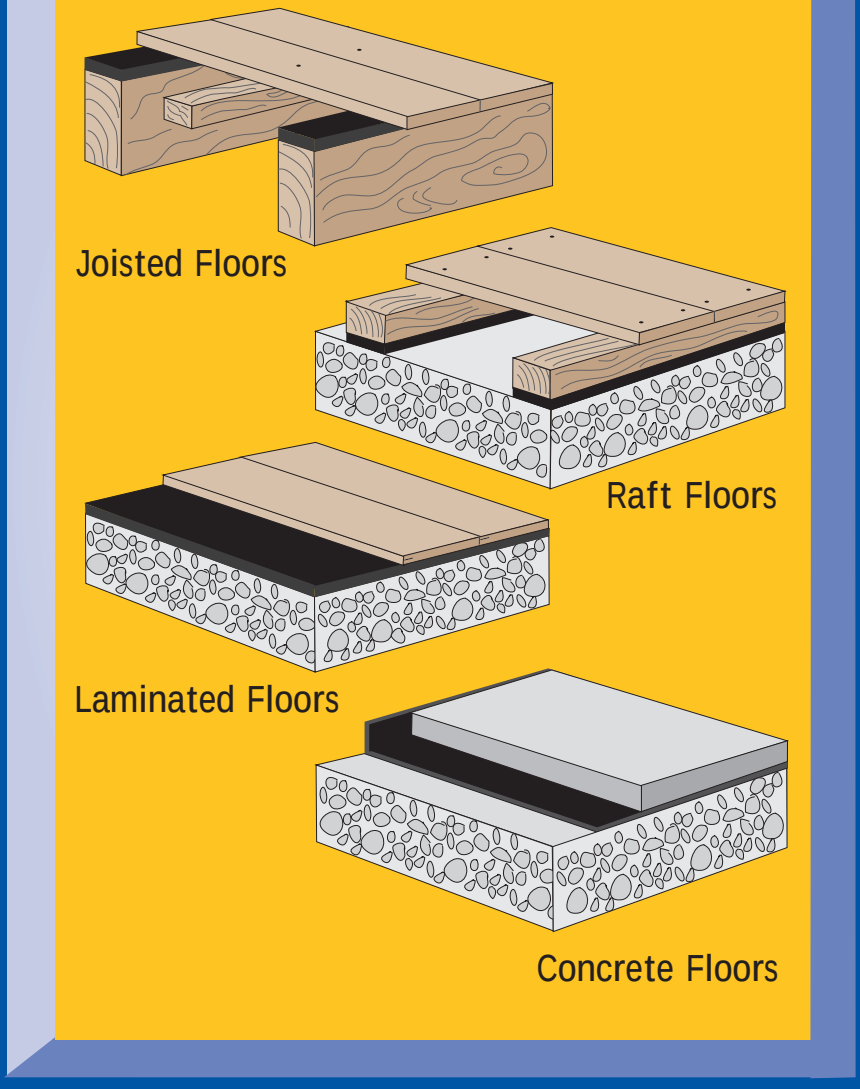
Impactafoam

CI/SfB. | 43 | T | (P2)

