



SOLUTIONS FOR  
**UNDERLAY ACOUSTIC  
INSULATION**



# UNDERLAY ACOUSTIC INSULATION



## Acoustic Insulation guarantees higher living standards

Isolgomma has been producing and distributing materials and solutions for sound insulation and vibration control for over 40 years in order to improve 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.



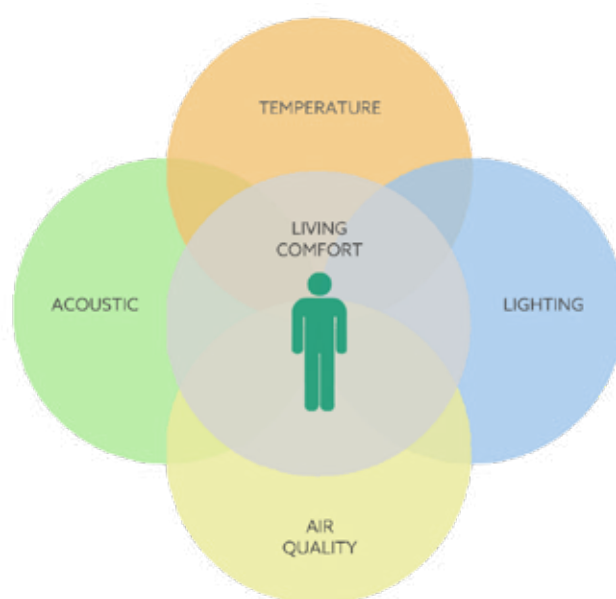


## Living comfort

The comfort within a home, a hotel or a working environment depends on four main parameters: Temperature, Lighting, Air quality and Acoustic. There is a high living comfort only when all these parameters reach an optimal value.

The quality of the air inside a building is influenced by many factors including the volatile organic compounds (VOC) released by the building materials. The use of certified VOC products ensures that there are no harmful emissions that reduce the air quality in the rooms for the users' welfare.

Even a disturbing noise can significantly affect the psychophysical comfort of the individual so to represent one of the most common factors of harmfulness for workplace and home environments. For this reason, a building with high levels of sound insulation is a condition sine qua non to achieve a high standard of living.



# UNDERLAY ACOUSTIC INSULATION



## UNDERLAY SYSTEM

The impact sound underlay mats are perfectly integrated into the floor system, constituting the interface between the flooring and the screed. In the case of ceramic flooring, it is also essential to guarantee the grip of the tiles subjected to stress caused by foot and accidental impacts or punctual loads.

Therefore, the underlay mat, in addition to its noise reducing purpose, must perform several other functions such as:

- Ensure flatness and a correct position: eliminating unevenness and creating a flat surface that will ensure an appropriate laying of the floating floor
- Preserving the floor over time: an adequate insulating material ensures a full and lasting functionality of the entire flooring system subjects to daily use. Moreover, applied under wooden floors, it can protect against the humidity coming from beneath
- Improving the flooring's features : in addition to reducing impact and footsteps noises, the mat also influences on the thermal properties and the walking comfort

## RESPECTING THE NORM

The standards that define the characteristics of a mat placed under laminated floors is the CEN / TS 16354, which defines the test methods used to analyse a series of technical parameters that the material must have for this specific application.

More especially, the norm identifies the following main parameters:

- Thickness (d)
- Surface mass (AW)
- Punctual confortability (PC)
- Compressive Strength (CS)
- Compressive creep (CC)
- Dynamic load (DL)
- Thermal resistance (R)
- Protection against moisture (Sd)
- Impact sound reduction (IS)
- Reflected walking sound (RWS)







The norm in the Appendix B presents levels of performance based on 6 different main characteristics, in particular:

