ISOLGOMMA
SILENCE MAKERS

SOLUTIONS FOR
ACOUSTIC INSULATION TIMBER STRUCTURES

ACOUSTIC INSULATION FOR TIMBER STRUCTURES

Acoustic in wooden buildings depends on a careful study and an accurate project execution

For more than 40 years, Isolgomma has been developing products and solutions for acoustic and thermal-acoustic insulation geared towards improving the quality of life.

Ever since its foundation in 1972, the launch of innovative products, covered by international patents, the expansion towards new markets and sectors and the achievement of quality certifications have made Isolgomma a well-known and appreciated brand all over the world, result of high experience and continuous research.
We use cutting-edge technologies to create high-performance products providing appropriate solutions for every customer need.
The study and creation of eco-compatible products and the creation of highly performing articles have made Isolgomma a company of excellence both for the Italian and foreign markets in the construction, industry, transport and safety flooring sectors.

Our specialized, dynamic and innovative staff are very attentive to customer needs. Our mission is innovation and eco-sustainability: investing in the development of new solutions and ensuring acoustic comfort for end users and offering eco-compatible solutions created through low environmental impact production processes. The use of advanced technologies, the continuous implementation of production processes and constant research and development activities allow us to create products composed of recycled rubber granules and fibres conferring unique technical characteristics; moreover, we offer global and tailor-made solutions for any soundproofing requirement. Isolgomma has two laboratories specialized in research, testing and control for the construction and railway sectors, in compliance with the ISO 9001 quality system procedures.

ETA - European Technical Assessment

Acoustics and comfort within wooden buildings

Wooden buildings are more and more considered as a valid alternative to the traditional constructions in reinforced concrete. Wooden buildings are very common in Northern European countries and are spreading massively both in Italy and in the rest of Europe. The reasons for this continuous growth lie in the unique properties of wood, such as excellent thermal insulation and mechanical resistance. The main advantages of timber structures are:

- **Anti-seismic behaviour:** thanks to a light weight and to the types of connections, wooden walls are less subject to seismic effects

- **Sustainability:** wood is a natural and sustainable material that has a reduced environmental impact for its production process

- **Reduced construction costs:** thanks to a high degree of prefabrication and the possibility of dry assembling of the various components

However, due to the intrinsic lightness of its components, timber structures require sound insulation interventions that involves all horizontal and vertical separation surfaces in order to meet regulatory requirements and increase overall living comfort.

For the new constructions, aside from the traditional wooden construction systems, the CLT technology is of considerable interest due to the great advantages it entails in terms of construction and site management.

In the renovation projects, very often old timber joists floors built in the past have to be kept and preserved. In these floors, built according to older and various technical practices, the compliance to the actual acoustic and thermal insulation standards is particularly difficult. Indeed, together with the compliance of modern standards, it is often required to preserve the aesthetics in valuable buildings of historical city centres.

Timber joists floors

Timber joists floors are very common and are still used a lot in new constructions, also due to their low weight and excellent structural behaviour.
In old buildings, this type of floor is very common and it is often preserved during renovation projects, both for its functionality and for aesthetic purposes, which is appreciated in all the markets.
To grant the compliance of the old wooden floors with the most recent technical standards and regulations, very often during renovation a structural reinforcement and stiffening is adopted through a connected concrete layer cast in site specifically designed or through the installation of a second crossed wooden board layer. On the other hand, in new constructions a timber joists floor can be designed to satisfy the most recent building regulations through an appropriate re-dimensioning of the beams and wooden boards and by connecting adequately the floor to the perimeter structures.

The various analysis carried out in the laboratory on acoustic performances of such type of wooden floor, according to EN ISO 10140-5, allowed to obtain a representative pattern of most old and new constructions.
Furthermore, it has also been possible to observe how the low acoustic performance regarding impact and airborne sound insulation characterizes bare timber joists floors and how particularly critical they are, considering that the sound waves are concentrated in the low and middle frequency range.
As a consequence, high performance isolation materials and products have to be used in order to comply with the national regulations and to reach a high insulation level.

CLT Floors and walls

The CLT technology was born and developed as an innovative and an alternative to the wooden frame structures. The concept of CLT is based on prefabricated wooden panels which, disposed both horizontally and vertically, will form the bearing structure of the building.
The CLT panels can be produced with a wide variety of dimensions, up to 5 meters per 20 meters long, with a thickness that can exceed 40 centimetres.
The prefabricated panels are to be installed on site, through standard mechanical fixing elements. A subsequent advantage of this technology is that the CLT elements can be customized, making the installation easier and reducing the time and the cost of the installation.
The prefabricated panels are to be installed in site, through standard mechanical fixing elements. A subsequent advantage of this technology is that the CLT elements can be customized, making the installation easier and reducing the time and the cost of the installation.

The acoustic performance of the CLT floors, even if it is better compared to the traditional timber joist, is still undermined by light weight. As a consequence, high performance materials and products have to be used in order to comply to national regulations and reach a higher insulation class.

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ACOUSTIC INSULATION
HIGHMAT LINE FOR WOODEN FLOORS

Acoustic and thermal insulation for floating floors

HIGHMAT products have been developed to reach extremely high insulation on floors with the floating screed technology.
Highmat is a combination of rubber bearings and polyester fibre assembled together in stand-alone panels, to be positioned on the base floor before casting the floating screed.
The Highmat system is the ideal choice to reach a first-class acoustic performance on all floor typologies. This product is particularly indicated for wooden floors as it increases significantly the acoustic performance at low frequencies and allows to meet the highest demands of acoustic comfort, both for impact sound and air-born noise.
Highmat's unique features make it suitable also for acoustic insulation of floors in music/video production studios and in music halls.

APPLICATION FIELDS

- High impact sound insulation of floating floor
- Music and video production studios insulation

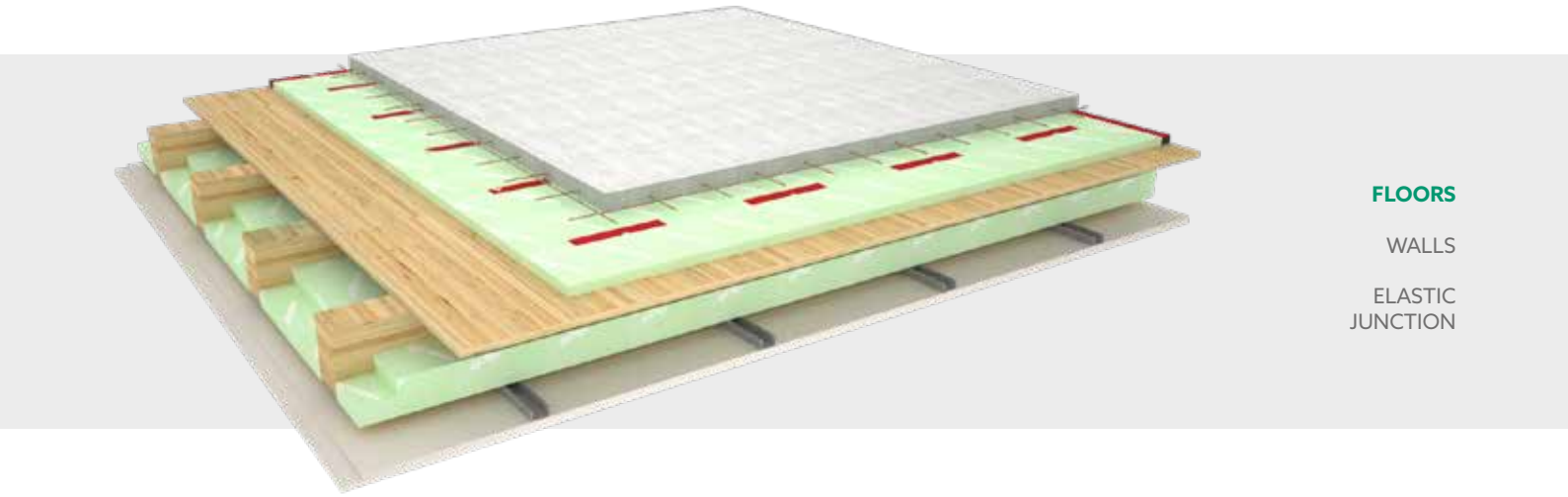
Technical features		Norm	HIGHMAT	
Thickness	mm	-	20	30
Dimensions	m	-	0,6x1	
Surface mass	kg/m²	-	1,64	1,89
Dynamic stiffness (s')	MN/m³	EN 29052-1	11	6
Impact sound level attenuation (ΔLw)	dB	EN ISO 10140	34	36
Thermal conductivity coefficient (λ)	W/m²K	EN 12667	0,04	

COMPLEMENTARY PRODUCTS AND ACCESSORIES

FYBRO

SIDE HIGHMAT

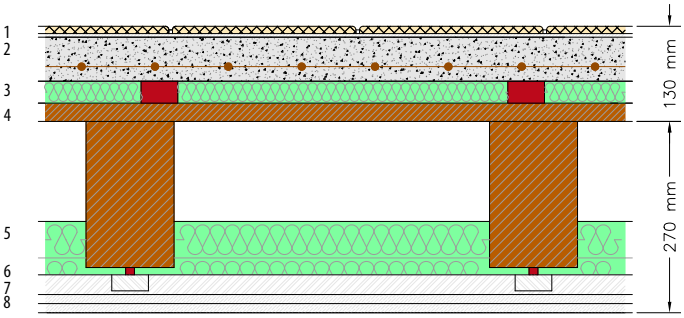
REDFIX



FLOORS

WALLS

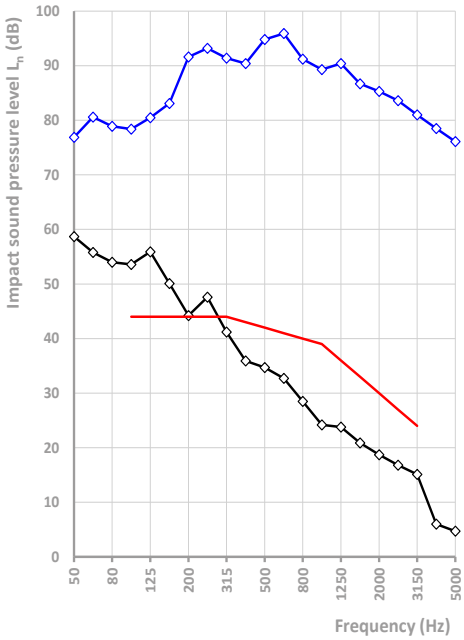
ELASTIC JUNCTION



Product	L_{nw} (dB)	R_w (dB)	U (W/m²K)
Highmat 30	42	69	0,230

1. Floor finishing, th. 15 mm
2. Screed, th. 60 mm
3. Acoustic insulation HIGHMAT
4. Timber joists floor, th. 200 mm
5. Acoustic insulation FYBRO 50 in double layer
6. Anti-vibration brackets REDFIX C28
7. Steel profile 50/27/0.6
8. Double layer of plasterboard, th. 25 mm

