

REDArt™ Silicone

The REDArt™ Silicone external wall insulation system offers outstanding thermal and weather protection plus an attractive exterior for new build and refurbishment projects.

REDArt Silicone

The REDArt Silicone system is produced from insulation made of renewable volcanic rock. There are a number of options in thickness and fixing methods to meet different substrate conditions. Decorative coats and specifically developed paints are available in a wide range of textures and colours, ensuring the best possible finish for your building's character and context.

Advantages

- Fire safe, Euroclass A2
- Dimensionally stable
- Low maintenance
- Wide range of colourfast finishes
- Minimises cold bridges
- Suitable for all exposure zones
- Suitable for new build and refurbishment work

Product properties and design

Dimensions and product details

Typical weights for ROCKWOOL REDArt Silicone systems (100mm ROCKWOOL dual density (DD) slab)

System	TC
Adhesive mortar	4.5
ROCKWOOL DD slab	12.7
Base coat	4.5
Decorative coat*	3.5
Total	22.3

*Decorative coat weight will alter with grain size

Insulation options

ROCKWOOL REDArt Silicone dual density slabs

Size: 1200 x 600mm

Thickness: Available in thicknesses from 30mm* - 200mm in 10mm increments

Rigid slabs are adhesive and mechanically fixed.

30 and 40mm thick slabs are mono density products.

ROCKWOOL REDArt Silicone facade lamellas

Size: 1000 x 200mm

Thickness: Available in thicknesses from 30mm to 300mm in 10mm increments

These are generally adhesive fix and may therefore be used on substrates that are problematical for mechanical fix.

Base coat

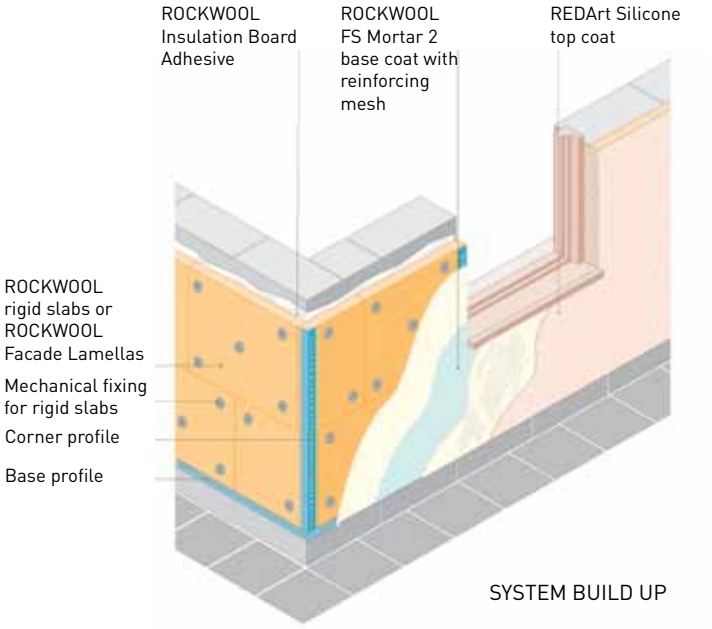
Application

ROCKWOOL FS Mortar 2 is used to fix mineral wool slabs and lamellas onto mineral substrates and to apply a reinforcing layer when insulating buildings.

Properties

ROCKWOOL FS Mortar 2 is a cement-polymer adhesive which is frost and water-resistant and provides improved vapour permeability and enhanced mechanical strength. It has been designed and ideally suited for building refurbishment.

ROCKWOOL FS Mortar 2 is additionally reinforced with fibres.



SYSTEM BUILD UP

Decorative coat options

REDArt Silicone Topcoat

This product is supplied in 25kg tubs, ready mixed, ensuring perfect colour matching.

Textured finishes

REDArt Silicone Topcoat is available in a grained texture with 1.0, 1.5 and 2.0mm sized grains.

Colours

REDArt Silicone Topcoat is supplied in a wide range of standard colours. Formulations can also be made to specific colour requests. Colour charts and samples are available upon request.

REDArt Silicone Topcoat represents a state-of-the-art development in plaster formulation.

It is based on quartz, a natural weather-resistant material, using an organic binder. Its excellent vapour permeability properties enable the whole of the REDArt Silicone system to breathe, helping to eliminate condensation problems. Because of its highly water repellent nature, any surface contamination is washed away by rainwater and the finish retains its colour intensity.

Paint finishes

REDArt Silicone Paint

REDArt Silicone Paint is silicon-based and available in the same range colours as the decorative coats. It is totally water resistant and highly vapour permeable.

Installation Guidance

Installation is only carried out by ROCKWOOL approved installers who receive full product and application training. We recommend that you contact ROCKWOOL to confirm your installer is qualified to install the product.

ROCKWOOL provides post-installation checks.

ROCKWOOL REDArt Silicone insulation systems are fixed either by a combination of adhesive and mechanical methods or by adhesive fix only (ROCKWOOL facade lamellas).

The insulation is easily cut on site using non-specialist tools, such as a panel saw.

The ROCKWOOL REDArt Silicone system is applied in two coats. The first includes a reinforcing mesh to impart strength to the system. The second coat is a decorative colour finish.

Application

1. 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 the base and decorative coats have dried.
2. Winter grade products are available for use during the winter months between November and March. These products are suitable for application during cold and humid conditions and have quick drying times.
3. 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 refer to the REDArt Silicone section in the ROCKWOOL Facade Systems Installation manual.

