

The benefits to you of glass or rock

GLASS MINERAL WOOL

Distributor & Merchant

- Almost 300% increased storage efficiency due to high compression packaging.
- Increased delivery efficiency (4385m² of 100mm FactoryClad[®] per vehicle compared to 1584m² of 100mm rock wool equivalent).
- Stocking glass increases market opportunity as it can be used in a wider range of thermal and acoustic applications.
- For merchants stocking a vast range of building materials with limited space, glass will cover most common building applications.

Main Contractor

- More product may be delivered per vehicle.
- The packaging of some products is specifically engineered to enable outside storage.
- Certain products are also packaged to allow greater storage efficiency.
- Easy to handle.

Installer

- Less carrying due to quantity of material in a single roll.
- High tensile strength in roll form reducing the possibility of tearing.
- Low weight.

ROCK MINERAL WOOL

Distributor & Merchant

- Rock products expand a product portfolio to allow focused targeting of niche fire protection, flooring and roofing markets.
- For specialist distributors, stocking rock along with glass mineral wool allows them to be impartial and offer the correct product for the application.

Main Contractor

- Highly engineered and tested products for specialist applications.
- When buying rock from a specialist distributor stocking both product types, you know you are getting the best product for the application.

Installer

- The nature of rock mineral wool allows some products to mould around irregular shapes, particularly in HVAC applications, which could make installation easier.

Is glass wool better than rock wool?





Is glass wool better than rock wool?

Ask the people who make both.

There has been much debate over the merits of rock mineral wool compared to glass mineral wool insulation.

Dependent on the application and specific requirements, both glass and rock mineral wool can offer unique advantages.

As the only UK manufacturer of both glass and rock mineral wool insulation solutions, Knauf Insulation is able to offer impartial advice and in order to help customers choose the best product for their needs, product names now focus on their recommended use.

Trust in the experience and expertise of Knauf Insulation to guide you towards the most appropriate solution.

To find out more about the best choice of insulation for your project call us now on 01270 824024 quoting reference KF09704.

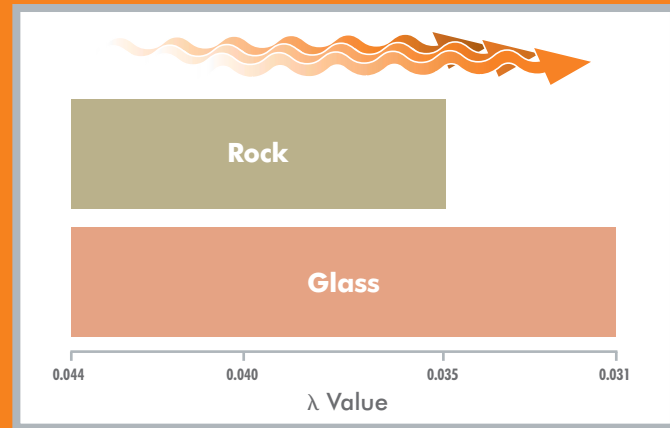
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Comparative Performance

Thermal Performance (λ Value) to 0.031W/mK

Where thermal performance is the primary requirement of the insulation material, then glass mineral wool offers a much more versatile range at lower weights.

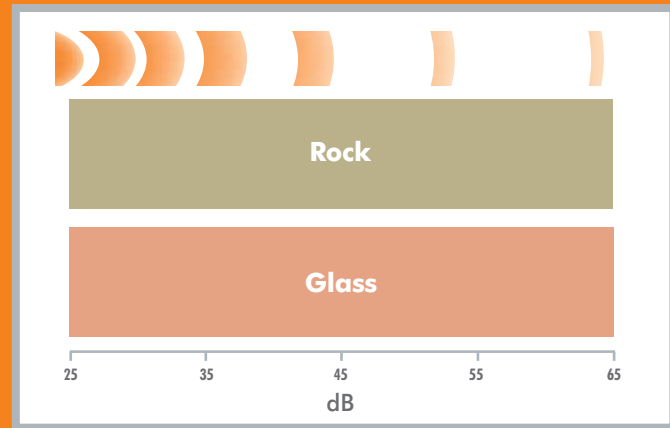


Most Appropriate Insulation

e.g. Cladding **Glass mineral wool**
Loft insulation **Glass mineral wool**

Acoustic Performance (dB) to 65dB

In acoustic applications there is negligible difference between rock and glass wool in terms of performance. A deciding factor can sometimes be the secondary feature of a product, for example, glass wool can also give high thermal performances, which may also help to retain heat in certain zones when partitioning between rooms in domestic housing.



