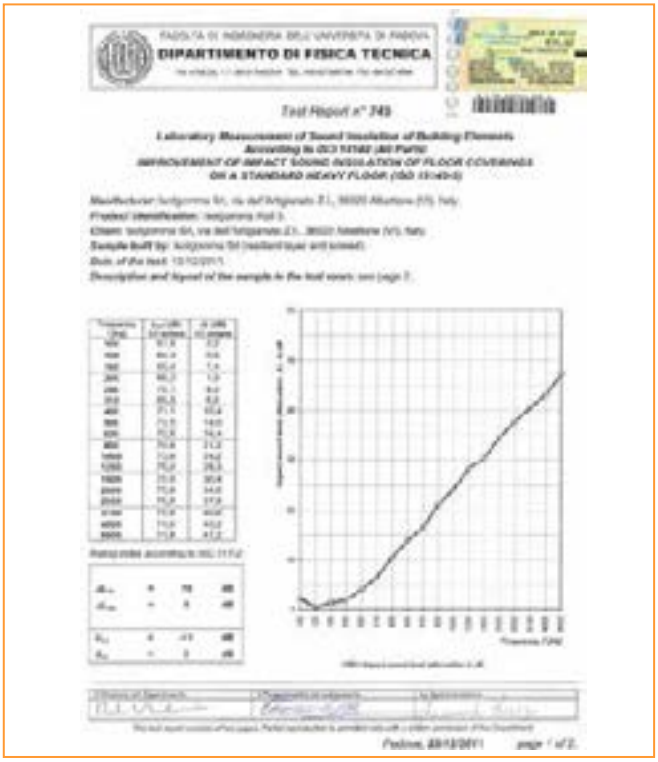
Place the steel mesh to prepare the reinforced concrete base

Build the concrete base and place the machine on the concrete base

LABORATORY TESTS

LABORATORY TESTS

Roll 5


DIPARTIMENTO DI FISICA TECNICA

Test Report n° 743

Laboratory Measurement of Sound Insulation of Building Elements According to ISO 10140 (All Parts)
IMPROVEMENT OF IMPACT SOUND INSULATION OF FLOOR COVERINGS ON A STANDARD HEAVY FLOOR (ISO 10140-3)

ΔL_w = 19 dB


DIPARTIMENTO DI FISICA TECNICA

Certificate n° 743

Layout of the sample in the test room:

Test conditions:

Sample layout:

Test carried out in: Isolgomma Srl Acoustic Laboratory, via dell'Artigianato 21, 36020 Altavilla (VI), Italy.

Instruments:

Notes of the engineer in charge of test:

Remarks:

Padova, 03/12/2011 page 2 of 2

Roll 7


DIPARTIMENTO DI FISICA TECNICA

Test Report n° 743

Laboratory Measurement of Sound Insulation of Building Elements According to ISO 10140 (All Parts)
IMPROVEMENT OF IMPACT SOUND INSULATION OF FLOOR COVERINGS ON A STANDARD HEAVY FLOOR (ISO 10140-3)

ΔL_w = 21 dB


DIPARTIMENTO DI FISICA TECNICA

Certificate n° 743

Layout of the sample in the test room:

Test conditions:

Sample layout:

Test carried out in: Isolgomma Srl Acoustic Laboratory, via dell'Artigianato 21, 36020 Altavilla (VI), Italy.

Instruments:

Notes of the engineer in charge of test:

Remarks:

Padova, 03/12/2011 page 2 of 2

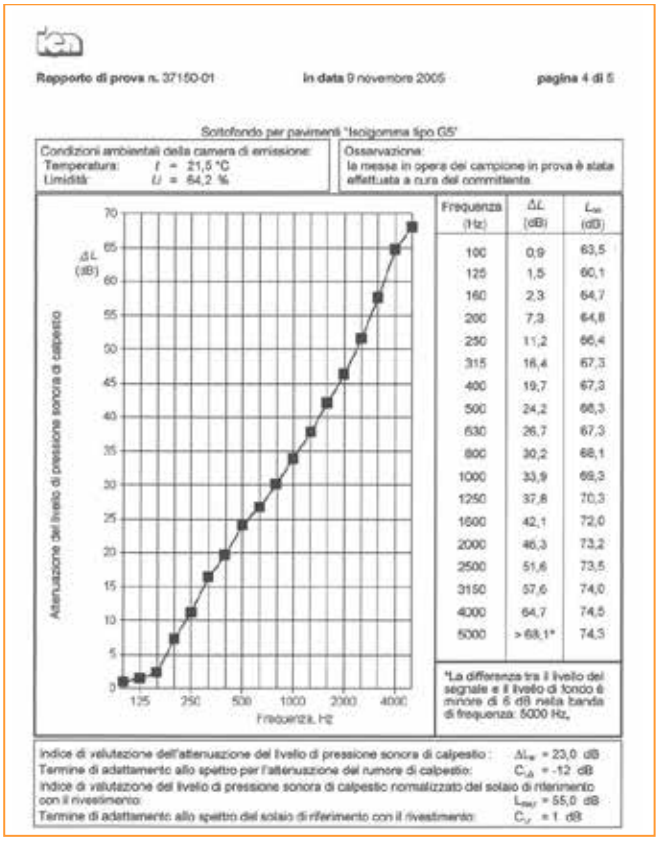
Impact sound reduction
UNI EN ISO 140/8 - UNI EN 10140

Roll 10

ΔL_w = 23 dB

Grei 5

ΔL_w = 23 dB



LABORATORY TESTS

Grei 8

ΔL_w = 24 dB

Upgrei 8

ΔL_w = 26 dB

Syl 5

Test Report

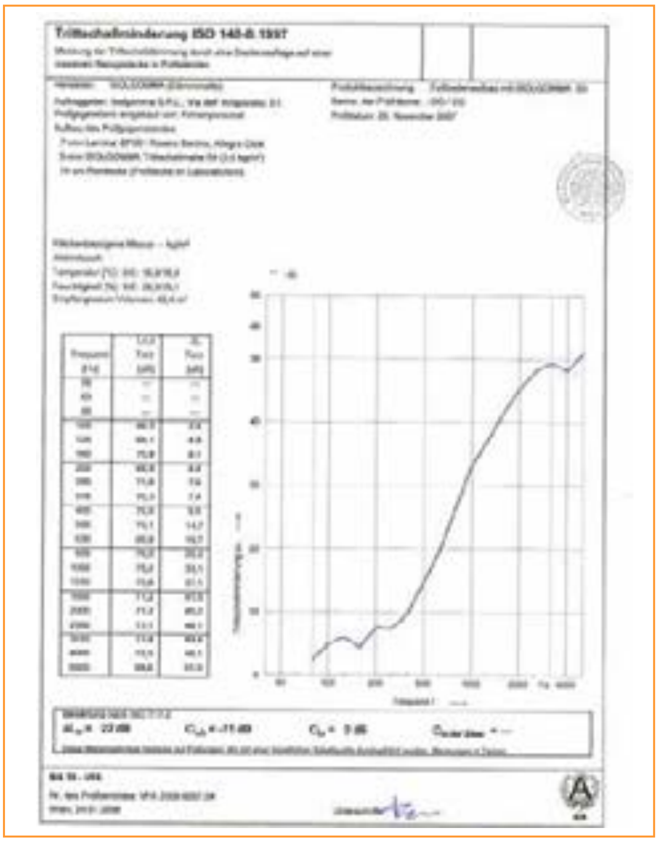
Applicant:

Date of application:

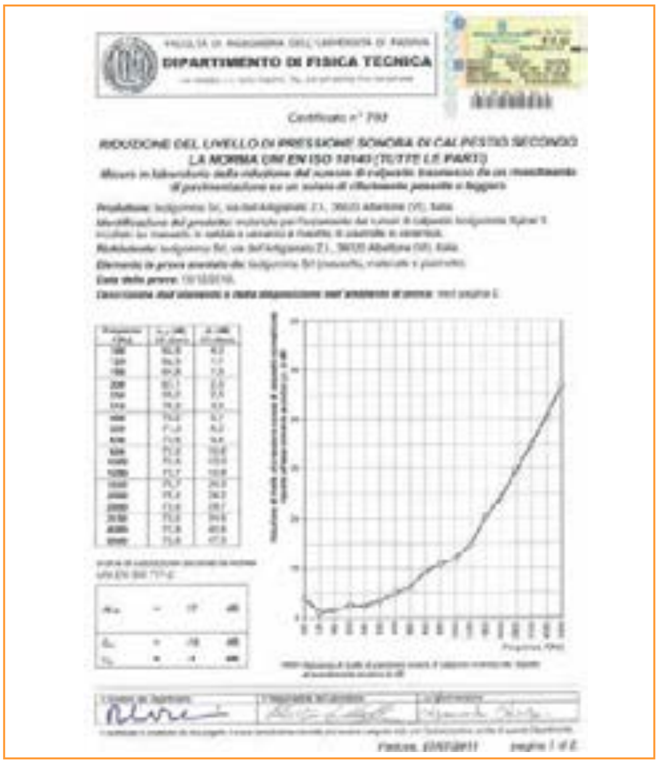
Floor structure:

Test programme:

ΔL_w = 22 dB



Sylcer 3



DIPARTIMENTO DI FISICA TECNICA

ΔL_w = 17 dB

DIPARTIMENTO DI FISICA TECNICA

LABORATORY TESTS

Sylwood 3

ΔLw = 21 dB

Upgrei 8 + Sylwood 3

ΔLw = 26 dB

Mustwall 20 - double brick wall

R_w = 55 dB

Mustwall 20 - double brick wall

R_w = 56 dB

LABORATORY TESTS

Mineral 50R - double brick wall

R_w = 56 dB

Biwall 40 - double light concrete wall

R_w = 54 dB

Biwall 40 - double light concrete wall

R_w = 55 dB

Mustwall 33B - 120 mm brick wall

R_w = 54 dB

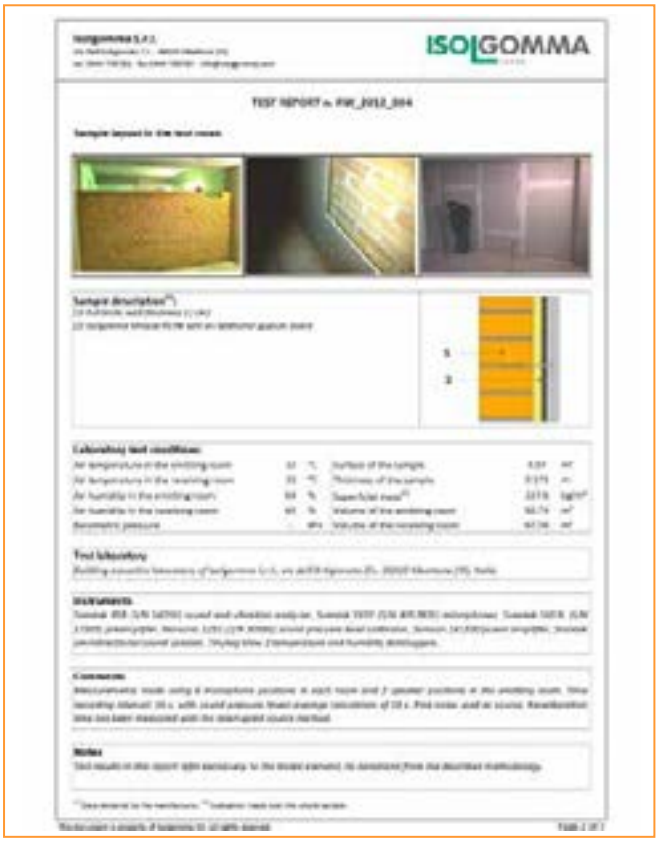
LABORATORY TESTS

Rewall 33B - 120 mm brick wall

R_w = 55 dB

Mineral 40RB - 120 mm brick wall

R_w = 57 dB

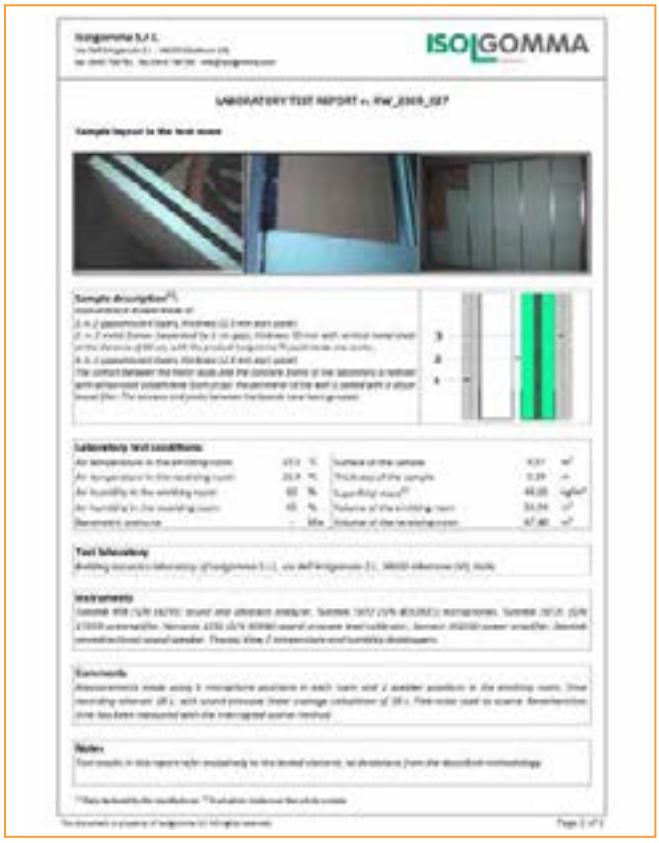


Trywall 48 - 100 mm gypsum wall

R_w = 54 dB

Trywall 48 - 160 mm gypsum wall

R_w = 59 dB

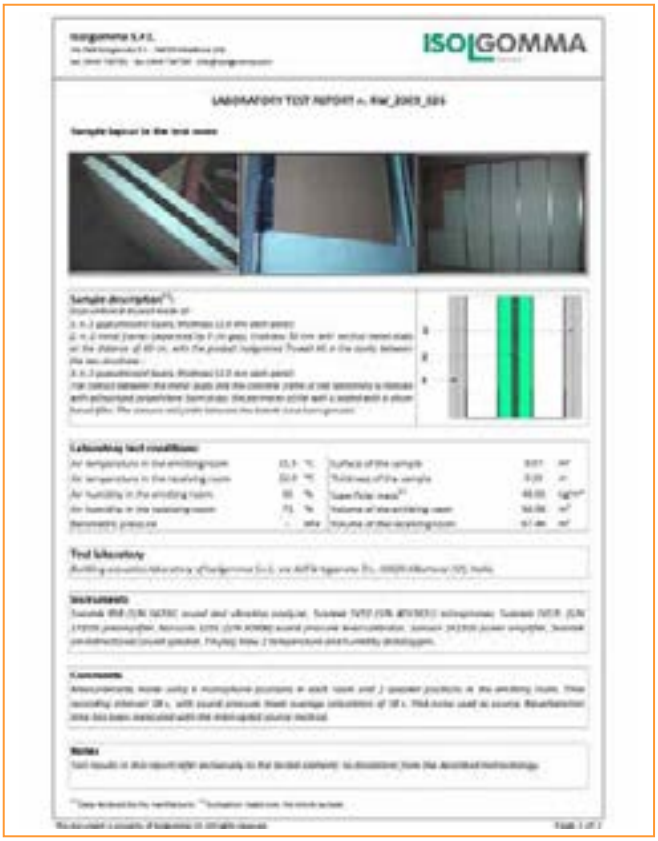


LABORATORY TESTS

Trywall 48 - 200 mm gypsum wall

LABORATORY MEASUREMENT OF THE AIRBORNE SOUND INSULATION OF A BUILDING ELEMENT ACCORDING TO ISO 10140-2

R_w = 60 dB



LABORATORY TEST REPORT n. RW_2303_024

Trywall 48 - 160 mm gypsum wall

LABORATORY MEASUREMENT OF THE AIRBORNE SOUND INSULATION OF A BUILDING ELEMENT ACCORDING TO ISO 10140-2

R_w = 63 dB

LABORATORY TEST REPORT n. RW_2303_024

Natur 50 - 125 mm gypsum wall


ISOLGOMMA

LABORATORY MEASUREMENT OF THE AIRBORNE SOUND INSULATION OF A BUILDING ELEMENT ACCORDING TO ISO 10140-2


ISOLGOMMA

LABORATORY TEST REPORT n. RW_2011_024

R_w = 54 dB

Natur 50 - 220 mm gypsum wall


ISOLGOMMA

LABORATORY MEASUREMENT OF THE AIRBORNE SOUND INSULATION OF A BUILDING ELEMENT ACCORDING TO ISO 10140-2


ISOLGOMMA

LABORATORY TEST REPORT n. RW_2011_023

R_w = 65 dB

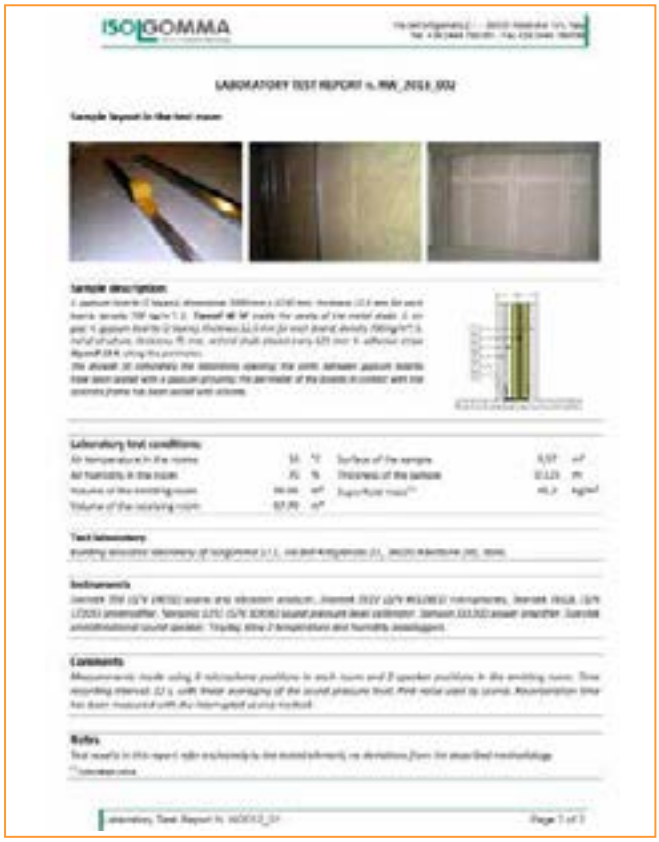
LABORATORY TESTS

Mineral 48 RM - 100 mm gypsum wall

R_w = 55 dB

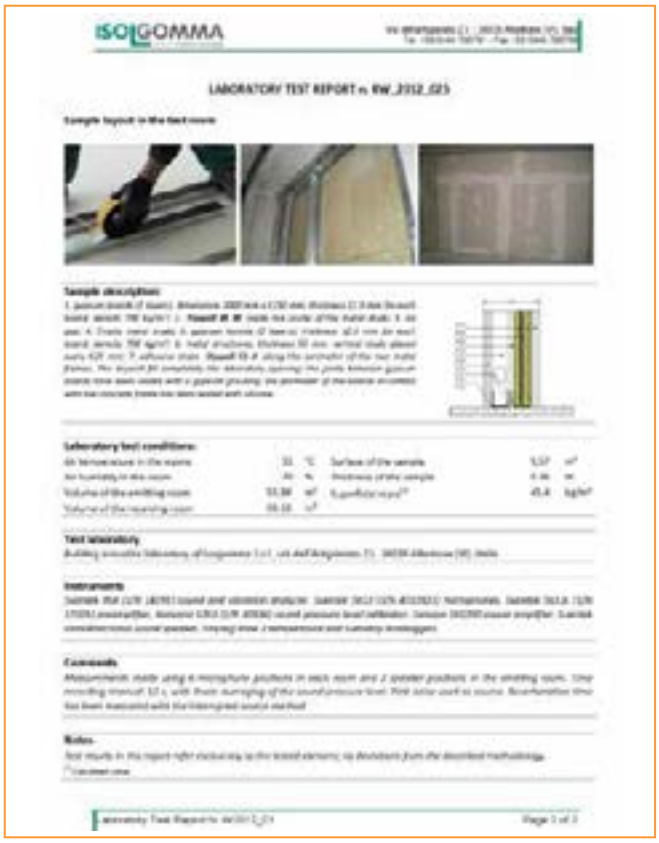
Mineral 48 RM - 125 mm gypsum wall

R_w = 58 dB



Mineral 48 RM - 160 mm gypsum wall

R_w = 60 dB



Mineral 48 RM - 160 mm gypsum wall

R_w = 65 dB

LABORATORY TESTS

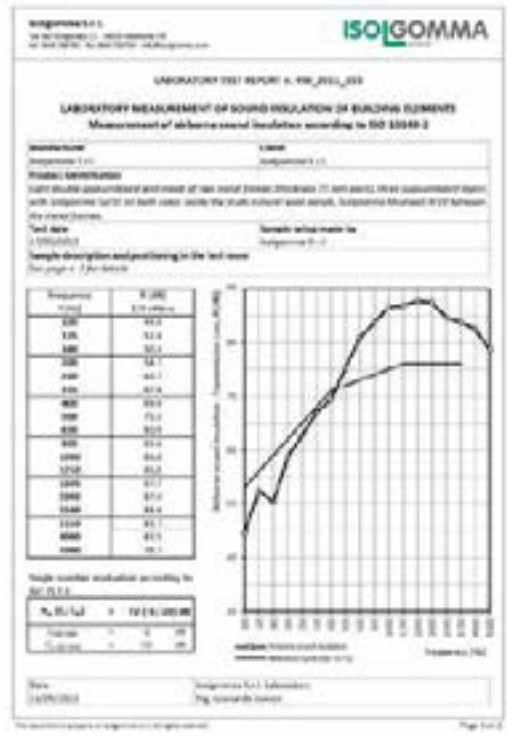
Mineral 60-70 - 125 mm gypsum wall

R_w = 57 dB

Mustwall 10 - Syl S3A - 125 mm gypsum wall

R_w = 58 dB

Mustwall 10 - Syl 5 - 265 mm gypsum wall


ISOLGOMMA

LABORATORY TEST REPORT n. RW_2011_033

LABORATORY MEASUREMENT OF SOUND INSULATION OF BUILDING ELEMENTS
Measurement of airborne sound insulation according to ISO 10140-2

R_w = 72 dB


ISOLGOMMA

LABORATORY TEST REPORT n. RW_2011_033

Fire resistance - Trywall 48


LAPI

Rapporto Classificazione No. 43/C/10-79FR
Data Emissione 30/07/2010
Pagina 3/4

3.2 Condizione di esposizione

- Curva temperatura/tempo: standard (le condizioni di riscaldamento e l'ambiente del forno rispondono a quanto indicato nella EN 1363-1, p.to 5.1.1, 5.1.2 e 5.2.1);
- Direzione di esposizione: unica – campione simmetrico;
- Numero di superfici esposte: 1

3.3 Risultati di Prova

Criterio di prestazione	Risultato	
	Descrizione	Tempo [min]
Tenuta (E)	Tampone di cotone	121(*)
	Calibro da 6 mm	121(*)
	Calibro da 25 mm	121(*)
Isolamento (I)	ΔT_{max}>140 °C (Tc 1÷5)	121(*) (ΔT_{max}=56 °C)
	ΔT_{max}>180 °C (Tc 1÷12)	121(*) (ΔT_{max}=68 °C)

(*) Interruzione del test

4. Classificazione e campo di applicazione dei risultati di prova

La presente classificazione è stata eseguita in accordo a quanto previsto al punto 7.5.2.4 della EN 13501-2:2007.

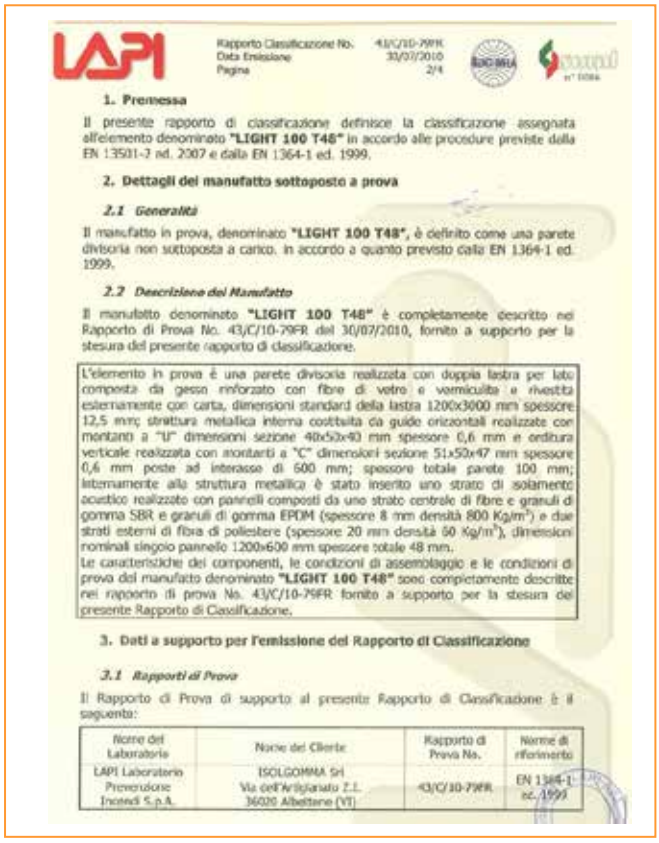
4.1 Classificazione

L'elemento in prova denominato **"LIGHT 100 T48"** viene classificato in accordo alla seguente combinazioni di parametri e classi appropriate.

R	E	I	W		t	-	M	C	S	IncSlow	sn	df	r

CLASSIFICAZIONE DI RESISTENZA AL FUOCO: EI120

EI 120


LAPI

Rapporto Classificazione No. 43/C/10-79FR
Data Emissione 30/07/2010
Pagina 2/4

1. Premessa

Il presente rapporto di classificazione definisce la classificazione assegnata all'elemento denominato **"LIGHT 100 T48"** in accordo alle procedure previste dalla EN 13501-2 ed. 2007 e dalla EN 1364-1 ed. 1999.

2. Dettagli del manufatto sottoposto a prova

2.1 Generalità

Il manufatto in prova, denominato **"LIGHT 100 T48"**, è definito come una parete divisoria non suttoposta a carico, in accordo a quanto previsto dalla EN 1364-1 ed. 1999.

2.2 Descrizione del Manufatto

Il manufatto denominato **"LIGHT 100 T48"** è completamente descritto nel Rapporto di Prova No. 43/C/10-79FR del 30/07/2010, fornito a supporto per la stesura del presente rapporto di classificazione.

L'elemento in prova è una parete divisoria realizzata con doppia lastra per lato composta da gesso rinforzato con fibre di vetro e vermiculite e rivestita esternamente con carta, dimensioni standard della lastra 1200x3000 mm spessore 12,5 mm; struttura metallica interna costituita da guide orizzontali realizzate con montanti a "U" dimensioni sezione 40x50x40 mm spessore 0,6 mm e orditura verticale realizzata con montanti a "C" dimensioni sezione 51x50x47 mm spessore 0,6 mm poste ad interasse di 600 mm; spessore totale parete 100 mm; internamente alla struttura metallica è stato inserito uno strato di isolamento acustico realizzato con pannelli composti da uno strato centrale di fibre e granuli di gomma SBR e granuli di gomma EPDM (spessore 8 mm densità 800 Kg/m^3) e due strati esterni di fibra di poliestere (spessore 20 mm densità 50 Kg/m^3), dimensioni nominali singolo pannello 1200x600 mm spessore totale 48 mm.
Le caratteristiche dei componenti, le condizioni di assemblaggio e le condizioni di prova del manufatto denominato **"LIGHT 100 T48"** sono completamente descritte nel rapporto di prova No. 43/C/10-79FR fornito a supporto per la stesura del presente Rapporto di Classificazione.