CHARACTERISTICS	CATEGORY	REQUIREMENT	
Punctual confortability (PC)	PC0 PC1 PC2 PC3	1 mm ≤ 2 mm ≤	PC < 1 mm PC < 2 mm PC < 3 mm PC ≤ 3 mm
Compressive Strength (CS)	CS0 CS1 CS2 CS3	10 kPa ≤ 50 kPa <	CS < 10 kPa CS ≤ 50 kPa CS ≤ 200 kPa CS > 200 kPa
Compressive creep (CC)	CC0 CC1 CC2 CC3	2 kPa ≤ 25 kPa <	CC < 2 kPa CC ≤ 25 kPa CC ≤ 50 kPa CS > 50 kPa
Dynamic load (DL)	DL0 DL1 DL2	10.000 ≤	DL < 10.000 cycle DL ≤ 100.000 cycle DL > 100.000 cycle
Impact sound reduction (IS)	IS0 IS1 IS2	15 dB ≤	ΔLw < 15 dB ΔLw < 17 dB ΔLw ≥ 17 dB
Reflected walking sound(RWS)	RWS0 RWS1 RWS2 RWS3	25 sone < 20 sone ≤	RWS > 30 sone RWS ≤ 30 sone RWS ≤ 25 sone RWS < 20 sone

In order to evaluate better the behavior of the flooring subject to dynamic actions, reference can be made to the EN 425 standard "Resilient and laminate floor coverings - Castor chair test". The norm sets a method for determining changes in appearance and stability of resilient and laminate floor coverings, including junctions, with the movement of a castor chair; this experiment carried out on the flooring allows to understand if the mat can be responsible of the eventual deterioration of the laminate due to excessive yielding under dynamic load conditions.



# UNDERLAY ACOUSTIC INSULATION

## BASEWOOD EL



### Acoustic insulation for wooden flooring

**BASEWOOD EL** is a product created from the great experience of Isolgomma in anti-impact noise mats, with a production process similar to the other roll lines by the falling of SBR (Styrene Butadiene Rubber) rubber granules on an anti-tear non-woven support. This technology allows the evenness of the surface floor and improves the insulation performance without compromising the stability of the flooring. Basewood EL is ideal for renovation works, in cases where the screeds don't have to be removed but when an intervention is necessary to improve the acoustic quality of the rooms. It can be installed on existing floors and used under a prefinished parquet or laminate of any thickness and size.

The product is to be installed directly under the flooring but in the adhesive format, the flooring can be glued to the mat, improving the footsteps noise insulation within the rooms.

#### APPLICATION FIELDS

- Acoustic insulation for prefinished wood flooring
- Acoustic insulation for laminate flooring
- Renovation works with low thickness available

Technical features		Norm	BASEWOOD EL
Thickness	mm	EN 12431	4,5
Dimensions	m	EN 822	1,04 x 10
Mass per unit area	kg/m <sup>2</sup>	EN 1602	1,00
Dynamic stiffness (s')	MN/m <sup>3</sup>	EN 29052-1	33
Impact sound pressure level attenuation ( $\Delta L_w$ )	dB	EN ISO 10140 EN ISO 717-2	20
Thermal conductivity coefficient ( $\lambda$ )	W/m K	EN 12667	0,099
Compressibility c	mm	EN 12431	1,1
Castor chair test	cycles	EN 425	> 25.000



