



Rockwool Cladding Roll

High performance industrial insulation

Rockwool Cladding Roll has been specifically developed for use in lightweight cladding applications to commercial or industrial framed buildings.

Cladding Roll U/F (unfaced) is an ideal economical solution for roofs and walls and our Foil Face (aluminium faced) option has a high tensile strength suitable for vertical applications.



The following NBS clauses include Cladding Roll:
h31:254, h31:271

Rockwool Cladding Roll

Advantages

- Fire classification A1
- Water repellent
- Chemically inert
- Outstanding thermal insulation
- Effective acoustic properties

Product properties and design

Packaging

Cladding Roll U/F (unfaced) and Foil Faced Cladding Roll (with reinforced aluminium foil facing on one side) come in the form of a lightweight flexible mat, supplied in compression wrapped rolls. Both products are easy to handle and are supplied palletised, protected by a waterproof covering which allows the product to be stored outside for a limited time period.

Installation guidance

Cladding Roll U/F is recommended for use in horizontal roofing applications.

Foil Faced Cladding Roll is recommended for use in vertical applications and should be installed with the foil facing towards the inner liner.

Standards and approvals

Rockwool Cladding Roll complies with BS EN 13162: 2008. Factory made mineral wool (MW) products specification.

Fire classification

Rockwool Cladding Roll (unfaced and aluminium faced) achieves a reaction to fire classification of A1 as defined in BS EN 13501-1.

Trade associations

Rockwool Ltd is an associate member of the Metal Cladding and Roofing Association (MCRMA) which seeks to foster and develop a better understanding amongst specifiers and end users alike of the most effective use of metal building products, components and systems. For more information about MCRMA call: 0151 652 3846 or visit www.mcrma.co.uk

Standard dimensions* Unfaced Roll

| Thickness (mm) | Width (mm) | Roll length (m) | M ² /pack | Pieces/ pack |
|----------------|------------|-----------------|----------------------|--------------|
| 100 | 1200 | 4.8 | 5.76 | 1 |
| 120 | 1200 | 4.0 | 4.8 | 1 |
| 150 | 1200 | 3.2 | 3.84 | 1 |
| 180 | 1200 | 2.7 | 3.24 | 1 |
| 200 | 1200 | 2.4 | 2.88 | 1 |
| 220 | 1200 | 2.2 | 2.64 | 1 |

Standard dimensions Aluminium Faced Roll

| Thickness (mm) | Width (mm) | Roll length (m) | M ² /pack | Pieces/ pack |
|----------------|------------|-----------------|----------------------|--------------|
| 100 | 1000 | 4.80 | 4.80 | 1 |
| 120 | 1000 | 4.00 | 4.00 | 1 |
| 150 | 1000 | 3.2 | 3.2 | 1 |
| 180 | 1000 | 2.7 | 2.7 | 1 |
| 200 | 1000 | 2.4 | 2.4 | 1 |

* All aluminium faced Cladding Roll thicknesses will be 1000mm wide

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Product performance

Thermal performance

Due to the complexity of the design issues within the Part L document there is no single fabric solution for individual elements for new build constructions. However, minimum elemental fabric performance standards have been set for extensions and refurbishment work.

U-values (Part L 2010)

Part L U-value requirements for external walls:

Extensions: $0.28\text{W/m}^2\text{K}$

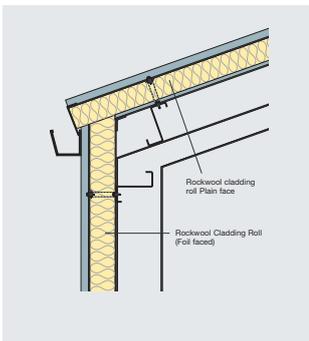
Renovation & Repair work: $0.30\text{W/m}^2\text{K}$

New build requirement could range between 0.27 and $0.24\text{W/m}^2\text{K}$.

Part L U-value requirements for roofs:

Extensions, Renovation & Repair work: $0.18\text{W/m}^2\text{K}$

New build requirement could range between 0.16 and $0.13\text{W/m}^2\text{K}$.



The U-values shown in the tables are based on Euroclad Elite systems using Rockwool Cladding Roll (thermal conductivity 0.040W/mK).

Construction 1. Roofs

| Application | Roof |
|-------------|------------------------------------|
| Products | Rockwool Plain Faced Cladding roll |
| U-values | Thickness range |
| 0.25 | 180-200mm |
| 0.20 | 240-260mm |
| 0.18 | 260-280mm |
| 0.16 | 300-340mm |

Construction 2. Walls

| Application | Wall |
|-------------|-----------------------------------|
| Products | Rockwool Foil Faced Cladding Roll |
| U-values | Thickness range |
| 0.28 | 150mm |
| 0.25 | 170-180mm |
| 0.23 | 180-200mm |
| 0.22 | 200-210mm |
| 0.20 | 210-220 |

Cladding systems require a complex calculation method using three dimensional modelling, hence thickness range shown may vary pending specific system type.

