

**ROCKWOOL**  
FIRESAFE INSULATION

## Rainscreen Duo-slab

Effective, firesafe thermal insulation for 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 overcladding 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'.

## Environment

No CFCs, HFC's or HCFCs are used in the manufacture of Rockwool materials.

Fewer fixings reduce installation noise.

## 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 x 600 mm and is available in thicknesses from 50 mm up to 105 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.

### 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

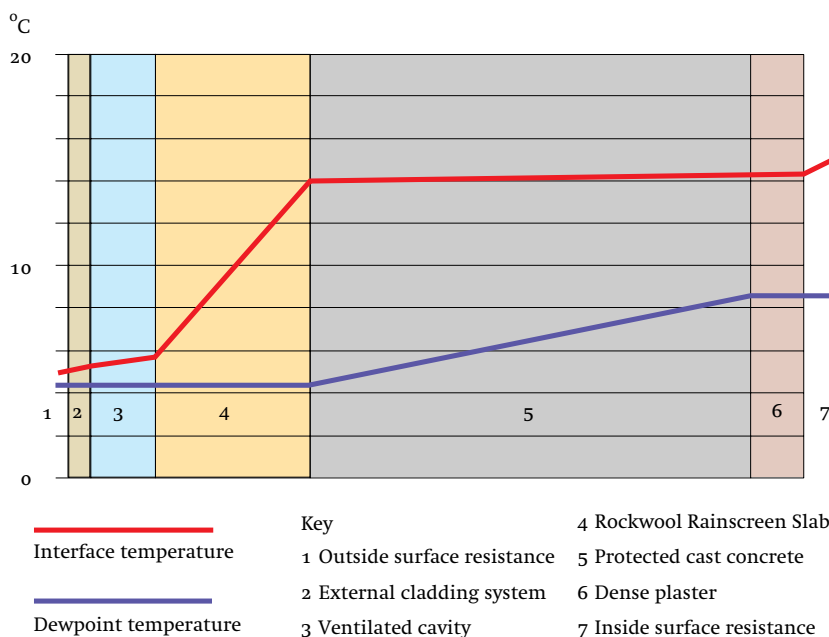
Vapour resistivity = 5.9 MNs/gm. The slabs, therefore reduce the risk of condensation, allowing natural drying out of the structure. See typical relative humidity / temperature graph right.



### U values

Insulation thicknesses relating to typical wall constructions are provided in the separate U value section of the Rockwool Red Book.



## Interface/dewpoint temperatures



- |   |                              |                             |
|---|------------------------------|-----------------------------|
|  | Key                          | 4 Rockwool Rainscreen Slab  |
|  | Interface temperature        | 5 Protected cast concrete   |
|   | 1 Outside surface resistance | 6 Dense plaster             |
|   | 2 External cladding system   | 7 Inside surface resistance |
|   | 3 Ventilated cavity          |                             |

## 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.

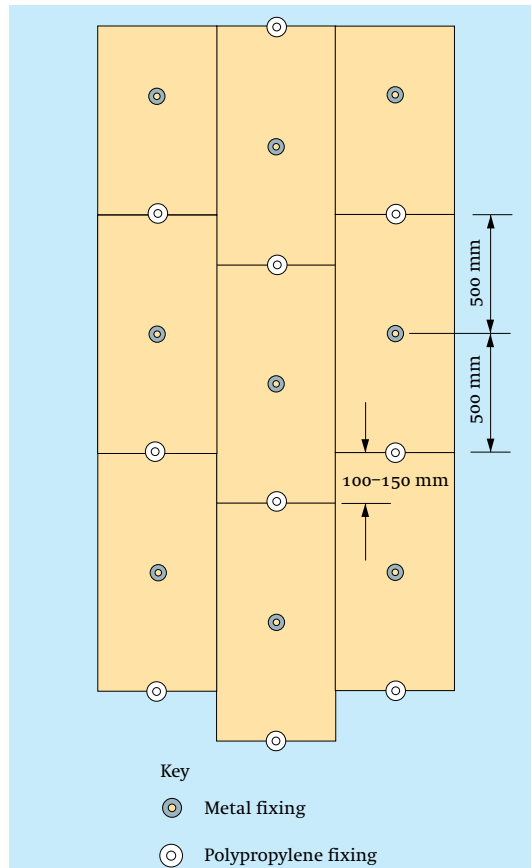


Figure 1 Typical fixing pattern of Rainscreen Duo-slab with 3 fixings per square metre

### Rainscreen cladding – timber batten application

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

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

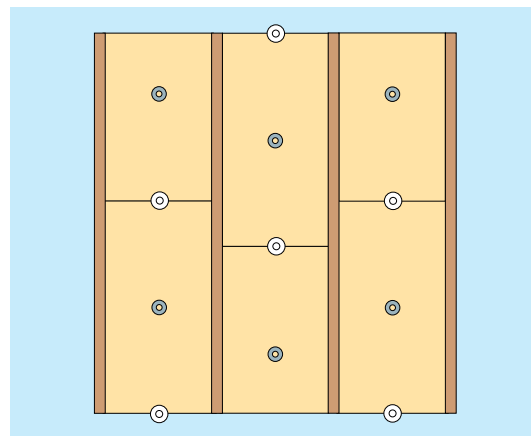


Figure 2 Typical fixing pattern of Rainscreen Duo-slab between battens

### Site use

Slabs are supplied compression wrapped in polyethylene, for short term protection. For long term storage they must be protected with a waterproof covering.

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.

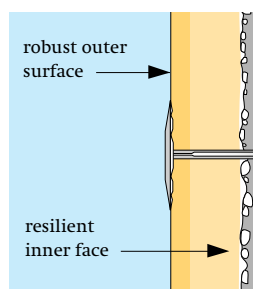


Figure 3 Dual density

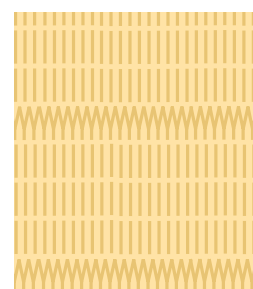


Figure 4 Textured outer face of slab

## 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

Current HSE 'CHIP' Regulations and EU directive 97/69/EC confirm the safety of Rockwool mineral wool; Rockwool fibres are not classified as a possible human carcinogen.

The maximum exposure limit for mineral wool is 5mg/m<sup>3</sup>, 8 hour time-weighted average.

A Material Safety Data Sheet is available from the Rockwool Marketing Services Department to assist in the preparation of risk assessments, as required by the Control of Substances Hazardous to Health Regulations (COSHH).

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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