

# ROCKFLOOR® - Acoustic

## Tools required

- Insulation saw
- Tape measure

## Separating floors

Approved Document E describes a range of constructions that should achieve the standards if built correctly.

## Service runs

Service runs can be accommodated by recessing the ROCKFLOOR® and a minimum thickness of 50mm of the insulation is required to achieve this.

## Separating Timber Floor Upgrade (Material Change of Use): ADE Section 4

Airborne DnT,w + Ctr 43dB (or more)

Impact L'nT,w 64dB (or less)

- Floating layer: A minimum of 2 layers of board material are required to provide a minimum total mass of 25Kg/m<sup>2</sup>, spot bonded together with joints staggered (eg 18mm T&G flooring grade chipboard and 19mm plasterboard plank).
- The floating layer should be loose laid over the ROCKFLOOR®.
- A minimum of 25mm of ROCKWOOL ROCKFLOOR® resilient layer should be laid on the existing floor deck on existing timber floor joists.
- 100mm of ROCKWOOL Flexi should be used between joists.
- Existing ceiling upgraded to 20kg/m<sup>2</sup>: If the existing ceiling consists of lath and plaster it should be retained, providing it satisfies Part B (Fire Safety). If in doubt, underdraw it with an additional layer of 12.5mm Firecheck board before screwing into the joists.
- Pre-completion site testing required

*Note: If the existing ceiling is being replaced the sound performance of the floor can be further enhanced by fitting resilient bars which isolate the ceiling from the floor structure.*

By adopting this method, Site Test Report no. 2271 showed that the construction exceeded ADE performance requirements:

Airborne: Rw 48 dB DnTw + Ctr

Impact: 58 dB LnTw

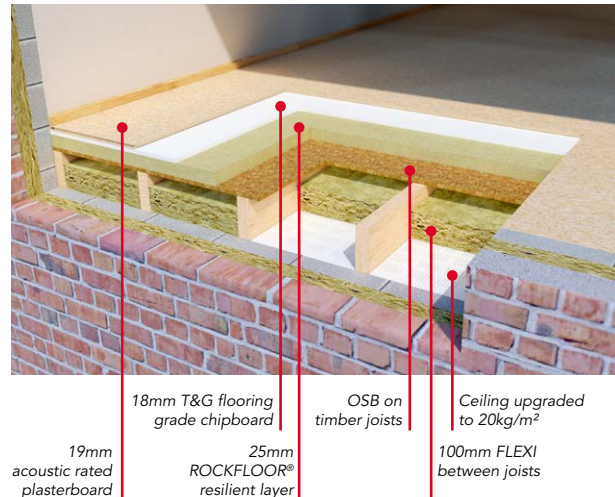
## Robust details – Acoustic solutions

The Approved Document E includes references to Robust Details (RDs) for use in new build separating wall and floor applications in dwellings. Compliance with the RDs will negate the requirement for pre-completion testing of new build separating wall and floor constructions.

Robust Details are based upon meeting sound test-values in excess of those required by Approved Document E.

Figure 1

Separating Timber Floor Upgrade (Material Change of Use): ADE Section 4



This guide highlights RDs involving ROCKWOOL ROCKFLOOR® products:

## Separating floors – concrete

### 1. Precast concrete plank - E-FC-1

Robust Details platform floor finish FFT4:

- T&G flooring board on 25mm ROCKWOOL ROCKFLOOR® (shown)
- Screed: 40mm (min) screed nominal 80kg/m<sup>2</sup> mass
- Structural floor: 150mm (min) pre-cast concrete floor plank, minimum 300kg/m<sup>2</sup> mass per unit area
- Ceiling finish: See Robust Detail handbook for suitable ceiling options

### 2. Steel-concrete composite - in-situ concrete slab supported by profiled metal deck E-FS-1

- Robust Details platform floor finish FFT4:
- T&G flooring board on 30mm ROCKWOOL
- Acoustic ROCKFLOOR®
- Structural floor: In-situ concrete slab, min density 2200kg/m<sup>3</sup>, supported by profiled metal decking
- Concrete thickness: 80mm (min) at shallowest point and-130mm (min) at deepest point
- Ceiling finish: See Robust Detail handbook for suitable ceiling options

## Fixing and application

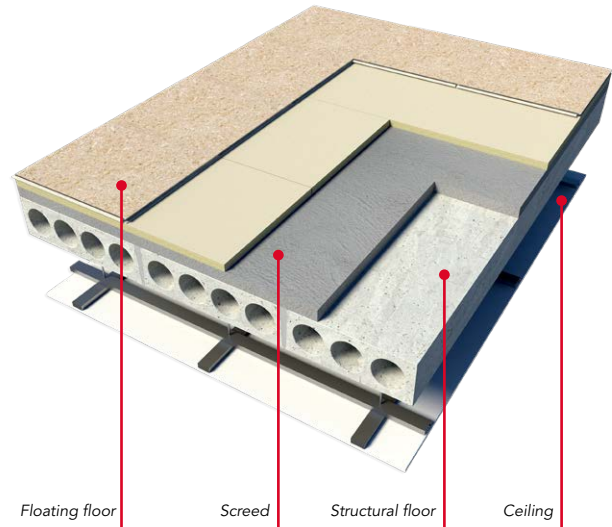
### Installation considerations

ROCKWOOL ROCKFLOOR® has a high compressive strength making it suitable for use in a wide range of applications. This means ROCKFLOOR® can support typical loads that arise in dwellings, offices, shops and similar areas, for further details contact the ROCKWOOL Technical Solutions team. The compressive strength is based on evenly distributed loading, and as such the boards should be protected where there is frequent footfall, step down areas and access routes whilst exposed during installation, and prior to the laying of a permanent covering.

