



# ROCKWOOL®

Application type	Thermal, acoustic and fire
Construction type	Walls

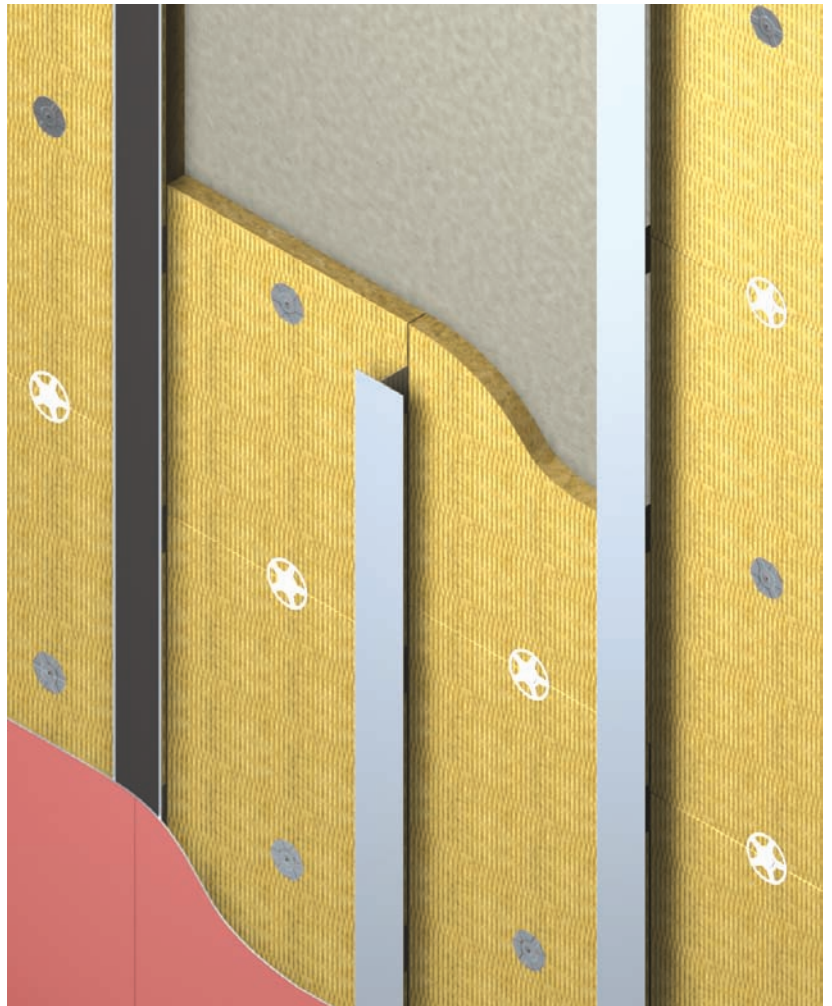
## Rainscreen Duo-slab

Effective, non-combustible thermal insulation for ventilated rainscreen and overcladding applications

Rockwool Rainscreen Duo-slab is a dual density slab which has been specifically developed for insulation behind rainscreen cladding systems and also for sealed cladding systems such as curtain wall and other over cladding systems.

### Advantages

- Designed for use on high rise buildings
- High resistance to wind and rain during construction
- Fewer fixings required for installation – compared to standard mineral wool slabs
- Robust front face resists damage and over-driving of fixings



Standards and approvals

Rainscreen Duo-slab satisfies the requirements of

BS EN 13162: 2001 'Thermal insulation products for building – Factory made mineral wool (MW) products – specification'.

Description

Rainscreen Duo-slab is a dual density slab comprising a robust outer surface (designed to withstand the rigours imposed on site), and a resilient inner face (designed to accommodate the substrate to which it is being applied).

The robust outer surface offers improved weather resistance and a more clearly defined cavity width, whilst the resilient inner surface accommodates itself to irregularities in the surface of the substrate, thus maximising thermal performance.

The slabs will knit together when tightly butt jointed so that way extraneous heat loss caused by gaps is eliminated. This also prevents water transmission through the insulation layer and is proven over 25 years in traditional masonry wall construction.

