RW SEMI-RIGID AND RIGID SLABS

(RWA45, RW3, RW4, RW5 & RW6)

ROCKWOOL®

RW SEMI-RIGID AND RIGID SLABS

Versatile building slabs for a wide range of general building applications, ROCKWOOL RW semi-rigid and rigid slabs are high quality resin bonded slabs that can be used for thermal, acoustic and fire resistant insulation in general building applications.

The slabs are available in a wide range of thicknesses and densities to suit most requirements. CE marked to EN 13162 and Euroclass A1 non-combustible.

Advantages

- Excellent thermal, acoustic and fire insulation
- Suitable for a wide range of general building applications
- Non-combustible – Euroclass A1
- Availability in a range of densities
- Black or white tissue, and aluminium foil facings available on request*

*Subject to production compatibility

Description

ROCKWOOL RW Slabs can be applied to an array of general building applications for acoustic, thermal and fire protection of partition walls, ceilings, floors and roofs.

Available in range of thicknesses and densities from 45 to 140 kg/m3, the slabs can also be black or white tissue faced, or foil faced, to one or both sides (subject to production compatibility).

ROCKWOOL RW Slabs conform to: BS EN 13162:2012: Thermal insulation products for buildings. Factory made mineral wool (MW) products.

Applications

ROCKWOOL RW slabs can be used for a wide range of applications, which include acoustic and fire insulation for partitions and ceilings, as well as thermal insulation for floors, walls, and roofs.

Performance

Fire
All Rockwool RW slab products, either un-faced or with an aluminium foil or glass fleece on one or both surfaces, achieve an A1 classification in accordance with BS EN 13501-1 and therefore comply with the requirements of non-combustible materials/products, as defined in all UK and Ireland Building Regulations.

Acoustic performance
ROCKWOOL stone wool products work in two distinct ways to reduce noise, either by impeding the transmission of sound through an element of the structure or by absorption of sound at the surface.

The structure of the fibres in ROCKWOOL RW slabs make them ideal for use as a sound absorber.

Internal partitions

Dwellings
In England and Wales, Approved Document E requires all internal walls between a bedroom or room containing a WC and another room to have a minimum sound insulation of 40 Rw dB. This applies to new walls built both in dwellings formed by a material change of use and new build extensions of existing dwellings. (For Scotland, the minimum sound insulation requirement is 43 Rw dB).

Schools
Specific performance standards are set for airborne sound insulation between spaces by Building Bulletin 93 (December 2014) 'The Acoustic Design of Schools'. This classifies each room for the purpose of airborne sound insulation by its activity purpose and sets the minimum sound insulation performance standards for each partition.

Hospitals
Similar to schools, the Healthcare Technical Manuals HTM 08-01 (previously HTM 2045) sets standards for privacy according to room type and from this the specific performance requirement for any partition can be obtained.

Fire performance requirements for internal partitions
Generally, fire performance of partitions will be determined in line with the appropriate Building Regulations. In certain buildings there may be specific fire performance requirements for partitions separating specific room types, for example in Hospitals where this is set by Firecode HTM 05-02 and Building Bulletin 100 Design for fire safety in schools.

ROCKWOOL products also help to improve the fire rating of a partition by limiting the transfer of heat across the cavity.