3. Dati a supporto per l'emissione del Rapporto di Classificazione

3.1 Rapporti di Prova

Il Rapporto di Prova di supporto al presente Rapporto di Classificazione è il seguente:

Nome del Laboratorio	Nome del Cliente	Rapporto di Prova No.	Norme di riferimento
LAPI Laboratorio Prevenzione Incendi S.p.A.	ISOLGOMMA Srl Via dell'Artigianato 7.1. 36020 Albettone (VI)	43/C/10-79FR	EN 1364-1: ed. 1999

LABORATORY TESTS

Transmission loss
UNI EN ISO 140/3 - UNI EN ISO 10140

Upgrei 8

Rapporto di Prova
no. 430.2DC0090/11 del 15/04/2011

DEROGHE
Nessuna

RISULTATI

Temperatura ambiente	(23±2)°C
Umidità relativa	(50±5)%

Temperatura di prova: 21°C

Misura n°	Spessore rilevato (m)	Conduttività termica λ (W/m·K)	Resistenza Termica R (m²·K/W)
1	0.0103	0.0479	0.215
2	0.0097	0.0474	0.205
3	0.0094	0.0466	0.202
Media	0.0098	0.0473	0.207

Nota 1: il valore della resistenza termica, calcolato come rapporto tra spessore del campione e conducibilità termica, si riferisce allo spessore rilevato del campione sottoposto a prova.

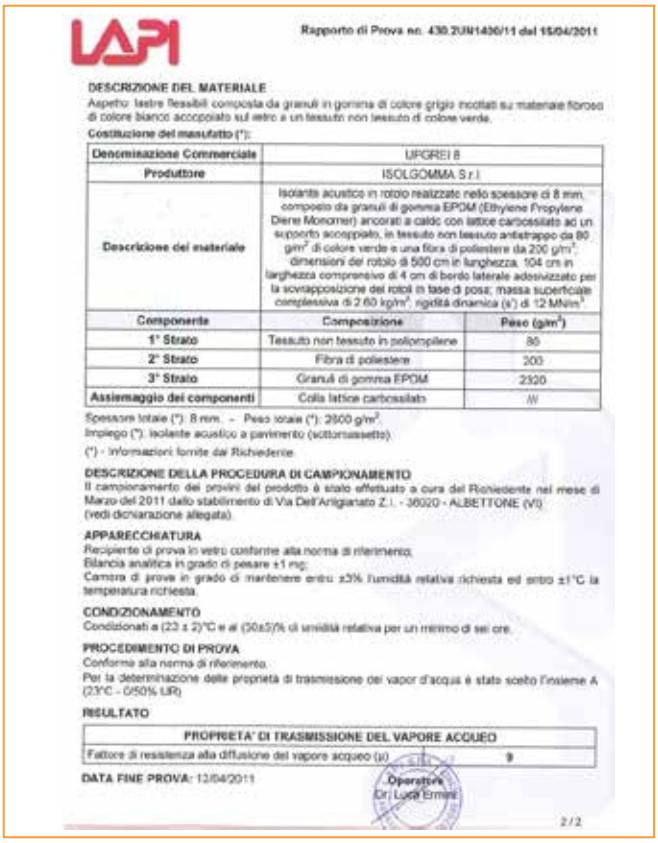
Nota 2: su una faccia il materiale presenta granuli di gomma che rendono la superficie molto irregolare, non planare. Non è possibile intervenire per rispianare tale superficie, il materiale è stato provato tal quale.

Nota 3: spessore nominale di 8 mm, ma spessori rilevati di circa 10÷11 mm (che diminuiscono leggermente durante la prova per la leggera pressione delle piastre).

DATA PROVE: 05/04/2011

Operatore
Ing. Fabio Crivella

3 / 3



Rapporto di Prova no. 430.2UN1430/11 del 15/04/2011

DESCRIZIONE DEL MATERIALE
Aspetto: lastre flessibili composta da granuli in gomma di colore grigio incollati su materiale fibroso di colore bianco accoppiato sul retro a un tessuto non tessuto di colore verde.

Costituzione del manufatto (*):

Denominazione Commerciale	UPGREI 8	
Produttore	ISOLGOMMA S.r.l.	
Descrizione del materiale	Isolante acustico in rotolo realizzato nello spessore di 8 mm composto da granuli di gomma EPDM (Ethylene Propylene Diene Monomer) ancorati a caldo con lattice carbossilato ad un supporto accoppiato, in tessuto non tessuto antistrappo da 80 g/m² di colore verde e una fibra di poliestere da 200 g/m². dimensioni del rotolo di 500 cm in lunghezza, 104 cm in larghezza comprensivo di 4 cm di bordo laterale adesivizzato per la sovrapposizione dei rotoli in fase di posa; massa superficiale complessiva di 2.60 kg/m², rigidità dinamica (s') di 12 MN/m³		
Componente	Composizione	Peso (g/m²)
1° Strato	Tessuto non tessuto in polipropilene	80
2° Strato	Fibra di poliestere	200
3° Strato	Granuli di gomma EPDM	2320
Assiemaggio dei componenti	Colla lattice carbossilato	///

Spessore totale (*): 8 mm - Peso totale (*): 2600 g/m².
Impiego (*): isolante acustico a pavimento (sottomassetto).
(*) - Informazioni fornite dal Richiedente.

DESCRIZIONE DELLA PROCEDURA DI CAMPIONAMENTO
Il campionamento dei provini del prodotto è stato effettuato a cura del Richiedente nel mese di Marzo del 2011 dallo stabilimento di Via Dell'Artigianato Z.I. - 36020 - ALBETTONE (VI) (vedi dichiarazione allegata).

APPARECCHIATURA
Recipiente di prova in vetro conforme alla norma di riferimento;
Bilancia analitica in grado di pesare ±1 mg;
Camera di prova in grado di mantenere entro ±3% l'umidità relativa richiesta ed entro ±1°C la temperatura richiesta.

CONDIZIONAMENTO
Condizionati a (23 ± 2)°C e al (50±5)% di umidità relativa per un minimo di sei ore.

PROCEDIMENTO DI PROVA
Conforme alla norma di riferimento.
Per la determinazione delle proprietà di trasmissione del vapor d'acqua è stato scelto l'insieme A (23°C - 0/50% UR)

RISULTATO

PROPRIETA' DI TRASMISSIONE DEL VAPORE ACQUEO	
Fattore di resistenza alla diffusione del vapore acqueo (μ)	9

DATA FINE PROVA: 12/04/2011

Operatore
Dr. Luca Ermini

2 / 2

λ = 0,047 W/m²K - μ = 9

Biwall 40

RACCOMANDATA

Spettabile
ISOLGOMMA S.r.l.
Via Dell'Artigianato Z.I.
36020 - Albettone (VI)

Prato, 14/09/2007
Rif. 1213/07/AC

Denominazione commerciale	Metodo di Prova	Rif. Laboratorio
MISPIRRA	UNI EN 12667: 2002 Prestazione termica dei materiali e dei prodotti per l'edilizia - Determinazione della resistenza termica con il metodo del termoflussimetro - Prodotti ad alta e media resistenza termica. 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.	1158/07

DESCRIZIONE DEL CAMPIONE

APPARECCHIATURA

PROCEDIMENTO DI PROVA E DEROGHE

DATA PROVE:

λ = 0,047 W/m²K

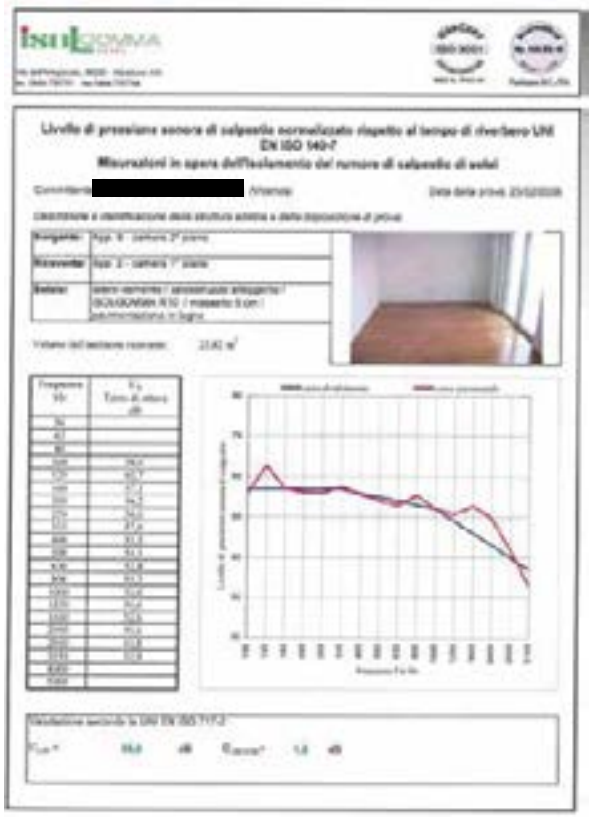
SITE TESTS

Hollow brick slab 24+4

Roll 10

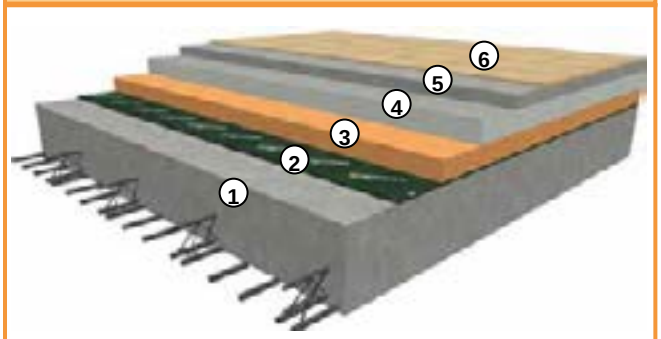
n	*description*	*mm*
1	Plaster	10
2	Hollow brick slab 24+4	280
3	Leveling screed	80
4	**Roll 10**	**10**
5	Sand and cement screed	50
6	Parquet flooring	10
		440

L'_{nw} = 55 dB



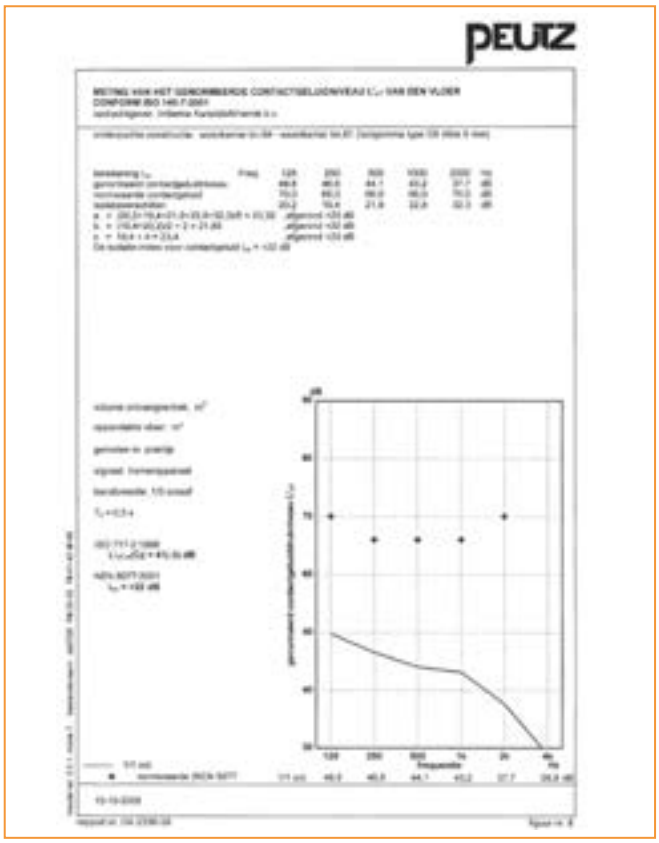
Concrete slab 280 mm

Grei 8



n	*description*	*mm*
1	Concrete slab	280
2	**Grei 8**	**8**
3	EPS	70
4	Steel fibre concrete floor	62
5	cement for glueing the tiles	40
6	Ceramic tiles	10
		470

$L'_{nT,w}$ = 41 dB I_{co} = + 22 dB



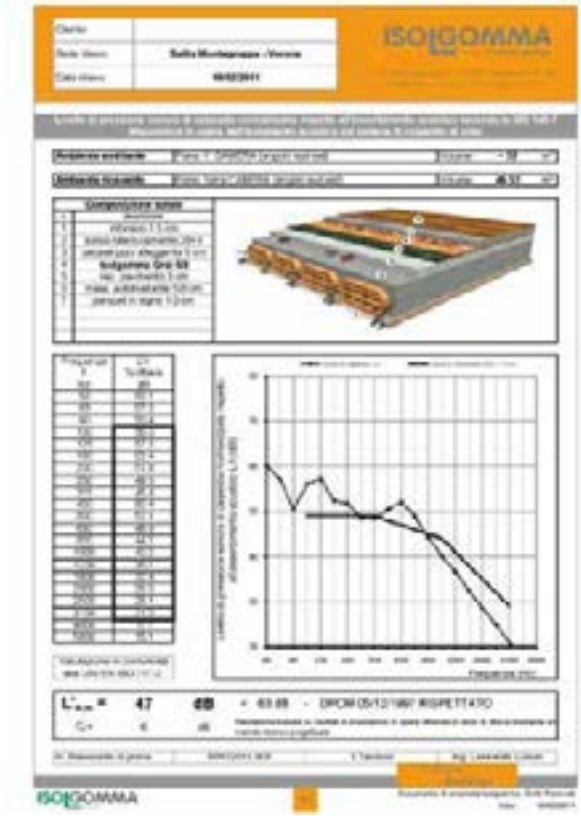
Floating screed - Wooden slab structure

Hollow brick slab 20+4

Grei 8

n	description	mm
1	Plaster	15
2	Hollow brick slab 20+4	240
3	Leveling screed	90
4	**Grei 8**	8
5	Heating panel	30
6	Sand and cement screed	50
7	Parquet flooring	10
		443

