ROCKWOOL Products

General Performance & Properties

The information below provides details on the general properties and performance of insulation products produced by ROCKWOOL Ltd.

Manufacture

ROCKWOOL 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.

ROCKWOOL relies on entrapped air for its thermal properties. It does not contain gases with harmful ozone depleting or harmful global warming potential.

Compatibility

ROCKWOOL is compatible with most materials used in normal buildings and industrial applications.

ROCKWOOL is not the same as glass wool, even though both are classed as 'mineral wools.' ROCKWOOL can be used to provide superior performance in a number of areas – for example, fire resistance and noise reduction – and offers a wide variety of products for demanding applications.

Durability

ROCKWOOL has been proven in services for over 60 years, in a wide range of climate and degrees of exposure. It will generally perform effectively for the lifetime of the building, plant or structure.

Biological

ROCKWOOL's insulating qualities rely purely on entrapped air, not environmentally harmful blowing agents, so that its thermal performance can remain constant, without altering or subsiding with time. It is an inert, rot-proof material and does not encourage the growth of fungi, moulds or bacteria. ROCKWOOL does not offer sustenance to vermin.

Melting Point

Being made from rock, ROCKWOOL products are dimensionally stable under a wide range of temperatures.

The melting point of ROCKWOOL is in excess of 1000°C.

Specific Heat

The heat capacity of ROCKWOOL products at 20°C is 0.84kJ/kgK.

Thermal conductivity

The thermal conductivity (λ value) of ROCKWOOL products at a mean temperature of 10°C is typically in the range of 0.034 to 0.044 W/mK. The thermal resistance (R value) of a specific product can be found by dividing its thickness in metres by the product λ value.

Water resistance

ROCKWOOL mineral wool repels water due to the presence of water-repellent additives. Moisture condensing from the air within ROCKWOOL is less than 0.02% by volume at 95% relative humidity.

Condensation Control

When calculating vapour diffusion through a structure, the vapour resistivity of ROCKWOOL is negligible and usually considered to be the same as that of air (typically 5.2 MNs/gm).

ROCKWOOL 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'.

Service Temperatures

The limiting temperature of ROCKWOOL is 800ºC dependent upon product type.

Electrical Cables

The I.E.E Wiring Regulations, 18th edition, BS 7671: 2018 and the Electricians' Handbook (latest edition) give guidance on the correction factors to be applied in down-rating cables according to insulation, and each case should be separately calculated.

Where possible, all cables should be lifted free of the insulation.