

SOUNDCEL®

Acoustic Insulation



- Outstanding noise reduction
- Environmentally preferred
- Healthy
- Independently tested and endorsed
- System solutions

The sound solution for intermediate floors, internal and party walls

EXCEL

Building Solutions

Hear The Quiet

When you're in a building insulated with Soundcel, you can actually hear the quiet.

Its ability to cut out airborne sounds offers a simple and cost effective barrier to the unwelcome strains of a neighbour's music, overloud conversations or the whirring of machinery.

Residential apartments, offices or any building, whose occupants are separated by intermediate floors or shared party walls, will benefit from the protection against noise pollution that Soundcel provides.

Optimised Sound Absorption

Optimised sound absorption is achieved by engineering the fibre used in Soundcel and determining its degree of 'openness'. Properties, such as fibre length, density and the capacity for interweaving, all contribute in determining the final insulation performance of the material.

Only after rigorous and repeated testing, first by the development engineers and then the main production team, to prove the consistency of the manufacturing operation was Soundcel given the official stamp of approval.

Even then, independent tests on built up floor systems were commissioned to confirm the company's own results.

Healthy and Environmentally Preferred

Free from CFCs, volatile organic compounds (VOCs) or other toxic substances, Soundcel does not contain any added formaldehyde and has zero ODP (Ozone Depletion Potential).

Manufactured from 100% recycled waste newspaper, it has extremely low embodied energy. And, when it is eventually removed from a building, Soundcel acoustic insulation can be recycled again or disposed of safely, without creating toxic waste or biodegradability problems.

Fully Compatible

Fully compatible with the materials used in floor and wall constructions, Soundcel will not affect common building components such as copper pipes, electric cabling and metal nail-plate fasteners.

Being non-toxic and non-irritant, Soundcel is completely safe to handle.

Fire Protection

Soundcel also offers effective protection against fire, enabling it to comfortably meet the fire protection standards required for timber-frame construction. Official fire tests have demonstrated that a wall panel insulated with Soundcel is able to withstand temperatures of up to 1000°C for 71 minutes, well beyond the building regulations' 30 and 60 minute requirements. Throughout the tests, the non-exposed face of the panel remained at a cool 17°C.



To achieve this impressive protection against fire, only simple inorganic salts are used in the formulation, with similar additives used to provide protection against other potential hazards, including biological and fungal attack, insects and vermin.

Independent Testing

Soundcel's acoustic performance has been independently tested* and verified at Herriot-Watt University and Sound Research Laboratories Limited and it has undergone extensive field trials to ensure the product's 'in use' performance is consistent with its design criteria.

Soundcel® Floor System

The Soundcel Floor System is a proven floor construction, developed to offer a tried and tested, optimised sound insulation solution for intermediate floors.

Built around ultra strong and lightweight Masonite Beams, the Soundcel Floor System features Soundcel acoustic insulation, enclosed by a double layer of plasterboard on the underside and 15mm floor decking on the upper face.

Insulated Battens

Insulated battens installed on top of the floor decking provide the dual benefits of additional impact sound insulation and the convenience of a built in service zone for carrying cabling, pipework and other services.

A similar service zone is provided on the underside of the floor to carry cables for ceiling-mounted lights, alarm sensors and other electrical devices in the room below.

Additional Sound Damping

The floor system is completed with the addition of a 19mm plasterboard 'plank', offering additional sound damping, and 18mm tongue and groove chipboard, which provides the 'walked on' floor finish.

The entire floor is sealed following installation with perimeter sound insulation to isolate it from the walls of the property.

**Copies of all independent reports can be obtained from Excel.*

Fast and Simple Installation

Undertaken by registered, specialist Soundcel installers, Soundcel is installed using one of the following methods:

- TurboFill
- AutoFill

TurboFill

TurboFill dry injection is used for walls and floors, where the void to be filled has already been fully enclosed by the plasterboard, sheathing or floor finish. This includes stick built constructions or interiors erected using factory-manufactured TRADIS-MT wall panels and floor cassettes.

The injection system features a nozzle akin to those used in refuelling systems seen in Grand Prix Formula 1 pit lanes. The nozzle is docked with

the wall or floor by means of pre-drilled access holes, through which the Soundcel is injected. An ingenious pressure sensing system ensures the wall or floor void is completely filled to the correct density for optimum performance.

Wall sections can normally be filled from either side and, likewise, floors can be insulated from above or below. On completion of the installation process, the filling nozzle is simply withdrawn and the access holes plugged.