Technical information

Dimensions & density

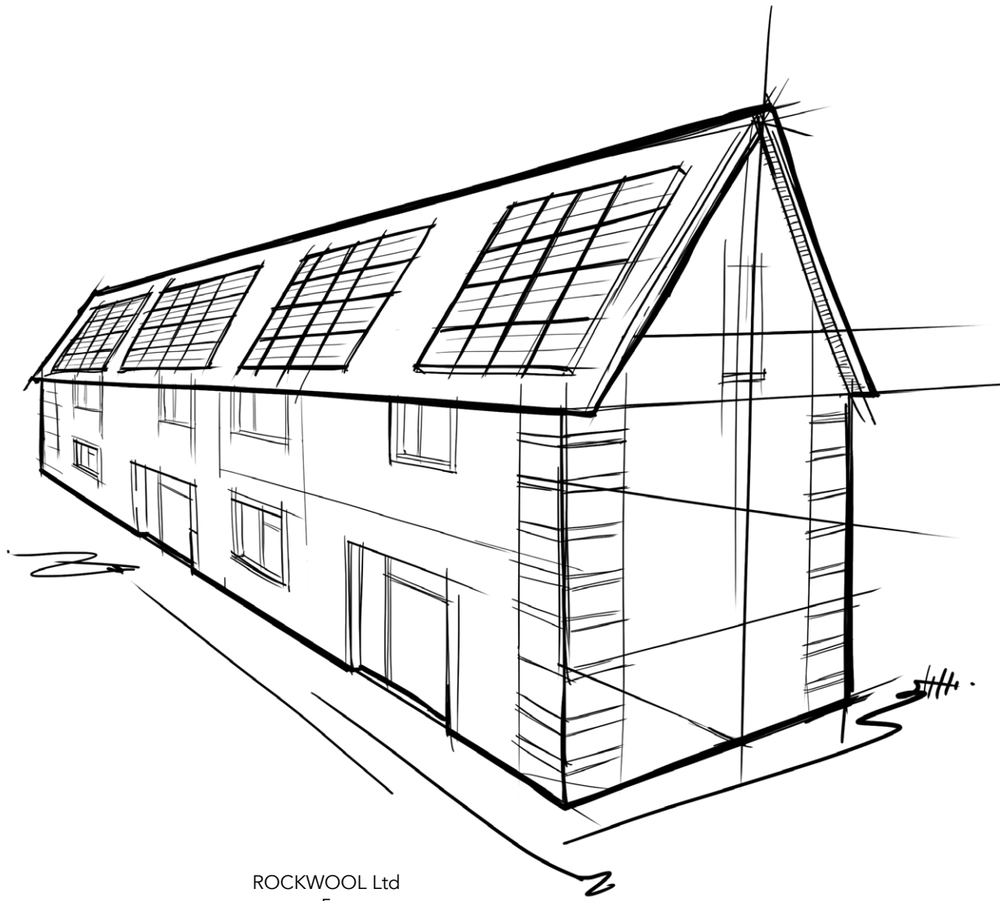
Product	Nominal density (kg/m^3)	Thermal conductivity	Dimensions (mm)
RWA45	45	0.035 W/mK	1200 x 600*
RW3	60	0.034 W/mK	1200 x 600*
RW4	80	0.034 W/mK	1200 x 600*
RW5	100	0.034 W/mK	1200 x 600*
RW6	140	0.035 W/mK	1200 x 600*

* faced slabs come in 1000 x 600mm dimensions

Facings
RW slabs are available with number of facing options, which are:

- Non-woven mineral black tissue (60gsm)
- Non-woven mineral white tissue (100gsm)
- Aluminium foil

Water resistance
ROCKWOOL RW Slabs are highly water repellent and non-hygroscopic.



Installation

Walls - steel frame party wall

Typical Twin light steel frame construction
Two separate steel frame walls are constructed. Minimum 60mm RWA45 slabs are slotted into the cavity between the two steel frames and butt jointed. (Actual thickness of insulation will be determined by the as built cavity width between each frame).

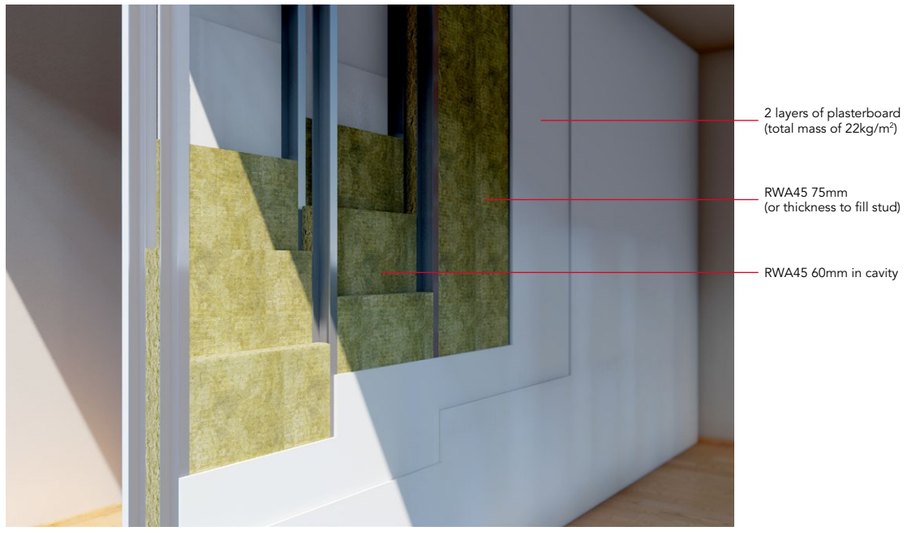
Fully fill the depth of the frame on both sides with 75mm RWA45 slabs, (or thickness to suit stud depth) with no gaps between the insulation slabs.

