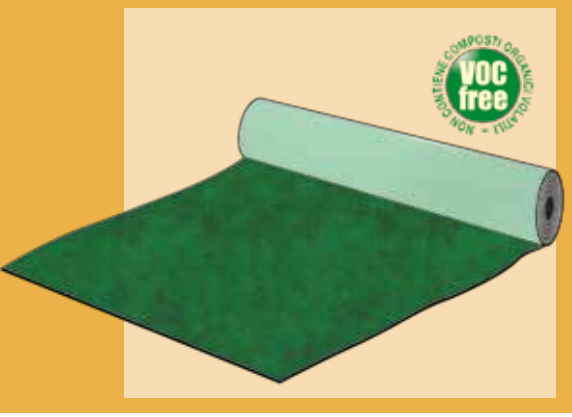


FONOSTOPLegno

DOUBLE LAYER ACOUSTIC INSULATION AGAINST FOOT TRAFFIC NOISE FOR FLOATING TONGUE-AND-GROOVE FLOORS

GRANTS *LEED* CREDITS

CHARACTERISTICS		ENVIRONMENTAL		
ACOUSTIC INSULATION	REACTION TO FIRE	ECO GREEN	RECYCLABLE	SAFE WASTE

1 PROBLEM

The thin insulating sheets usually used under floating wood floors reduce foot traffic noise inside the room where it is generated and are not sufficiently effective to prevent the transmission of foot traffic noise, through the floor slab, to adjacent rooms.

2 SOLUTION

FONOSTOPLegno is an acoustic insulation against foot traffic noise specific for floating wood floors made up of a sound-resilient foil, lined with a non-woven green polypropylene textile finish, coupled with a non-woven high-density elastic polyester fabric. The fibres are not irritant, they are flexible and do not crumble when compressed or folded. **FONOSTOPLegno** has a high friction coefficient referred to cement laying surfaces. It is heavy enough so as not to move when laying the wood floor, thus ensuring insulation continuity and stability. Only when applying on an old smooth floor is it preferable to prepare the laying surface with a coat of adhesive FONOCOLL of 80-100 g/m^2 that fixes the insulation while laying the wood boards.

FONOSTOPLegno resists building site traffic and has a high-density non-woven polyester fabric, highly resistant to crushing, which maintains its performance long-term.

FONOSTOPLegno is applied directly under the flooring without installing a screed in-between, of which the dynamic stiffness is gauged for the type of use of the product. To avoid breakages or problems along the floor joins, the dynamic stiffness chosen is the outcome of the compromise between elasticity and resistance to crushing. **FONOSTOPLegno** has a compression resistance 5 times higher than FONOSTOPDuo.

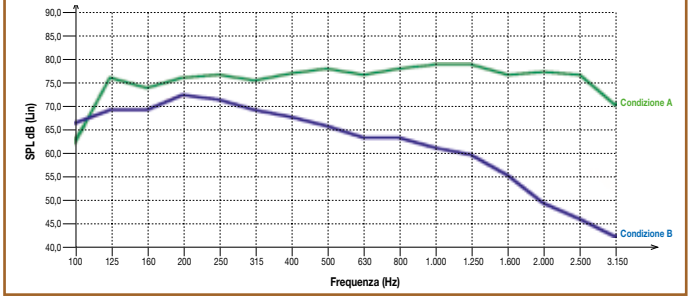
FONOSTOPLegno also protects the overlying wood flooring, because the foil of the upper part of the product is waterproof and resistant to water vapour that could rise from the substrate.

FONOSTOPLegno, thanks to its limited thickness, insulates the transmission of foot traffic noise when it is laid in-between the floor slab and the floating wood floors used in the civil building industry. It can be used in new builds but also for restoring acoustic insulation of existing flooring. It is also used under cement screeds, in special cases where very high compression resistance is required.