IMPACT SOUND INSULATION

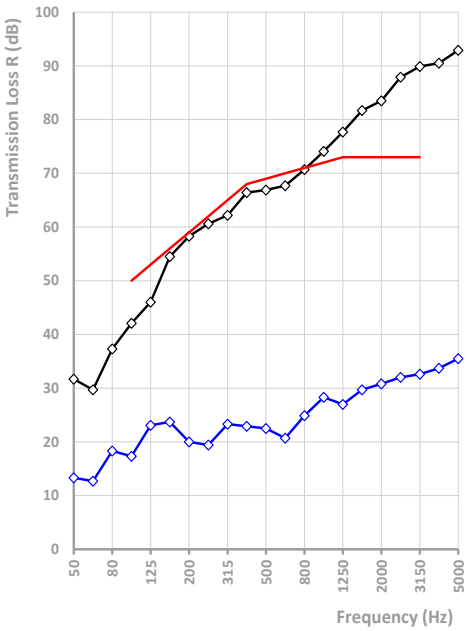


Fr Hz	Ln dB
50	58,7
63	55,8
80	54,0
100	53,6
125	55,9
160	50,1
200	44,2
250	47,6
315	41,2
400	35,9
500	34,7
630	32,7
800	28,5
1000	24,2
1250	23,8
1600	20,9
2000	18,7
2500	16,8
3150	15,1
4000	6,0
5000	4,7

= L_n wooden floor — = standard ISO 717-2 — = L_n insulated floor

Certified laboratory values, test report nr. 15-4974-005

AIRBORNE SOUND INSULATION



Fr Hz	R dB
50	31,7
63	29,7
80	37,3
100	42,1
125	46,0
160	54,5
200	58,3
250	60,6
315	62,2
400	66,4
500	66,9
630	67,7
800	70,7
1000	74,1
1250	77,7
1600	81,7
2000	83,5
2500	87,9
3150	89,9
4000	90,5
5000	92,9

= R wooden floor — = standard ISO 717-2 — = R insulated floor

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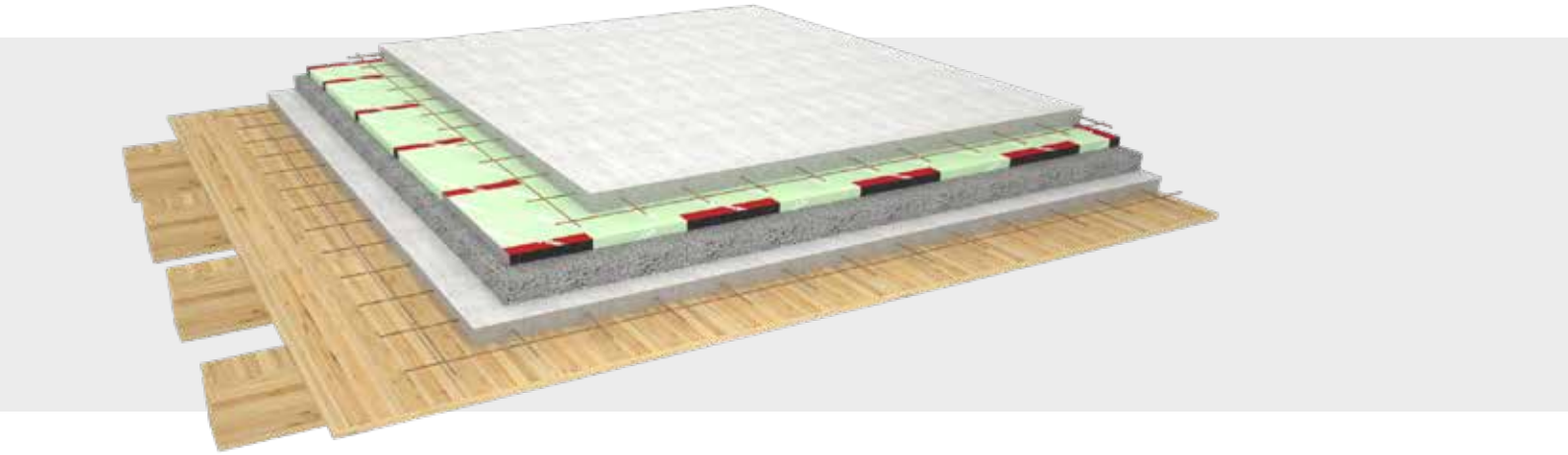
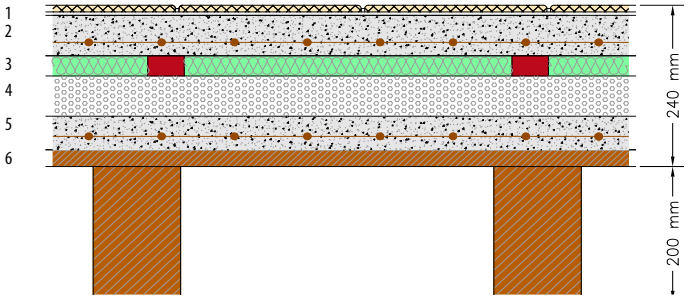
ACOUSTIC INSULATION
HIGHMAT LINE FOR WOODEN FLOORS

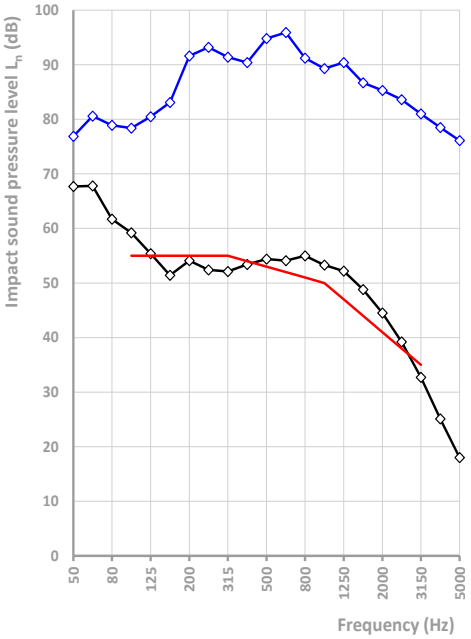




Product	L_{nw} (dB)	R_w (dB)	U (W/m²K)
Highmat 30	53	56	0,520

1. Floor finishing, th. 15 mm
2. Sand and cement bonded screed, th. 60 mm
3. Acoustic insulation HIGHMAT 30
4. Levelling screed, th. 60 mm
5. Reinforced concrete, th. 50 mm
6. Timber joists floor, th. 200 mm

IMPACT SOUND INSULATION

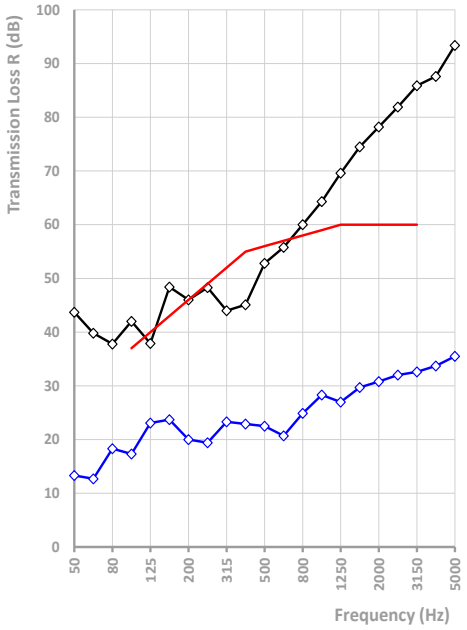


Fr Hz	Ln dB
50	67,7
63	67,8
80	61,7
100	59,2
125	55,4
160	51,4
200	54,1
250	52,4
315	52,1
400	53,4
500	54,4
630	54,1
800	55,0
1000	53,3
1250	52,2
1600	48,8
2000	44,5
2500	39,2
3150	32,7
4000	25,1
5000	18,0

