Effective impact noise absorption with FiberAcoustic Impact 19

Achieve less noise – a better indoor environment

Wet rooms

Stairways

Corridors

– and in multi-storey buildings and similar places where the requirement for impact noise level is $L'_{n,w} \leq 58$ dB

Fibertex
NONWOVENS

Impact noise absorption

with FiberAcoustic Impact 19

Impact noise requirements

Noise between dwellings has a significant impact on the indoor environment and constitutes a nuisance to people living in multi-storey buildings and terraced houses. Proper design and execution of inter-property structures is a prerequisite for obtaining a satisfactory acoustic environment. Regulatory requirements should be in accordance with national regulations and standards. In general the impact noise level of 48-58 dB is acceptable. Calculations should be made in accordance with EN 12354-6, Building Acoustics. Estimation of acoustic performance of building from the performance of elements. Sound absorption in enclosed spaces and EN iSO 717-2, Acoustics – Rating of sound inculation in buildings and of building elements – Part 2: Impact sound insulation.
As input to the calculation the impact sound attenuation index ΔL_w is needed. The impact noise attenuation index is determined in accordance with ISO 10140-3, Acoustics – Laboratory measurements of sound insulation of building elements – Part 3: Measurements of impact sound insulation. For guidance ΔL_w in the range 17-19 dB is sufficient to meet the requirements for dwelling rooms, kitchens, living rooms, stairways, corridors, balconies or similar, toilets and bathrooms made with floating concrete floors. Impact noise level documented in accordance with the EN ISO 10140-3 and EN ISO 717-2 standards.

Practical solutions

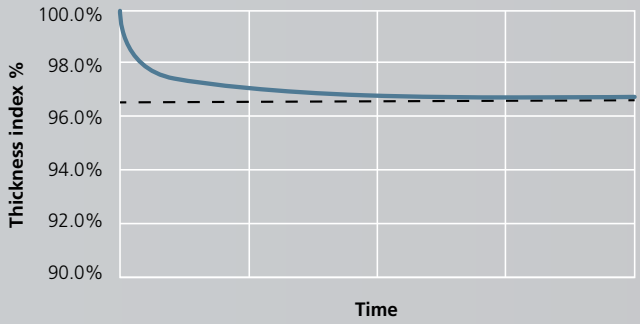
The required technical construction solutions are described in SBi guideline 237, Sound insulation between dwellings – new construction. The following points are particularly noteworthy regarding impact noise reduction:

- Floating floors are often executed with underfloor heating, and the impact noise absorption material should be compatible
- Before grouting, the impact noise absorption material should be covered with sealed plastic sheeting or similar to ensure that the grout does not compromise the impact noise insulation
- Floating floors are difficult to execute in practice, and it is particularly important not to damage the impact noise absorption substrate during spreading and grouting. It is also important to isolate the floor from walls, service penetrations, etc., with flexible, sealed joints. Supervision of the work is recommended.

Fibertex for impact noise absorption

FiberAcoustic Impact 19 has been specially developed for impact noise absorption under floating concrete floors, based on more than 30 years' experience.
The product is particularly suitable for slimline floating floors.
FiberAcoustic Impact 19 is especially suitable for underfloor heating for use within a normal temperature range of 5–85°C.
The fibre membrane is strong and withstands even heavy loads during handling and installation. At the same time, the membrane is easy to work with and prepare for penetrations and wall joints.
FiberAcoustic Impact 19 delivers a weighted noise impact absorption of 19 dB at a thickness of just 8 mm. Combined with special floor compounds, the total thickness can be as little as approximately 30 mm, with a weight of just 35 kg/m².

FiberAcoustic Impact 19
Compressive creep (EN ISO 25619-1)



FiberAcoustic Impact 19 retains its thickness over time, guaranteeing that flexible joints will not leak.