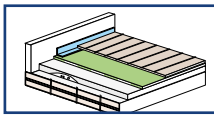
Foot traffic noise - evaluation index L'n,w

Description	Thickness (cm)	Experimental value (dB)
Condition A		
Gypsum plaster	1.5	
Slab in clay/cement mix	20+4	
Light cement for levelling (polystyrene + sand)	5.0	78.0 dB
Screed in sand and finishing cement	3.5	
Floor (wood parquet glued on screed)	1.5	
Total floor about	**35.5**	
Condition B		
Gypsum plaster	1.5	
Slab in clay/cement mix	20+4	
Light cement for levelling (polystyrene + sand)	5.0	59.0 dB
Screed in sand and finishing cement	3.5	
FONOSTOPLegno	0.5	
Flooring (wood on FONOSTOPLegno)	1.5	
Total floor about	**36.0**	

Foot traffic noise - evaluation index L'n,w

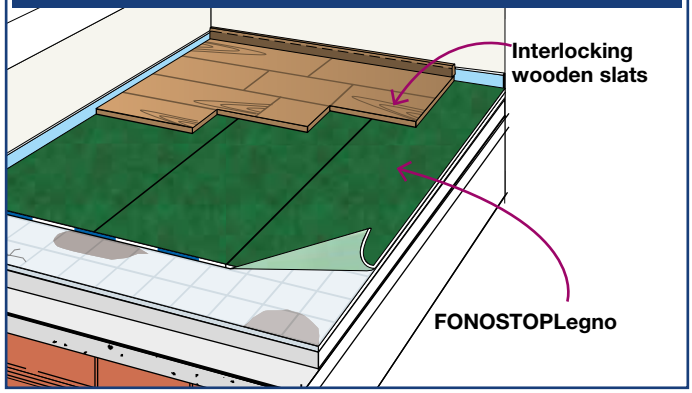


(See following)



Acoustic insulation of wood floors against foot-traffic noise - page 49

Acoustic insulation of floating wood floors against foot-traffic noise



FONOSTOPLegno

Mass per unit area		1.8 kg/m²	
Roll size		1.00 x 10.0 m	
Thickness	UNI 9947	approx. 5.0 mm	
Water resistance (1 m water column)	EN 1928	Water proof	
Aqueous vapour diffusion coefficient (phonoresilient foil)		μ 100 000	
Thermal conductivity λ (1)		0.044 W/mK	
Thermal capacity for surface (2)		1.79 KJ/m²K	
Specific heat.		1.30 KJ/kgK	
Thermal resistance R (1)		0.10 m² K/W	
Dynamic stiffness under a load of 200 kg/m² • FONOSTOPLegno	UNI EN 29052 p. 1°	Apparent dynamic stiffness s't = 43 MN/m³	Dynamic stiffness s' = 72 MN/m³
Compression tests under constant load of 200 kg/m² • FONOSTOPLegno single layer	EN 1606	Reduced thickness 0.2 mm	
Compressibility. • Crushing 1 mm • Crushing 2 mm		 5.87 KPa 62.40 KPa	
Volatile organic compound emissions – after 48 hours – after 28 days	EN ISO 16000-9	 << limits declared in prEN 12052 (3) << limits declared in prEN 12052 (3)	
Fire reaction class	EN 13501-1	**Euroclass C_{fl}-s1** (4)	
Certification		CATAS LAPI	

(1) Value established on the material subjected to a load of 1 KPa (100 kg/m²). (2) Apparent value calculated from the values for the individual components, per m² of material.
(3) "CATAS" (Centro ricerche e sviluppo laboratorio prove settore legno-arredo - Wooden furnishings test laboratory, R&D centre) certification n. 108145/1. (4) LAPI certificate n. 085.0DC0050/08 equivalent to Class 1 pursuant to Ministerial Decree 10-03-2005 latest edition, dated 16-02-2009.

✱ ***ATTENTION.*** Only the dynamic rigidity values marked in red are of value in making the calculation pursuant to EN 12354-2 and solely the transparent expression of both the apparent dynamic rigidity s't and the dynamic rigidity s' allow the designer to make a proper evaluation.

(See previous)

METHOD OF USE

The rolls of **FONOSTOPLegno** are to be unrolled in their natural unrolling direction with the top green face facing upwards, on a smooth foundation, which should be clean and dry, without any bumps or dips.
The sheets should not overlap, but should be brought close to each other and the joining lines must always be sealed with adhesive SIGILTAPE, stuck over them. The insulation material will be blocked and trimmed-off at the foot of the walls and anything protruding from the surface of the floor slab. To avoid acoustic bridges when laying the floor, do not lay it right up to the walls. As a precaution, use a strip of self-adhesive extruded polyethylene, and just stick it at the foot of the walls. It will ensure that the walls are separated from the floor. The strip is trimmed-off after the floor has been laid completely

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