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#### ACCESSORIES



PROFYLE FLAT 5



STIK HD

SOLUTIONS FOR  
UNDERLAY ACOUSTIC  
INSULATION

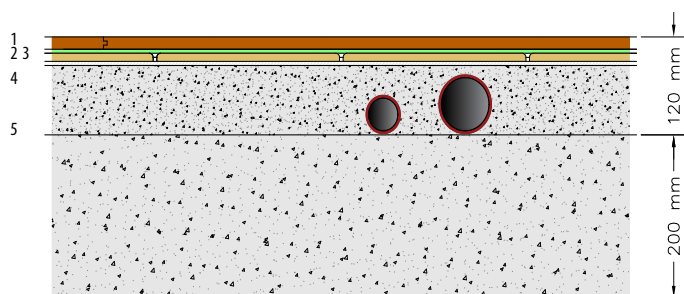


## BASEWOOD EL

SYLWOOD

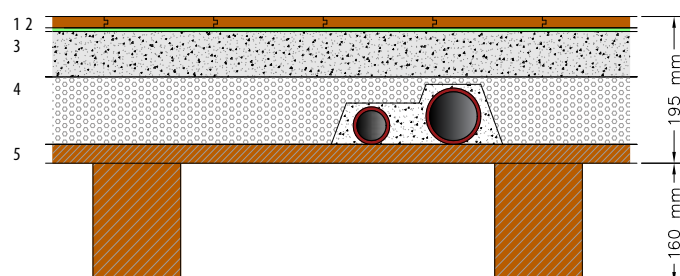
SYLPRO

SYLCER



Product	$L_{nw}$ (dB)	$R_w$ (dB)	$U$ (W/m <sup>2</sup> K)
BASEWOOD EL	54	58	1,62

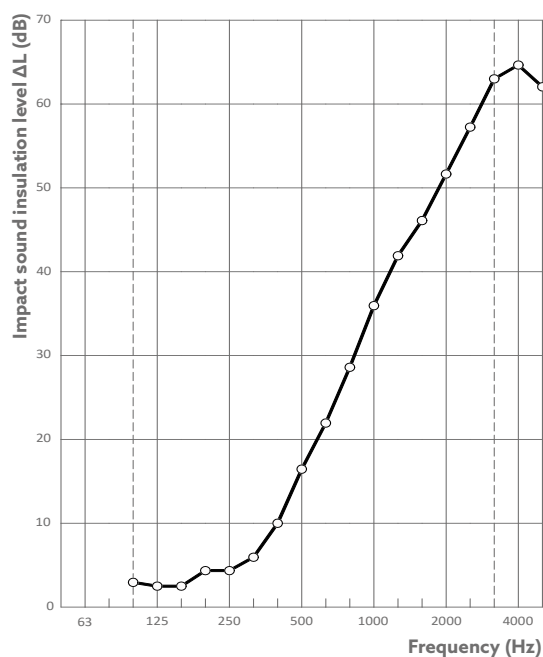
1. Parquet flooring, thickness 15 mm
2. Acoustic insulation BASEWOOD EL
3. Existing flooring, th. 10 mm
4. Sand and cement bonded screed, th. 80 mm
5. Concrete slab, th. 200 mm



Product	$L_{nw}$ (dB)	$R_w$ (dB)	$U$ (W/m <sup>2</sup> K)
BASEWOOD EL	63	53	0,57

1. Parquet flooring, th. 15 mm
2. Acoustic insulation BASEWOOD EL
3. Sand and cement bonded screed, th. 50 mm
4. Levelling screed, th. 100 mm
5. Timber joists floor, th. 185 mm

## IMPACT SOUND INSULATION EN ISO 10140 & EN ISO 717-2



$$\Delta L_w \geq 20 \text{ dB}$$

The results are concerning the tested structure.

Laboratory measurement of the acoustic insulation elements of the standard building. Measurement of the impact noise insulation.

Test composition:

- 140 mm Concrete slab
- 4,5 mm BASEWOOD EL
- 14 mm Parquet flooring

**Total thickness 160 mm**

Fr. Hz	$\Delta L$ dB
100	3,0
125	2,5
160	2,5
200	4,3
250	4,4
315	5,9
400	10,1
500	16,4
630	22,0
800	28,6
1000	35,9
1250	41,9
1600	46,1
2000	51,6
2500	57,3
3150	63,0
4000	64,7
5000	62,1

# UNDERLAY ACOUSTIC INSULATION

## SYLWOOD



### Acoustic insulation under wooden flooring

**SYLWOOD** is a high-performance product that is ideal for improving the existing room acoustic for any type of wood flooring during renovation works. Sylwood is a high density rubber mat with cork granules. The product has been specifically designed to meet the needs of renovation and acoustic improvement of existing floors, where a classic or prefinished wood flooring is considered. Sylwood can be easily applied directly under the wood flooring.

#### APPLICATION FIELDS

- Classic or pre-finished wooden flooring renovation
- Acoustic correction of existing floors following the regulatory requirements
- Compatible with heating floors



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Technical features		Norm	SYLWOOD	
Thickness	mm	EN 12431	3	5
Dimensions	m	EN 822	1 x 20	
Mass per unit area	kg/m <sup>2</sup>	EN 1602	2,1	3,5
Dynamic stiffness (s')	MN/m <sup>3</sup>	EN 29052-1	235	225
Impact sound pressure level attenuation ( $\Delta L_w$ )	dB	EN ISO 10140 EN ISO 717-2	20	
Thermal conductivity coefficient ( $\lambda$ )	W/m K	EN 12667	0,12	
Compressibility c	mm	EN 12431	0,1	