The slab is designed for use in conditions of severe climatic exposure. Because of its unique dual density construction, the product requires fewer fixings, thus providing a cost-effective solution in overcladding applications.

Dimensions

Standard size of 1000 × 600 mm and is available in thicknesses from 50 mm up to 150 mm. For other thicknesses please contact Rockwool.

Performance and properties

Fire

Rated A1 when tested to EN 13501-1 classification using test data from reaction to fire test.

Wind resistance

Rainscreen Duo-slab fixed as indicated in Figure 1 (opposite) has successfully undergone wind resistance testing by the Building Research Establishment. Windloading fatigue tests were used to simulate the performance of the slabs when fully exposed and subjected to fluctuating wind loads during the construction stages of buildings. The tests simulated and exceeded the maximum UK basic wind speed of 56 m/s as defined by BS CP3: Chapter 5: Part 2: 1972.

Test report BRE GI2801

Water resistance

Rockwool mineral wool repels liquid water due to its fibre orientation and the presence of water repellent additives.

Acoustic Performance

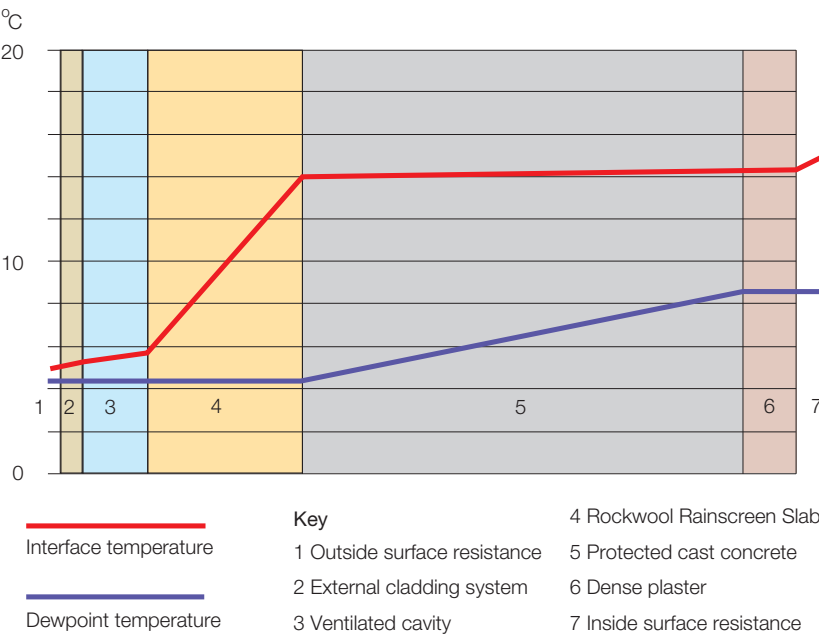
The slabs can significantly improve the acoustic performance of the external building structure.

Condensation control

Vapour resistivity = 5.9 MNs/gm. The slabs, therefore reduce the risk of condensation, allowing natural drying out of the structure. See typical relative humidity / temperature graph right.



Interface/dewpoint temperatures



## Installation

### *Rainscreen cladding – Metal rail systems*

To obtain the optimum performance of the system, the Slabs should be applied with the patterned side facing outwards (see Figure 4). The resilient inner layer will accommodate surface irregularities (see Figure 3).

Close butt the slabs at all vertical and horizontal joints.

Stagger the horizontal joints of the insulation in accordance with good fixing practice.

Fix using a combination of metal and polypropylene fixings in accordance with the detail shown in Figure 1. Fixings should have a minimum head diameter of 70 mm.

Rainscreen Duo-slabs should be cut and tightly fitted around wall brackets where these occur.

See 'Construction 1' on the back page for typical U-values relating to this construction.