= L_n wooden floor = standard ISO 717-2 = L_n insulated floor

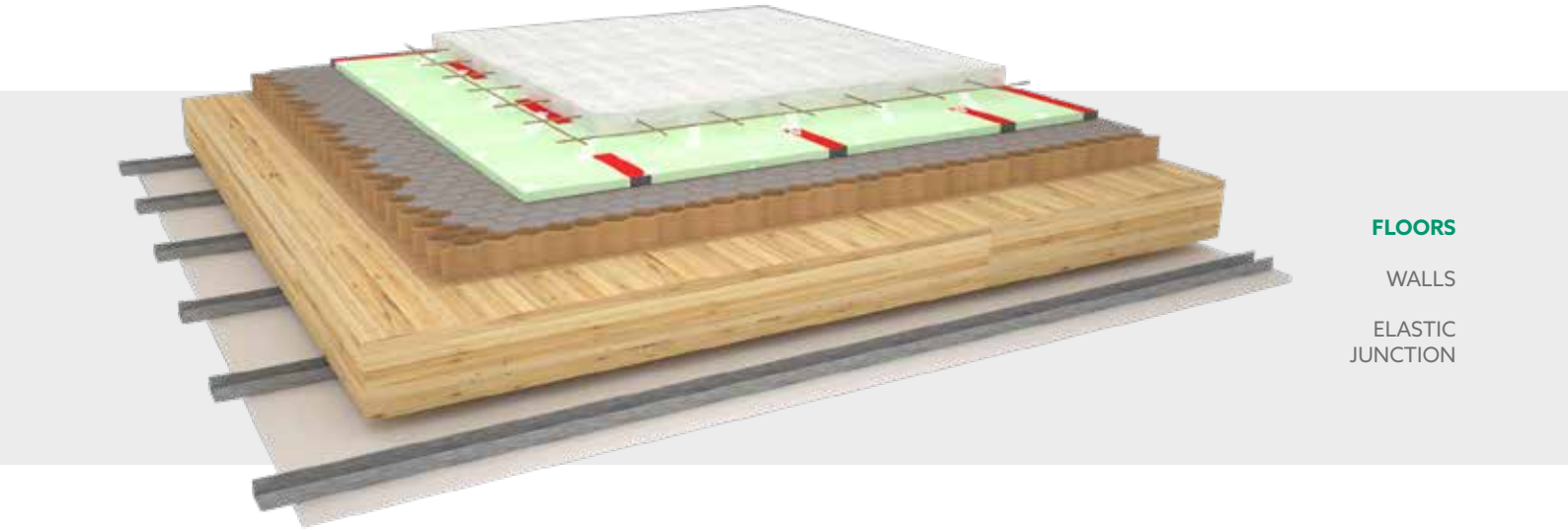
Calculated values

AIRBORNE SOUND INSULATION



Fr Hz	R dB
50	43,7
63	39,8
80	37,8
100	42,0
125	37,9
160	48,4
200	46,0
250	48,3
315	44,0
400	45,1
500	52,8
630	55,8
800	60,0
1000	64,3
1250	69,6
1600	74,5
2000	78,2
2500	81,9
3150	85,9
4000	87,6
5000	93,4

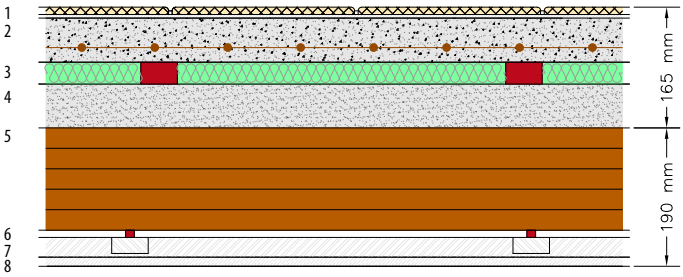
= R wooden floor = standard ISO 717-2 = R insulated floor



FLOORS

WALLS

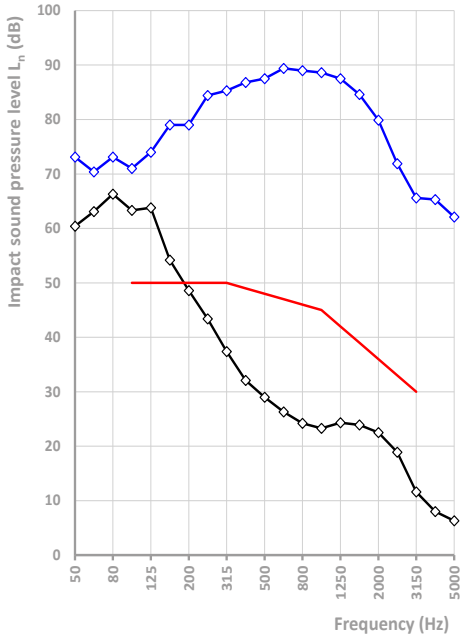
ELASTIC JUNCTION



Product	L_{nw} (dB)	R_w (dB)	U (W/m²K)
Highmat 30	48	60	0,460

1. Floor finishing, th. 15 mm
2. Screed, th. 60 mm
3. Acoustic insulation HIGHMAT 30
4. Sand filling, th. 60 mm
5. CLT floor, th. 140 mm
6. Anti-vibration brackets REDFIX C28
7. Steel profile 50/27/0.6
8. Plasterboard, th. 12,5 mm

IMPACT SOUND INSULATION

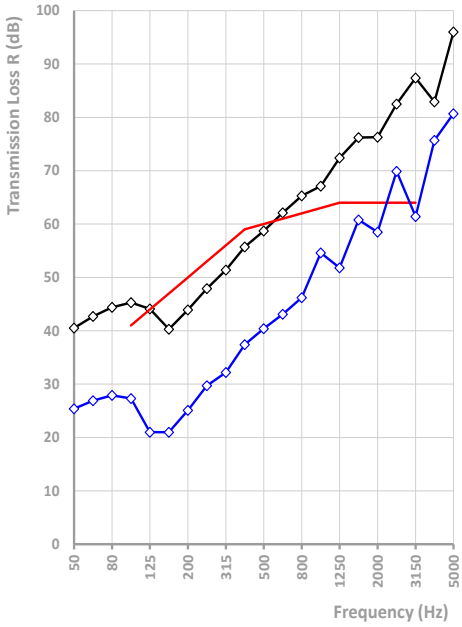


Fr Hz	Ln dB
50	60,4
63	63,1
80	66,3
100	63,3
125	63,8
160	54,2
200	48,6
250	43,4
315	37,4
400	32,1
500	29,0
630	26,3
800	24,2
1000	23,3
1250	24,3
1600	23,9
2000	22,5
2500	18,9
3150	11,6
4000	8,0
5000	6,3

= L_n wooden floor = standard ISO 717-2 = L_n insulated floor

Certified laboratory values, test report nr. 15-380-001

AIRBORNE SOUND INSULATION



Fr Hz	R dB
50	40,5
63	42,7
80	44,4
100	45,3
125	44,1
160	40,3
200	43,9
250	47,9
315	51,4
400	55,7
500	58,7
630	62,1
800	65,3
1000	67,1
1250	72,4
1600	76,2
2000	76,3
2500	82,5
3150	87,4
4000	82,9
5000	96,0

= R CLT floor = standard ISO 717-2 = R insulated floor

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ACOUSTIC INSULATION
UPGREI LINE FOR WOODEN FLOORS

Acoustic and thermal insulation for floating floors

UPGREI is a product line for high performance in acoustic insulation, developed with cutting-edge technologies, for applications in the construction using floating screeds. Upgrei is made in rolls using a special type of EPDM rubber that exploits the tried and tested Grei technology, coupled with a polyester fibre layer.
The combination of these two materials gives the product excellent acoustic, thermal and mechanical properties.
The Upgrei line is ideal for impact sound insulation of wooden floors, especially when high acoustic performances are required.
The extremely resistant yet flexible mat adapts perfectly to the underlying surface and - thanks to the self-adhesive joining edge - allows a perfect connection of the edges of the rolls without having to use adhesive tape. As a result, the product can be applied easily and precisely, in a much shorter time.

APPLICATION FIELDS

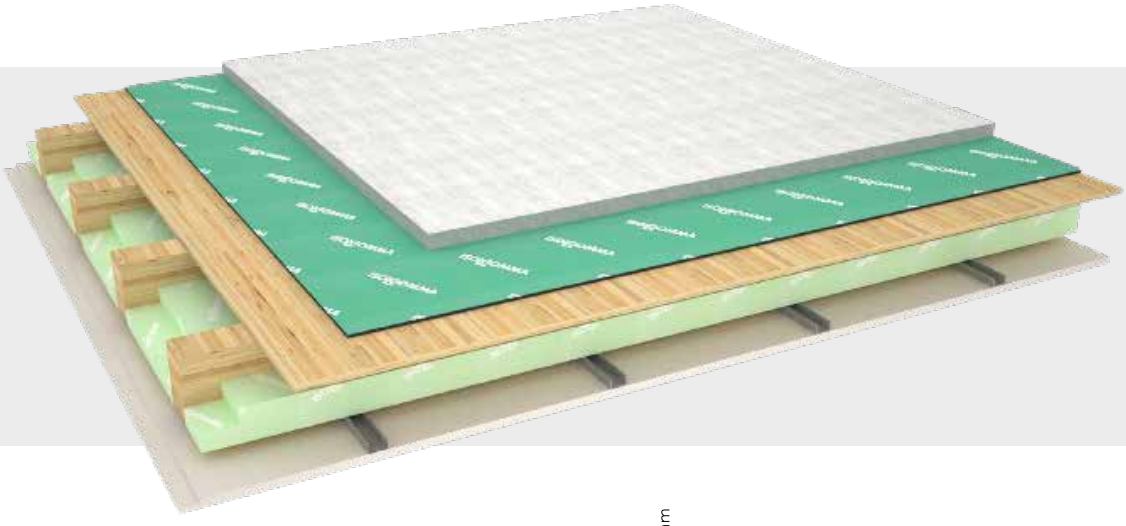
- Acoustic and thermal insulation of floating floors
- Acoustic and thermal insulation of high thickness screeds
- Applications on floors where a high acoustic performance is required

Technical features		Norm	UPGREI
Thickness	mm	-	10
Dimensions	m	-	1,04x5
Surface mass	kg/m²	-	2,65
Dynamic stiffness (s')	MN/m³	EN 29052-1	≤ 18
Impact sound level attenuation (ΔLw)	dB	EN ISO 10140	≥ 25
Thermal conductivity coefficient (λ)	W/m²K	EN 12667	0,047
Fire grade	Class	EN 13501-1	E_{fl}