#### COMPLEMENTARY PRODUCTS AND ACCESSORIES



PROFYLE FLAT 5

GLUE FOR ABSORPTIVE SUPPORT

GLUE FOR NON-ABSORPTIVE SUPPORT



ULTRABOND ECO V4SP



ULTRABOND ECO S 955 1K



FYBRO



STIK HD



REDFIX



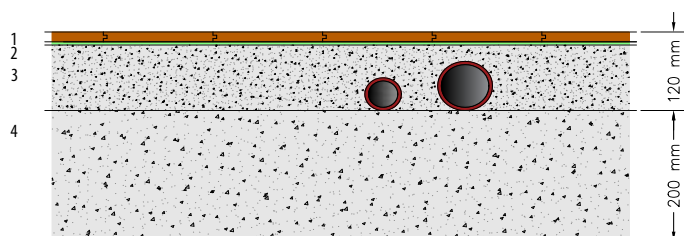


BASEWOOD EL

SYLWOOD

SYLPRO

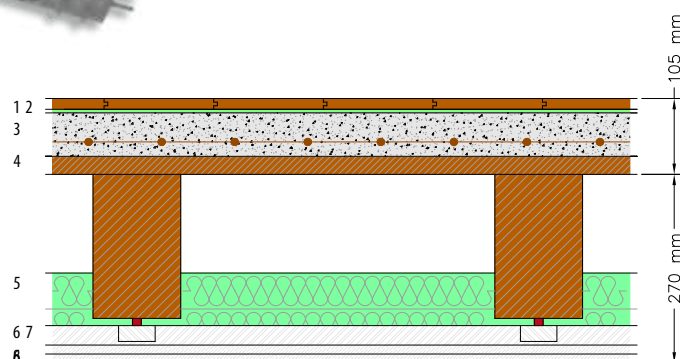
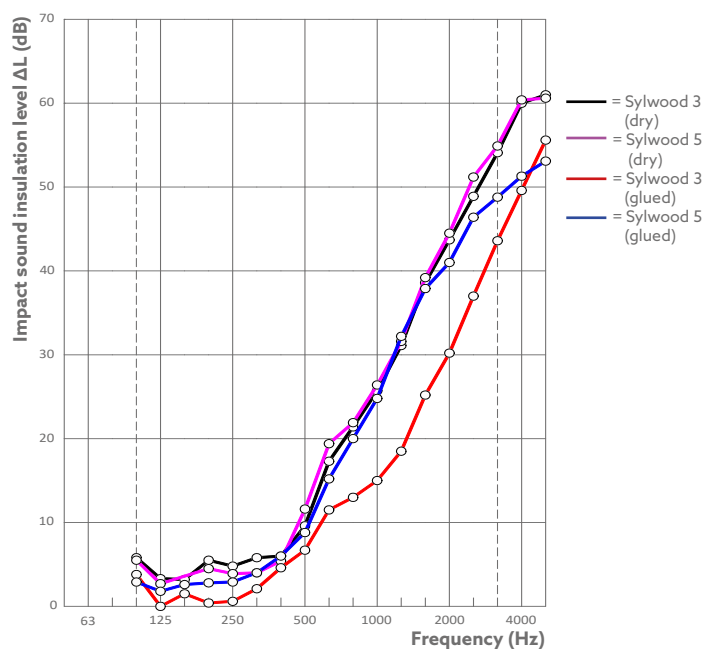
SYLCER



Product	$L_{nw}$ (dB)	$R_w$ (dB)	$U$ (W/m <sup>2</sup> K)
SYLWOOD 3 (dry)	55	58	1,71
SYLWOOD 5 (dry)	55	58	1,67
SYLWOOD 3 (glued)	58	58	1,71
SYLWOOD 5 (glued)	58	58	1,67

1. Parquet flooring, th. 15 mm
2. Acoustic insulation SYLWOOD
3. Sand and cement bonded screed, th. 80 mm
4. Concrete slab, th. 200 mm

#### IMPACT SOUND INSULATION EN ISO 10140 & EN ISO 717-2



Product	$L_{nw}$ (dB)	$R_w$ (dB)	$U$ (W/m <sup>2</sup> K)
SYLWOOD 3 (dry)	52	63	0,30
SYLWOOD 5 (dry)	52	63	0,29
SYLWOOD 3 (glued)	55	63	0,30
SYLWOOD 5 (glued)	55	63	0,29