Wall linings: 2 layers of gypsum plasterboard each side of the party wall, with all joints staggered, to provide a total nominal mass per unit area of 22kg/m2 both sides. A minimum width of 200mm is required between the inner faces of plasterboard lining.

Seal all joints in outer leaf with Joint Tape or caulk sealant.

NOTE: This wall construction requires pre-completion testing.

To meet fire, acoustic and thermal regulations cavity barriers must be installed at the interface junction between the steel frame party wall with the external cavity wall. (For further information, please refer to the ROCKWOOL Cavity Barrier data sheet).



RW SEMI-RIGID AND RIGID SLABS

Acoustic Solutions for Internal metal stud partition walls

Lightweight 50mm metal partition - Rw 41dB

Studs: 50mm metal 'C 'studs at 600mm Centres

Facings: 1 layer of 12.5mm standard plasterboard (total mass per unit area 8.0kg/m² each side)

Insulation: 30mm ROCKWOOL RW3 slab

Results	
Weighted sound reduction	Rw 41dB
Fire resistance	30 minutes
Maximum height	2.5 metres
Nominal wall thickness	75mm
Approx. weight	18kg/m²

This Rockwool solution exceeds the minimum requirements of the Approved Document E for a Rw 40dB internal wall partition in dwellings.

Lightweight 50mm metal partition - Rw 43dB

Studs: 50mm metal 'C 'studs at 600mm Centres

Facings: 1 layer of 12.5mm standard plasterboard (total mass per unit area 8.0kg/m² each side)

Insulation: 30mm ROCKWOOL RW3 slab

Results	
Weighted sound reduction	Rw 43dB
Fire resistance	30 minutes
Maximum height	2.5 metres
Nominal wall thickness	75mm
Approx. weight	22kg/m²

This Rockwool solution also meets the minimum requirements for a Rw 43dB as required by Section 5 of the Scottish Technical Standards for internal wall partition in dwellings.

Lightweight 70mm metal partition - Rw 44dB

Studs: 70mm metal 'C 'studs at 600mm Centres

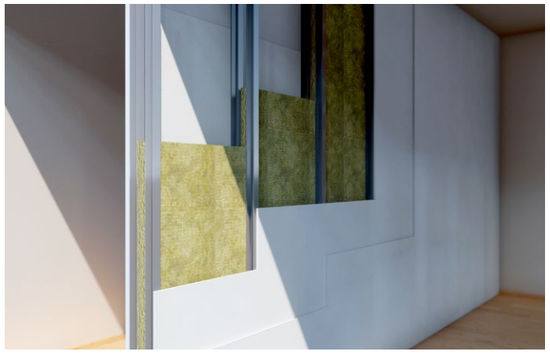
Facings: 1 layer of 12.5mm standard plasterboard (total mass per unit area 8.0kg/m² each side)

Insulation: 30mm ROCKWOOL RW3 slab

Results	
Weighted sound reduction	Rw 44dB
Fire resistance	30 minutes
Maximum height	3.6 metres
Nominal wall thickness	95mm
Approx. weight	19kg/m²

This Rockwool solution is suited to general offices and other general purpose uses.

Lightweight 70mm metal partition - Rw 50dB



Studs: 70mm metal 'C 'studs at 600mm Centres

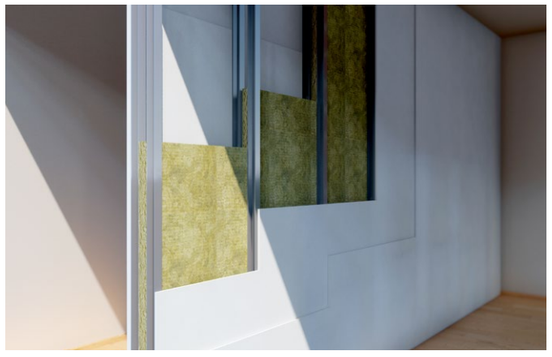
Facings: 2 layers of 12.5mm standard plasterboard (total mass per unit area 16.0kg/m² each side)

Insulation: 50mm ROCKWOOL RWA45 slab

Results	
Weighted sound reduction	Rw 50dB
Fire resistance	60 minutes
Maximum height	4.6 metres
Nominal wall thickness	120mm
Approx. weight	36kg/m²

This Rockwool solution is suited to board rooms, offices and classrooms etc.