COMPLEMENTARY PRODUCTS AND ACCESSORIES

FYBRO

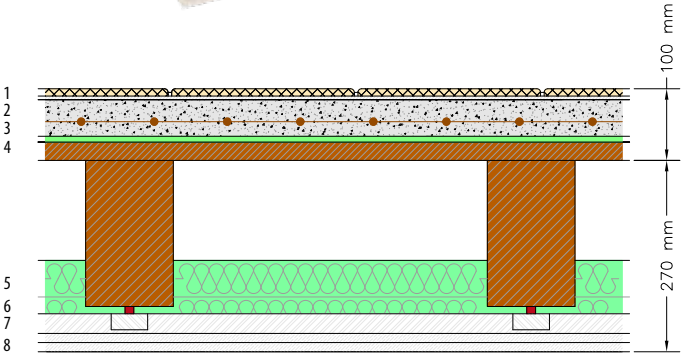
REDFIX



FLOORS

WALLS

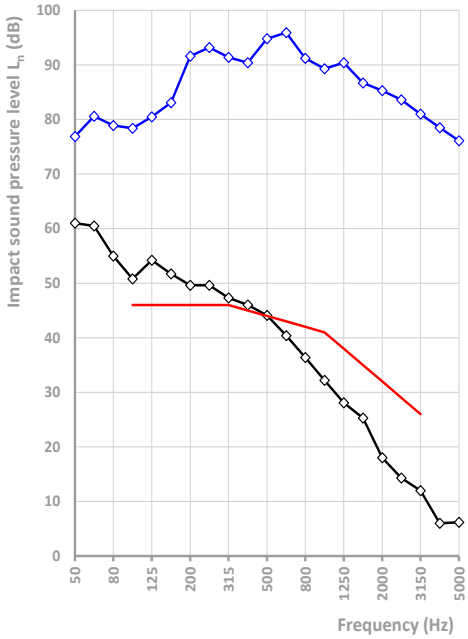
ELASTIC JUNCTION



Product	L_{nw} (dB)	R_w (dB)	U (W/m²K)
Upgrei	44	67	0,270

1. Floor finishing, th. 15 mm
3. Acoustic insulation UPGREI
4. Timber joists floor, th. 200 mm
5. Acoustic insulation FYBRO 50 in double layer
6. Anti-vibration brackets REDFIX C28
7. Steel profile 50/27/0.6
8. Double layer of plasterboard, th. 25 mm

IMPACT SOUND INSULATION

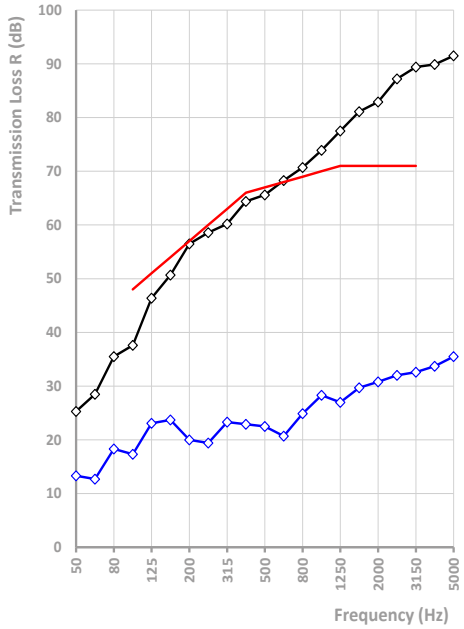


Fr Hz	Ln dB
50	61,0
63	60,5
80	55,0
100	50,8
125	54,2
160	51,7
200	49,6
250	49,6
315	47,3
400	46,0
500	44,1
630	40,4
800	36,4
1000	32,2
1250	28,1
1600	25,3
2000	18,0
2500	14,3
3150	12,0
4000	6,0
5000	6,2

= L_n wooden floor = standard ISO 717-2 = L_n insulated floor

Certified laboratory values, test report nr. 15-4974-003

AIRBORNE SOUND INSULATION



Fr Hz	R dB
50	25,3
63	28,5
80	35,5
100	37,6
125	46,4
160	50,7
200	56,5
250	58,6
315	60,2
400	64,4
500	65,6
630	68,3
800	70,7
1000	73,9
1250	77,5
1600	81,1
2000	82,9
2500	87,2
3150	89,4
4000	89,9
5000	91,5

= R wooden floor = standard ISO 717-2 = R insulated floor

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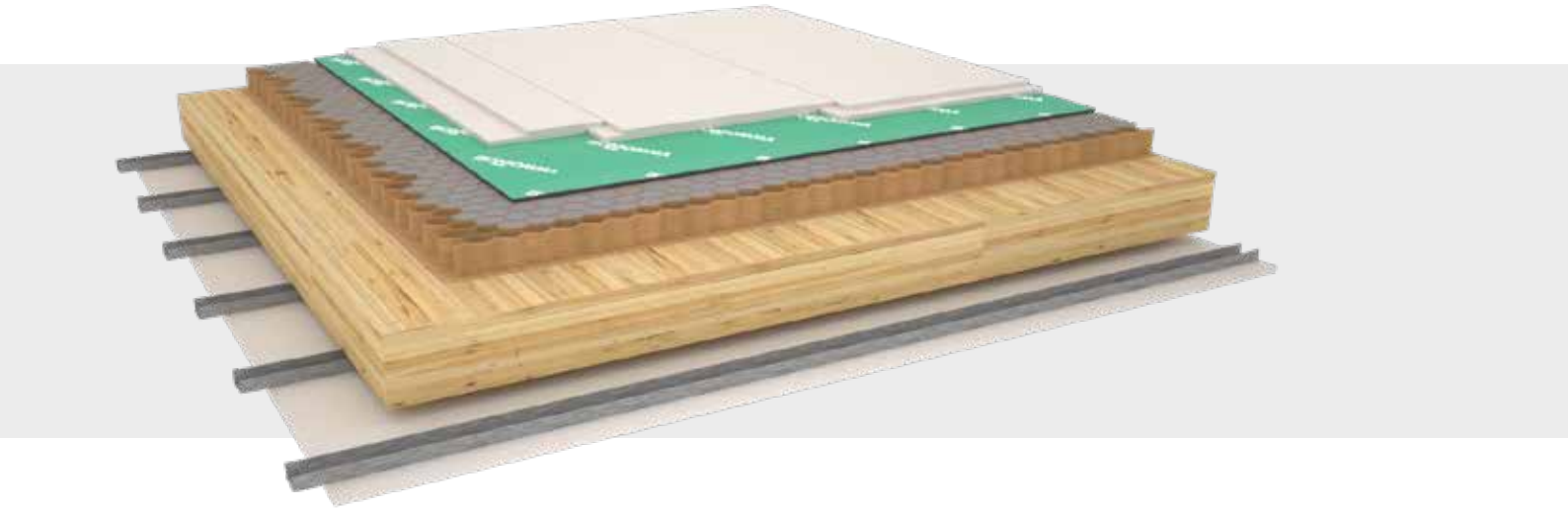
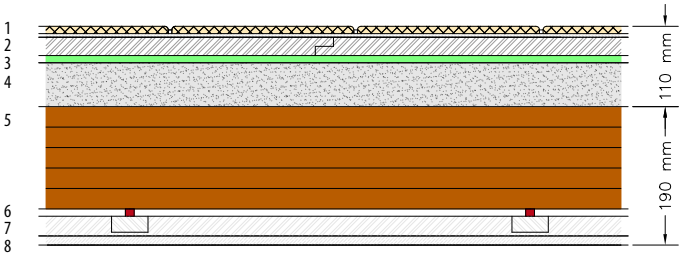
ACOUSTIC INSULATION
UPGREI LINE FOR WOODEN FLOORS

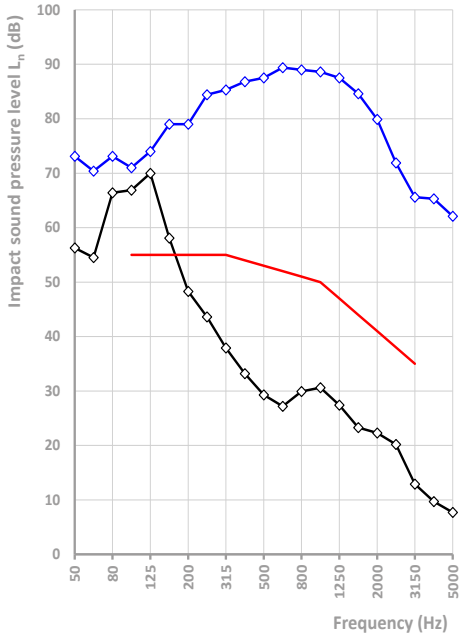




1. Floor finishing, th. 15 mm
2. Gypsum fiber underlayment, th. 25 mm
3. Acoustic insulation UPGREI
4. Sand filling, th. 60 mm
5. CLT floor, th. 140mm
6. Anti-vibration brackets REDFIX C28
7. Steel profile 50/27/0.6
8. Plasterboard, th. 12,5 mm

Product	L_{nw} (dB)	R_w (dB)	U (W/m²K)
Upgrei	53	59	0,630

IMPACT SOUND INSULATION

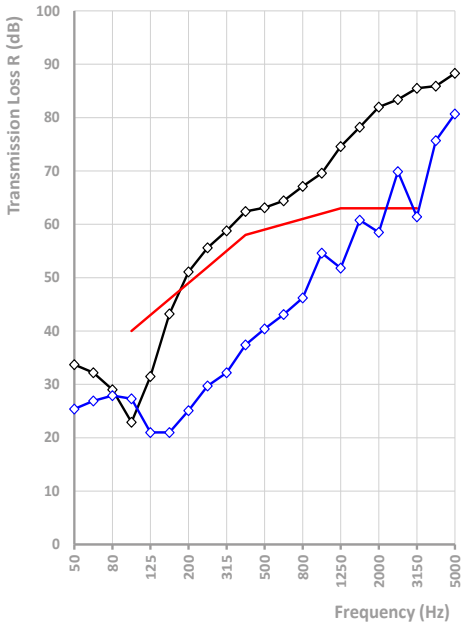


Fr Hz	Ln dB
50	56,3
63	54,5
80	66,4
100	66,9
125	70,0
160	58,1
200	48,3
250	43,6
315	37,9
400	33,2
500	29,3
630	27,2
800	29,9
1000	30,6
1250	27,4
1600	23,3
2000	22,3
2500	20,2
3150	12,9
4000	9,7
5000	7,7

= L_n wooden floor — = standard ISO 717-2 — = L_n insulated floor

Certified laboratory values, test report nr. 14-4529-005

AIRBORNE SOUND INSULATION



Fr Hz	R dB
50	33,7
63	32,2
80	29,0
100	22,9
125	31,5
160	43,2
200	51,1
250	55,6
315	58,8
400	62,4
500	63,1
630	64,4
800	67,1
1000	69,6
1250	74,6
1600	78,2
2000	82,0
2500	83,4
3150	85,5
4000	85,9
5000	88,3

