

# EWI SYSTEM HOLDERS

Non-combustible thermal insulation





## What is ROCKWOOL?

Put simply, ROCKWOOL is made from rock. Our manufacturing process recreates the inside of an active volcano, using a cupola furnace to melt volcanic basalt rock at temperatures of up to 1,500°C.

The liquid rock is channelled into a chamber where it is spun into strands. These strands are collected, then mixed with a small amount of binder and water-repelling agent to form stone wool insulation products.

## Advantages

### Non-combustible

- ROCKWOOL stone wool achieves the highest 'A1 – Non-combustible' rating under the European Reaction to Fire Classification System
- This means that it doesn't burn and won't contribute to any stage of a fire

### Durable

- ROCKWOOL slabs are dimensionally stable and won't shrink or degrade over the lifetime of the building
- The dense outer surface provides a solid face for base coat application, and helps to prevent overdriven fixings
- Offers a high resistance to wind and rain when exposed during installation
- Tried and tested: EWI providers across Europe have been using ROCKWOOL in their systems for over 40 years

### Breathable

- The breathable open-cell structure of ROCKWOOL stone wool allows water vapour to pass through, while the randomly oriented water-repellent fibres work to prevent water ingress
- ROCKWOOL stone wool has a vapour resistance similar to that of still air

### Thermal Performance

- When tightly butt jointed, the fibres of adjacent slabs will effectively knit together
- This eliminates heat losses that would otherwise be caused by gaps between slabs

### Acoustic Performance

- EWI systems incorporating ROCKWOOL slabs can add significant mass to the building envelope, helping to limit the transfer of sound and vibration, while the fibrous nature of the product also helps to stop sound through absorption
- Test evidence demonstrates an improvement to the weighted sound reduction,  $R_w$ , of up to 8 dB (substrate-dependent)



## External Wall Dual Density Slabs

### Product description

External Wall Dual Density Slab is a stone wool insulation specifically developed for use in external wall insulation systems.

Made using a ROCKWOOL-patented 'dual density' manufacturing process, the top layer of each slab has a distinctly higher density than the remainder of the product. This provides a robust outer surface for applying render and accepting fixings, while the resilient underside can accommodate unevenness in the substrate.

To aid installation the top layer is branded with 'THIS SIDE UP', allowing for quick and easy identification of the outer surface.

### Dimensions

Length	Width	Thickness
1200mm	600mm	50-250mm (10mm increments)

### Performance

#### Fire

Euroclass A1 – non-combustible

#### Thermal

Thermal conductivity 0.036 W/mK

#### Strength

Tensile strength perpendicular to faces  $\geq 10$  kPa

Compressive  $\geq 10$  kPa

#### U-values

U-value (W/m <sup>2</sup> K)	External wall slab DD (mm)	
	New build Steel frame <sup>1</sup>	Refurbishment 215mm block <sup>2</sup>
0.30	50	110
0.29	60	110
0.28	60	120
0.27	60	120
0.26	70	130
0.25	70	130
0.24	80	140
0.23	80	140
0.22	90	150
0.21	100	160
0.20	100	170
0.19	110	170
0.18	120	190
0.17	130	200
0.16	140	210
0.15	160	220
0.14	170	240

EWI System on:

<sup>1</sup> 12mm Cement Particle Board, 100mm Steel Frame filled with 100mm ROCKWOOL Flexi, 2 x 12.5mm Plasterboard.

<sup>2</sup> 215mm Dense Concrete Block, 13mm Plaster.

## External Wall HD Slab

### Product description

External Wall HD Slab is a stone wool insulation specifically developed for use in external wall insulation systems where a higher density slab required.

### Dimensions

Length	Width	Thickness
1200mm	600mm	30-200mm (10mm increments)

### Performance

#### Fire

Euroclass A1 – non-combustible

#### Thermal

Thermal conductivity 0.038 W/mK (30 – 40mm) / 0.039 W/mK (> 40mm)

#### Strength

Tensile strength perpendicular to faces  $\geq 15$  kPa  
Compressive  $\geq 10$  kPa



## Double Layering

Insulation thicknesses greater than 250mm can be achieved by installing slabs in two layers.

Where possible both layers should be of the same thickness, e.g. 2 x 150mm to meet 300mm – otherwise, for ease of identification on site, two visually dissimilar thicknesses should be chosen.

### Fixing instructions

Installation is started from the left side of the façade at base track level.

When using two different slab thicknesses, the thinner of the two is installed first. To avoid thermal bridging the slabs are installed in a brick bond pattern.

### First layer

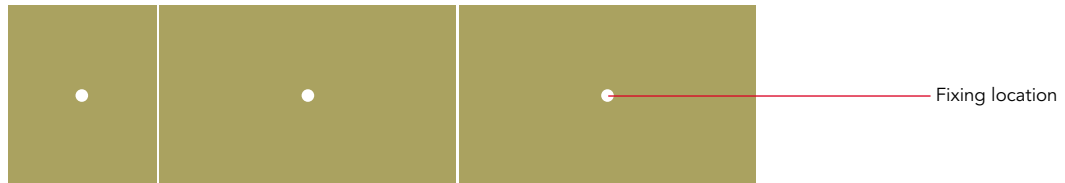
The first slab to be installed is cut in half (i.e. measuring 600x600mm), as per Figure 1 below. This is to ensure that the second layer is offset by half a slab length. The run is then continued to the right with full size slabs.