### *Suitable Fixing Manufacturers*

Hilti: 0806 083 0858

ITW Construction Products Ltd.: 0800 731 4924

Ejot: 01977 687040

Hardo Fischer: 01206 835951

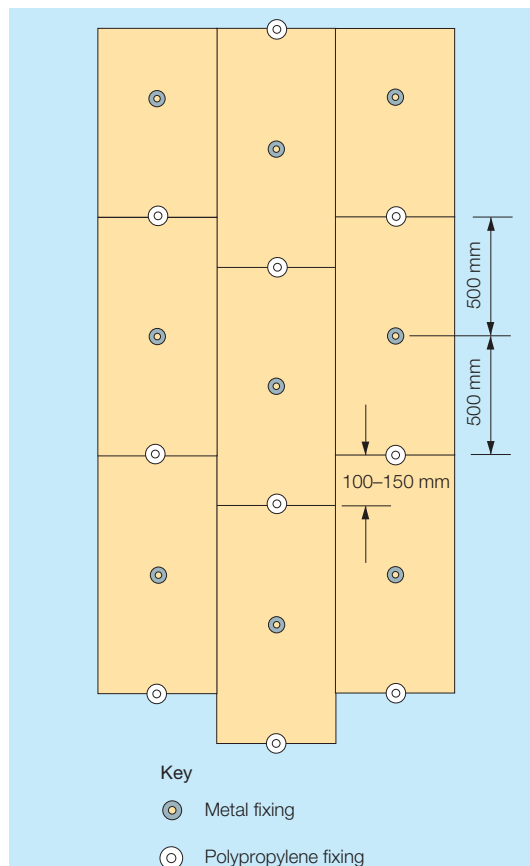


Figure 1 Typical fixing pattern of Rainscreen Duo-slab with 3 fixings per square metre

### *Rainscreen cladding – timber rail application*

The Slabs should be tightly fitted between the treated timber rails prior to the installation of the external cladding boards and mechanically fixed as shown in figure 2. Provision should be made for a minimum 25 mm ventilated air space behind the cladding boards.

All horizontal joints should be closely butted to optimise the insulation performance.

See 'Construction 3' on the back page for typical U-values relating to this construction.

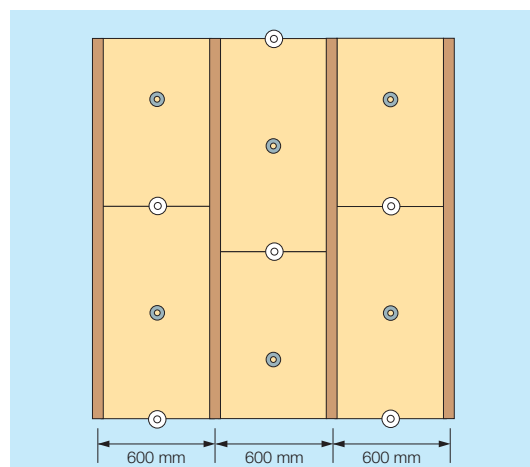


Figure 2 Typical fixing pattern of Rainscreen Duo-slab between treated timber cladding rails

### *Work on site*

Rockwool Rainscreen Duo-slabs are light and easy to cut to any shape with a sharp knife. They are shrink wrapped in polyethene and supplied on pallets that are shrouded with a waterproof hood suitable for outside storage.

Once installed, due to their robust outer facing surface, the slabs can be left unprotected for an extended period of time prior to fixing the rainscreen cladding.

### *Workability*

Light and easy to handle, the slabs are easy to cut to shape or size with a sharp knife, to suit the cladding system.

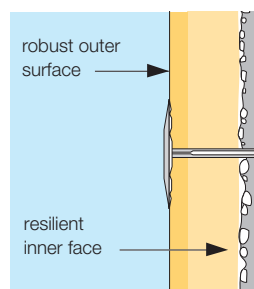


Figure 3 Dual density

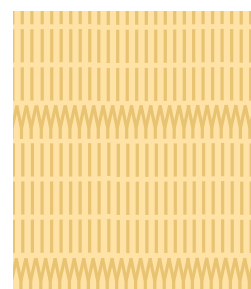


Figure 4 Textured outer face of slab



Typical specification

The rainscreen insulation is to be Rockwool Rainscreen Duo-slab, ..... mm thickness, as manufactured by Rockwool Limited, Pencoed, Bridgend cf35 6ny, secured to the substrate with metal and polypropylene fixings in accordance with Rockwool Rainscreen Duo-slab Data Sheet.

Horizontal joints should be staggered and all joints tight butted.

The Slabs should be fixed with the robust (patterned) surface facing outwards.