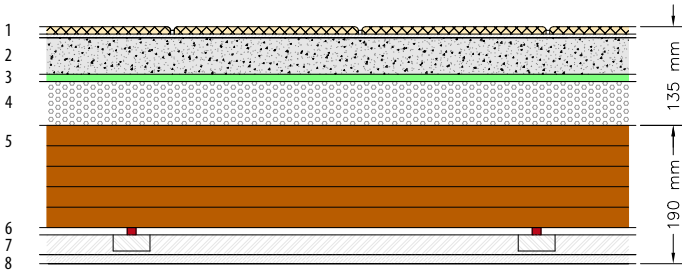
= R CLT floor — = standard ISO 717-2 — = R insulated floor

Certified laboratory values, test report nr. 14-4529-007

FLOORS

WALLS

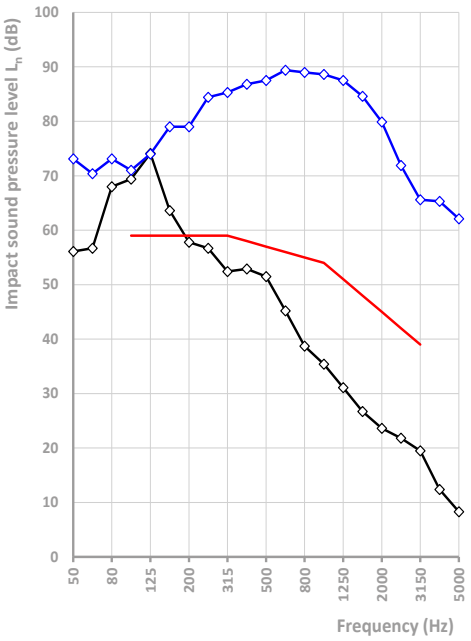
ELASTIC JUNCTION



1. Floor finishing, th. 15 mm
2. Sand and cement bonded screed, th. 50mm
3. Acoustic insulation UPGREI
4. Levelling screed, th. 60 mm
5. CLT floor, th. 140 mm
6. Anti-vibration brackets REDFIX C28
7. Steel profile 50/27/0.6
8. Plasterboard, th. 12,5 mm

Product	L_{nw} (dB)	R_w (dB)	U (W/m²K)
Upgrei	57	57	0,470

IMPACT SOUND INSULATION

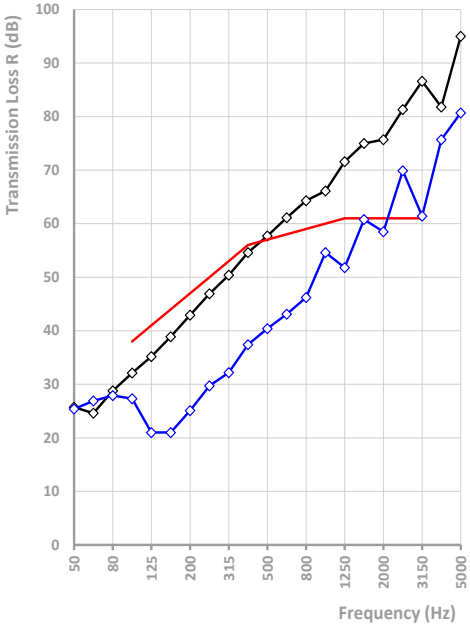


Fr Hz	Ln dB
50	56,1
63	56,7
80	68,0
100	69,4
125	74,1
160	63,6
200	57,8
250	56,7
315	52,4
400	52,9
500	51,5
630	45,2
800	38,7
1000	35,4
1250	31,1
1600	26,7
2000	23,6
2500	21,8
3150	19,5
4000	12,4
5000	8,3

= L_n wooden floor = standard ISO 717-2 = L_n insulated floor

Certified laboratory values, test report nr. 14-4529-003

AIRBORNE SOUND INSULATION

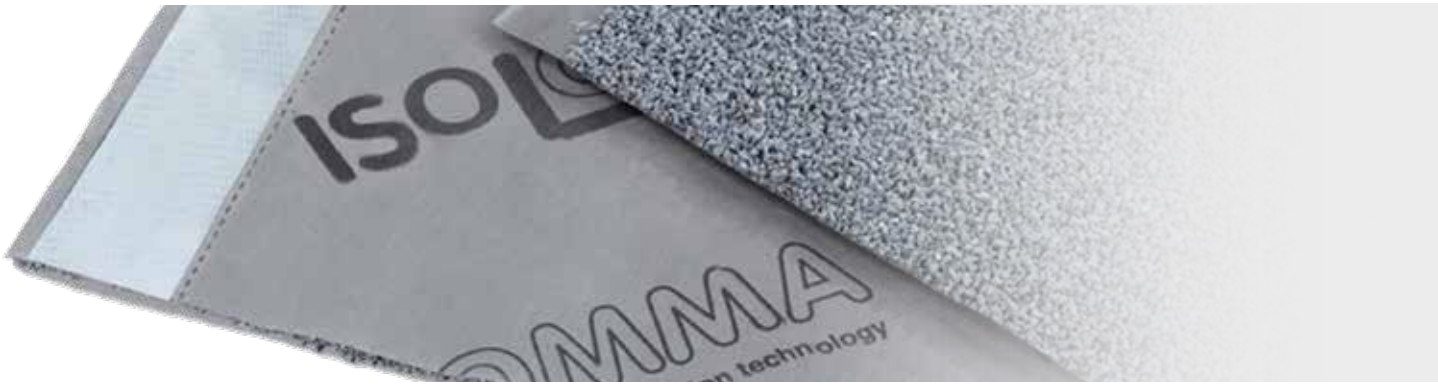


Fr Hz	R dB
50	25,7
63	24,6
80	28,8
100	32,1
125	35,2
160	38,9
200	42,9
250	46,9
315	50,4
400	54,6
500	57,7
630	61,1
800	64,3
1000	66,1
1250	71,6
1600	75,0
2000	75,7
2500	81,3
3150	86,6
4000	81,8
5000	95,0

= R CLTfloor = standard ISO 717-2 = R insulated floor

ISOLGOMMA
SILENCE MAKERS

ACOUSTIC INSULATION
GREI LINE FOR WOODEN FLOORS



Acoustic insulation for floating floors

GREI is a product range for acoustic insulation of floors and was developed for constructing high-quality slabs guaranteeing excellent insulation performances.
The use of a special EPDM rubber combined with a specific patented production process guarantee a product with superior mechanical and acoustic properties and making it ideal for impact noise insulation on all types of slabs.
The extremely resistant yet flexible mat adapts perfectly to the underlying surface and - thanks to the self-adhesive joining edge - allows for joining the edges of the rolls without having to use adhesive tape. As a result, the product can be applied easily and precisely, in a much shorter time.

APPLICATION FIELDS

- Floor slabs with floating floor finishing
- High thickness screeds

Technical features		Norm	GREI	
Thickness	mm	-	5	8
Dimensions	m	-	1,04x5	
Surface mass	kg/m²	-	2,4	2,9
Dynamic stiffness (s')	MN/m³	EN 29052-1	15	11
Impact sound level attenuation (ΔLw)	dB	EN ISO 10140	23	24
Thermal conductivity coefficient (λ)	W/m²K	EN 12667	0,067	

COMPLEMENTARY PRODUCTS AND ACCESSORIES

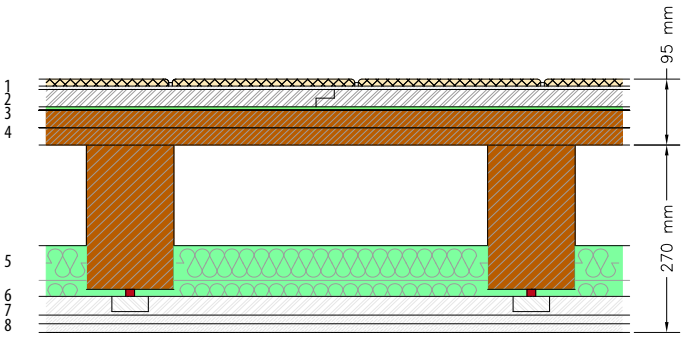
FYBRO

REDFIX

FLOORS

WALLS

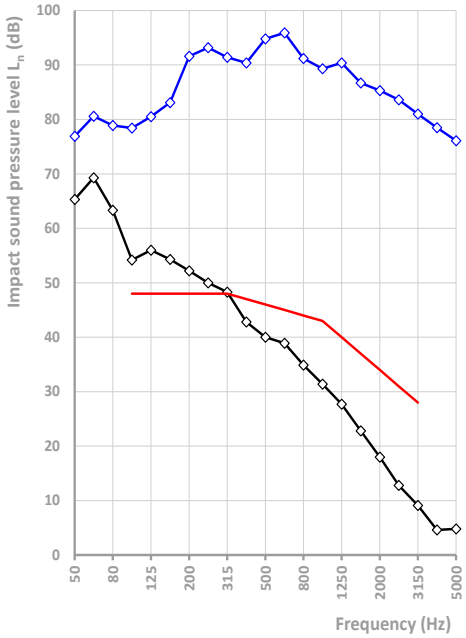
ELASTIC JUNCTION



Product	L_{nw} (dB)	R_w (dB)	U (W/m²K)
Grei 5	46	63	0,270

1. Floor finishing, th. 15 mm
2. Gypsum fiber underlayment, th. 25 mm
3. Acoustic insulation GREI 5
4. Timber joists floor, th. 20 mm
5. Acoustic insulation FYBRO 50, double layer
6. Anti-vibration brackets REDFIX C28
7. Steel profile 50/27/0.6
8. Double layer of plasterboard, th. 25 mm

IMPACT SOUND INSULATION

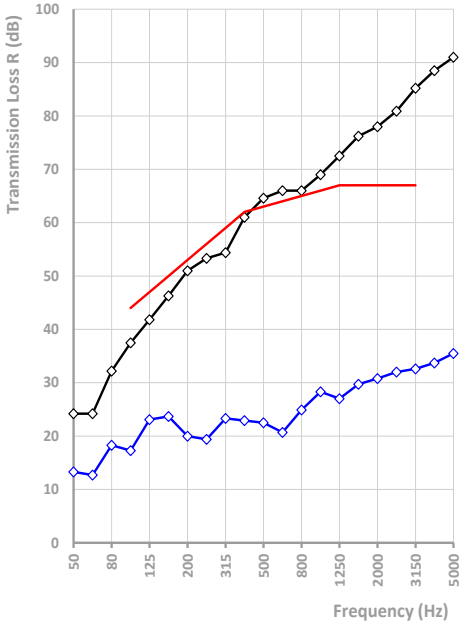


Fr Hz	Ln dB
50	65,3
63	69,3
80	63,3
100	54,2
125	56,0
160	54,3
200	52,2
250	50,0
315	48,3
400	42,8
500	40,0
630	38,9
800	34,9
1000	31,4
1250	27,7
1600	22,8
2000	18,0
2500	12,8
3150	9,1
4000	4,6
5000	4,8