AutoFill

The AutoFill installation of Soundcel is employed for installation in Fillcrete's TRADIS-AF wall panels and floor cassettes, which are manufactured entirely in the factory. The AutoFill process ensures the optimum density of Soundcel is achieved throughout the panel, guaranteeing consistency and repeatability of performance.

TRADIS®

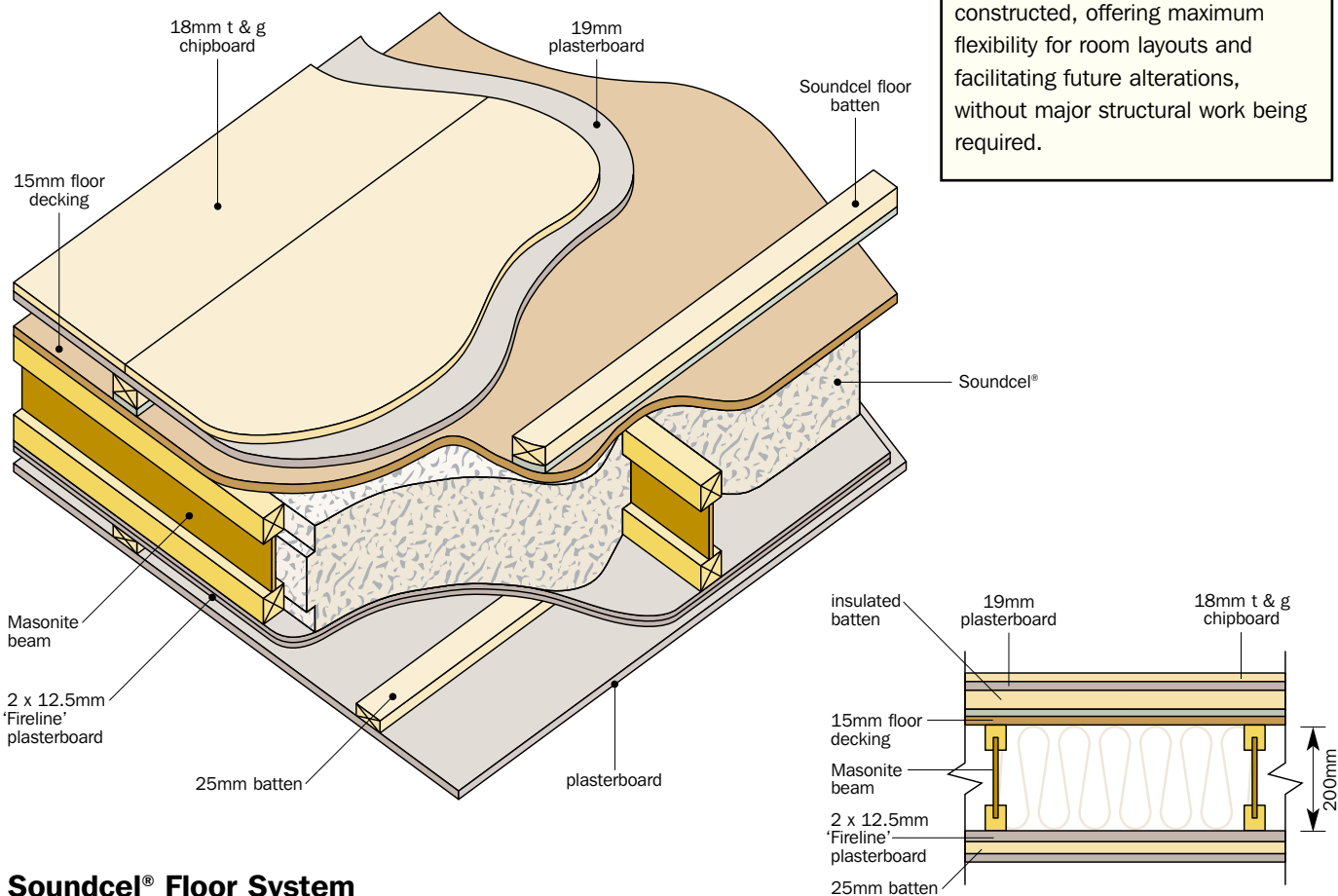
Factory-manufactured wall panels and floor cassettes

The TRADIS range of factory-produced structural wall panels, floor cassettes and roof plates enables a complete house shell to be constructed in less than a day. Because the panels are factory-manufactured, they benefit from accurate dimensions, consistency and quality controlled compatibility. This minimises on-site installation times, while delivering greater structural integrity and guaranteed repeatable performance.

Soundcel® Option

External walls, floors and roof sections are installed with Warmcel 500 thermal insulation, with internal floor cassette and wall panel options also being available with Soundcel acoustic insulation.