L'_{nw} = 47 dB

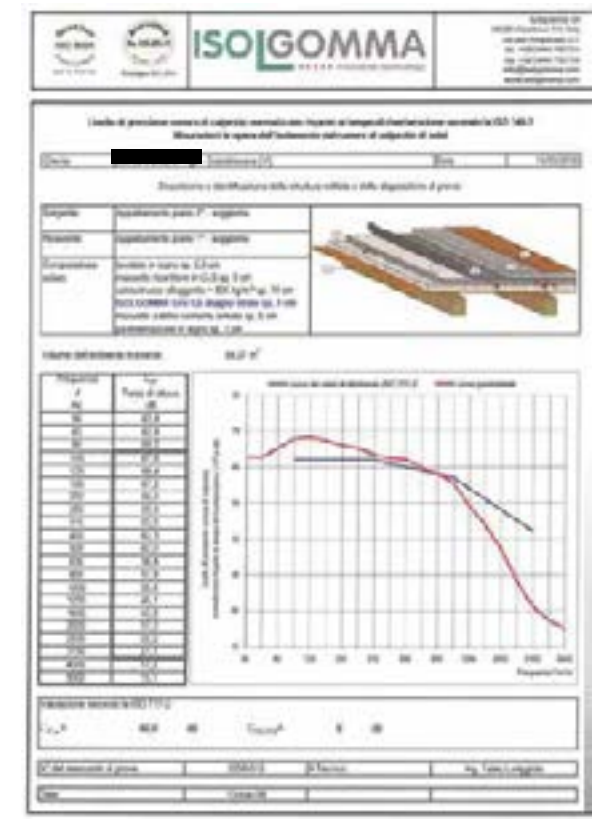


Wooden slab structure

Grei 5

n	description	mm
1	Wooden slab	25
2	Concrete slab	50
3	Leveling screed density 800 kg/m³	100
4	**Grei 5 double layer**	**10**
5	Sand and cement screed	50
6	Ceramic tile	10
		250

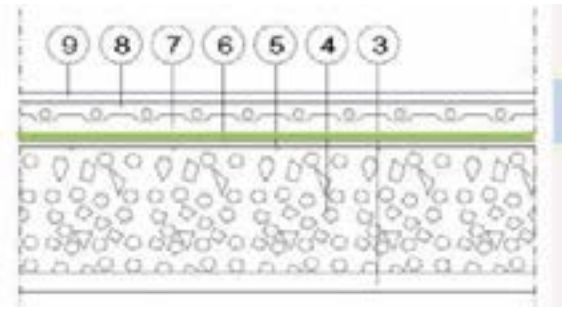
L'_{nw} = 60 dB



Wooden slab structure - Under wooden floor

Dry system wooden slab

Upgrei 8

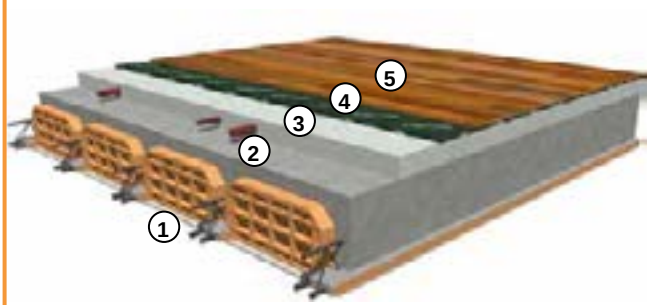


n	*description*	*mm*
3	Wooden slab	40
4	Levelling screed in dry granules	260
5	Plasterboard and wood fibres	18
6	**Upgrei 8**	8
7	Floating screed	40
8	Dry heating panel	30
9	Parquet flooring	10
		406

L'_{nw} = 57 dB

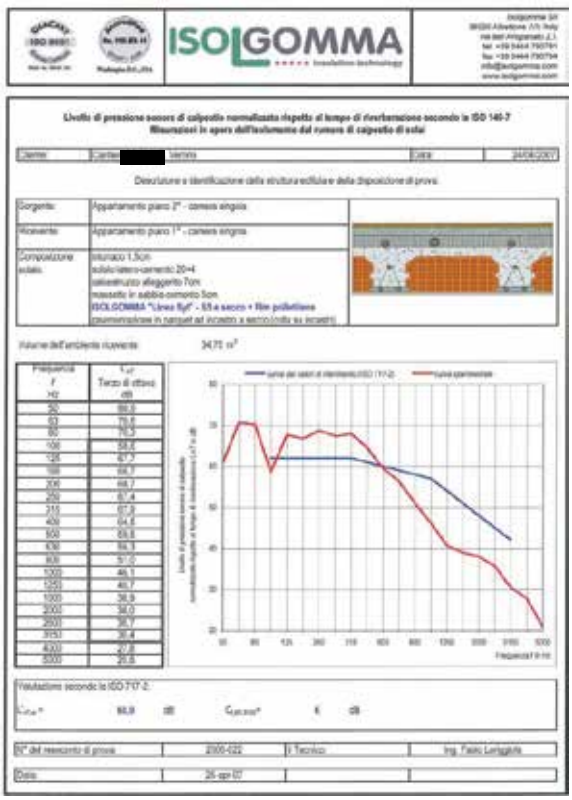
Under wooden slab - hollow brick slab 20+4

Syl 5



n	*description*	*mm*
1	Plaster	15
2	Hollow brick slab 20+4	240
3	Leveling screed	70
4	Sand and cement screed	50
5	**Syl 5**	**5**
6	Parquet flooring	10
		390

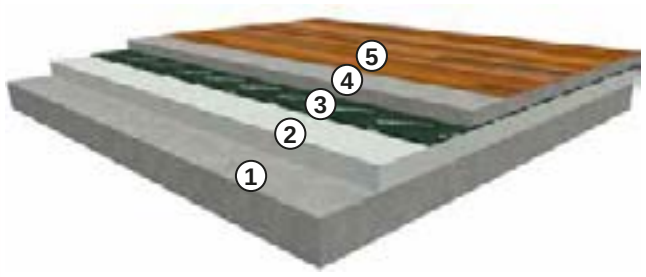
L'_{nw} = 60 dB



Floating screed

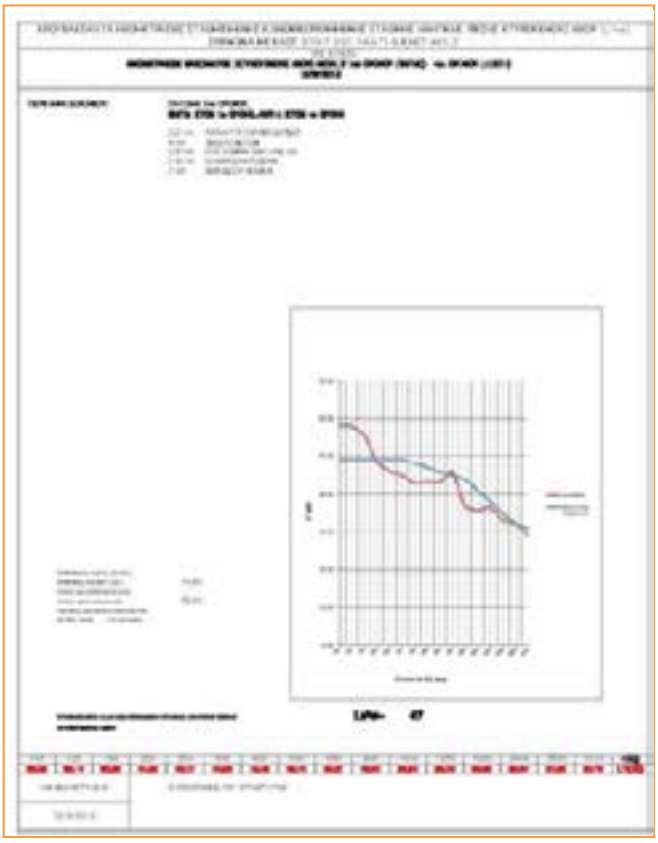
Trabecular floor

Grei 8



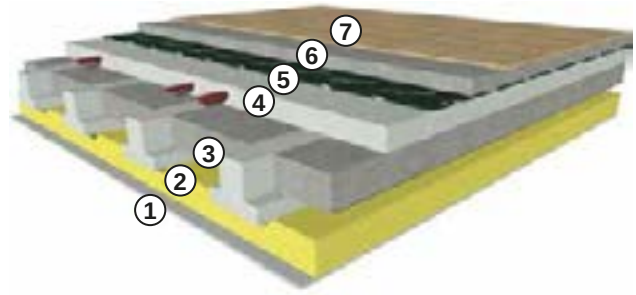
n	*description*	*mm*
1	Trabecular plate	70
2	Light concrete	70
3	**Grei 8**	**8**
4	Floating screed	40
5	Wooden floor	22
		210

$L'_{n,w}$ = 47 dB



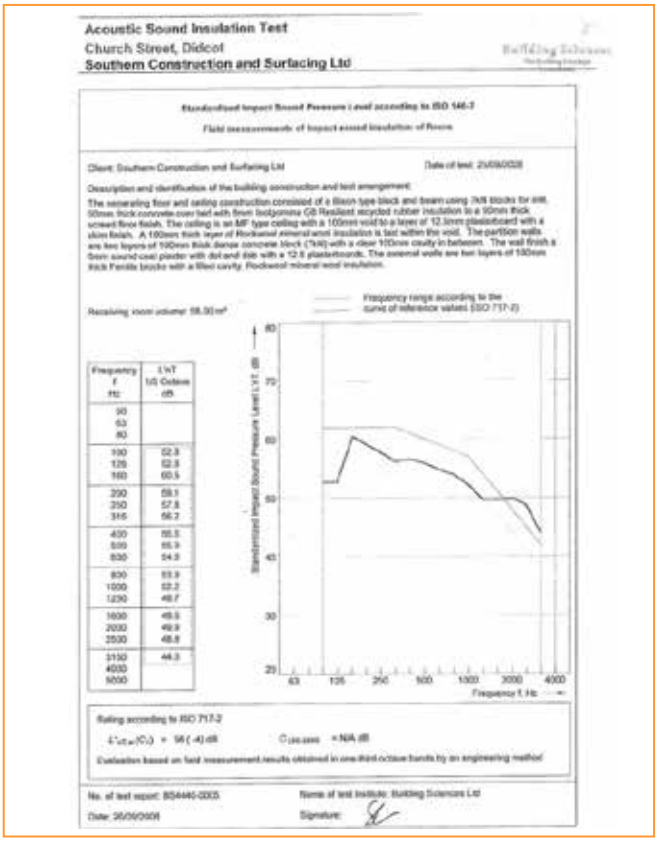
Beam and block floor

Grei 8



n	*description*	*mm*
1	Gypsum board	12.5
2	Rock wool	100
3	Beam and block floor	150
4	Sand and cement screed	50
5	**Grei 8**	8
6	Sand and cement screed	50
7	Floor finishing	10
		380

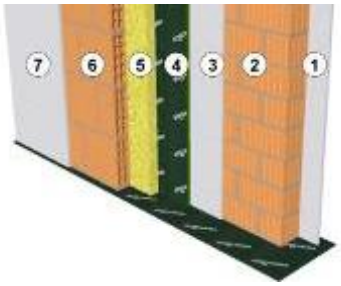
$L'_{nT,w}$ = 56 dB


Acoustic Sound Insulation Test
Church Street, Didcot
Southern Construction and Surfacing Ltd

Double wall

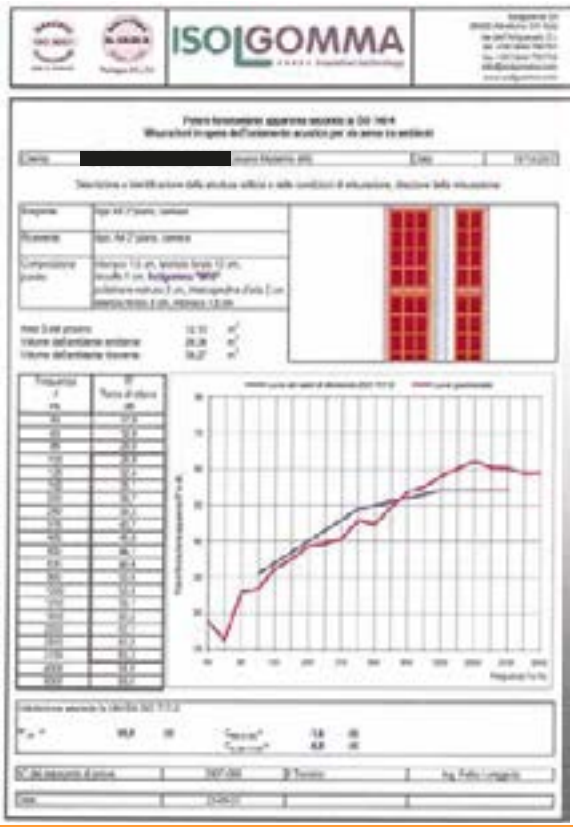
Double wall 12+8

Mustwall 10



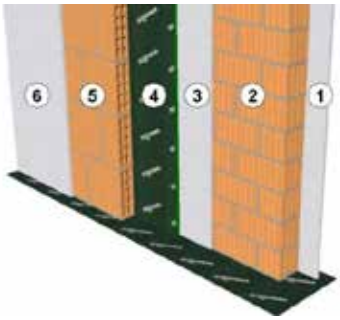
n	description	mm
1	Plaster	15
2	Hollow brick wall 12/25/25	120
3	Plaster	10
4	**Mustwall 10**	**10**
5	Polistiren and air cavity 2 cm	50
6	Hollow brick wall 8/25/25	80
7	Plaster	15
		300

