

Rockfloor

Unique thermal and acoustic insulation for ground and separating floors

Rockwool Rockfloor is a tissue faced, high compressive strength insulation slab - designed to meet both Part E (Acoustic) and Part L (Thermal) regulations.



The following NBS clauses include Rockfloor: E20:30, E20:200, K11:25, K11:215, K11:225, K11:235, K:11:245, K21:111, M10:40, M10:290, M10:295, M13:20, M13:260, M13:265

Rockfloor

Made from renewable stone wool, the Rockfloor range offers unique and economic, dual density thermal insulation for ground floors. In addition it is a high-performing acoustic solution for separating floors, providing optimum comfort to occupants.

Advantages

- Excellent acoustic and thermal properties
- Minimises thermal and acoustic bridging
- High compressive resistance
- Easy handling and fitting

Product properties

Dimensions

Rockfloor boards are manufactured to a standard size of 1000 x 600mm, and in a range of thicknesses from 25mm to 100mm. Other thicknesses can be specially made to order subject to the quantity required.

Finish

Rockwool Rockfloor boards are supplied with a tissue face on the top surface. The surface also provides a useful medium for marking or scribing the boards for cutting, and facilitates the tight laying and jointing of chipboard.

Resistance to moisture

Rockwool Rockfloor is water resistant but requires a damp proof membrane (DPM) to protect against rising damp or high watertable areas when used below ground-bearing concrete.

Compressive strength

Due to its high modulus of compression, Rockfloor supports loads that normally arise in dwellings, offices, shops and similar areas.

Thermal performance and U-values

Design considerations

Rockfloor insulation is suitable for use below most floor constructions, including:

- Flooring grade t & g chipboard, OSB or plywood etc and supported on concrete slabs (ground bearing or suspended etc) or on fully boarded timber joisted floors.
- Screeds laid in accordance with BS 8204: Part 1 and supported on levelled concrete slabs, plank, beam and block floors etc.
- Concrete ground bearing slabs on DPM, sand or hardcore.

Rockfloor's unique dual density structure enables it to be laid over a slightly uneven subfloor with the lower density absorbing imperfections and the high density surface providing excellent point load resistance. Rockfloor can be placed over or under the oversite slab. If placed under the slab, an upstand of Rockfloor perimeter edge insulation must be placed around the perimeter to minimise thermal bridging.

Anhydrite screeds

Anhydrite floor screeds are pump applied, self-levelling screeds.

- Often used for subfloor levelling, they provide an ideal smooth flat surface to receive thin floor coverings such as tiles.
- 40mm thick anhydrite screeds can also be applied as a floating construction over Rockwool Rockfloor (separated by a 250mm gauge polythene membrane).
- The use of this kind of screed can significantly reduce installation time and offer floor-to-ceiling height advantages over traditional sand/cement screeds.

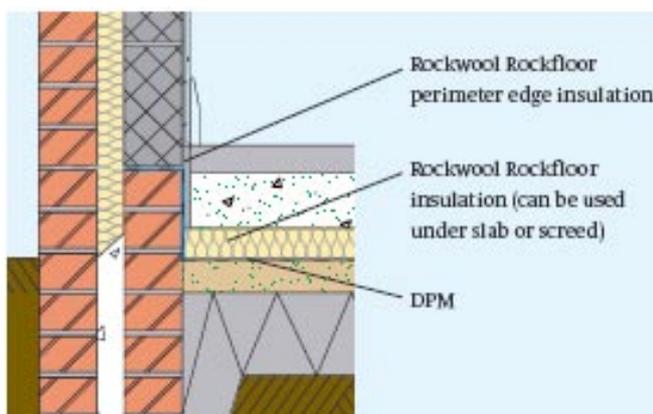
Rockfloor

Because the U-value for ground floors is dependent upon size, shape, soil type, edge, insulation etc, it is not possible to quote specific values. The following tables show the insulation thickness required to suit floor types based on their P/A ratio.

Construction 1: Ground bearing slab

Rockwool Rockfloor can be installed below the concrete slab or below screed.

