

## RockShield

Rockwool's complete high performance external wall insulation. Suitable for insulating, weatherproofing and decorating all wall types.

The Rockwool RockShield system fulfils the triple function of thermal insulation, weather protection and aesthetic improvement.

The system offers a choice of options in insulation thickness and fixing methods to meet different substrate conditions. RockShield decorative coats and specially developed paints are available in a choice of textures and a wide range of colours, so that a finish appropriate to the building character, context and type may be achieved.

### Advantages

- Fire safe, Euroclass A2
- Dimensionally stable
- Low maintenance
- Wide range of colourfast finishes
- Removes cold bridges



Bankside Lofts, London SE1  
Architects: CZWG

## Thermal efficiency, fire safety and exceptional weather protection

### Standards and approvals

Rockwool RockShield has been extensively used for both new-build and refurbishment schemes, and on a wide range of building types.

Rockwool RockShield systems have been approved by the BBA (Certificate No. 90/2437) and by the Institute of Bautechnik in Germany. The systems are also registered with the Insulated Render and Cladding Association (INCA).

Rockwool RockShield meets the requirements for the NHBC on masonry substrats subject to individual assessment.

### Quality Assurance

Rockwool Limited operates a Quality Management System which complies with the requirements of BS EN ISO 9001:1994 and is registered by BSI-QA under Certificate No. FM 02262.

### System options

The Rockwool RockShield system is available in a range of options, including choice of insulation, thickness of base coat and decorative finish.

### Insulation options

#### *Rockwool RockShield Rigid Slabs*

Sized 1000 × 500 mm, RockShield rigid slabs are available in thicknesses of 30 mm to 140 mm in 10 mm increments. Rigid slabs are adhesive and mechanically fixed.

#### *Rockwool RockShield Facade Lamellas*

Facade Lamellas are 1000 × 200 mm and are available in thicknesses from 30 mm to 300 mm in 10 mm increments. They are generally adhesive fix and may therefore be used on substrates that are problematical for mechanical fix. They are ideally suited to new-build constructions with a height limit of 20 m.

### Base coat options

#### *RockShield TC*

Rockwool RockShield TC is a thin coat system with a total thickness of between 6 and 8 mm.

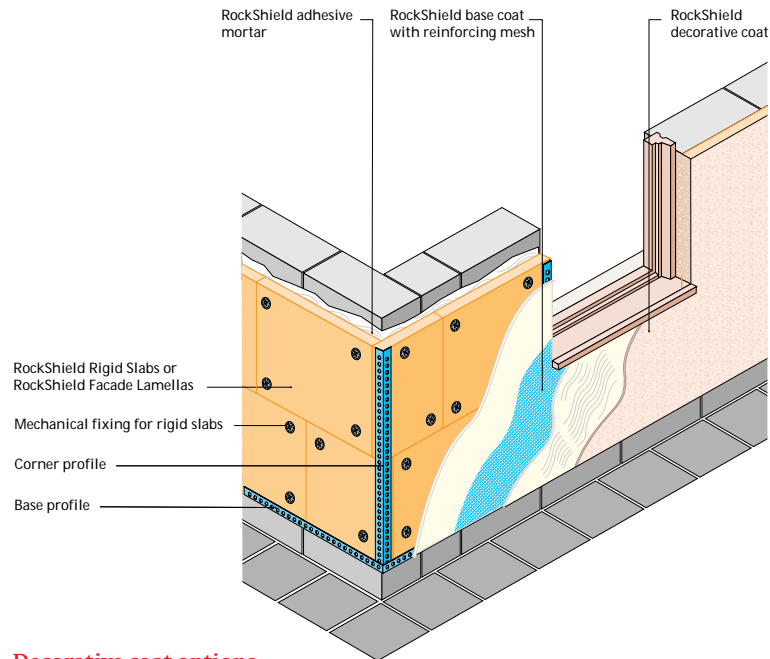
#### *RockShield LW*

Rockwool RockShield LW is a thicker coat system with a total thickness of between 8 and 12 mm (it can be applied up to 20 mm thick) offering a higher level of tolerance on uneven substrates.

Both RockShield TC and RockShield LW can be classified as thin coat systems which have a high degree of flexibility and are not subject to the temperature stresses which are imparted to thick, sand/cement renders. Both RockShield systems include glass fibre reinforcing mesh for added strength.

#### *High Impact Coat*

For areas which are likely to be subject to high levels of impact, an additional high impact coat can be applied to both the above systems.