R'_w = 50,0 dB



Double wall with heavy hollow brick wall

Mustwall 20



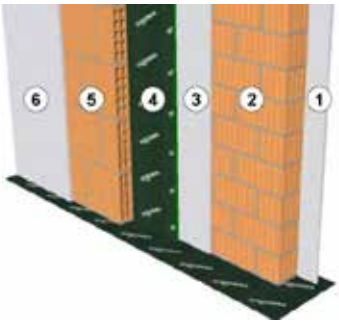
n	description	mm
1	Plaster	15
2	Heavy hollow brick wall	120
3	Plaster	10
4	**Mustwall 20**	**20**
5	Hollow brick wall 8/25/25	80
6	Plaster	15
		260

R'_w = 52,0 dB

Double wall

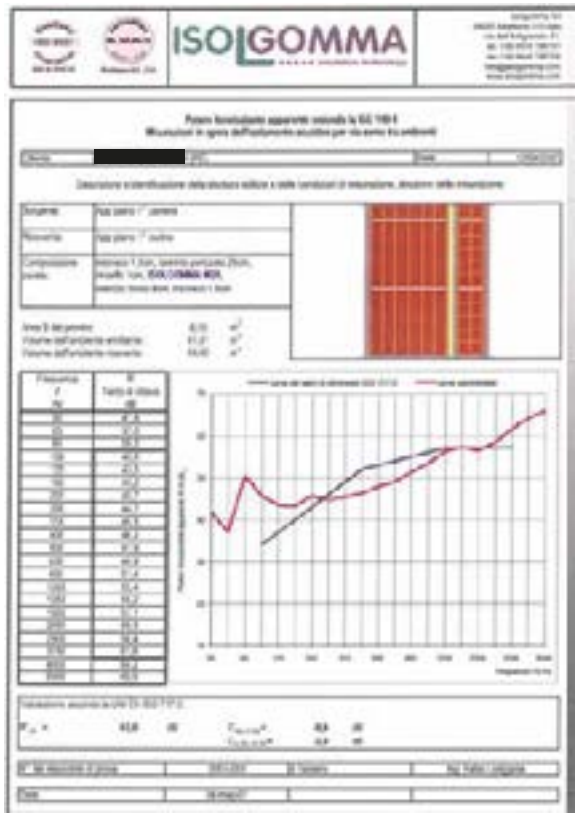
Duble wall 25+8

Mustwall 20



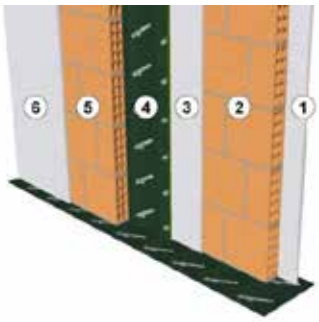
n	*description*	*mm*
1	Plaster	15
2	Heavy hollow brick wall	250
3	Plaster	10
4	**Mustwall 20**	**20**
5	Hollow brick wall 8/25/25	80
6	Plaster	15
		390

R'_w = 53,0 dB



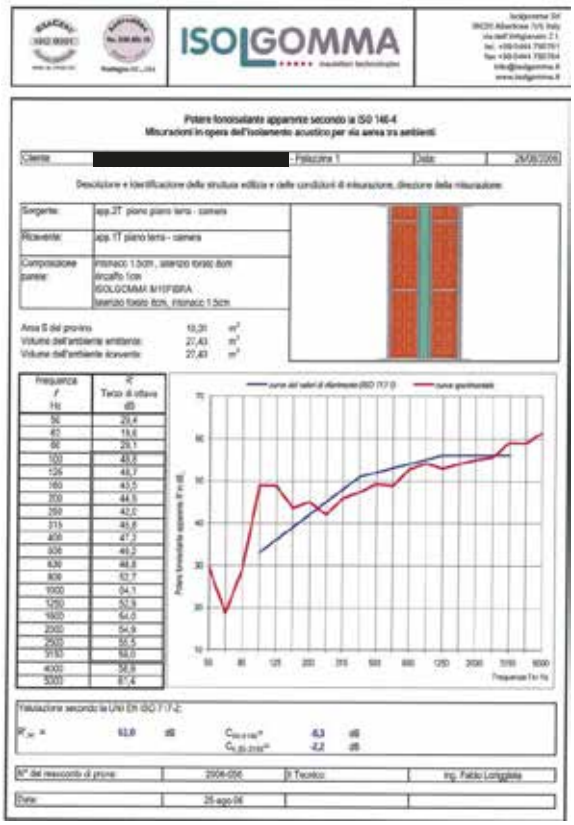
Double wall 8+8

Biwall 40



n	*description*	*mm*
1	Plaster	15
2	Hollow brick wall 8/25/25	80
3	Plaster	10
4	**Biwall 40**	**40**
5	Hollow brick wall 8/25/25	80
6	Plaster	15
		240

R'_w = 52,0 dB



EXAMPLES OF ACOUSTIC BUILDING CALCULATION

TECHNICAL REPORT

Technical analysis for acoustic insulation

Client	
Country	Netherlands
Objects	Wall and floor insulation
Project	
Notes	-
Suggested products	**Trywall 48, Mineral 50-70, Grei 5**

Date	Writer	Report number
		ENG-B-2012-XXX

TECHNICAL REPORT

Abstract

This soundproofing technical report represent the best knowledge of ISOLGOMMA SRL in the building industry for acoustic insulation. This report indicates our best acoustic technical solutions based on our theoretical knowledge and based on our market and application experience. It do not replace the competence of the deputed technical body or equivalent departments. This report can not be used as unique acoustic document reference to issue a building permit. All the results and acoustic indications of this report are valid if the product application procedure, shown in our manual book and here synthetically mentioned, is correctly implemented. ISOLGOMMA Srl is not responsible for the result and quality of product application procedure.

Index

Attachments

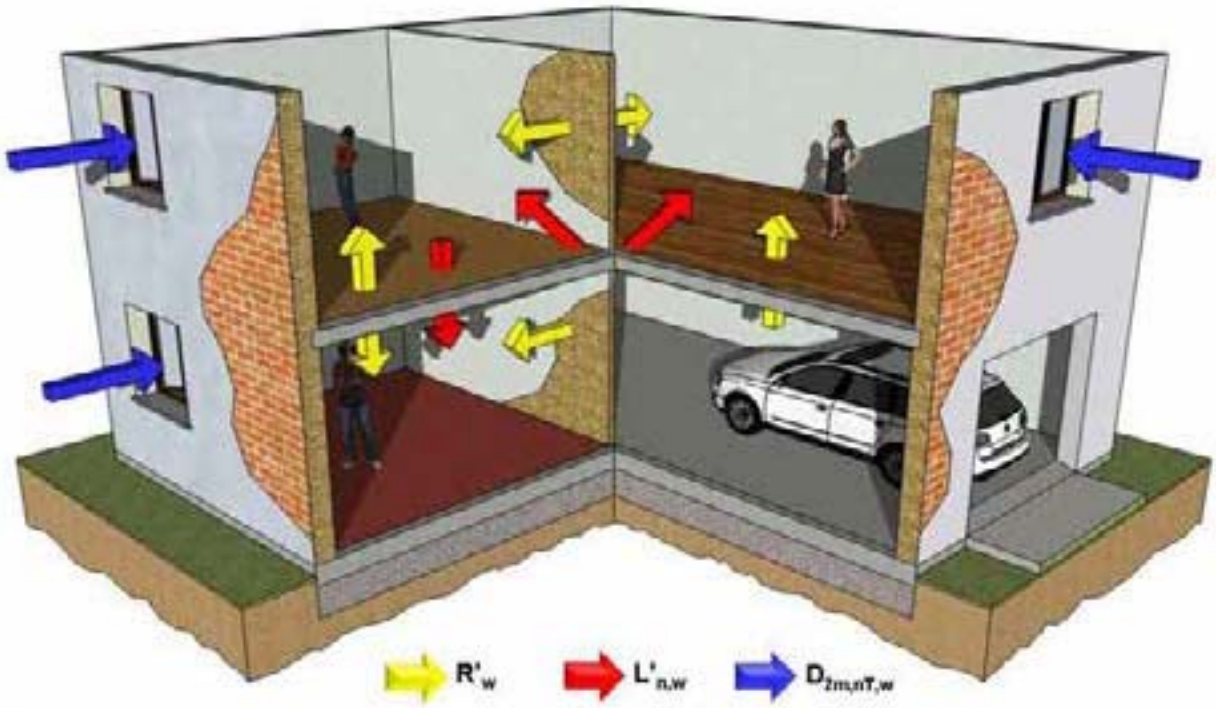
Technical data sheets

Warning

Airborne and impact noise insulation values are calculated with a software owned by Isolgomma S.r.l. The results are not laboratory test reports and the accuracy of the prediction depends on the formulations adopted in the calculation model and the precision of the input data. In some cases, overestimated or underestimated results can be found for complex building elements.
Termic analysis is approximative and refers to a database of thermic conductivity values owned by Isolgomma S.r.l. This database can be different from other databases in different references.

TECHNICAL REPORT

Acoustic parameters in buildings



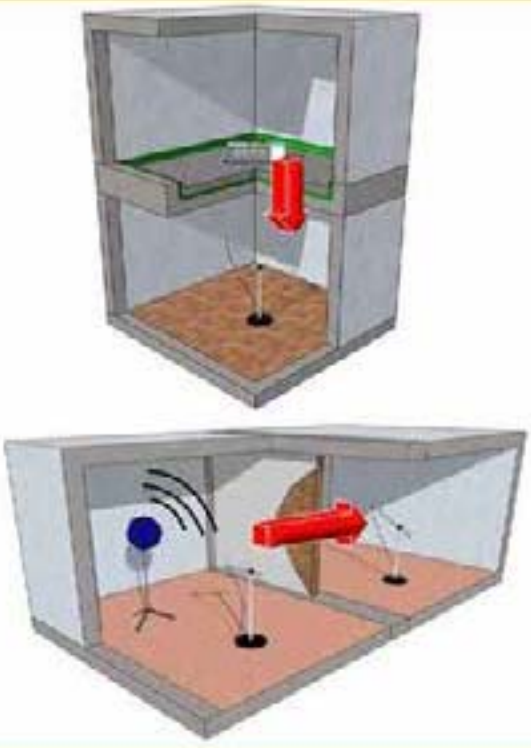
R'_w	airborne sound insulation weighted index of separating elements between rooms in site.
$L'_{n,w}$	impact sound insulation weighted index of floors in site.

Impact noise is the sound pressure level measured in the receiving room, caused by the sound radiation of the floor, excited by the standard tapping machine.

$$L_n = L_i + 10 \cdot \log (A / A_0) \quad [dB]$$

The transmission loss (R) of a separating element describes its capacity in reducing the sound energy transmission. It is described by the ratio between the incident and transmitted energy.

$$R = 10 \cdot \log (W_1 / W_2) \quad [dB]$$



TECHNICAL REPORT

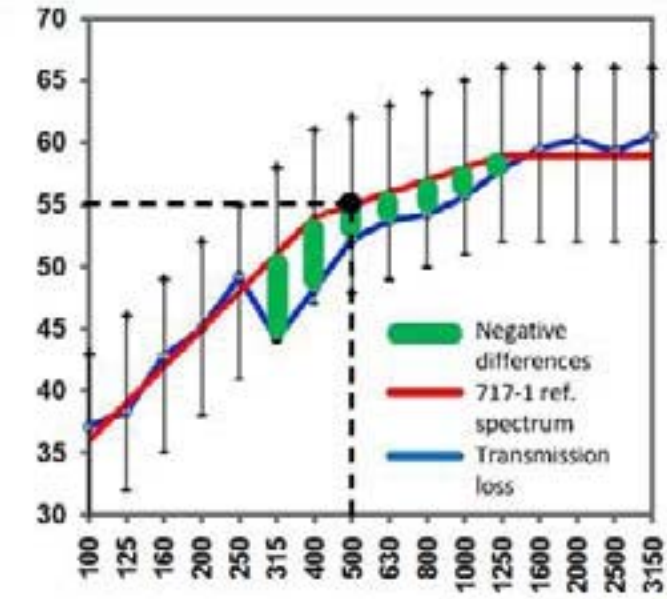
Minimum sound performances for housing in Europe

	Airborne acoustic insulation	*Impact noise insulation (floors)*	
DK	55-58 (R'w + Ctr 50-3150)	53 (L'n,w)	DK
SF	55 (R'w)	53 (L'n,w)	SF
N	55 (R'w)	53 (L'n,w)	N
S	53 (R'w + Ctr 50-3150)	56 (L'n,w)	S
D	53-56 (R'w + Ctr 50-5000)	53 (L'n,w)	D
NL	52-57 (DnT,w + C)	53 (L'nT,w+Ci)	NL
F	53-55 (DnT,A)	55 (L'nT,w)	F
B	54-58 (DnT,w + C)	58 (L'nT,w)	B
A	55-58 (DnT,w)	48 (L'nT,w)	A
CH	49 (DnT,w + C)	55 (L'nT,w+Ci)	CH
GB	45 (DnT,w + Ctr)	62 (L'nT,w)	GB
E	45 (DnT,w)	68 (L'nT,w)	E
P	50 (DnT,w)	60 (L'nT,w)	P
I	50 (R'w)	63 (L'n,w)	I
EST	52 (R'w)	60 (L'n,w)	EST

Determination of Rw and Ln,w according to ISO 717-1 and ISO 717-2

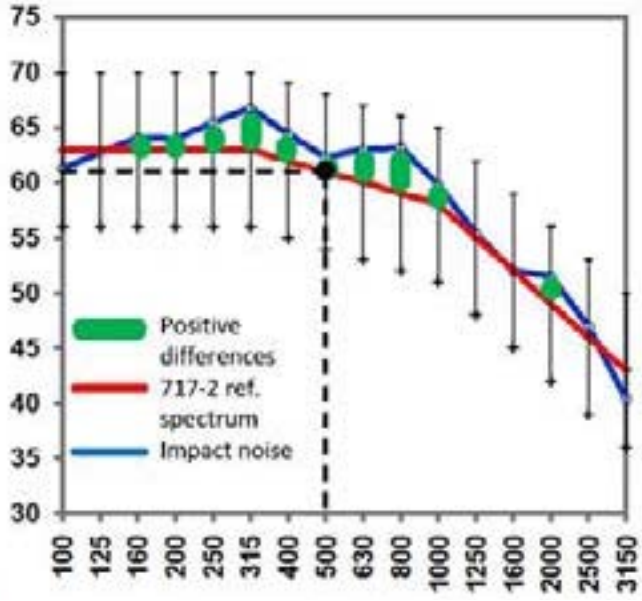
Spectrum R → Weighted index R_w

The transmission loss index Rw, in decibel, is the value of the reference curve at 500 Hz frequency, after the translation of this curve. The red curve have to be moved up & dow in order to get the yellow areas counting for ≤ 32 dB.