Each slab is affixed with adhesive and one centrally located fixing.

### Second layer

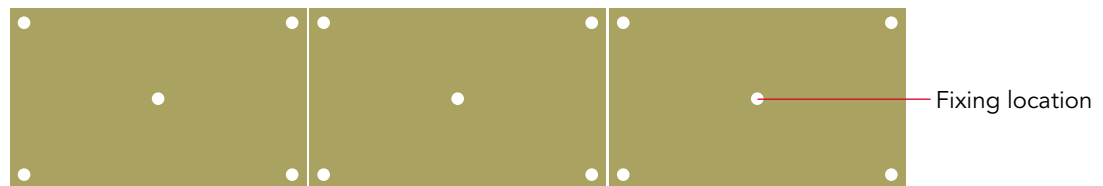
The second layer is started and continued from left to right using full-size slabs. Each slab is affixed with 5 fixings per board in the pattern shown in Figure 2. There is no need for adhesive between the layers.

Figure 1  
First layer



Per board: one centrally located fixing.

Figure 2  
Second layer



Per board: one centrally located fixing, and four located 100-150mm diagonally from each corner.  
Note: Number of fixings required may increase subject to project-specific wind load calculations.

Having completed the first course of two layers, the second course is then installed in the same way – i.e. the first layer is started with a half board from the left side as per Figure 1, followed by the second layer as per Figure 2.

## Packaging

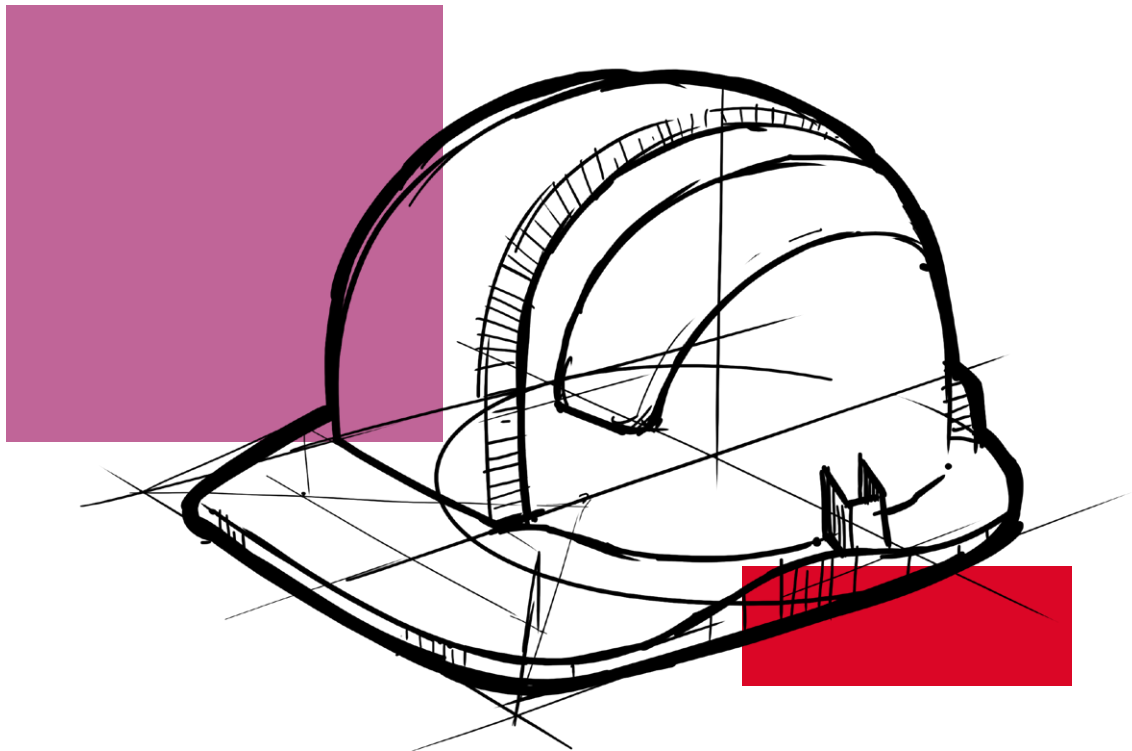
The product is supplied on pallets. For full details of packaging specifications and minimum order quantities, please see the EWI System Holder's Ordering Guide

## Handling & Storage

Slabs should be stored indoors or under waterproof covering.

## Quality Assurance

ROCKWOOL operates a Quality Management System which complies with the requirements of BS EN ISO 9001:2008 and is registered by BSI-QA under Certificate No. FM 02262.



## 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**



**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](http://www.rockwool.co.uk) to assist in the preparation of risk assessments, as required by the Control of Substances Hazardous to Health Regulations (COSHH).

## Environment

Made from a renewable and plentiful naturally occurring resource, ROCKWOOL insulation saves fuel costs and energy in use and relies on trapped air for its thermal properties.

ROCKWOOL insulation does not contain (and has never contained) gases that have ozone depletion potential (ODP) or global warming potential (GWP).

ROCKWOOL is approximately 97% recyclable. For 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 these materials to our factory for recycling.



## Interested?

For further information, contact the Technical Solutions Team on 01656 868490 or email [technical.solutions@rockwool.co.uk](mailto:technical.solutions@rockwool.co.uk)  
Visit [www.rockwool.co.uk](http://www.rockwool.co.uk) to view our complete range of products and services.

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