### Decorative coat options

#### *Silcoplast*

Silcoplast represents a state of the art development of plaster formulation. It is based on quartz, a natural, weather-resistant material, using an organic binder.

Silcoplast's excellent vapour permeability properties enable the total RockShield system to breathe, helping to eliminate condensation problems. Because of its highly water repellent nature, any contamination of the surface is washed away by rainwater, thus retaining the colour intensity of the finish. It is supplied in 25 kg tubs, ready mixed, ensuring perfect colour matching.

The Silcoplast decorative coat is available in two finishes:

- (1) grained texture
- (2) dragged texture

### Colours

Both decorative coat finishes are supplied in a wide range of standard colours as well as BS 4800 colours. Formulations can also be made to specific colour requests. Colour charts are available on request from Rockwool's Marketing Services department.

### Textured finishes

Silcoplast is available in a grained texture of three grain sizes: 1.5 mm, 2.5 mm and 3.5 mm and dragged texture two grain sizes 2 mm and 3 mm.

### Paint finishes

#### *Colorsil*

Colorsil paint is a silicon-based paint available in all the same colours as the decorative coats. It is totally water resistant and highly vapour permeable.

## RockShield performance and properties

### Properties

Typical weights for Rockwool RockShield systems  
(70 mm Rockwool)

System	Weights (kg/m <sup>2</sup> )	
	TC	LW
Adhesive mortar	4.5	4.5
Rockwool slab	9.8	9.8
Base coat	4.5	7.5
Decorative coat*	3.5	3.5
Total	22.3	25.3

\* Decorative coat weight will alter with grain size

### Fire

When tested to the new European Fire Classification, the RockShield system is likely to achieve a Euro Class 'A2' for reaction to fire. The core Rockwool insulation will achieve 'A1'.

### 'U' values

Insulation thicknesses relating to typical wall constructions are shown below.

### Condensation control

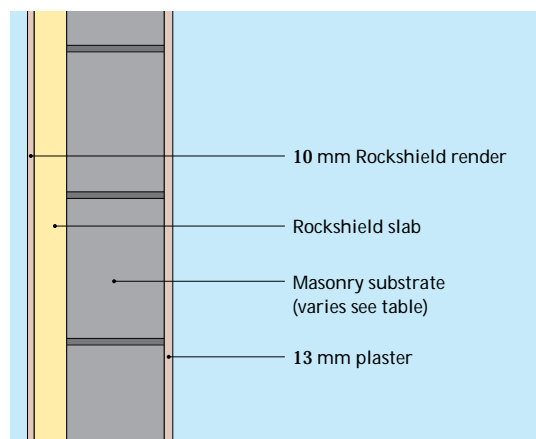
When calculating vapour diffusion through a structure, the vapour resistance of Rockwool is 5.9 MNs/gm. The vapour resistivity of the combined Rockwool RockShield base coat and decorative coat is 9 MNs/gm.

### Environment

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

### Compression

The System will, without being damaged, support ladders, with a spreading board being used for normal maintenance work.



U values (W/m <sup>2</sup> K)								
Rockshield Slab Thickness (mm)	Masonry construction options							
	Dense block $\lambda = 1.13$ w/mK Thickness (mm)		Med dense block $\lambda = 0.51$ w/mK Thickness (mm)		Lightweight block $\lambda = 0.19$ w/mK Thickness (mm)		Brick Solid Thickness (mm)	Brick/Block 50mm Cavity Thickness (mm)
	140	215	140	215	140	215	225	102 (Brick)/100 (Block)
70	0.45	0.43	0.42	0.40	0.35	0.32	0.40	0.41
80	0.40	0.39	0.38	0.36	0.32	0.29	0.36	0.38
90	0.36	0.35	0.34	0.33	0.30	0.27	0.33	0.35
100	0.33	0.32	0.31	0.30	0.28	0.25	0.30	0.32
110	0.30	0.30	0.29	0.28	0.26	0.24	0.28	0.30
120	0.28	0.27	0.27	0.26	0.24	0.22	0.26	0.28

### Impact resistance

Rockwool RockShield has been tested by a 25 mm punch method and achieved an ultimate strength figure of 1000 N. The following materials and constructions are shown for comparison:

13 mm wood fibreboard on battens	150 N
13 mm gypsum plasterboard on battens	300 N
8 mm asbestos cement sheet on battens	550 N
Rockwool RockShield	1000 N

### Rain resistance

Rockwool mineral wool is inherently water repellent, and this property is enhanced by special additives. RockShield base coats, decorative coats and specially developed paints are also highly water resistant.