Spectrum L_n → Weighted Index $L_{n,w}$

The impact sound pressure level index Ln,w, in decibel, is the value of the reference curve at 500 Hz frequency, after the translation of this curve. The red curve have to be moved up & down in order to get the yellow areas counting for ≤ 32 dB.



TECHNICAL REPORT

Thermal conductivity - Definitions

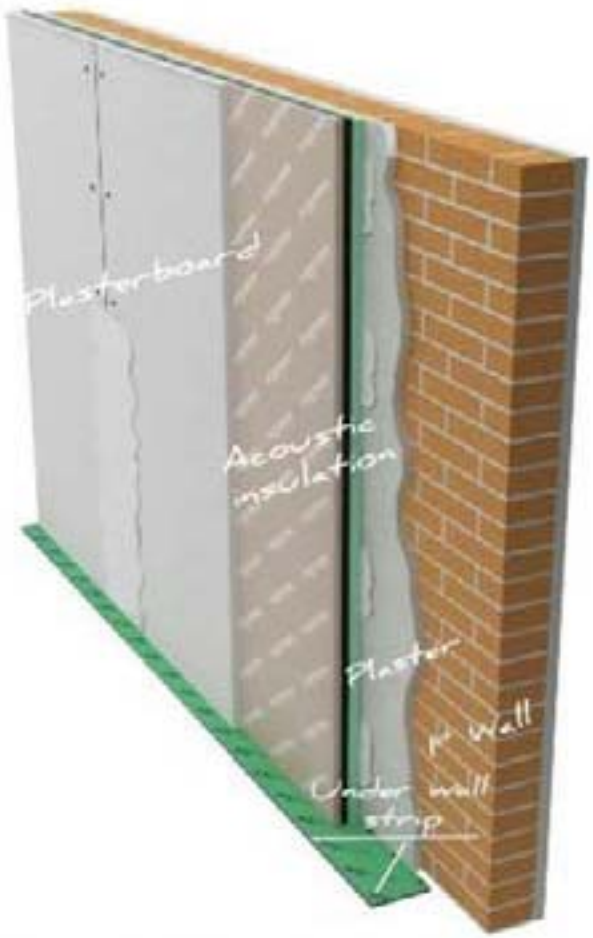
Index	Unit	Definition
λ	(W/m K)	thermal conductivity
R	(m^2K/W)	thermal resistance
R_{si}	(m^2K/W)	internal thermal convection resistance
R_{se}	(m^2K/W)	external thermal convection resistance
U	(W/m^2K)	thermal trasmittance

λ : derives from laboratory tests or references; it depends on the product.	
R_{si}-R_{se}: derives from standards; conventional values of internal and external surfaces of the building.	
$R = s1/\lambda1 + s2/\lambda2 + s3/\lambda3 + ...$	*Thermal resistance of a multi-layer system*
$R_T = R + Rsi + Rse$	*Thermal resistance of a building element*
$U = 1 / R_T$	*Thermal trasmittance of the building element*

Building element	Internal thermal convection resistance	
	Rsi	Rse
Internal wall (between two dwellings)	0.13	0.13
External wall	0.13	0.04
Internal floor (between two dwellings or towards a cold car box / cellar)	0.17	0.17
Floor towards outside (portico)	0.17	0.04

TECHNICAL REPORT

Predictional calculation of wall insulation



A coated wall is used for renovation of an existing wall or to improve an existing wall performance. This system focuses on increasing the acoustic performance with a limited increase in wall thickness. This solution can be adopted when a wall needs to be upgraded to meet local building regulations. The system features a traditional block wall on which a light wall system is installed consisting of acoustic panels with plasterboard finishing.

Under-wall strip : Under any partition an elastic rubber Stywall strip must be placed to minimise any sound and vibration transmission from the wall to the floor. The minimum width of the strip width must be equal to the total wall width.

Plaster 1 : The finishing layer is generally made from gypsum plaster which, from an acoustic point of view, is used to seal any gaps in the brick wall and contribute to the overall wall mass.

Wall : Composed of different sizes of bricks, depending on wall specification, which are jointed together with mortar. It is very important that horizontal and vertical joints are properly sealed with sufficient mortar.

Plaster 2 : The finishing layer is generally made from gypsum plaster which, from an acoustic point of view, is used to seal any gaps in the brick wall and contribute to the overall wall mass.

Acoustic insulation : Fixed to the wall by mechanical nailing or adhesive. The desired outcome is to create an uniform acoustic layer separating the structural wall from the gypsum board. This coating can be done on both sides of the structural wall.

Plasterboard : External side of the wall system made up of one or more layers of plasterboard. These boards can also be of different thicknesses and between the boards an additional acoustic layer such as Syl, can be placed to improve the acoustic insulation..

Client	
Country	Netherlands
Suggested products	Trywall 48, Mineral 50-70, Grei 5

TECHNICAL REPORT

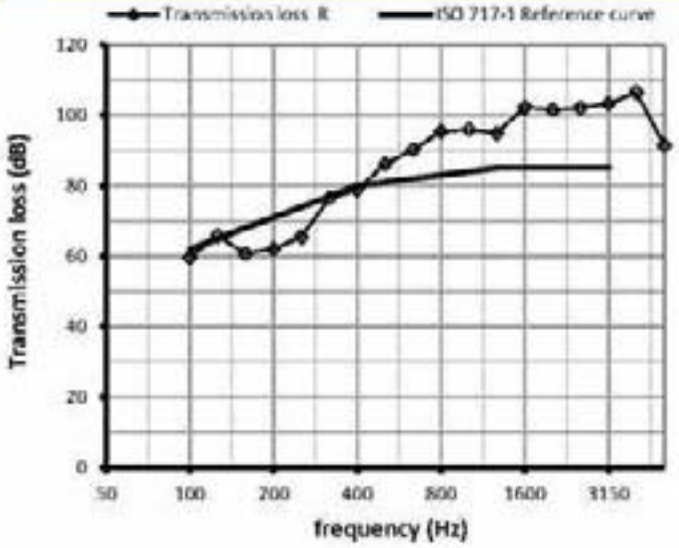
Predictional calculation of wall insulation

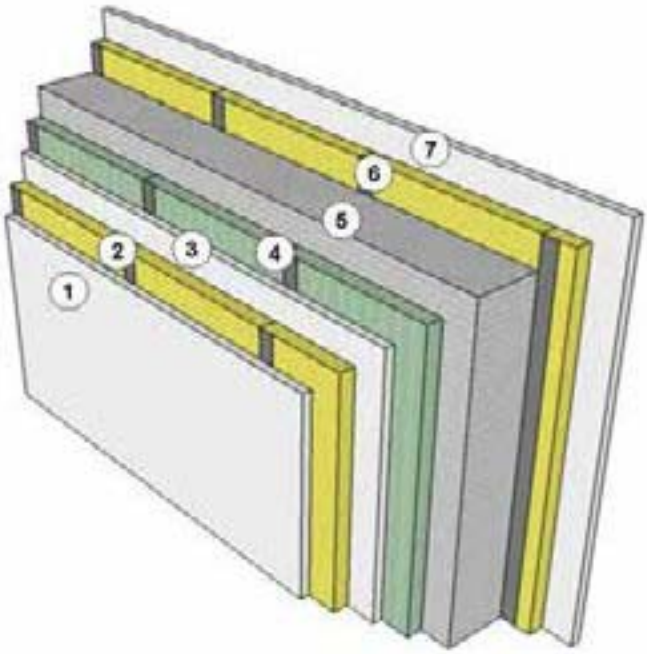
Wall composition					
n	Layers description (from left to right)	thickness s (mm)	conductivity λ (W/mK)	density ρ (kg/m³)	resistance R (m²K/W)
1	Gypsumboard (2 layers)	25	0.21	900	0.119
2	Isolgomma Mineral 50-70 in metal studs (50 mm)	50	0.04	70	1.250
3	Gypsumboard (2 layers)	25	0.21	900	0.119
4	Isolgomma Trywall 48 in metal studs (50 mm)	50	0.047	-	1.064
5	Concrete block wall	200	2.3	2000	0.087
6	Isolgomma Mineral 50-70 in metal studs (50 mm)	50	0.04	70	1.250
7	Gypsumboard (2 layers)	25	0.21	900	0.119
8					
9					
	Total thickness	425			
	Superficial thermal resistance (internal surface)				0.130
	Superficial thermal resistance (external surface)				0.130
	U - Total trasmittance (W/m²K)				**0.234**

Transmission loss weighted index

Evaluation according to ISO 717-1:

R_w = 81 dB (*)



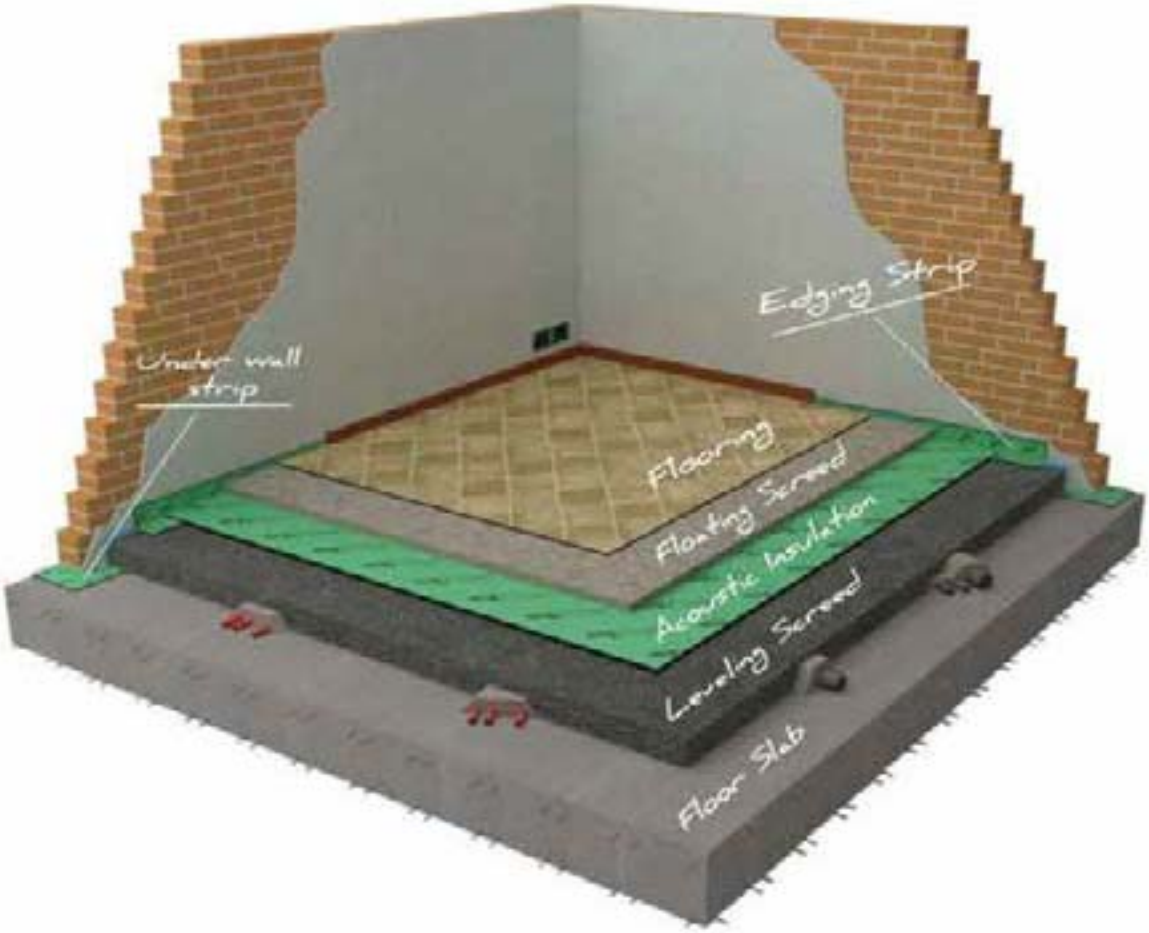


(*) Rw is defined as the theoretical weighted index of the transmission loss: this index takes into account the characteristics of the adopted materials, the layers composition and the chosen insulation products. It is not a prediction of the site transmission loss (R'w), which takes into account the flanking transmission, the type of joints of the separating element, the volumes of emitting and receiving rooms.

ISOLGOMMA insulation technology

TECHNICAL REPORT

Predictional calculation of floor insulation



A floating screed is the ideal solution for the impact sound insulation of any type of floor. This floor system is designed in order to obtain "mass" over the resilient layer which is acting as a "spring" to produce that mitigation effect.
This floor system very efficiently reduces sound waves and vibration flows produced by walking, speaking or other sources. This is thanks to the floor system transforming all vibration and sound flows into micro floating movements of the upper floating screed.