1. Parquet flooring, th. 15 mm
2. Acoustic insulation SYLWOOD
3. Levelling screed, th. 60 mm
4. Timber joists floor, th. 200 mm
5. Acoustic insulation FYBRO 50 (double layer)
6. Anti-vibration brackets REDFIX C28
7. Steel profile 50/27/0.6
8. Double slab of plasterboard, th. 25 mm

Fr. Hz	Sylwood 3 $\Delta L$ dB	Sylwood 5 $\Delta L$ dB	Sylwood 3 $\Delta L$ dB	Sylwood 5 $\Delta L$ dB
100	5,8	5,5	3,8	2,9
125	3,3	2,7	0,0	1,8
160	3,2	3,6	1,5	2,6
200	5,5	4,5	0,4	2,8
250	4,8	3,9	0,6	2,9
315	5,8	4,0	2,1	4,0
400	6,0	5,4	4,6	6,0
500	9,6	11,6	6,7	8,8
630	17,3	19,4	11,5	15,2
800	21,4	21,9	13,0	20,0
1000	25,7	26,4	15,0	24,8
1250	31,1	31,6	18,5	32,2
1600	38,6	39,2	25,2	37,9
2000	43,7	44,5	30,2	41,0
2500	48,9	51,2	37,0	46,4
3150	54,1	54,9	43,6	48,8
4000	60,0	60,4	49,6	51,3
5000	61,0	60,6	55,6	53,1

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# UNDERLAY ACOUSTIC INSULATION

## SYLPRO



### Acoustic insulation under wooden flooring

**SYLPRO** is a high-performance product that is ideal for improving the existing room acoustic for any type of wood flooring during renovation works. Sylpro is a high density rubber mat. Sylpro can be easily applied directly under the wood flooring.

#### APPLICATION FIELDS

- Classic or pre-finished wooden flooring renovation
- Acoustic correction of existing floors following the regulatory requirements

Technical features		Norm	SYLPRO				
Thickness	mm	-	3	5	6	8	10
Height	m	EN 822	1,25				
Length	m	EN 822	20	10	8	6	
Mass per unit area	kg/m <sup>2</sup>	EN 1602	2,2	3,7	4,4	5,8	7,3
Dynamic stiffness s'	MN/m <sup>3</sup>	EN 29052-1	≤ 77	≤ 63	≤ 62	≤ 49	≤ 47
Impact sound pressure level attenuation $\Delta L_w$	dB	EN ISO 10140 EN ISO 717-2	19				
Thermal conductivity coefficient $\lambda$	W/mK	EN 12667	0,120				
Compressibility c	mm	EN 12431	0,2				