Euroclad offers solutions to allow architectural requirements to be met, whilst providing the required strengths and cost advantages associated with cladding systems. Confirmation of systems and U-values should therefore be obtained from Euroclad Ltd.

For further details of Euroclad systems visit www.euroclad.com (+44 (0)2920 790 722).

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For cladding systems not detailed in our U-value tables and for systems incorporating a structural liner tray, a more complex calculation method must be used which requires a three dimensional computer model programme.

The U-values and insulation thicknesses shown may vary depending on the cladding system and confirmation of U-values must be obtained directly from the individual cladding manufacturer.

Thermal bridging and air leakage

Improving the U-value of the main building fabric without adding the thermal bridging is no longer an option. Approved Document L 2010 edition, requires that the building fabric should be constructed so that there are no significant thermal bridges or gaps in the insulation layer, particularly at joints between elements and at the edges of elements, such as those around window and door openings. Linear thermal transmission losses, known as psl values are found at junctions between elements such as floors, walls and corners.

Thermal point losses, known as 'chi' values occur at brackets or fixings that penetrate insulation layer. These values will vary with each detail and confirmation of heat loss and risk of condensation should be obtained directly for the individual cladding manufacturer.

Buildings also need to be reasonably airtight, to reduce air leakage and testing to show compliance. Special care should be taken at junctions between elements and around penetrations within the building envelope.

Useful links

BuildDesk

BuildDesk is able to offer U-value and thermal bridging analysis using 2D and 3D numerical analysis as recognised in BR 443 Conventions to U-value calculations (May 2006) to BS EN ISO 10211 using specialist modelling software products such as TRISCO. These Numerical Analysis techniques can be used for calculating the U-value of complex build ups or individual metal components that passes through the insulation layer. For advice and a quotation please send your enquiries to steve.channon@builddesk.co.uk

Fire performance

Insulated Fire Wall incorporating Rockwool Cladding Roll has been fire tested and shown to comply with BS 476: Part 22 as a fire rated wall one metre or more from a relevant boundary.

The over sheeting rail system achieved 4 hours integrity, 4 hours stability and 17 minutes insulation (Warres No. 42624 + WF153726).

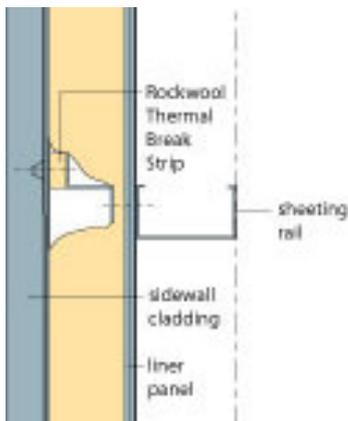
Alternative Fire Wall designs have been tested by cladding systems manufacturers using different sheeting, fixing and spacer systems. These manufacturers should be contacted for full specification and design.

Contact MCRMA for manufacturer's details:
www.mcrma.co.uk

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Acoustic performance

Tests have shown that with suitably designed constructions excellent sound reduction can be achieved.



Construction
Sidewall cladding with
100mm Rockwool
Cladding Roll and
Rockwool thermal break
strips.

Noise reduction –
Rw 37dB

A 0.4mm thick lining sheet and 0.55mm outer sheet filled with 100mm Cladding Roll achieved an average Rw 37dB. This can be increased to an average Rw 38dB by including an air space between the insulation and the outer sheets.

Please note: The Rw figure will alter with the profile and construction.

Perforated liner trays

Cladding Roll can also be used in conjunction with Rockwool Acoustic Infill pieces fitted within the trapezoidal sections of a perforated liner tray to provide both sound absorption and reduction. Rockwool Acoustic Infill trapezoidal pieces are tissue faced.

Composite panels

Rockwool also supplies structural panel products to composite panel manufacturers who have developed a wide range of fire safe composite panels for use both internally and externally. The external panel systems include wall constructions that achieve up to four hours stability and one hour of integrity and insulation. These systems are suitable for use less than one metre from the relevant boundary.

Specification clause

1. Wall insulation

The insulation to the wall cladding¹ is to be Rockwool Cladding Roll Alu-faced mm² thick, as manufactured by Rockwool Limited, Pencoed, Bridgend, CF35 6NY and installed in accordance with the manufacturer's recommendations.

1. insert required thickness

2. Roof insulation (as wall insulation) but state Cladding Roll 'Plain face' (in lieu of Alu faced)

Construction notes

Great care is required in the design and installation to ensure that lining systems are sealed and are airtight or that a vapour control is fitted. Air leakage will degrade thermal performance and may introduce condensation problems.

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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 and 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 can be downloaded from www.rockwool.co.uk or requested from Rockwool Technical Support (0871 222 1780) to assist in the preparation of risk assessments, as required by the Control of Substances Hazardous to Health Regulations (COSHH).

Environment

Relying on entrapped air for its thermal properties, we are proud to say that 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 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.

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More information

For further details visit our website at www.rockwool.co.uk or phone Rockwool Technical Support 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 Rockwool Cladding Roll. Rockwool Limited does not accept responsibility for the consequences of using Rockwool Cladding Roll 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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