Tolerances

It is possible to take up tolerances within the façade of up to 20mm 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 3mm. If the wall exceeds these tolerances, 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.

The ROCKWOOL REDArt Silicone system is available in a range of options, including choice of insulation, thickness of base coat and decorative finish. Other ROCKWOOL external wall systems are available: REDArt Silicone+, REDArt Brick Effect, REDArt Dash, ECOROCK® and BRICKSHIELD®.

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 REDArt Silicone 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.

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

The ROCKWOOL REDArt Silicone system is completely rot proof and does not encourage the growth of fungi, moulds or bacteria.

Rain resistance

The REDArt Silicone system provides a high degree of protection against rain penetration.

ROCKWOOL stone wool is inherently water repellent and this property is enhanced by special additives.

REDArt Silicone base coats, decorative coats and specially developed paints are also highly water resistant.

Standards and quality approvals

ROCKWOOL REDArt Silicone has been used extensively for both new-build and refurbishment schemes, as well as on a wide range of building types.

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.

Product performance

Fire

When tested to BSEN 13501 – 1 (Reaction to fire), the REDArt Silicone system achieved a fire classification A2 – s1, d0.

The core ROCKWOOL REDArt Silicone insulation slab achieved fire classification A1.

Thermal

Low U-values can be easily achieved using REDArt Silicone external wall insulation on both new build construction as well as refurbishment work.

U-values

As per Approved Document L (2010 edition) U-value requirements:

Extensions: 0.28w/m.K

Renovation and Repair: 0.30w/m.K

New build requirements can range between: 0.27 and 0.22w/m.K

ROCKWOOL REDArt Silicone dual density (DD) insulation slab has a thermal conductivity (K value) of 0.036W/mK.

U-values for refurbishment, renovation and repair work:

Example 1 (Refurbishment)

Existing construction:

19mm render, on 200mm 'No fines' concrete, internal plaster finish:

Thickness (mm)	U-value (W/mÇK)
nil	2.34
100	0.28

Installation is only carried out by ROCKWOOL approved installers
Example 2 (Refurbishment)

Existing construction:

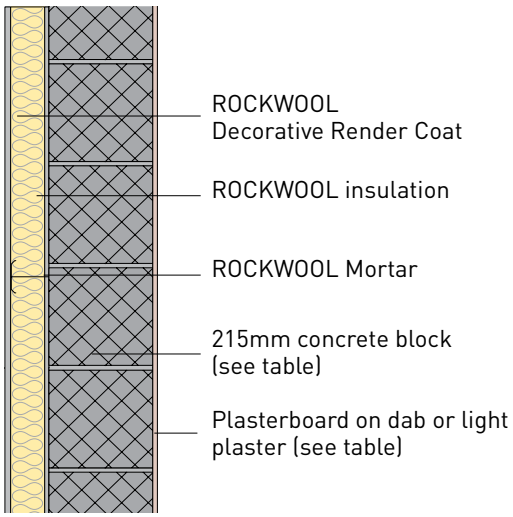
225mm solid brick with internal plaster:

Thickness (mm)	U-value (W/mÇK)
nil	2.1
100	0.30

Example 3 (New Build)

Construction: REDArt Silicone system on solid 215mm concrete block (see table below) with plasterboard on dab or light plaster finish:

Block type	Medium dense 1400-1450kg/m³		Aircrete 750kg/m³		Aircrete 600kg/m³		Aircrete 470kg/m³	
W/mK	0.510 W/mK		0.190 W/mK		0.150 W/mK		0.110 W/mK	
Finishes	Pb/dab	light laster	Pb/dab	Plaster	Pb/dab	Plaster	Pb/dab	Plaster
U-values								
0.30	90	95	75	75	65	65	55	55
0.28	100	105	80	85	75	75	60	65
0.27	105	110	85	90	80	80	65	70
0.25	115	120	95	100	85	90	75	80
0.22	135	145	115	120	105	100	95	100
0.20	150	155	130	135	120	125	110	110
0.18	170	175	150	150	140	145	130	130
0.15	210	210	185	190	180	180	165	170



For further information on U-values and other constructions please refer to the ROCKWOOL Part L guide at www.rockwool.co.uk

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 REDArt Silicone base coat and decorative coat is 9 MNs/gm.

Compression

The system supports ladders with a spreading board being used for normal maintenance work.

Impact resistance

REDArt Silicone has been tested in accordance with ETAG 004 and achieves Category ii. The following materials and constructions are shown for comparison:

13mm wood fibreboard on battens	150 N
13mm gypsum plasterboard on battens	300 N
8mm asbestos cement sheet on battens	550 N
ROCKWOOL REDArt Silicone compressive strength	1000 N

Typical specification clauses

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

The insulation is to be ROCKWOOL rigid slab (mechanical & adhesive fix)/ ROCKWOOL facade lamella (adhesive fix only),* thickness..... mm†.

The decorative coat is to be REDArt Silicone Topcoat,* grain size.....mm†, colour.....† and/or to be painted using REDArt Silicone paint, colour.....†

† Insert thickness, grain size or colour required as appropriate

Health and Safety

In accordance with REACH health and environment regulations, there are no hazardous classifications associated with ROCKWOOL mineral wool in respect to physical, health and environmental considerations.

More information

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.

Interested?

For further information, contact the Systems Solutions team on 01656 868 445 or email systems.solutions@rockwool.co.uk

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

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REDArt™