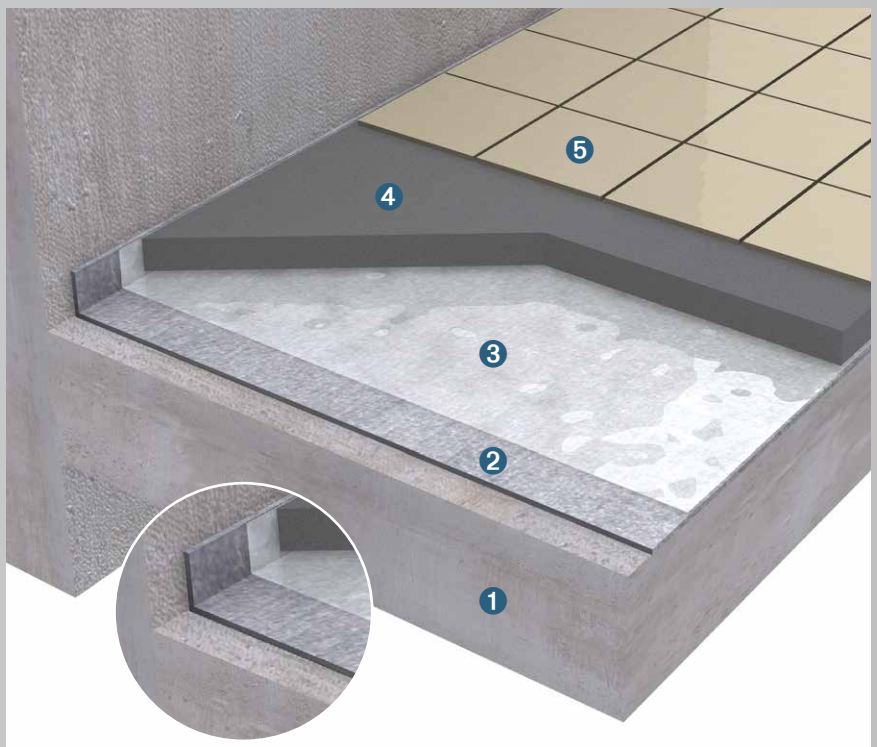
FiberAcoustic Impact 19

FiberAcoustic Impact 19 is made of 100% non-recycled polypropylene needlefelt. Needlefelt is lightweight, with a porosity of approximately 85%, ensuring highly effective sound insulation.
Polypropylene needlefelt fabric withstands high loads without compression creep. This means flexible joints are exposed to minimal strain, reducing the risk of slippage.

Product data			
Weighted impact noise	19 dB	Tensile strength	> 30 kN/m
Thickness	8 mm	Elongation at break	> 25%
Porosity	85%	Water absorption	0
Compressive creep	< 1 mm	Chemical resistance	100%
Weight	1.000 g/m²	Biological resilience	100%
Puncture resistance	10 kN	Material	Polypropylene

Floor structure

Sound-proofed substrate for floating floors



Along walls, FiberAcoustic Impact 19 and the plastic sheeting wrap up along the wall and trimming to prevent formation of acoustic bridges.

FiberAcoustic Impact 19 significantly reduces impact noise and other types of noise. The sound-proofed floor structure is usually constructed as follows:

1. **Concrete slab**
   – e.g. concrete hollow floor element. Ensure that the surface has no significant/abrupt runs and slopes. Maximum 1–2 mm
2. **FiberAcoustic Impact 19**
   – weighted impact noise absorption of Δ Lw 19 dB in just 8 mm
3. **Plastic sheeting**
   – Ensures separation between FiberAcoustic Impact 19 and the wearing course. This will prevent formation of an acoustic bridge
4. **Wearing course**
   – executed as a floating grout floor, a concrete floor with or without underfloor heating
5. **Covering**
   – FiberAcoustic Impact 19 is a substrate for the majority of floor coverings, e.g. tiled or vinyl floors

– strong features that make a difference

Wear-resistant
Resistant to fungal and bacterial growth.

Low thermal conductivity
Particularly suitable for use with underfloor heating.

Simple installation
Do not glue. Lay directly on the storey floor after preparation.

100% environmentally-friendly
Does not contain any substances harmful to the indoor or general environment.

Long durability
Does not creep over time. Minimum strain on flexible joints.

Flexible
Flexible joints must always be inserted between concrete and walls/installations in order to prevent formation of acoustic bridges.

Chemically resistant
Does not change its properties under moisture or chemical attack.

Easy to work with
Just use a knife or scissors.

Easy handling
Comes in a handy 1 x 25 m roll weighing 25 kg.

Quick installation – simplicity itself!

The process of preparing and establishing impact noise absorption for a floating floor is very straightforward.

– all you need is a Stanley knife!

1. Preparing the floor

The storey floor must be free from significant/abrupt runs and slopes, +/- 2 mm. Concrete structural floors can be shot-blasted or polished and subsequently vacuumed.

2. Laying FiberAcoustic Impact 19

Noise impact absorption must be laid with tight joints directly on top of the storey floor. Any scarf joints must be offset. Along the wall, bring the membrane up above the height of the covering, and tape in place.

3. Laying plastic sheeting

Position the plastic sheeting on top of the noise impact absorption in the same way and tape all joints. This minimises the risk of the wearing course and impact noise absorption coming into contact and forming an acoustic bridge.

4. Installing the floating floor

The floating floor can now be laid as directed by the supplier.

Please get in touch with Fibertex if you require further help:

Documentation
Product data
Your nearest dealer
Technical service

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