Health and safety

The safety of Rockwool mineral 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 from Rockwool Customer Support (0871 222 1780) to assist in the preparation of risk assessments, as required by the Control of Substances Hazardous to Health Regulations (COSHH).

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.

Environment

Relying on entrapped air for its thermal properties, 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 Ltd 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.

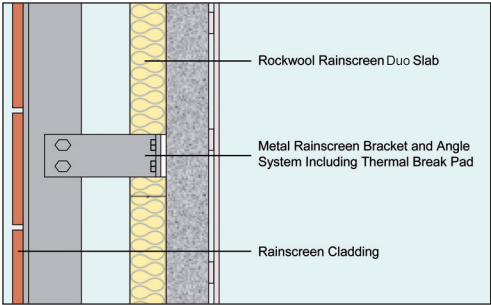


**More information**  
For further details visit our website at [www.rockwool.co.uk](http://www.rockwool.co.uk) or phone Customer Support on 0871 222 1780

U-values  
Rainscreen Duo-slab Ventilated Rainscreens

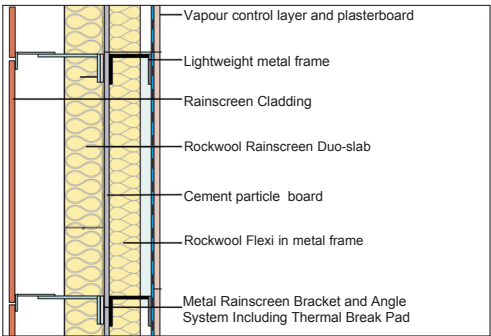
**Construction 1: Rainscreen Duo-slab** between Metal Bracket System on 150mm Reinforced Concrete or dense block wall. Internal finishes: (a) plaster (b) plasterboard on dabs

Internal finish	a	b
Rainscreen Duo-slab Thickness (mm)	U-values W/m²K	U-values W/m²K
125	0.35	0.34
150	0.32	0.31
175	0.28	0.28
200	0.26	0.26
275	0.22	0.22
325	0.20	0.20



**Construction 2: Rainscreen Duo Slab** on 150mm deep metal studs at 600mm centres with Rockwool Flexi 140mm part-filling frame.

Rainscreen Duo-slab Thickness (mm)	RW Flexi Thickness	U-values W/m²K
50	140	0.34
75	140	0.30
100	140	0.27
125	140	0.25
140	140	0.24
150	140	0.23
175	140	0.22
225	140	0.20



Notes for constructions 1 & 2

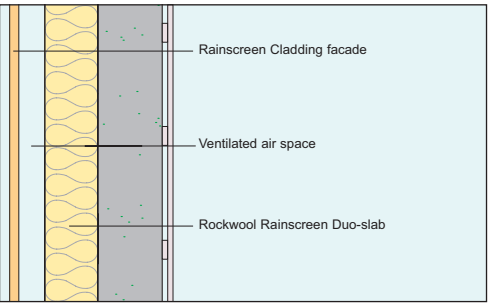
- Tables based on pointloss scenarios where only the rainscreen brackets bridge the thermal insulation layer.
- A thermal bridging allowance of 0.1 W/m²K has been added to the wall U-value (e.g. a calculated U-value of 0.25 will be increased to 0.35 W/(m²K) to allow for predicted bridging).

(Based on data supplied by the BRE using a 5mm thick thermal break pad and brackets at 600mm x 600mm fixing matrix).

Rockwool recommend all U-value calculations for rainscreen application be verified by the cladding manufacturer utilising 3D thermal modelling software.

**Construction 3: Rainscreen Duo-slab** between timber rails on 150mm Dense Concrete or dense block wall. Internal finishes: (a) plaster-Lambda 0.180 W/mk (b) Plasterboard on dabs

Internal finish	a	b
Rainscreen Duo-slab Thickness (mm)	U-values W/m²K	U-values W/m²K
100	0.35	0.34
125	0.29	0.28
140	0.26	0.26
150	0.25	0.24
200	0.19	0.19
225	0.17	0.17



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 Rainscreen Duo-slab. Rockwool Limited does not accept responsibility for the consequences of using Rainscreen Duo-slab 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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