May 2001

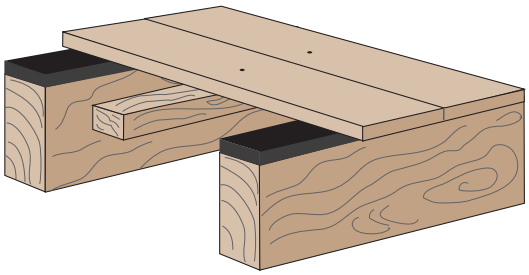
Impactafoam



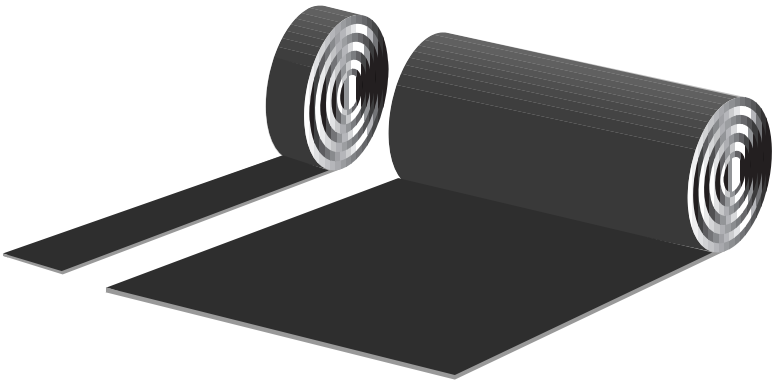

# Impact sound insulation for floors

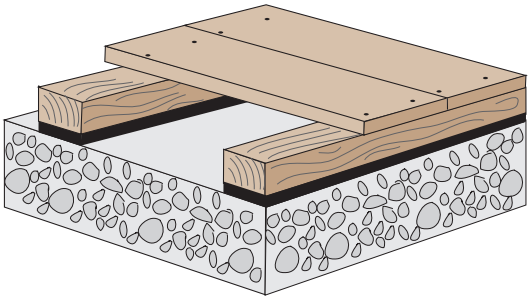
sound reduction systems

Manufacturers of Acoustic Insulation Products



Joisted Floors





Raft Floors

## The Benefits

Reduces impact noise

Only 5mm thick

High compression strength

Low thickness loss

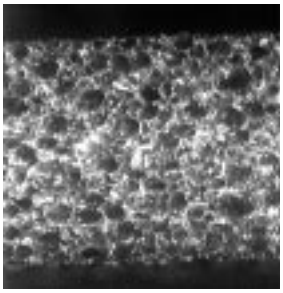
Easy to lay and cut

Good vapour barrier

Good chemical resistance

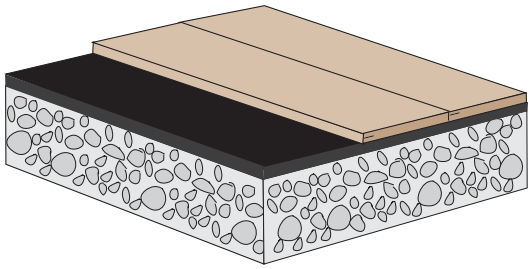
Does not deteriorate or mildew

Environmentally friendly

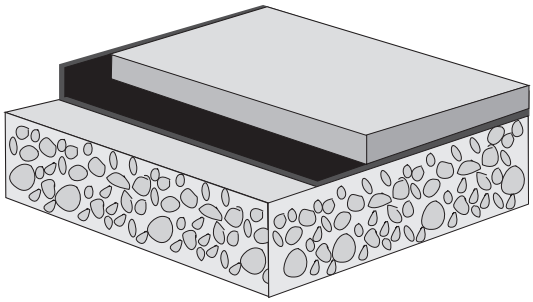


Impactafoam is made up of thousands of tiny cross linked cells. Therefore even if some cells become punctured Impactafoam continues to perform, with good compression strength and low thickness loss.

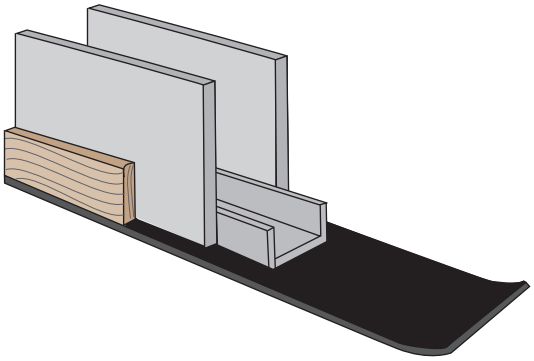
Impactafoam is designed to form a resilient layer reducing impact noise transmission in concrete and timber floors. It is an inert crosslinked closed cell polyethylene foam, therefore providing a vapour barrier with good compression strength. In a concrete construction, it is laid as a membrane between a structural concrete floor of mass 300Kg/m$^2$ and the finishing screed. For a raft floor construction Impactafoam batten strips are applied to the underside of the timber battens. In a conventional timber construction self adhesive batten strips are easily applied to the top of the floor joists. This forms a resilient layer between the joists and the boarding, reducing impact noise.



