

RL STONEWOOL

FOR ULTRATHERM MSR ROOFING & ROOFLOGIC CLADDING SYSTEMS

APPLICATION

To be used as the thermal insulation layer in Rooflogic built up insulated roof and cladding assemblies. RL Stonewool is a high density insulation slab that can be used in Rooflogic metal and membrane roof systems and as a continuous insulation layer for all wall systems.

DESCRIPTION OF MATERIALS

RL Stonewool is manufactured from a volcanic rock, to which selected recycled materials are added. The material is melted and spun into wool, which is then bonded using a small amount of binder. Stonewool relies on entrapped air for its thermal properties. It does not contain gases with harmful ozone depleting or harmful global warming potential.

RL Stonewool is compatible with most materials used in commercial and industrial building applications. This can be used to provide superior performance in a number of areas ,for example, fire resistance and noise reduction.

Because RL Stonewool's insulating qualities rely purely on entrapped air, not environmentally harmful blowing agents, its thermal performance remains constant, without altering or subsiding with time. Being made from rock, RL Stonewool products are dimensionally stable under a wide range of temperatures, RL Stonewool is non-combustible with melting point in excess of 1000°C.

BENEFITS

Durability

RL Stonewool slabs are odourless, rot proof, non hygro-scopic, do not sustain vermin and will not encourage the growth of fungi, mould or bacteria.

Water Resistance

RL Stonewool slabs are non-wicking when tested to BC 2972:1989 Section 12. When exposed to 90% relative humidity at 200°C, RL Stonewool will absorb less than 0.004% moisture.

Condensation Control

When calculating vapour diffusion through a structure, the vapour resistivity of RL Stonewool is negligible and usually considered to be the same as that of air (typically 5.9 MNs/gm). RL Stonewool products can therefore be used to reduce the risk of condensation and allow natural drying out of the construction due to their ability to 'breathe'.



RL Stonewool installed in our Rooflogic Bespoke System to increase acoustic performance.



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BENEFITS

Acoustic Performance

Within a properly designed roof system RL Stonewool can significantly enhance the acoustic performance of a roof system in respect to STC rating and rain noise attenuation.

Thermal Performance

RL Stonewool has excellent thermal performance and has the benefit of being able to be installed continuously across the roof, eliminating thermal bridging. Unlike cellular plastic/polyurethane insulation boards Stonewool will retain dimensional stability and thermal performance over the life of the building.

Fire Performance

RL Stonewool are classified as Euroclass A1 to BS EN 13501-1, non-combustible to BS 476: Part: 1970 (1984) and, Class 1 Surface spread of flame to BS 476: Part 7: 1997. Meets requirements of AS/NZS 1530.1 (non-combustible)

Environmental

RL Stonewool Slabs represent no known threat to the environment and have zero ozone depleting potential and zero global warming potential.

STORAGE

RL Stonewool slabs are easy to handle, install and cut to size. RL Stonewool slabs are supplied in polythene packs which are designed for short term protection only. For longer term protection on site, product should be stored indoors, or under cover off the ground. Slabs should not be left permanently exposed to the elements.

TYPES OF MATERIAL

- D 80
- D 90
- D 145
- D 180

BASIC PHYSICAL AND MECHANICAL PROPERTIES

PROPERTY	D 80	D 90	D 145	D 180
COMPRESSION STRENGTH AT 10% DEFORMATION, kPa, NOT LESS THAN	30	40	50	60
CONCENTRATED LOAD, N, NOT LESS THAN	380	500	600	600
FLAMMABILITY GRADE	NON-FLAMMABLE	NON-FLAMMABLE	NON-FLAMMABLE	NON-FLAMMABLE
REACTION TO FIRE	EUROCLASS A1 EN 13501-1 AS1530.1-1994, NON-COMBUSTIBLE			
DECLARED THERMAL CONDUCTIVITY AT 10°C, W/m°C	0.036	0.038	0.038	0.038
INTERLAMINAR STRENGTH, kPa, NOT LESS THAN	10	10	12	14
VAPOR PERMEABILITY, mg/(m ² hPa), NOT LESS THAN	0.3	0.3	0.3	0.3
HUMIDITY BY WEIGHT, %, NO MORE THAN	0.5	0.5	0.5	0.5
WATER ABSORPTION BY VOLUME, %, NO MORE THAN	15	15	15	15
CONTENT OF ORGANIC SUBSTANCES, %, NO MORE THAN	4.5	4.5	4.5	4.5
DENSITY, kg/m ³	80	90	145	180
LENGTH, mm	1000 – 1200	1000 – 1200	1000 – 1200	1000 – 1200
WIDTH, mm	500 – 600	500 – 600	500 – 600	500 – 600
THICKNESS (WITH INCREMENTS OF 10 mm).	50-200			

R-VALUES

THICKNESS (mm)	50	60	70	80	90	100	120	140	160	180	200
R VALUE-D 80	140	167	195	222	250	278	334	390	445	500	555
R VALUE-D 90/145/180	132	159	185	211	238	264	317	37	423	475	528