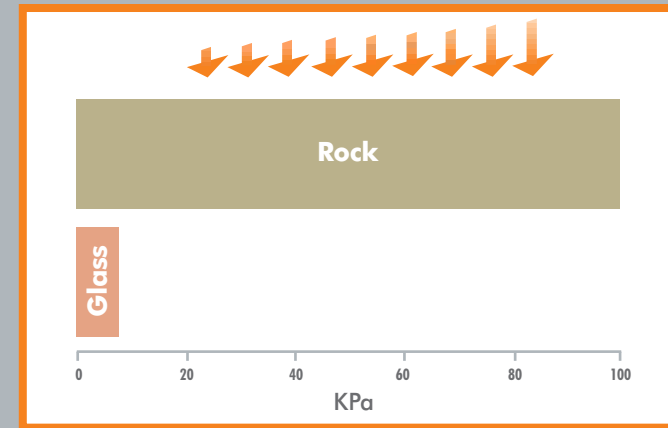
Note: above results are achieved when used as part of a system

Most Appropriate Insulation

e.g. Partition walls **Glass mineral wool**
Internal wall linings **Rock mineral wool**

Compressive Strength (KPa) to 100KPa

Compressive strength is required where a construction may be put under high weight loading. In this instance rock wool is able to give a much higher performance whilst also contributing thermally to the application.

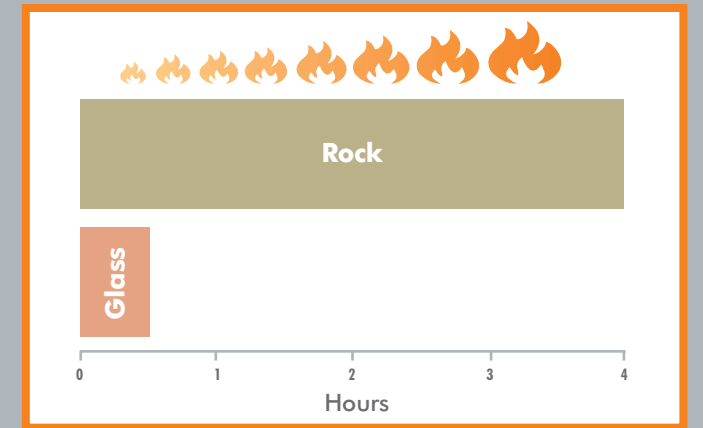


Most Appropriate Insulation

e.g. Flat roofs **Rock mineral wool**
Ground floors (load bearing) **Rock mineral wool**

Fire Resistance (Hours) to 4 hours

Due to the composition and high melting point of rock mineral wool products, they are perfect for high temperature and fire resistant applications, whilst retaining thermal performance. The functions of fire protection are to prevent structural collapse in the event of a fire and to allow human occupants to safely exit the building.



Note: above results are achieved when used as part of a system

Most Appropriate Insulation

e.g. Separating walls **Rock mineral wool**
Fire protection of structural steel **Rock mineral wool**

GLASS MINERAL WOOL INSULATION

Lightweight

- The higher thermal efficiency of glass wool means an equivalent thermal insulation value compared to rock wool can be achieved with lighter weight.
- This superior characteristic creates considerable material handling advantages.
- 1.0kg/m² is required to achieve a R-Value of 2.50 m²K/W in 100mm (a weight saving of over 50% for the same thermal performance).

Good Recovery from Packaged Compression

- The fibre characteristics of glasswool facilitate the high compression of product without affecting recovery to the required thickness after unpacking, resulting in high transport and storage efficiencies (e.g. 4385m² of 100mm FactoryClad product on a HGV, 277% more than the rock wool equivalent).

Reaction to Fire

- Glass wool is non-combustible and has the highest possible A1 fire classification according to European standards.

High Operating Temperatures

- Glass wool has operating temperatures of up to 230°C, meaning it is ideal for applications providing fire safe insulation in virtually all building applications.

ROCK MINERAL WOOL INSULATION

High Density & Weight

- The inherent characteristics of rock wool insulation result in a relatively higher density, and therefore weight for a specified thermal performance (e.g. 2.30kg/m² is required to achieve an R-Value of 2.50 m²K/W in 100mm).

Recovery from Packaged Compression

- The characteristics of rock wool do not allow the product to be highly compressed in packaging, resulting in comparatively inefficient transportation and storage (e.g. 1584m² of 100mm roll product on a HGV).

Reaction to Fire

- Rock wool is non-combustible and has the highest possible A1 fire classification according to European standards.

Very High Operating Temperatures

- Rock wool has extremely high operating temperatures of up to 850°C, meaning that it is ideal for high performance fire protection applications in building and is also suitable for thermal insulation at extremely high temperatures (e.g. industrial process pipework).

GLASS MINERAL WOOL INSULATION

Good Water Resistance

- The water resistance of mineral wool can be engineered to meet the conditions of their application (e.g. Cavity Walls).

Low Installed Compressive Strength

- The lower density of glass wool means it is not the ideal product for flooring applications.

Good Acoustic Performance

- Mineral wools are excellent acoustic absorbers. At higher densities the absorption properties of rock can marginally worsen.

ROCK MINERAL WOOL INSULATION

Good Water Resistance

- The water resistance of mineral wool can be engineered to meet the conditions of their application (e.g. Rainscreen Cladding).

High Installed Compressive Strength

- The increased density of rock wool (to provide the same thermal performance of lower density glass wool), means that the product has a comparatively high compressive strength and therefore makes it ideal for floor and flat roof applications.

Good Acoustic Performance

- Mineral wools are excellent acoustic absorbers.

In conclusion, is glass wool better than rock wool? It depends on your area of business and the application you require. But with advice from Knauf Insulation, you can be assured that you will always use the most appropriate insulation for the job.

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