Care must be taken to ensure the boards are not exposed to the wet and moisture, before and during installation, until the floor is permanently covered and protected.

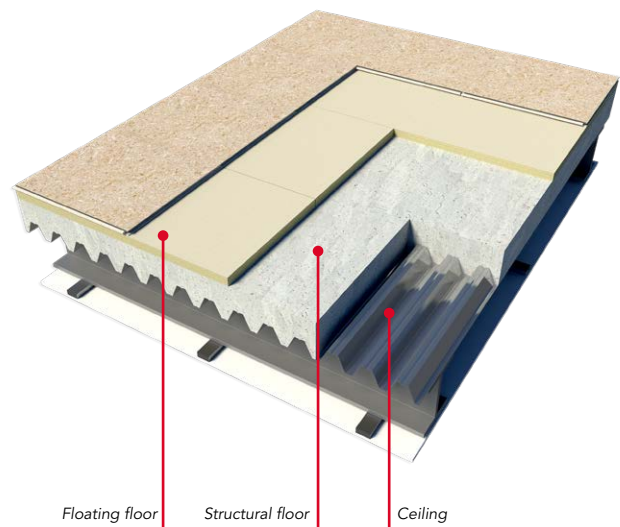
**Figure 2**

1. Precast concrete plank - E-FC-1



**Figure 3**

2. Steel-concrete composite - in-situ concrete slab supported by profiled metal deck E-FS-1



## Laying method

The ROCKFLOOR® boards should be laid lengthways to the longest wall, in a staggered joint pattern, tissue face upwards. The joints should be laid with tightly butted joints. There should be no gaps at abutments. For dual layered systems, always ensure the tissue face is laid facing upwards, and with vertically staggered joints. The offcut at one end of the first row is then used to start the next row and similarly with subsequent rows.

An upstand of ROCKFLOOR® should be placed around the perimeter to isolate the screed thermally and acoustically from the wall.

## Applications

### Traditional sand and cement screeds

Standard sand and cement screeds should be laid at a minimum 65mm thick. The screed should contain a light wire mesh reinforcement and be laid strictly in accordance with BS 8204.2003+A1:2009 Part 1.

### Calcium sulphate / anhydrite screeds

Where thinner, high performance screeds are required, these must be laid in accordance to the manufacturer's guidelines. Anhydrite screeds provide an ideal flat surface, can reduce installation time and offer floor to ceiling height advantages over traditional sand and cement screeds. Typically laid at a minimum of 40mm thick, wire mesh reinforcement is not usually required.

### Boarded applications

Ensure the sub-floor is level. ROCKFLOOR® will absorb minor imperfections but if the floor is generally uneven a levelling screed should be applied. On suspended timber floors the ROCKFLOOR® should be supported on 15mm thickness plywood nailed to the joists.

To allow for expansion of the chipboard a minimum gap of 10mm should be provided around the room perimeter. ROCKFLOOR® should also be installed in this gap, and where acoustic insulation is required a gap of approximately 5mm should be left between the chipboard and the bottom edge of the skirting.

At thresholds, stair landings, or where a change in floor construction occurs, the insulation should be cut back and a timber batten of the same thickness as the insulation inserted to reinforce the edge. Where acoustic insulation is required, the batten thickness should be reduced to include a 6mm thick neoprene isolation strip bonded to the batten.

## Other installation considerations

### Heavy fixtures (such as baths, kitchen units etc.)

It is recommended that permanently fitted heavy items such as baths, WCs, kitchen units and the like should be supported directly from the sub-floor or via previously positioned timber battens recessed within the insulation layer.

### Service runs

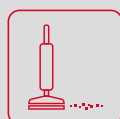
Services may be accommodated by either recessing the insulation or, where access is required, by using purpose made ducts. Consideration should be given to the local Water Bye-Laws (Bye-Law 58) regarding the provision of access to pipes. When electrical conduit is to be placed within or below the insulation, the electrical sub-contractor should check whether the size of the cables needs to be increased to comply with IEE Wiring Regulation.

## Health & safety

The mechanical effect of fibres in contact with skin may cause temporary itching.



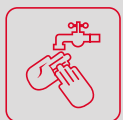
Cover exposed skin  
When working in unventilated area wear disposable face mask.



Clean area using vacuum equipment.



Waste should be disposed of according to local regulations.



Rinse in cold water before washing.



Ventilate working area if possible.



Wear goggles when working overhead.