Laminated Floors



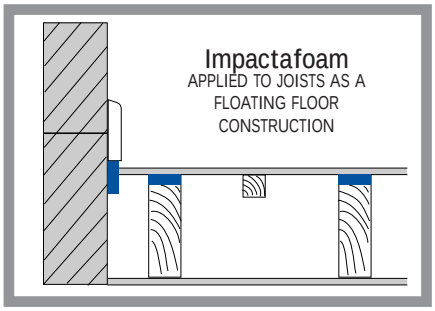
Concrete Floors



Stud Partitions

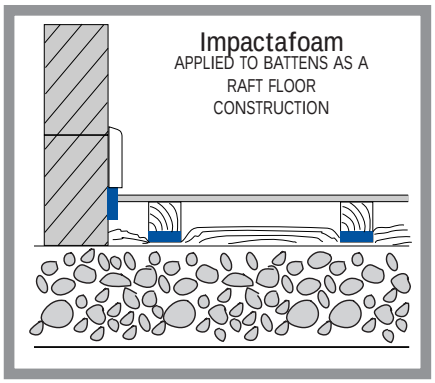
# Installation with floor joists

This is a very cost effective way of reducing impact noise in a conventional timber joisted floor. The Impactafoam self adhesive batten strips are supplied in roll form and are simply applied to the top of the joists providing a resilient seating for the boards. The floor is installed by positioning 50 x 50mm timber battens directly underneath the floor boarding, and centrally between the joists, running parallel to them. The boards or sheets are screwed to these battens and not the joists. The battens hold the boards together and the whole floor floats on the Impactafoam strips. The boards must be left free of the perimeter walls and skirting, to avoid flanking sound. Impactafoam can be used as a gasket between the boards and the perimeter walls and skirting.



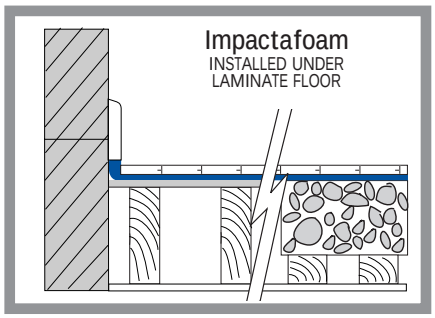

# Installation with floor battens

Impactafoam may also be used as part of a raft floor construction on top of a concrete base. Self adhesive strips are applied to 50x50mm timber battens and laid on top of a 13mm thick 36kg/m$^3$ insulation quilt over the concrete floor. Boards or sheets are then fixed to the battens giving a floating raft layer. The chipboard should be isolated from the perimeter walls using strips of Impactafoam.



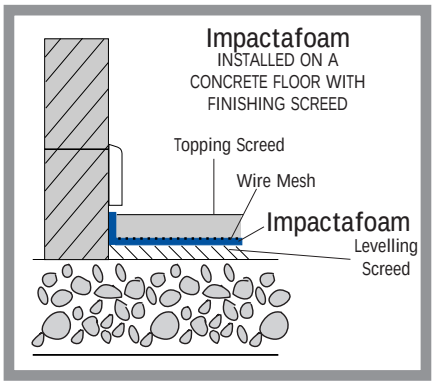

# Installation with laminate floors

This is an ideal and cost effective method of reducing impact noise caused by footballs or the movement of furniture on a timber laminate surface. Impactafoam is simply rolled out onto the structural floor and should return up all perimeter walls or columns to stop sound bridging. The laminate floor is laid on top, and should butt up to the Impactafoam at the perimeters. Any overlap should be cut away with a trimming knife. This will completely insulate the laminate floor from the structure.



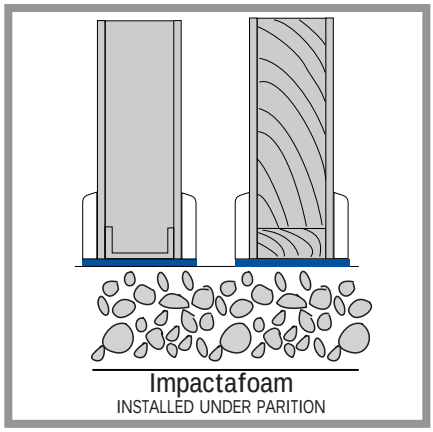

# Installation with finishing screed

The floor surface must be clean and free of any material that could puncture the foam. Impactafoam is supplied in 1m wide rolls and is laid loose onto the concrete. Edges of adjoining sheets should be overlapped by 150mm and Impactafoam should be turned up at perimeters 25mm above the finished screed level to prevent flanking via the walls. Services penetrating the screed should be isolated by wrapping in Impactafoam. The surface of the Impactafoam should be covered with a 20 x 50mm wire mesh layer to protect it from puncture when the screed is being laid.