### Durability

It is essential that the basic structure is sound and in good repair. It is recommended that a suitable damp-proof course be installed, if none exists in the original structure.

The Rockwool RockShield system is stable and will ensure continuing high performance. Rockwool slabs have been proved in service for over 50 years in all types of exposure.

The base coats and decorative coats employed in the RockShield system have been used with great success for over 19 years within the UK, and for in excess of 25 years on the Continent.

Rockwool RockShield has undergone successful accelerated ageing tests simulating 25 years of exposure. Life expectation is in excess of 50 years without any major maintenance.

## Installation

Installation is only by Rockwool approved installers. Rockwool Limited will provide post-installation checks.

An approved installer is fully trained by Rockwool Ltd.

The Rockwool insulation is fixed either by a combination of adhesive and mechanical methods using rigid slabs, or by adhesive fix only, using RockShield Facade Lamellas.

The Rockwool can be easily cut on site using normal tools, such as a panel saw.

The Rockwool RockShield finish is applied in two coats. The first coat includes a reinforcing mesh to impart strength to the system. The second coat is a decorative finish. A wide range of colour finishes is available.

## Application

Materials must not be applied below 5°C or if there is a risk of frost within 24 hours. Protection from rain must be provided until both base and decorative coats have dried.

During the winter months, winter grade products are available for use between November and March. These products are suitable for application during cold and humid conditions and have faster drying times.

Drying of the finishes is dependent on temperature and relative humidity. Under average conditions this will be in less than 24 hours, but in winter it may be longer.

For further information on application see the RockShield Application Guide.

### Tolerances

It is possible to take up tolerances within the facade of up to 20 mm over the length of the elevation or between expansion joints.

The system will also be able to cope with thickness differentials between blocks and bricks, and mortar protrusions of up to 3 mm. If the wall exceeds these tolerances however then some preparatory work on the substrate may be necessary.

### Handling and storage

Rockwool slabs should be handled with care. They should be stored indoors or under waterproof covering. Rockwool base coats and finishes can be stored for up to 12 months if kept in a dry, frost-free place.

### Biological

The Rockwool Rockshield system is completely rot proof and does not encourage the growth of fungi, moulds or bacteria.

## Typical specification clauses

The external wall insulation system is to be Rockwool RockShield as supplied by Rockwool Limited, Pencoed, Bridgend, CF35 6NY, and installed by a RockShield Approved Installer.

The Rockwool RockShield system is to be TC/LW.\*

The insulation is to be RockShield Rigid Slab (mechanical & adhesive fix) / RockShield Facade Lamella (adhesive fix only),\* thickness..... mm†.

The decorative coat is to be Silcoplast/grained/dragged\* grain size.....mm†, colour.....† and/or to be painted using RockShield Colorsil paint, colour.....†

\*Delete as appropriate.

† Insert thickness, grain size or colour required as appropriate

## 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).

## Additional information

To obtain any of the following information or samples, simply photocopy the page, tick or complete the appropriate box(es), fill in name and address and fax or send to Rockwool at the address below.

Technical guide	<input type="checkbox"/>
Colour swatch	<input type="checkbox"/>
Application guide	<input type="checkbox"/>
Detailing sheets	<input type="checkbox"/>
Silcoplast decorative coat sample grained texture.	<input type="checkbox"/>
Grain size: 1.5mm	<input type="checkbox"/>
2.5mm	<input type="checkbox"/>
3.5mm	<input type="checkbox"/>
Silcoplast decorative coat sample dragged texture.	<input type="checkbox"/>
2mm	<input type="checkbox"/>
3mm	<input type="checkbox"/>
TC	<input type="checkbox"/>
LW	<input type="checkbox"/>
Registered installer list	<input type="checkbox"/>
BBA certificate	<input type="checkbox"/>

Name

Position

Company

Address

Telephone

Facsimile

### Technical Helpline

Technical advice relating to RockShield is available from the Rockwool Technical Helpline Services Department on 0871 222 1780.

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 RockShield. Rockwool Limited does not accept responsibility for the consequences of using RockShield 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.

**ROCKWOOL**  
FIRE SAFE INSULATION

Rockwool Limited  
Pencoed, Bridgend, CF35 6NY

E info@rockwool.co.uk  
www.rockwool.co.uk