Under-wall strip : Under any wall or partition a resilient strip is needed in order to prevent the transfer of structural vibration or noise to the floor and vice versa.
Levelling screed : If there is piping located over the floor base a levelling screed is required in order to produce a homogeneous flat surface on which the resilient layer will be placed.
Acoustic insulation : The acoustic insulation layer is selected so as to achieve the required level of impact sound improvement as specified by the relevant national building regulations.
Edging strips : To achieve the floating movements of the upper screed, the screed must be separated from the surrounding room walls. This separation can be obtained by placing the horizontal insulation layer onto to the vertical wall side or more simply by using the Profyle Self Adhesive Edging Strips which are placed on all perimeter walls before laying down the horizontal insulation layer. In this manner an elastic joint between the floating screed and the wall is created granting free movement of the floor against the walls.
Floating screed : A traditional mixture of sand and cement or a "self-levelling" proprietary screed mixture. The important point here is to achieve a uniform thickness with a minimum thickness required by the acoustical analysis in our application manual of never less than 4 cm.
Flooring : At this stage it is important that the edging strip along the wall is not cut but continues to separate the floor finish from the walls.

Client	
Country	
Suggested products	

TECHNICAL REPORT

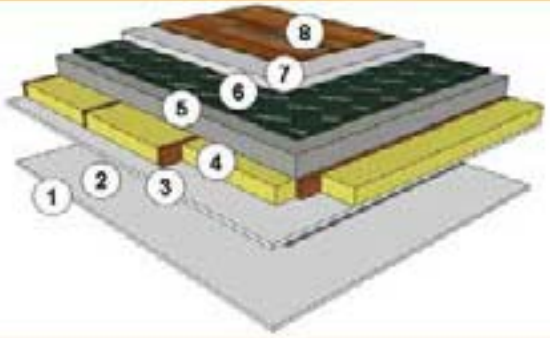
Predictional calculation of floor insulation

Floor composition					
n	Layers composition (from bottom to top)	thickness s (mm)	conductivity λ (W/mK)	density ρ (kg/m³)	resistance R (m²K/W)
1	Gypsumboard	12.5	0.21	900	0.060
2	Air gap	350	-	-	0.180
3	Gypsumboard	12.5	0.21	900	0.060
4	wood laths and Isolgomma Mineral 60-70	80	0.04	70	1.500
5	Concrete floor	100	1	2400	0.100
6	Isolgomma Grei 5 (two layers)	10	0.067	-	0.149
7	Screed	50	1	2400	0.050
8	Wooden finishing	10	0.5	-	0.020
	Total thickness	625			
	Superficial thermal resistance (internal surface)				0.170
	Superficial thermal resistance (external surface)				0.170
	U - Total trasmittance (W/m²K)				**0.407**

Impact sound pressure level weighted index

Evaluation according to ISO 717-2:

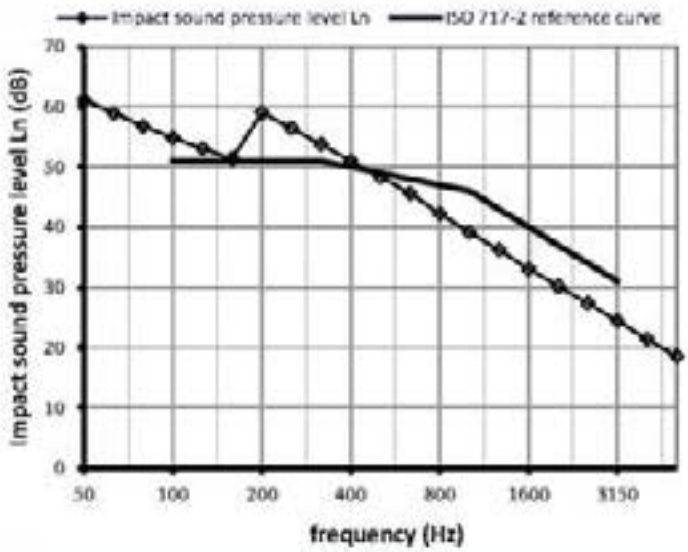
$L_{n,w}$ = 49 dB (*)

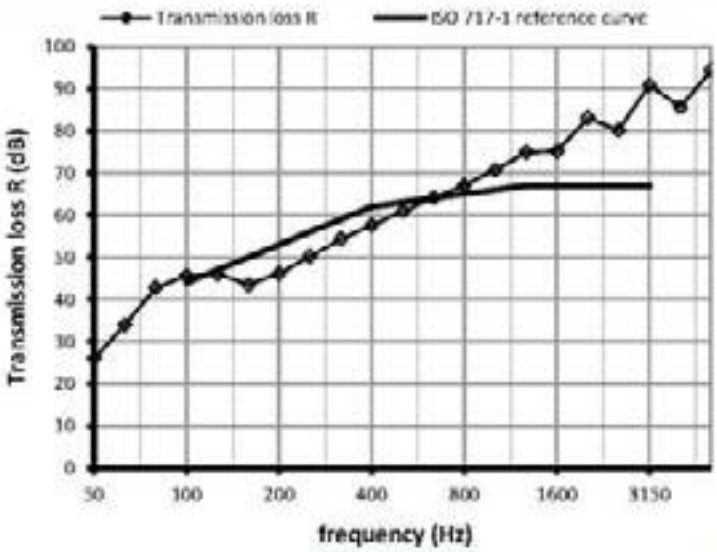


Transmission loss weighted index

Evaluation according to ISO 717-1:

R_w = 63 dB (*)

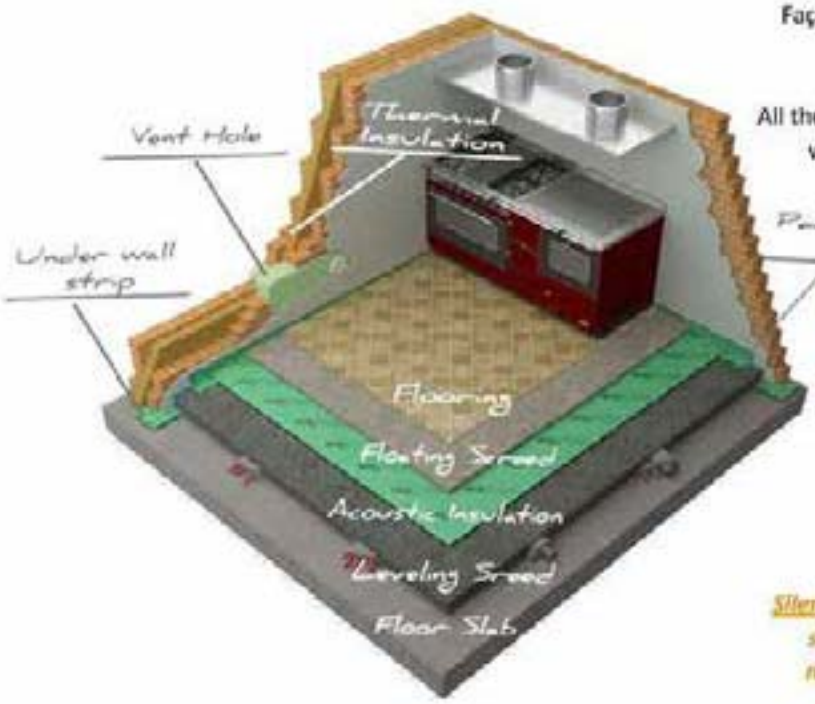




(*) Ln,w is defined as the theoretical weighted index of the impact sound pressure level; Rw is defined as the theoretical weighted index of the transmission loss. These indexes take into account the characteristics of the materials, the layers composition and the adopted insulating products. It is not a prediction of site preformances (L'n,w - R'w), that depend on the flanking transmissions, joint types of the separating elements, volumes of the emitting and receving rooms.

TECHNICAL REPORT

Prescriptions



Façade wall acoustic insulation not only involves the wall itself but any element of the façade such as doors, windows, balconies etc.
All these wall elements contribute to the façade insulation. **Here** we focus on the ventilation hole element which is often the acoustic weak point of a façade wall.

Facade wall : generally the external wall does not need to be acoustically insulated since the mass and the thickness of the wall will automatically achieve the correct airborne insulation as per the relevant national building regulations.
Acoustic issues can occur in weak areas like windows or ventilation holes. Here we assume that the windows are of a high standard from an acoustic point of view.

Silencer for ventilation holes : Ventilation holes in the kitchen should be treated with a proper acoustic sound silencer to maintain the levels of sound insulation as per the relevant national building regulations.

To get a proper facade insulation a ventilation hole silencer has to be used (see the next picture for reference).

Start the building of the wall and stop at the height decided for the ventilation hole.

Lay the Sylencer horizontally on the mortar layer.

Build the wall around the Sylencer and plaster using a specific mesh.

Remove the cap of the Sylencer and insert the finishing grid.

TECHNICAL REPORT

Prescriptions

The acoustic problems of hydraulic equipment in civil buildings is the drain pipe, which connect bathrooms at different floors; the water outflow creates different noise typologies that have to be solved separately.

Noise from fall

It's the noise caused by the water which falls inside the pipe.

Noise from impact

It is caused by the impact of water on the change of direction of the pipe at curves. Water hits the pipe and the outflow gets slower.

Noise from the outflow

It is caused by the horizontal flow of the water inside the pipe. Generally it is silent, but it can disturb if the pipe changes the direction.

To get a better pipe insulation, it is necessary to coat the pipe with an elastic and high density product, for example Syl (fig. 1); the improvement is at least 10 dB. In the case of pipes fixed with metal bands, insert Syl to reduce structural vibration and noise (fig. 2)

Remove adhesive film and glue the product around the pipes.

Insert the pipe in the proper casing.

Carry on the installation of the pipes.

TECHNICAL REPORT

Prescriptions

Impact noise and airborne noise propagate through the building structures as vibration and transfer in the rooms connected to the sound source as vibration. The way to eliminate this indirect sound transmission is to separate the structures through anti-vibration elements. This is the case of the insulation of separating elements between dwellings using under-wall strips. Under-wall strips prevent the transmission of walls vibration and noise to the floor and create an elastic joint at the lower border of the wall, improving the acoustic insulation of the walls and the impact noise insulation of the floor.

Depending on the load, the natural frequency of the wall-strip system can be evaluated and analyzed to get the insulation from the disturbing frequencies. First of all, the load of the wall has to be known:

HEAVY WALLS: realized with heavy blocks made of concrete or bricks.

Load of the wall: 400 – 600 kg/m²
Load on the strip: 0,04 – 0,06 N/mm²

MEDIUM WEIGHT WALLS: realized with heavy hollow blocks or similar type blocks

Load of the wall: 200 – 400 kg/m²
Load on the strip: 0,02 – 0,04 N/mm²

LIGHT WALLS: made of light hollow blocks or light concrete blocks

Load of the wall: 100 – 200 kg/m²
Load on the strip: 0,01 – 0,02 N/mm²

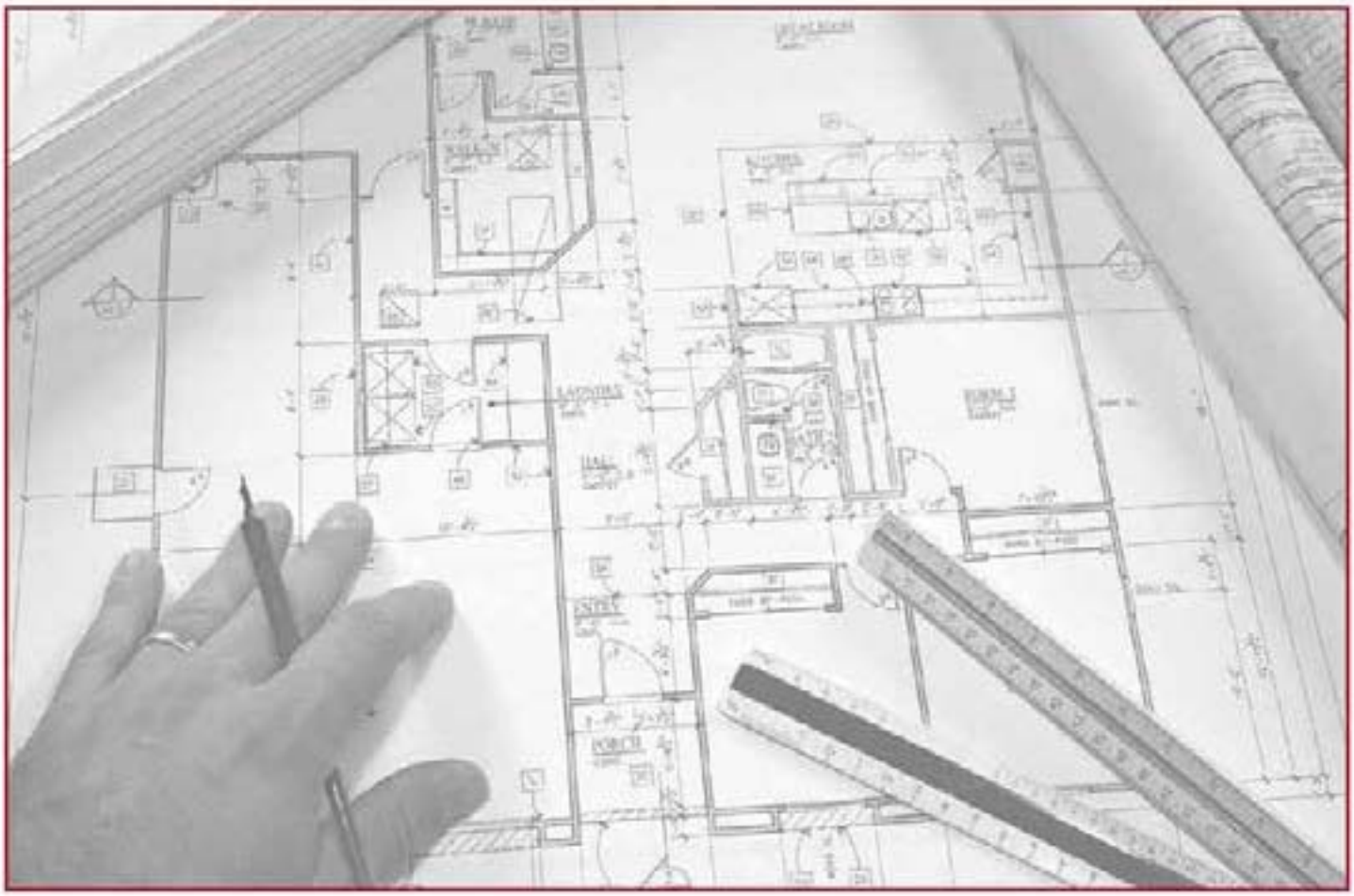
Lay the under-wall strip.