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#### ACCESSORI



PROFYLE FLAT 5



STIK HD

SOLUTIONS FOR  
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INSULATION

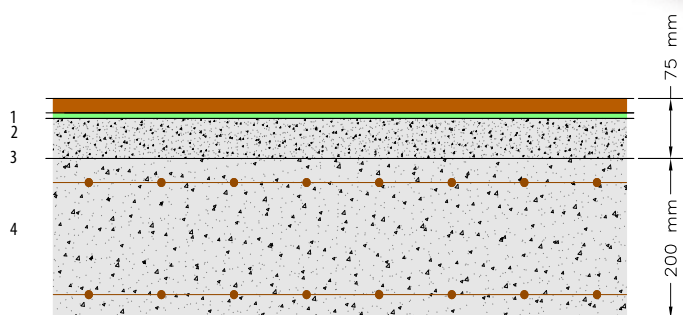


BASEWOOD EL

SYLWOOD

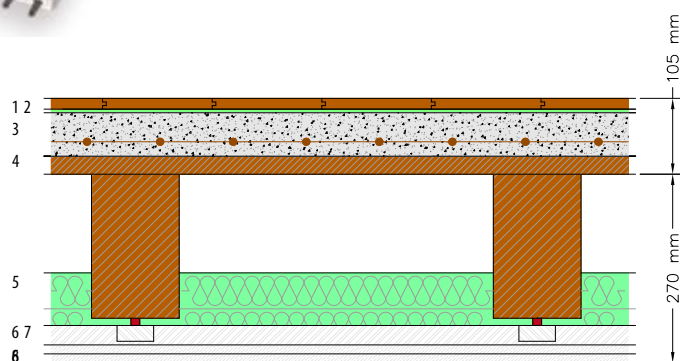
**SYLPRO**

SYLCER



Prodotto	$L_{nw}$ (dB)	$R_w$ (dB)	$U$ (W/m <sup>2</sup> K)
SYLPRO 5	54	60	1,78

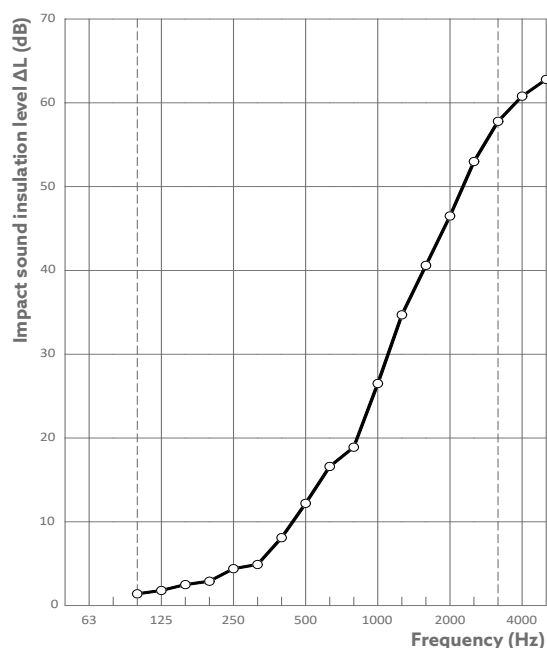
1. Parquet flooring, th. 10 mm
2. Acoustic insulation SYLPRO
3. Sand and cement bonded screed, th. 60 mm
4. Concrete slab, th. 200 mm



Prodotto	$L_{nw}$ (dB)	$R_w$ (dB)	$U$ (W/m <sup>2</sup> K)
SYLPRO 5 (dry)	53	63	0,30

1. Parquet flooring, th. 15 mm
2. Acoustic insulation SYLPRO
3. Levelling screed, th. 60 mm
4. Timber joists floor, th. 200 mm
5. Acoustic insulation FYBRO 50 (double layer)
6. Anti-vibration brackets REDFIX C28
7. Steel profile 50/27/0.6
8. Double slab of plasterboard, th. 25 mm

#### IMPACT SOUND INSULATION EN ISO 10140 & EN ISO 717-2



$$\Delta L_w \geq 19 \text{ dB}$$

The results are concerning the tested structure.

Laboratory measurement of the acoustic insulation elements of the standard building. Measurement of the impact noise insulation.

Test composition:

- 140 mm Concrete slab
- 3 mm SYLPRO dry
- 7 mm Glued laminate floor

**Total thickness 150 mm**

Fr. Hz	$\Delta L$ dB
100	1,4
125	1,8
160	2,5
200	2,9
250	4,4
315	4,9
400	8,1
500	12,2
630	16,6
800	18,9
1000	26,5
1250	34,7
1600	40,6
2000	46,5
2500	53,0
3150	57,8
4000	60,8
5000	62,8

# UNDERLAY ACOUSTIC INSULATION

## SYLCER



### Acoustic insulation under ceramic or stones floors

**SYLCER** is an innovative and highly performing product suitable for the acoustic restoration of existing structures, during building restructuring, for ceramic floor finishes.

Sylcer is a high-density regenerated rubber mat composed of low-thickness SBR and EPDM rubber that reduces impact sound transmission. It can be placed directly above the existing floor finish - without having to demolish the underlying structure - by applying the new ceramic or stone finish, or directly above screeds.