= L_n wooden floor = standard ISO 717-2 = L_n insulated floor

Certified laboratory values, test report nr. 15-4974-012

AIRBORNE SOUND INSULATION

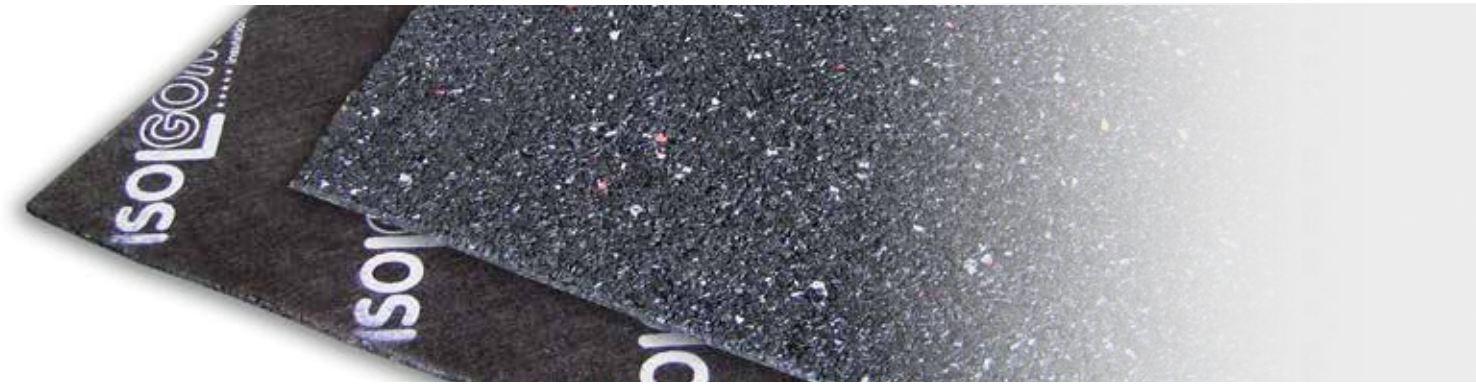


Fr Hz	R dB
50	24,2
63	24,2
80	32,2
100	37,5
125	41,8
160	46,3
200	51,0
250	53,3
315	54,4
400	61,0
500	64,6
630	66,0
800	66,0
1000	69,0
1250	72,5
1600	76,2
2000	78,0
2500	80,9
3150	85,2
4000	88,5
5000	91,0

= R wooden floor = standard ISO 717-2 = R insulated floor

ISOLGOMMA
SILENCE MAKERS

ACOUSTIC INSULATION
SYLPRO LINE FOR WOODEN FLOORS



Acoustic insulation for floating floors

SYLPRO AD is made of high density rubber for sound insulation with a direct application under base floor. The Sylpro line, made in rolls, is composed of highly flexible SBR rubber granules which, once hot pressed and bound with polyurethane binders, grant great acoustic performance and mechanic stability and a good level of impact sound insulation even beneath wooden floors.

APPLICATION FIELDS

- Acoustic insulation of floating floors

Technical features		Norm	SYLPRO AD		
Thickness	mm	-	6	8	10
Dimensions	m	-	1,2x8		
Surface mass	kg/m²	-	4,8	6,4	8,0
Dynamic stiffness (s')	MN/m³	EN 29052-1	77	60	68
Impact sound level attenuation (ΔLw)	dB	EN 12354-1	20	21	21
Thermal conductivity coefficient (λ)	W/m²K	EN 12667	0,120		

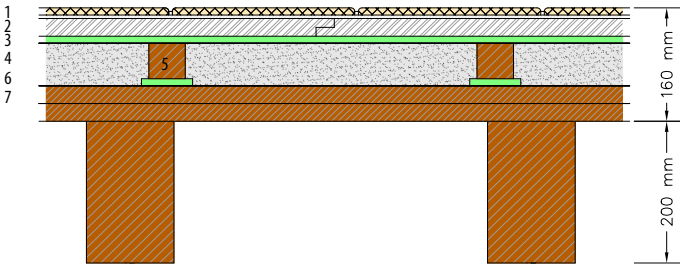
COMPLEMENTARY PRODUCTS

STYWALL AD PRO

FLOORS

WALLS

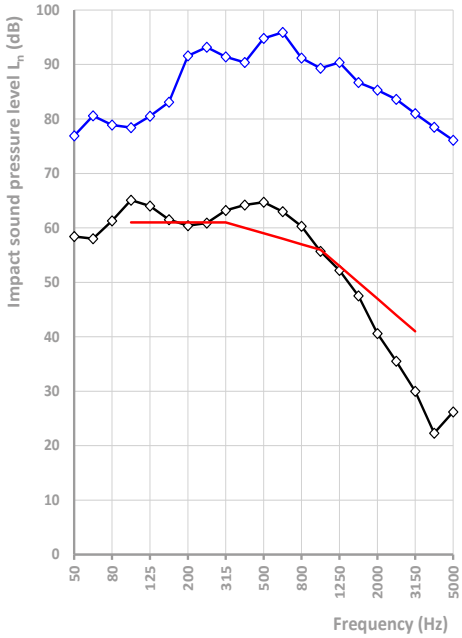
ELASTIC JUNCTION



1. Floor finishing, th. 15 mm
2. Gypsum fiber underlayment, th. 25 mm
3. Acoustic insulation SYLPRO 10 AD
4. Sand filling, th. 70 mm
5. Wooden beam, th. 65 mm
6. Acoustic insulation STYWALL AD PRO
7. Timber joists floor, th. 200 mm

Product	L_{nw} (dB)	R_w (dB)	U (W/m²K)
Sylpro 10 AD	59	59	1,100

IMPACT SOUND INSULATION

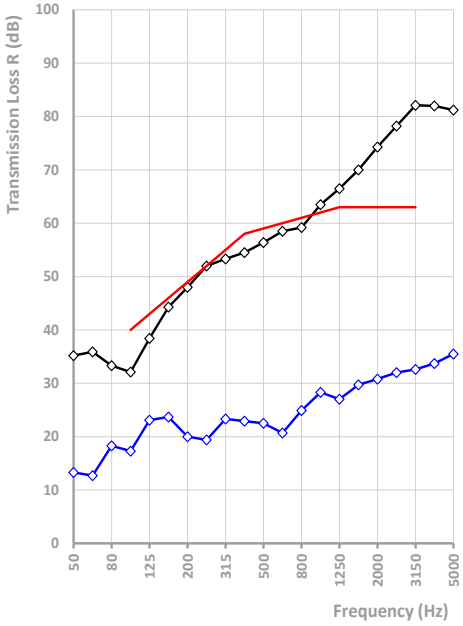


Fr Hz	Ln dB
50	58,4
63	58,0
80	61,3
100	65,1
125	64,0
160	61,5
200	60,4
250	60,9
315	63,2
400	64,2
500	64,7
630	63,0
800	60,3
1000	55,7
1250	52,2
1600	47,5
2000	40,6
2500	35,5
3150	30,0
4000	22,3
5000	26,2

= L_n wooden floor — = standard ISO 717-2 — = L_n insulated floor

Certified laboratory values, test report nr. 15-4974-011

AIRBORNE SOUND INSULATION

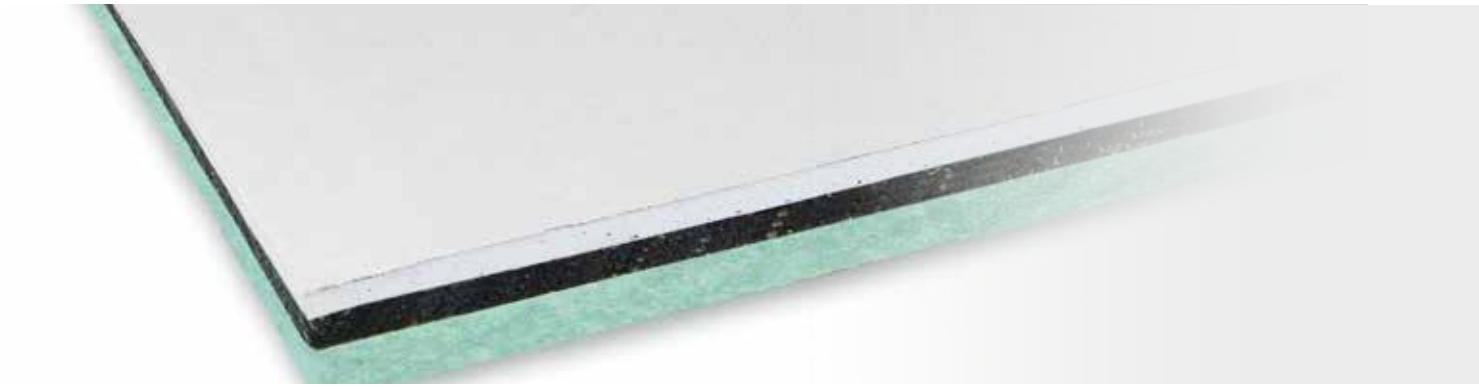


Fr Hz	R dB
50	35,2
63	35,9
80	33,3
100	32,1
125	38,4
160	44,3
200	48,0
250	52,0
315	53,3
400	54,5
500	56,4
630	58,5
800	59,2
1000	63,5
1250	66,5
1600	70,0
2000	74,3
2500	78,2
3150	82,1
4000	82,0
5000	81,2

= R wooden floor — = standard ISO 717-2 — = R insulated floor

ISOLGOMMA
SILENCE MAKERS

ACOUSTIC INSULATION
REWALL LINE FOR WOODEN WALLS



Acoustic and thermal insulation for walls

REWALL is a product of high thermo-acoustic features which was developed to increase the acoustic insulation performances of CLT walls.
Its low thickness allows the application even in situations of limited space and in renovations works.
It is composed of a panel of fibres and granules of SBR rubber coupled with a polyester fibre panel and a coated plaster board.