With self-supporting spans available in lengths of up to 12m and widths of 3.1m, large clear runs can be constructed, offering maximum flexibility for room layouts and facilitating future alterations, without major structural work being required.



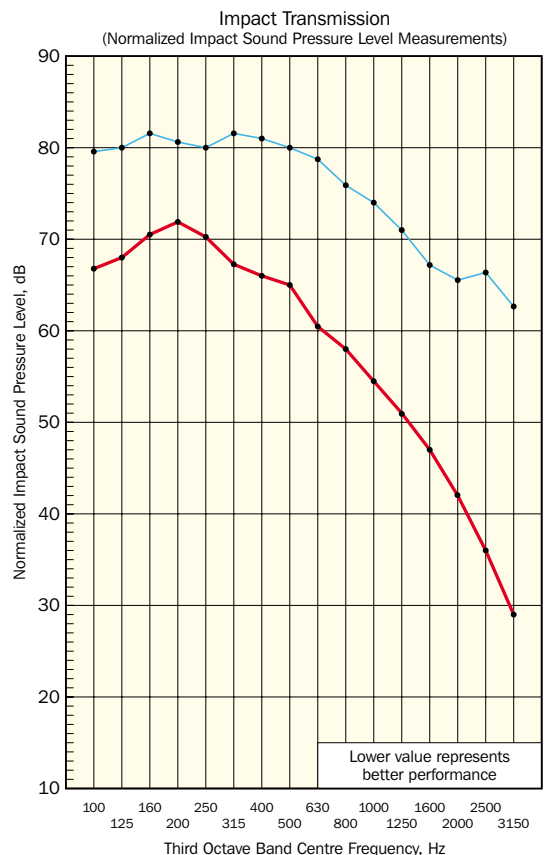
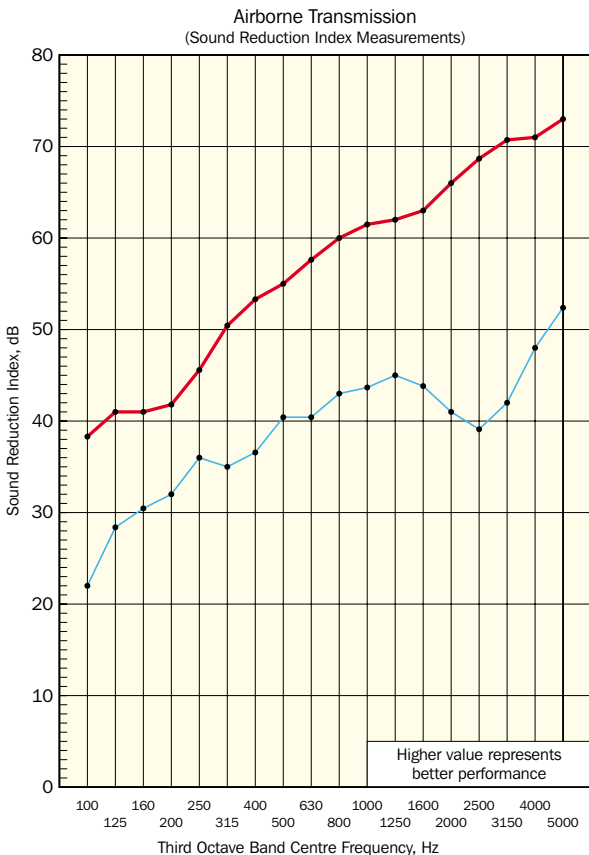
Soundcel® Floor System

Independent Test Results for Soundcel® Insulated Floor

	Airborne Transmission (Weighted Sound Reduction Index (Rw)) higher value represents better performance	Impact Transmission (Weighted Normalised Sound Pressure Level (LnT,w)) lower value represents better performance
Masonite Floors Soundcel Floor System, featuring Masonite Beam 'joists' at 600mm centres, with 250mm cavity completely filled with Soundcel acoustic insulation. (see graphs below).	58 dB (52 dB)	63 dB (65 dB)
Uninsulated floor, featuring Masonite Beam 'joists' at 600mm centres, with a 250mm cavity (see graphs below).	41 dB (52 dB)	77 dB (65 dB)
Timber Floors Soundcel Floor System, featuring timber joists at 400mm centres, with 200mm cavity completely filled with Soundcel acoustic insulation.	57 dB (52 dB)	65 dB (65 dB)
Uninsulated floor, featuring timber joists at 400mm centres, with a 200mm cavity.	41 dB (52 dB)	77 dB (65 dB)

(Building Regulations values shown in brackets)

Test Result Graphs for Masonite Floors



Tests undertaken by Sound Research Laboratories Limited, consultants in noise and vibration.



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