Lightweight 70mm metal partition - Rw 55dB



Studs: 70mm metal 'C 'studs at 600mm Centres

Facings: 2 layers of 12.5mm acoustic plasterboard (total mass per unit area 20.0kg/m² each side)

Insulation: 50mm ROCKWOOL RWA45 slab

Results	
Weighted sound reduction	Rw 50dB
Fire resistance	60 minutes
Maximum height	4.6 metres
Nominal wall thickness	120mm
Approx. weight	43kg/m²

This Rockwool solution is suited to board rooms, offices and classrooms etc.

Acoustic upgrade of existing solid masonry wall to party wall standard

This Rockwool solution meets the requirements of ADE Section 4 'Material change of use' Wall treatment 1

Existing wall: min.100mm existing solid masonry wall plastered on both faces

Studs: Independent 50mm metal 'C' studs (leaving a minimum 10mm air space between the back of the stud and the existing wall)

Insulation: min 40mm ROCKWOOL RWA45 slab between studs

Facings: 2 layers of 12.5mm standard plasterboard (8.2kg/m² per board) with staggered joints between boards.

Finishes: Plaster skim coat

Total mass per unit area, excluding framework: 20.0kg/m²

If an existing masonry wall is not plastered or is less than 100mm thick then independent panels should be applied to both sides.

Seal all gaps at the perimeter of the plasterboard lining and where services, such as electrical sockets, penetrate the plasterboard with Rockwool Intumescent Acoustic sealant.

This solution is only suitable for refurbishment work and will require pre-completion testing to show compliance with Building Regulation requirements.

Sustainability

ROCKWOOL stone wool is produced from diabase rock, which is naturally and continually replenished from within the earth at a higher rate than it is used. ROCKWOOL have invested to make sure recycling is a key part of our business. Waste material, refurbishment and demolition waste, along with off-cuts, can all be transformed into ROCKWOOL insulation briquettes and used in our furnaces. In fact, more than 75% of our stone wool waste is recycled. ROCKWOOL also runs a product recycling program from our recycling centre in Bridgend.

Fire resistance

Acoustic comfort

Sustainable materials

Durability

Health & 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 is available and can be downloaded from www.rockwool.co.uk to assist in the preparation of risk assessments, as required by the control of Substances Hazardous to Health Regulations (COSHH). ROCKWOOL Limited.

Environment

ROCKWOOL Insulation is made from natural, sustainable and recyclable resources. Our high-tech production process utilises filters, pre-heaters, after-burners and other cleaning collection systems to ensure an environmentally responsible approach.97% recyclable and with a zero Ozone Depletion Potential and zero Global Warming Potential, ROCKWOOL insulation products represent no known threat to the environment.

Interested?

For further information, contact the Technical Solutions Team on 01656 868490 or email technical.solutions@rockwool.co.uk

Visit www.rockwool.co.uk to view our complete range of products and services.

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The above applications do not necessarily represent an exhaustive list of applications for ROCKWOOL Sound Insulation Slab.

ROCKWOOL Limited does not accept responsibility for the consequences of using ROCKWOOL Sound Insulation Slab in applications different from those described within this data sheet. Expert advice should be sought where such different applications are contemplated, or where the extent of any listed application is in doubt

The ROCKWOOL Trademark

ROCKWOOL® - our trademark

The ROCKWOOL trademark was initially registered in Denmark as a logo mark back in 1936. In 1937, it was accompanied with a word mark registration; a registration which is now extended to more than 60 countries around the word.

The ROCKWOOL trademark is one of the largest assets in the ROCKWOOL Group, and thus well protected and defended by us throughout the world.

If you require permission to use the ROCKWOOL logo for your business, advertising or promotion. You must apply for a Trade Mark Usage Agreement. To apply, write to: marketcom@rockwool.com.

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ROCKWOOL Limited

Pencoed
Bridgend
CF35 6NY

Tel: 01656 862 621

info@rockwool.co.uk

rockwool.co.uk