APPLICATION FIELDS

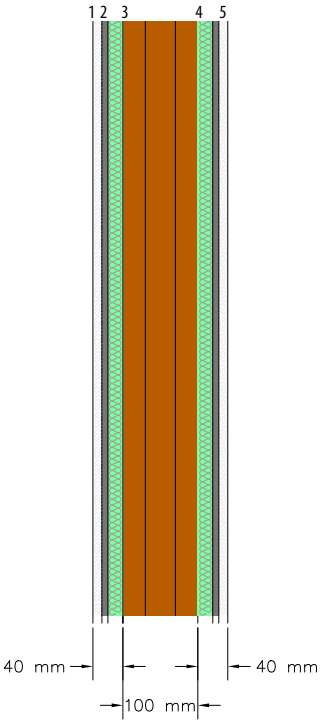
- Acoustic and thermal insulation of dividing walls and ceilings
- Applicable in existing settings where it is not possible to perform masonry work
- Recovering of existing walls without using the traditional metal structure

Technical features		Norm	REWALL
Thickness	mm	-	40
Dimensions	m	-	1,2x2
Surface mass	kg/m²	-	18,0
Thermal resistance	m² K/W	EN 12667	0,761

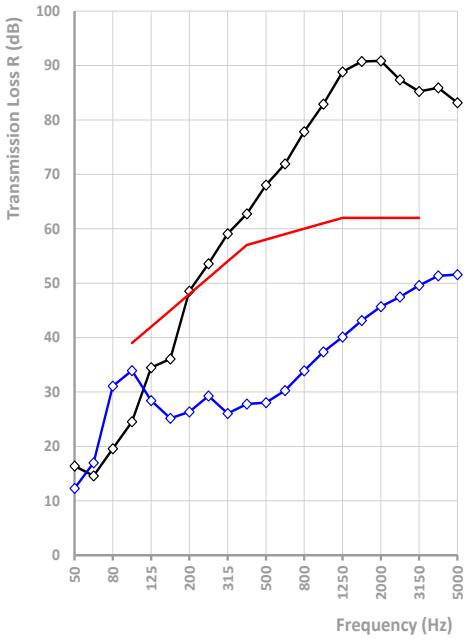
COMPLEMENTARY ACCESSORIES

PERLFIX
K465 ADHESIVE

GLUE SELENA
TYTAN 60S



AIRBORNE SOUND INSULATION



Fr Hz	R dB
50	16,4
63	14,6
80	19,6
100	24,5
125	34,5
160	36,1
200	48,6
250	53,6
315	59,1
400	62,8
500	68,0
630	71,9
800	77,8
1000	82,9
1250	88,8
1600	90,7
2000	90,8
2500	87,4
3150	85,2
4000	85,9
5000	83,2

= R CLT floor = standard ISO 717-2 = R insulated wall

Certified Isolgomma laboratory values

Product	R_w (dB)	U (W/m²K)
Rewall 40	58	0,403

1. Plasterboard, th. 12,5 mm
2. Acoustic Insulation REWALL 40
3. CLT wall, th. 100mm
4. Acoustic insulatin REWALL 40
5. Plasterboard, th. 12,5 mm

ACOUSTIC INSULATION

TRYWALL LINE FOR WOODEN WALLS

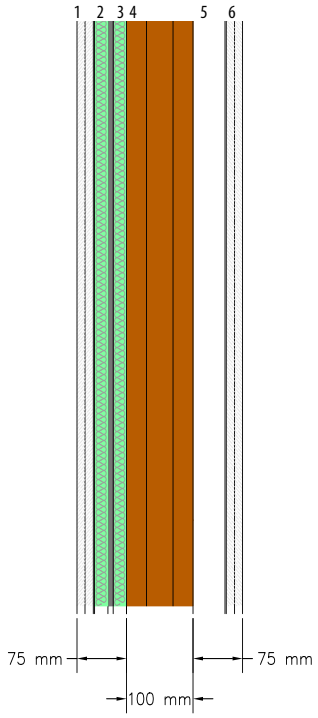
Acoustic and thermal insulation for walls

TRYWALL is specially developed to offer high acoustic insulation for applications with lining and lightweight walls made with a plasterboard structure.
It is a coupled product with a total thickness of 48 mm, composed of 2 elements in polyester fibre and a central high-density rubber board, which allows you to obtain a sound-insulating panel with a reduced environmental impact.
Trywall has been specifically designed for wall systems with cavities for implants thus avoiding air leaks. This type of product combines excellent acoustic performance with excellent results in thermal insulation and offers an extreme ease of installation in light wall systems as the different elements are already coupled and ready to install.

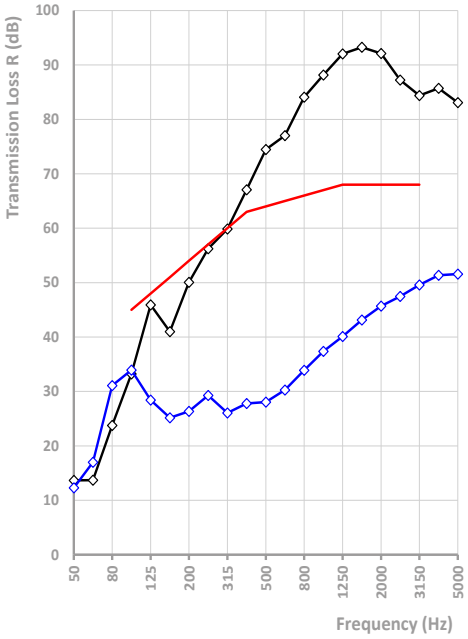
APPLICATION FIELDS

- Acoustic and thermal insulation of dividing walls and ceilings
- Recovering of existing walls with the use of the traditional metal structure

Technical features		Norm	TRYWALL
Thickness	mm	-	48
Dimensions	m	-	0,6x1,2
Surface mass	kg/m²	-	8,80
Thermal conductivity coefficient (λ)	W/m²K	EN 12667	0,047



AIRBORNE SOUND INSULATION



Fr Hz	R dB
50	13,7
63	13,7
80	23,7
100	33,2
125	45,9
160	41,0
200	50,1
250	56,2
315	59,9
400	67,1
500	74,5
630	77,0
800	84,1
1000	88,1
1250	92,0
1600	93,3
2000	92,1
2500	87,2
3150	84,4
4000	85,7
5000	83,1

= R CLT floor = standard ISO 717-2 = R insulated wall

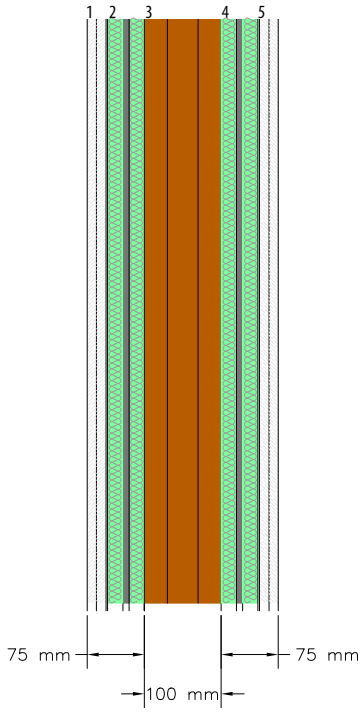
Certified Isolgomma laboratory values

Product	R_w (dB)	U (W/m²K)
Trywall 48	64	0,440

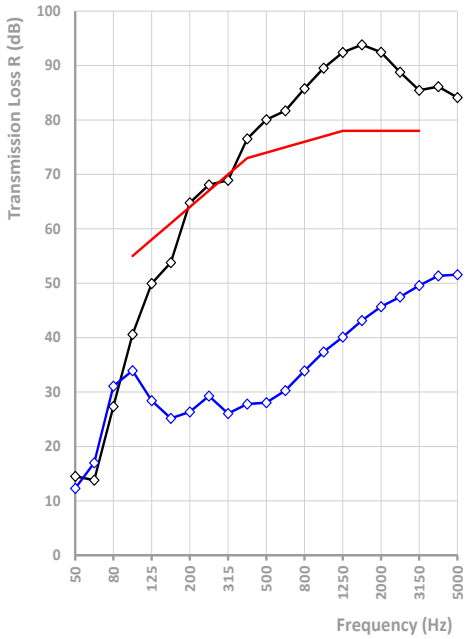
1. Double layer of plasterboard, th. 25 mm
2. Acoustic Insulation TRYWALL 48
3. Steel profile 50/50/0.6
4. CLT wall, th. 100 mm
5. Air gap (metal structure), th. 50 mm
6. Double layer of plasterboard, th. 25 mm

ISOLGOMMA
SILENCE MAKERS

ACOUSTIC INSULATION
TRYWALL LINE FOR WOODEN WALLS



AIRBORNE SOUND INSULATION

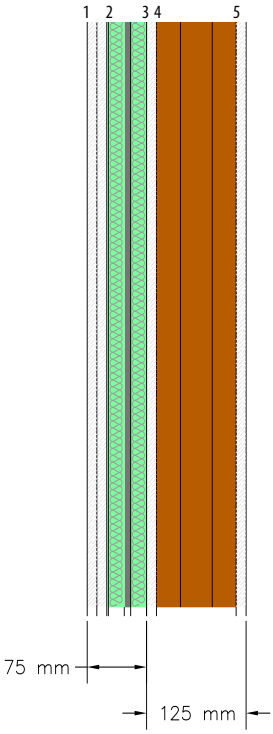


Fr Hz	R dB
50	14,5
63	13,8
80	27,4
100	40,6
125	50,0
160	53,8
200	64,8
250	68,1
315	68,9
400	76,5
500	80,0
630	81,7
800	85,7
1000	89,5
1250	92,4
1600	93,8
2000	92,5
2500	88,8
3150	85,5
4000	86,1
5000	84,1