#### APPLICATION FIELDS

- Restructuring of ceramic or natural stone floor finishes
- Acoustic correction of existing floors in accordance with regulatory provisions
- Applicable on heated floors

Technical features		Norm	SYLCER
Thickness	mm	EN 12431	3
Dimensions	m	EN 822	1 x 20
Mass per unit area	kg/m <sup>2</sup>	EN 1602	2,46
Dynamic stiffness (s')	MN/m <sup>3</sup>	EN 29052-1	180
Impact sound pressure level attenuation ( $\Delta L_w$ )	dB	EN ISO 10140 EN ISO 717-2	17
Thermal conductivity coefficient ( $\lambda$ )	W/m K	EN 12667	0,12
Compressibility c	mm	EN 12431	0,2



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#### ACCESSORIES



PROFILE FLAT 5



STIK HD

GLUE FOR ABSORPTIVE SUPPORT

GLUE FOR NON-ABSORPTIVE SUPPORT



ULTRABOND ECO V4SP



ULTRABOND ECO S 955 1K

LAYING TILES



ELASTORAPID A+B

TILE GROUTING



ULTRACOLOR PLUS



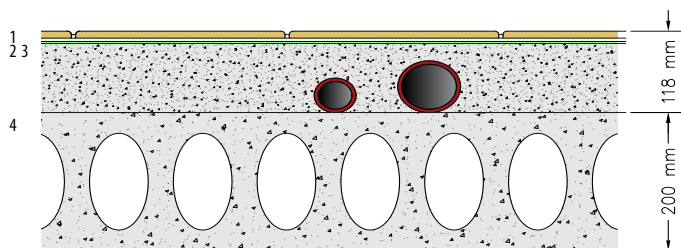


BASEWOOD EL

SYLWOOD

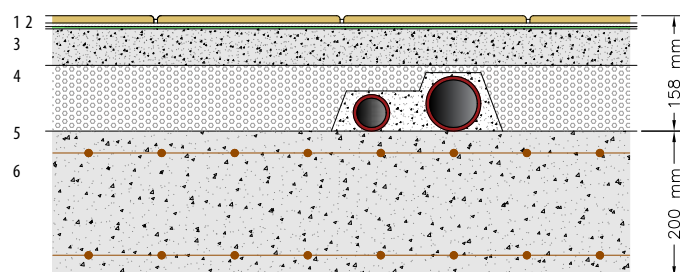
SYLPRO

**SYLCER**



Product	$L_{nw}$ (dB)	$R_w$ (dB)	$U$ (W/m <sup>2</sup> K)
SYLCER	61	51	1,68

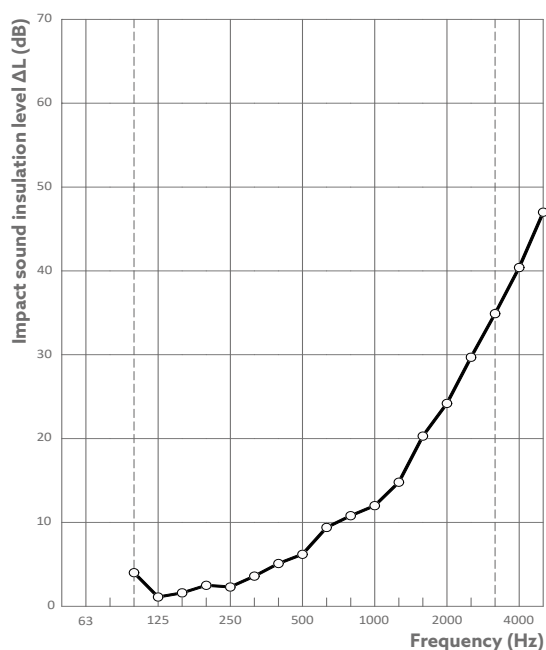
1. Ceramic flooring, th. 15 mm
2. Acoustic insulation SYLCER
3. Sand and cement bonded screed, th. 90 mm
4. Precast concrete floor, th. 200 mm



Product	$L_{nw}$ (dB)	$R_w$ (dB)	$U$ (W/m <sup>2</sup> K)
SYLCER	56	60	0,67

1. Ceramic flooring, th. 15 mm
2. Acoustic insulation SYLCER
3. Sand and cement bonded screed, th. 50 mm
4. Levelling screed, th. 90 mm
5. Concrete slab, th. 200 mm

#### IMPACT SOUND INSULATION EN ISO 10140 & EN ISO 717-2



$$\Delta L_w \geq 17 \text{ dB}$$

The results are concerning the tested structure.

Laboratory measurement of the acoustic insulation elements of the standard building. Measurement of the impact noise insulation.