Realize brick wall on the strip, applying it on the mortar layer.

EXAMPLES OF INDUSTRY CALCULATION

TECHNICAL REPORT

Indications of vibration insulation



Client	
Country	Turkey
Object	Machine vibration insulation
Project	
Note	-
Product	**Megamat 20/500 (3 layers)**

Date	Writer	Rel. N.
		ENG-I-2012-XXX

TECHNICAL REPORT

Abstract

This technical report represents the best knowledge of ISOLGOMMA Srl in the industry for vibration insulation. This report indicates our best anti-vibration technical solutions based on our market and application experience and based on our theoretical knowledge; it do not replace the competence of the deputed technical body. This report can not be used as unique reference to issue a building permit. All the results and anti-vibration indication of this report are valid considering the application procedure shown in our manual book and here synthetically mentioned. ISOLGOMMA Srl is not responsible for the result and quality of product application.

Index

Warnings

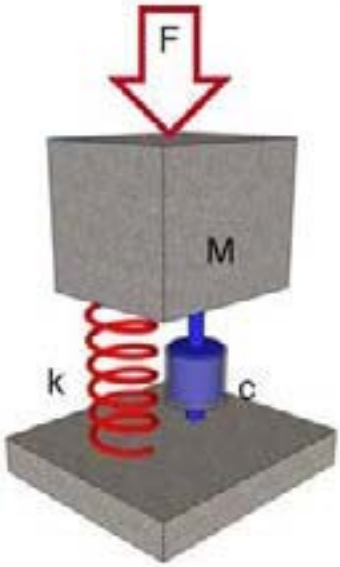
The values of vibration isolation are calculated with software owned by Isolgomma Srl The results are not laboratory tests and therefore the accuracy of the prediction depends on the formulations adopted by the calculation model and the accuracy of the input data. In some cases may be found calculations overestimated or underestimated depending on the type of machine being analyzed.

TECHNICAL REPORT

Parameter

Vibration:	it defines the vibrating motion of a body oscillation around a position of balance, resulting in a force which varies over time
Frequency:	is the number times that the motion of the system shows the same characteristics in a target range, represents the number of cycles completed in time
Natural frequency (f_0):	frequency which vibrates in the absence of external forces
Work frequency (f):	it dipend to the external action F (t), if any, acting on the system with variability dependent on time

Mass-spring system



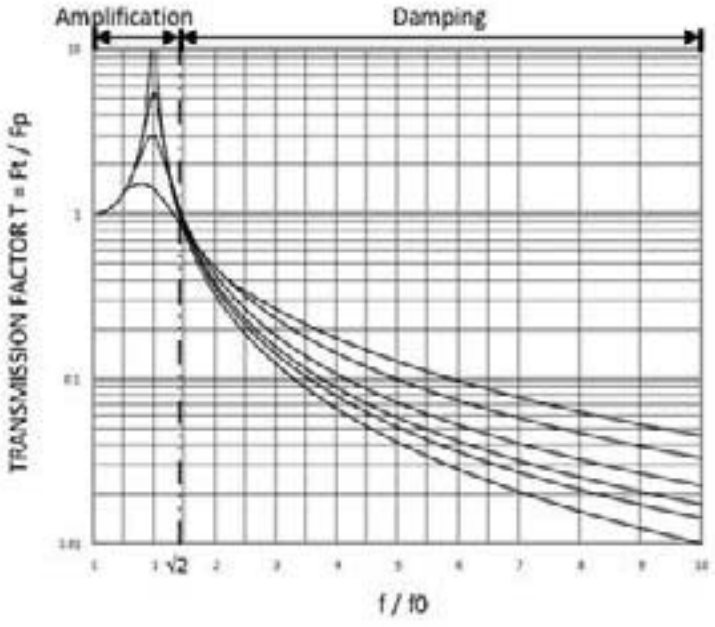
Consider the following parameters:

F	vibration force	t_p	period
M	mass of the system	**f**	frequency $1/t_p$
k	stiffness	F_p	amplitude of disturbing force
c	damping	F_t	amplitude of transmitted force

We consider a force vibration F, applied to the mass M, of harmonic sinusoidal type. Through the spring system, with stiffness k and damping c, is transmitted to the support structure a force with the same frequency f (tp same period) but different amplitude (Ft). The effect of damping system can be expressed through the transmission factor:

$$T = F_t / F_p$$

The spring system is efficient when T <1, when the force transmitted is less than the disturbing force



The spring system, to be effective, must be chosen so as to give the system supported a natural oscillation frequency of at least 1.41 times less than the rate of force perturbante, f / f0> √ 2

Degree of insulation (%)

$$A_{\%} = 100 (1 - T)$$

Transmission reduction (dB)

$$A_{dB} = 20 \log (T)$$

TECHNICAL REPORT

Input data

Machine dimensions

Lenght	-	mm
Width	-	mm
Height	-	mm
Machine weight	1000	kg

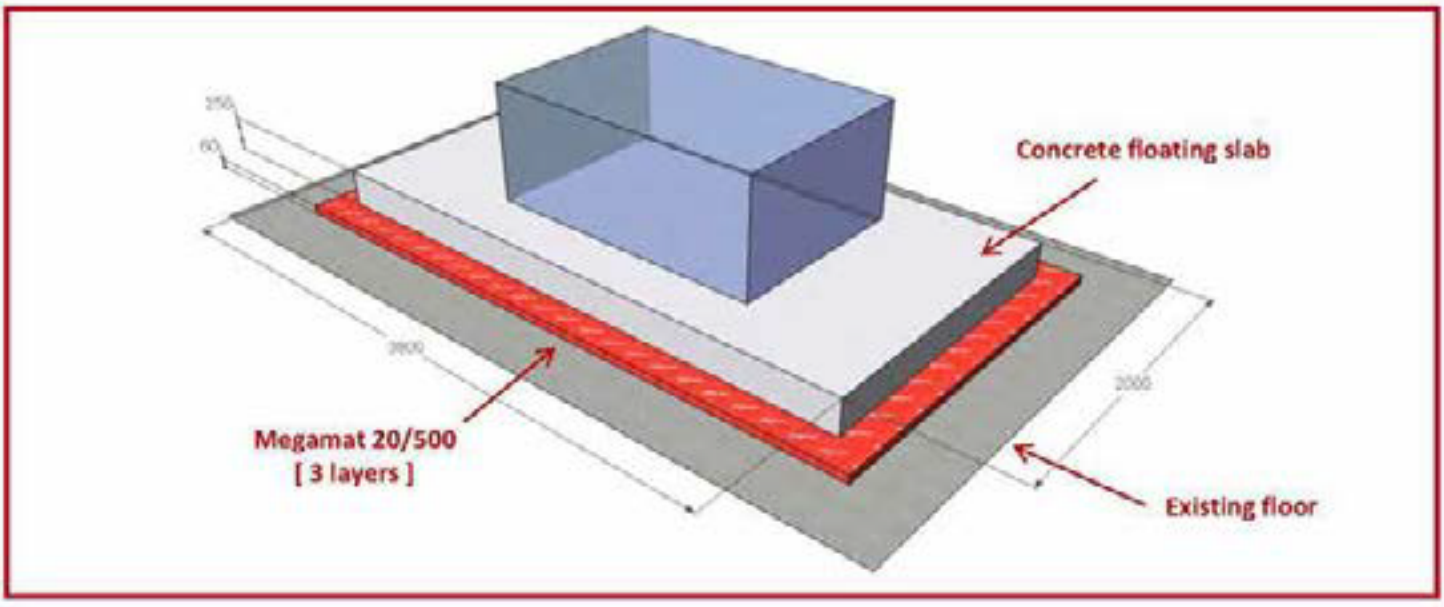
Base dimensions

Lenght	3800	mm
Width	2000	mm
Height	250	mm
Base weight (concrete density 2400 kg/m³)	4560	kg

Pressure on mat	**0.0072**	N/mm²

Requirements

Work frequency	50 Hz	Degree of insulation	max %
	3000 rpm	Transmission reduction	max dB



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★★★★★ insulation technology

Client	
Country	Turkey
Product	Megamat 20/500 (3 layers)

TECHNICAL REPORT

Solution output

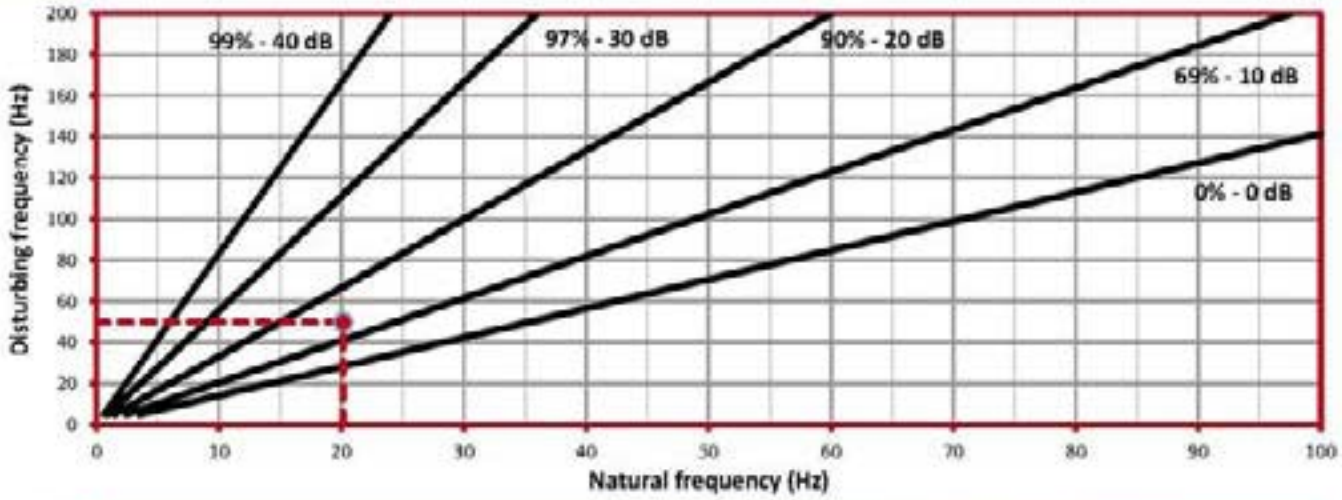
Product suggest:	Megamat 20/500 (3 continuous layers)

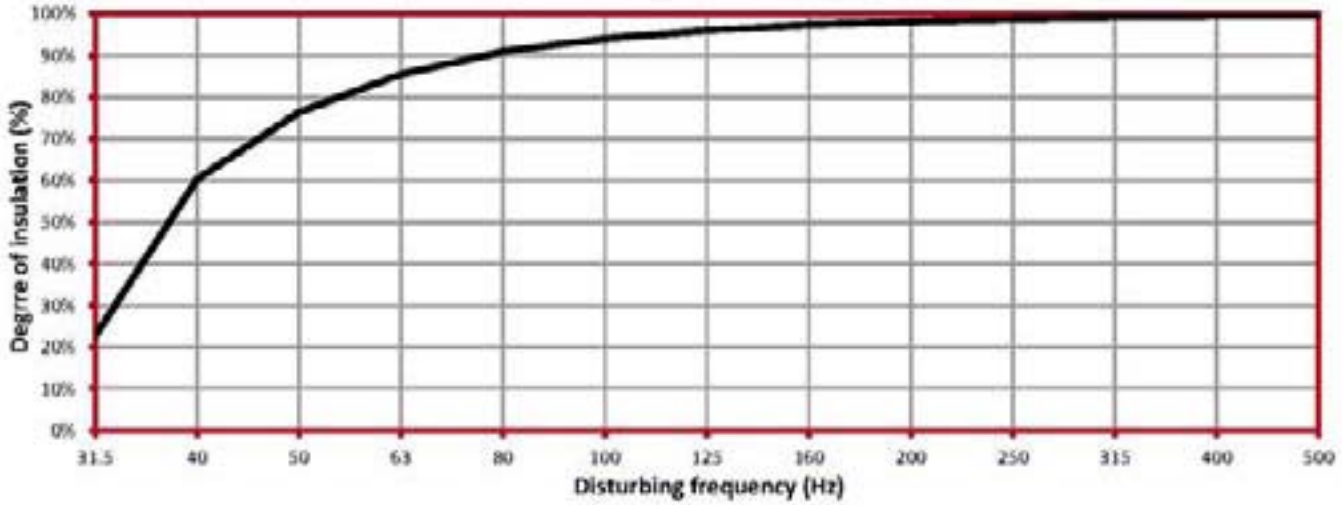
Product thichness:	60 mm	Static Young modul:	0.623 N/mm²
Loss factor:	0.143	Dynamic Young modul:	0.700 N/mm²

Results

Pressure on product:	0.007 N/mm²	Natural frequency:	20.1 Hz
Static displacement:	0.7 mm	Disturbing frequency:	50 Hz
Dynamic displacement:	0.6 mm	Transmission factor T:	0.205 < 1

DEGREE OF INSULATION	79.5 %	TRANSMISSION REDUCTION	-13.8 dB





Notes

ISOLGOMMA
insulation technology

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