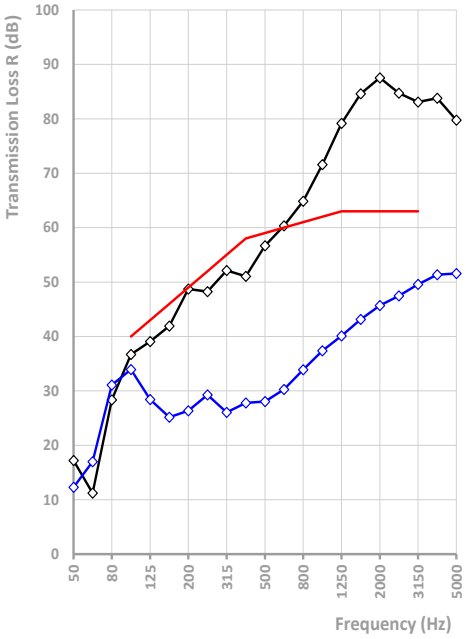
= R CLT floor = standard ISO 717-2 = R insulated wall
Certified Isolgomma laboratory values

Product	R_w (dB)	U (W/m²K)
Trywall 48	74	0,320

1. Double layer of plasterboard, th. 25 mm
2. Acoustic Insulation TRYWALL 48
3. CLT wall, th. 100 mm
4. Acoustic Insulation TRYWALL 48
5. Double layer of plasterboard, th. 25 mm



AIRBORNE SOUND INSULATION



Fr Hz	R dB
50	17,2
63	11,2
80	28,3
100	36,7
125	39,1
160	41,9
200	48,7
250	48,3
315	52,1
400	51,1
500	56,7
630	60,3
800	64,8
1000	71,6
1250	79,2
1600	84,6
2000	87,5
2500	84,7
3150	83,1
4000	83,8
5000	79,8

= R CLT floor = standard ISO 717-2 = R insulated wall

Certified Isolgomma laboratory values

Product	R_w (dB)	U (W/m²K)
Trywall 48	59	0,476

1. Double layer of plasterboard, th. 25 mm
2. Acoustic Insulation TRYWALL 48
3. Plasterboard, th. 12,5 mm
4. CLT wall, th. 100 mm
5. Plasterboard, th. 12,5 mm

ISOLGOMMA
SILENCE MAKERS

ACOUSTIC INSULATION
ELASTIC JUNCTION

Acoustic insulation and vibration control of CLT floors and walls

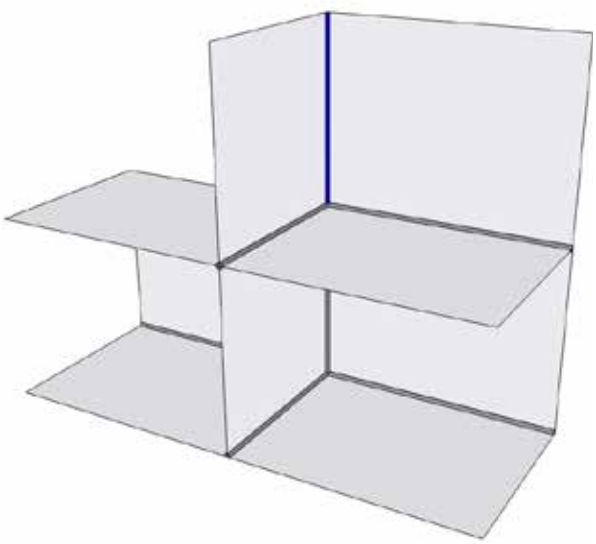
The strip JOINWOOD is a decoupling element for the reduction of lateral noise transmissions in CLT structures. The latter is the result of a research project that broadens the knowledge of the acoustic behaviour of wooden supporting structures which acoustic behaviour is improved through the introduction of this anti-vibration strip.
JOINWOOD is made in rolls with hot-pressed SBR rubber granules and anchored to an anti-tear non-woven support. Resistant to compression, it maintains excellent elastic properties which guarantee a damping effect on the transmission of acoustic waves inside the CLT structure.
Easy to use and to install, JOINWOOD is applicable within various configurations foreseen by the EN ISO 12354 standards for the management of Cross, X, T and L-shaped junctions.
It is an element of primary importance for the improvement of the overall acoustic performance of the structure as well as for the damping of vibrations that can be propagated throughout the structure itself.

APPLICATION FIELDS

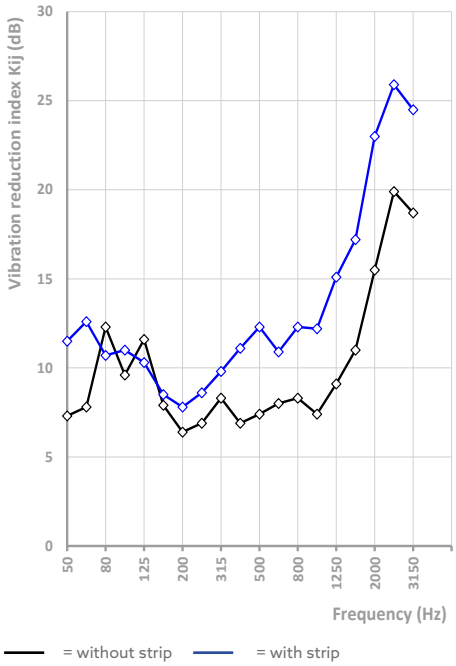
- Joints for CLT structures

Technical features		Norm	JOINWOOD
Thickness	mm	-	6
Length	m	-	8
Width	mm	-	100 - 140
Density	kg/m^3		800
Thermal conductivity coefficient (λ)	W/m^2K	EN 12667	0,120

LAYOUT FOR CROSS, T AND L-SHAPED JUNCTIONS



VIBRATION REDUCTION INDEX KIJ - L SHAPED JUNCTION



Values obtained through a series of experimental tests with the research project POR ESE 2014-2020 Veneto Region.

Project code 2105-99-2216-2016 "ALPS - High performance wooden buildings"

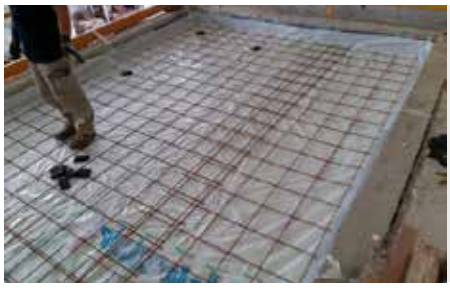
VIBRATION REDUCTION INDEX KIJ

The vibration reduction index is a fundamental indicator for lateral transmissions within the forecast calculation method of the levels of sound insulation in the field (R', L'n), according to the EN ISO 12354:2017 standard. This index, measured in accordance with EN ISO 10848: 2017, allows you to compare the performance of the joints of a structure or to set a requirement value. The data shown in the graph is part of an experimental study on CLT structures carried out in the laboratory in order to demonstrate the efficiency of the insulation strip compare to the non insulated structure.
With these values it is therefore possible, according to the forecast method of the EN ISO 12354: 2017 standard, to accurately predict the acoustic behaviour of the different partitions that make up the CLT structures.

ACOUSTIC INSULATION
INSTALLATION INDICATIONS FOR TIMBER STRUCTURES

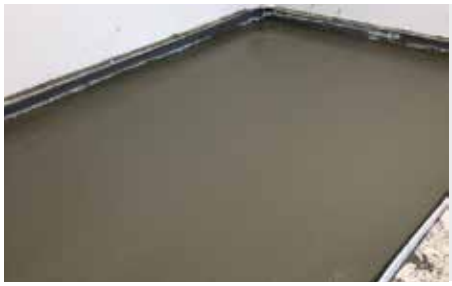
Bottom layers

Concrete layer



Install the steel mesh on the whole surface of the wooden floor, then raise it to the desired height

Realize the casting of the reinforced concrete

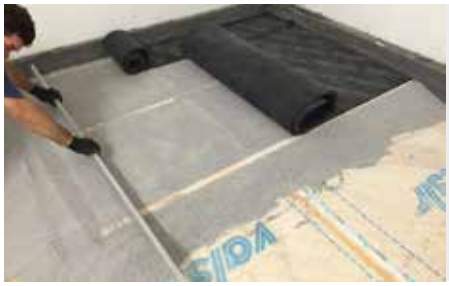


Level the concrete layer in order to get as smooth and plane as possible

Loose sand filling

Install the honeycomb on the whole floor surface

Fill the honeycomb with the heavy infill and level to obtain a smooth and plane surface



Without a honeycomb, use wooden joists to level the loose sand to the desired height

Impact sound insulation mats

Floating screed

Install the Profyle edging strip along the perimeter walls (use Profyle Flat when insulation panels are used)

Install the acoustic insulation on the whole floor surface, with a particular care of the edges and the junctions

Install a reinforcement steel mesh where needed and cast the screed

Dry screed

Install the edging strip Profyle Flat 5 along the perimeter walls

Install the acoustic insulation on the whole floor surface, with a particular care of the edges and the junctions

Install the dry screed, with a particular care of the junctions between adjacent floor elements

ISOLGOMMA
SILENCE MAKERS

ACOUSTIC INSULATION
INSTALLATION INDICATIONS FOR TIMBER STRUCTURES

Ceiling

Suspended ceiling on a wooden structure

Install the anti-vibration brackets and fasten the steel profiles to the brackets

Insert the Fybro panels in the space between the beams, taking care of covering also the exposed lower part of the beams

Close the ceiling with a double layer of gypsum-board; seal the joints and edges with gypsum plaster

Suspended ceiling between beams

Fix the 50 mm steel studs to the beams' side using screws and Stywall S3-A rubber stripe

Insert the Fybro panels (cut in the correct dimensions) in the cavity of the steel studs

Fix the Rewall 40 insulation panels to the steel profiles using screws with minimum length 55 mm

Ceiling

Suspended ceiling on CLT structure

Fix the steel U profiles to the walls at the perimeter of the ceiling

Install the steel C/U profiles with a spacing of 40-60 cm; Fybro panels can be inserted in the cavity to improve thermal and acoustic insulation

Close the ceiling with gypsum fibreboards; seal the joints and edges with gypsum plaster

Flooring installation

Ceramic or wooden flooring

Lay the adhesive on the floor and install the ceramic tiles or the wooden flooring

Apply the grouting glue and clean the ceramic tiles

Cut the exceeding part of the Profyle and remove it only when the floor finishing has been completely installed

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NOTES

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FLOORS

WALLS

ELASTIC
JUNCTION

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