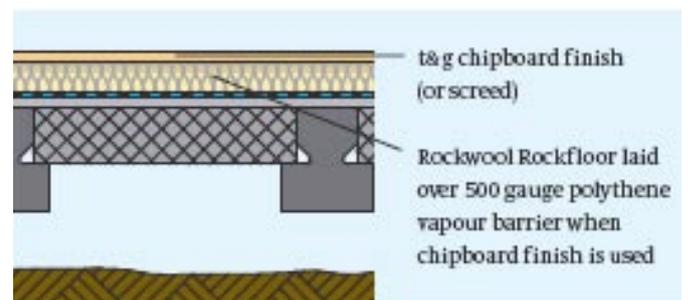
P/A ratio	U-value (W/m ² K)			
	0.25	0.22	0.20	0.18
0.1	nil	nil	nil	nil
0.2	30	50	65	90
0.3	60	80	95	120
0.4	75	95	110	130
0.5	85	105	120	140
0.6	90	110	130	150
0.7	95	115	130	150
0.8	105	120	140	160
0.9	105	125	140	160
1.0	110	130	145	175



Construction 2: Suspended beam and block

Rockwool Rockfloor is laid over the dense beam and block floor below screed or t&g flooring grade chipboard where floor heights are limited.

P/A ratio	U-value (W/m ² K)			
	0.25	0.22	0.20	0.18
0.1	nil	30	50	70
0.2	65	80	100	120
0.3	80	100	120	140
0.4	95	115	130	150
0.5	100	120	135	160
0.6	105	125	140	160
0.7	105	130	145	165
0.8	110	130	145	165
0.9	115	130	150	170
1.0	115	135	150	170



Part L (2010 edition) U-value requirement for Ground Floors:

Extensions: 0.22W/m²K

Renovation & Repair work: 0.25W/m²K

New build requirement could range between 0.20 and 0.18W/m²K pending building and construction type.

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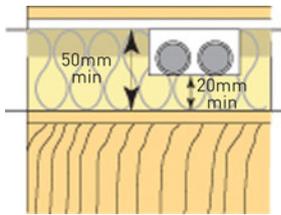
Acoustic performance

Separating floors

The 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.



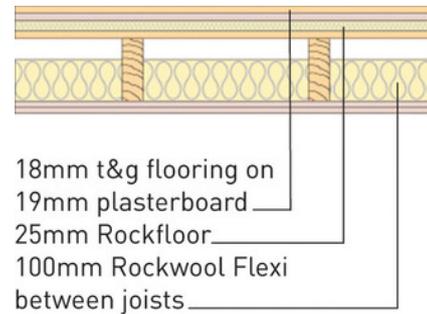
Separating Timber Floor Upgrade (Material Change of Use): ADE Section 4

Airbourne 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/m², 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/m²: 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 is required under ADE.



Please 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

- 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.

This guide highlights RDs involving Rockwool products.

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Separating floor – concrete

Precast concrete plank

E-FC-1

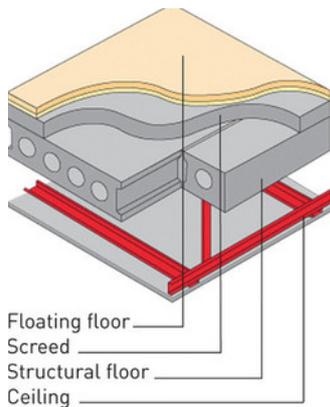
Robust Details platform floor finish FFT4:

T&g flooring board on 25mm Rockwool
Rockfloor (shown)

Screed: 40mm (min) screed nominal 80Kg/m² mass

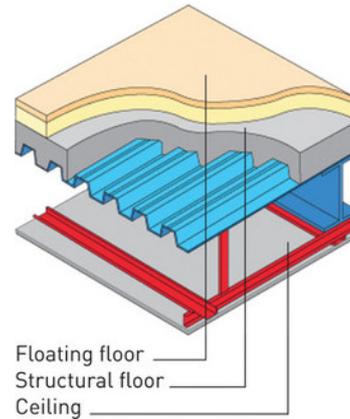
Structural floor: 150mm (min) pre-cast concrete floor
plank, minimum 300Kg/m² mass per unit area