# Installation with partitions

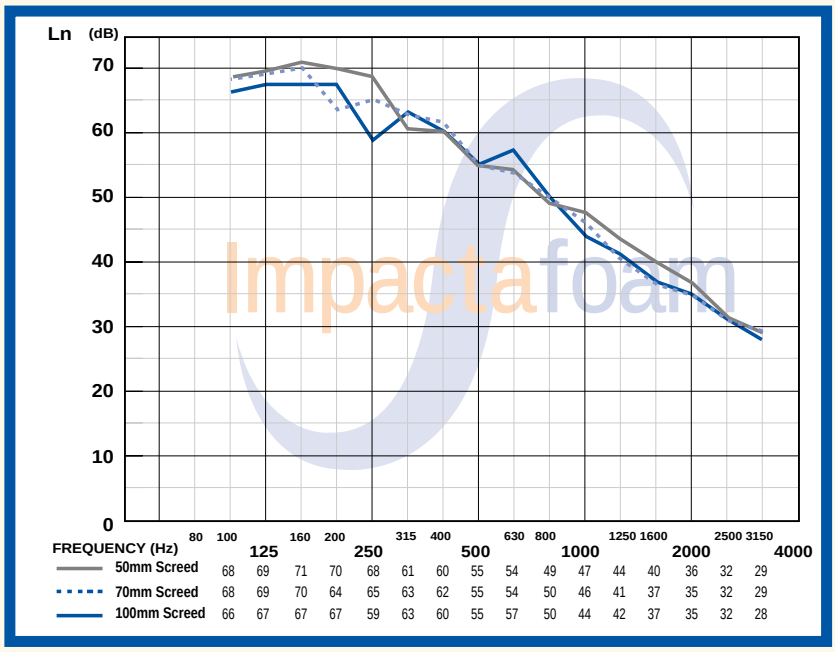
Impactafoam is perfect for providing a resilient base to reduce structure borne noise in timber or metal stud partitions, forming a good seal, it will also reduce the leakage of airborne sound. Easily applied in self adhesive strips, they must cover the total width of the partition including the skirting.



# Sound Insulation

ISO 140-6
Weighted impact sound pressure level (L) ISO 717
Impactafoam laid onto a structural floor of mass 384kgm$^2$ with screed laid over
50mm Screed $L_{nw}$ = 61dB
70mm Screed $L_{nw}$ = 60dB
100mm Screed $L_{nw}$ = 58dB

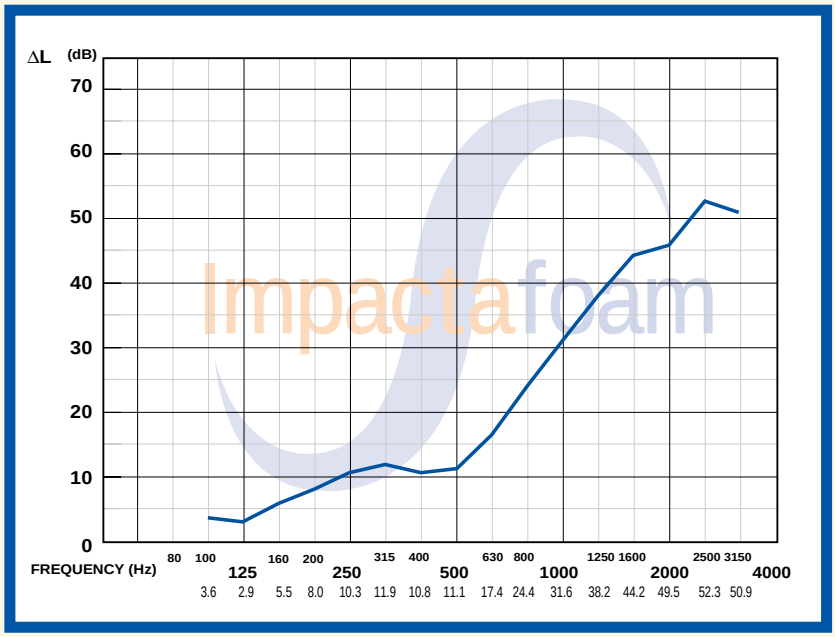
Test carried out at
Acoustical House EMPA, Dübendorf.
Date of test 18.5.88




# Sound Insulation

ISO 140-8 1998
Reduction of impact sound pressure level (ΔL)
ISO 717-2 1997
Impactafoam laid onto a structural concrete floor with 6.8mm laminated floor laid over
$\Delta L_w$ 22dB

Test carried out at
Sound Research Laboritories
Sudbury, Suffolk
Date of test 15.1.01.




# Specification

MAXIMUM LOAD 500kg/m$^2$
The maximum load is the load which the thickness loss of the foam is < 10% after 3 years at 23°c and includes both screed weight and traffic load (inc furniture). A typical concrete screed thickness of 50-70mm corresponds to an approximate load of 100kg/m$^2$.

| | |
|---|---|
| Compr. strength @25% compression | ISO 844 30kPa |
| water vapour diffusion res, index | ISO 1663 ca6000 |
| water absorption 28days | ISO 2896 <1% |

CONSTRUCTION
Crosslinked, closed cell polyethylene

DENSITY
33kg/m$^3$

SIZES
25m x 1.2m x 5mm.
90m/Box ,50mm x 5mm, Self Adhesive.

CUTTING
By trimming knife

sound reduction systems
Manufacturers of Acoustic Insulation Products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