Test composition:

- 140 mm Concrete slab
- 50 mm Sand & cement floating screed
- 3 mm SYLCER glued
- 10 mm Ceramic tiles flooring glued

**Total thickness 205 mm**

# UNDERLAY ACOUSTIC INSULATION

## INSTALLATION INSTRUCTIONS



For a correct laying of the underfloor product it is necessary to follow some directions:

- Use only indoors, do not subject to heavy loads
- Use on horizontal surfaces and on solid supports only
- Do not use under light, glossy or cushioned resilient flooring
- Apply on a screed surface only after its complete drying
- Do not use on slabs subject to continuous humidity
- The perimeter stripe has a very effective adhesive power and the removal of the excess part could leave some residue on the wall. If the plinths are not considered, make sure that the adhesive stripe doesn't exceed the height of the flooring. To remove eventual residues use a diluting agent.

### PREPARATION OF THE LAYING SURFACE

The underfloor products can be installed on all cement-based substrates and on existing floors; the surfaces must be dry, solid, flat, clean and without cracks.



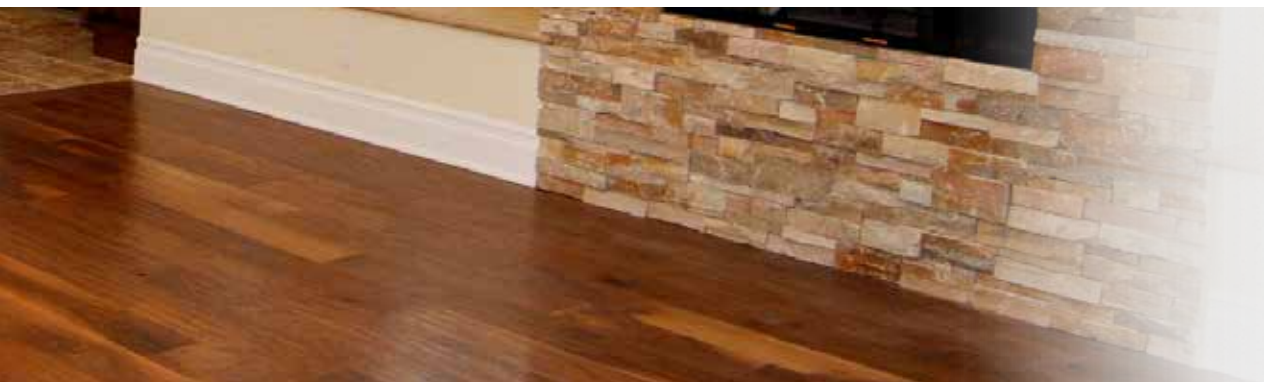
The cracks should be repaired with appropriate products, such as dedicated epoxy adhesive or resin



In case of excessive humidity, treat the surface with a primer



If the surface is not flat and it has irregularities, it must be properly levelled



BASEWOOD EL

SYLWOOD

SYLPRO

SYLCER

## SYLWOOD WITH GLUE



Apply the Profyle Flat 5 edging strip along the perimeter of the room



Put a thin layer of glue and roll down Sylwood on the surface. Rub the surface with a spatula



Seal the joints between rolls with Stik tape



After 24/48 hours rest, apply a layer glue and install the parquet

## BASEWOOD EL - SYLWOOD - SYLPRO WITHOUT GLUE



Lay down the insulation layer on the floor surface



Seal the joints between rolls with Stik tape



Lay the parquet flooring directly on the dry mat



Trim the Profyle edging strips, only when the floor finish has been completely install



# UNDERLAY ACOUSTIC INSULATION

## LAYING INSTRUCTIONS



### SYLCER



Apply the Profyle Flat 5 along the perimeter of the room. Prepare the Sylcer previously cut to desired dimension



Lay the tiles on the adhesive, as desired. Apply the grout and clean the ceramic tiles



Apply a thin layer of glue and lay down the Sylcer. Rub the surface with a spatola to improve the adherence



Trim the Profyle edging strips, only when the floor finish has been completely install



Seal the joints between rolls with Stik tape



Install the plinth



After 24/48 hours rest, apply a layer glue and install the floor tiles



## NOTES

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## NOTES

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