Ceiling finish: See Robust Detail handbook for suitable
ceiling options



Concrete thickness: 80mm (min) at shallowest point
and-130mm (min) at deepest point

Ceiling finish: See Robust Detail handbook for suitable
ceiling options



Find out more:

Further information on acoustic
applications can be found in the
Rockwool SoundPro Solutions Guide.
A copy of this is available at
www.rockwool.co.uk

Separating floor – concrete

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
Rockfloor (shown)

Structural floor: In-situ concrete slab, min density
2200Kg/m³, supported by profiled metal decking

Rockfloor

Fire performance

Rated A1 when tested to EN 13501-1 classification using test data from reaction to fire test. Rockfloor boards can be used in conjunction with Rockwool Flexi to construct a compartment floor, providing 1 hour of fire resistance combined with acoustic isolation.

Installation guidance

Laying Method

Rockfloor boards should be laid lengthways to the longest wall, in a staggered joint pattern, tissue face upwards. The offcut at one end of the first row is then used to start the next row and similarly with subsequent rows.

Chipboard

Starting from one corner of the room; lay the boards lengthwise, parallel to the longest wall with the gap maintained against the adjacent walls. The boards should be laid with staggered joints working towards the opposite corner of the room.

The final boards must be cut in order to maintain the appropriate gap against the wall.

Edge detail

To allow for expansion of the chipboard, a minimum 10mm wide gap should be provided around the room perimeter. This gap should be packed with neoprene isolating strips. Where acoustic insulation is required, a gap of approximately 5mm should be left between the chipboard and the bottom edge of the skirting.

Thresholds

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 should be inserted to reinforce the edge.

Where acoustic insulation is required, the batten thickness should be reduced to include a 6mm thick neoprene isolation strip that is bonded to it.

Supply

Rockfloor is available throughout the United Kingdom and Ireland from all Rockwool stockists. A list of stockists is available on request. Call: 0871 222 1780

Ordering

Please quote the thickness in millimetres and the area in square metres that are required.

Standards and approvals

Rockwool Rockfloor complies with the requirements of BS EN 13162 Thermal Insulation Products for Buildings: Factory made mineral wool (MW) products specification.

Rockfloor

Sustainability



As an environmentally conscious company, Rockwool promotes the sustainable production and use of insulation and is committed to a continuous process of environmental improvement.

All Rockwool products provide outstanding thermal protection as well as four added benefits:

- Fire resistance
- Acoustic comfort
- Durability
- Sustainable materials

Environment

Relying on entrapped air for its thermal properties, we are proud to say that Rockwool insulation does not contain (and has never contained) gases that have ozone depleting potential (ODP) or global warming potential (GWP). Rockwool therefore complies with the relatively modest threshold of GWP<5 included in documents such as the Code for Sustainable Homes.

Rockwool is increasingly involved in recycling waste Rockwool material that may be generated during installation or at end of life.

We are happy to discuss the individual requirements of contractors and users considering returning Rockwool materials to our factory for recycling.

Health and safety

The safety of Rockwool stone wool is confirmed by current UK and Republic of Ireland health & safety regulations and EU directive 97/69/EC: Rockwool fibres are not classified as a possible human carcinogen.

A Material Safety Data Sheet can be downloaded from www.rockwool.co.uk or requested from Rockwool Technical Support (0871 222 1780) to assist in the preparation of risk assessments, as required by the Control of Substances Hazardous to Health Regulations (COSHH).

More information

For further details visit our website at www.rockwool.co.uk or phone Rockwool Technical Support on 0871 222 1780.

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Rockwool Limited reserves the right to alter or amend the specification of products without notice as our policy is one of constant improvement. The information contained in this data sheet is believed to be correct at the date of publication. Whilst Rockwool will endeavour to keep its publications up to date, readers will appreciate that between publications there may be pertinent changes in the law, or other developments affecting the accuracy of the information contained in this data sheet.

The above applications do not necessarily represent an exhaustive list of applications for Rockfloor. Rockwool Limited does not accept responsibility for the consequences of using Rockfloor in applications different from those described above. Expert advice should be sought where such different applications are contemplated, or where the extent of any listed application is in doubt.

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