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## Road Sound Barriers Insulation

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## ROCK MINERAL WOOL – MAIN FEATURES AND CHARACTERISTICS

- **SUPERB ACOUSTIC PERFORMANCE;** Due to its open fibrous structure rock mineral wool is able to absorb and significantly reduce high levels of sound.
- **NON-COMBUSTIBILITY;** Rock mineral wool boasts the highest possible Euroclass A1 fire rating according to European standards (melting point above 1,000°C).
- **VAPOUR PERMEABILITY;** Owing to its fibrous structure rock mineral wool is vapour permeable.
- **WATER-REPELLENT;** The wool fibres are permanently water-repellent.
- **HIGHLY SUSTAINABLE;** Rock mineral wool is non-hazardous for both personal health and for the environment. It is entirely free of CFCs, HCFCs and all other ozone depleting materials, both in manufacturing and end-content, and presents no known threat to the environment.
- **PERMANENTLY STABLE DIMENSIONS;** Rock mineral wool products remain integral, and do not change shape or fluctuate in dimensions (length or width), regardless of changes in humidity or temperature.
- **RESISTANCE TO MICROORGANISMS;** Rock mineral wool remains clean and hygienically sound, is non-hygroscopic, rot-proof, and will not sustain vermin or encourage the growth of fungi, mould or bacteria.



Noise is unwanted sound. Highway traffic noise tends to be a dominant noise source in our urban and rural environments. There are three sources of traffic noise, depending on the origin: vehicle engines, tyres and aerodynamics.

A sound barrier is an exterior structure designed to protect sensitive land users from noise pollution. Sound barriers are the most effective method of reducing traffic and industrial noise sources.

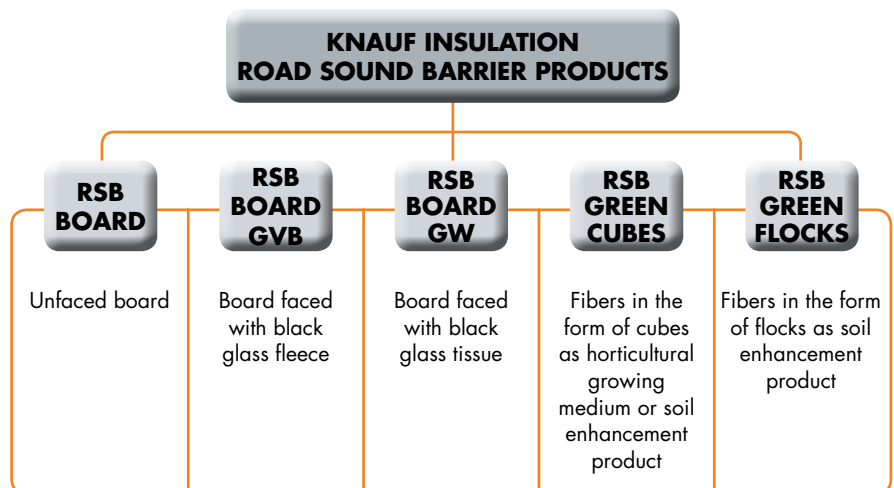
Knauf Insulation rock mineral wool insulation forms an integral part of the road sound barrier. With its outstanding properties, especially with superb acoustic performance, it absorbs noise and provides noise insulation to protect people and the environment.

It is particularly suitable as a core element for sound barrier systems on roads, highways (incl. high-speed rails) and other important applications.

**We build partnerships with our clients based on high quality products, excellent service and permanent support to their development projects.**

### We provide solutions for:

- Road sound barriers **made of metal**
- Road sound barriers **made of wood**
- Other systems for sound barriers that need sound absorption core elements





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## KNAUF INSULATION RSB BOARD GVB (RSB B GVB) Insulation boards for road sound barriers exposed to outside influences

### DESCRIPTION

**KNAUF INSULATION RSB B GVB** are boards made of rock mineral wool **faced with black glass fleece**. Black glass fleece facing protects the mineral wool boards from degradation caused by air flow and other outside influences.

Knauf Insulation RSB B GVB provides sound absorption and insulation against noise produced by traffic or industry. The dimensions of each board are customized according to the dimensions of each road sound barrier system.

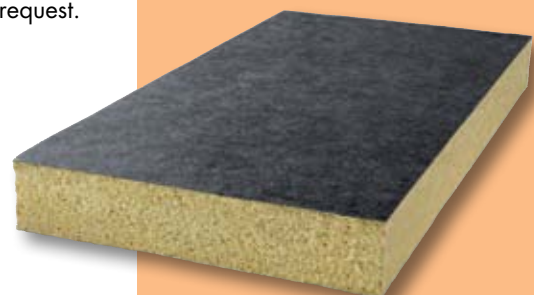
Additional facing colours (besides black glass fleece) are also available on request.

### BENEFITS

- Excellent sound absorption
- Excellent noise insulation
- Requested air flow streaming resistance
- Mechanical stability throughout the product's lifetime
- Hydrophobic properties help to resist weathering
- Dimensional stability
- Reaction to fire: Euroclass A1
- Our production technology enables custom-made dimensions

### APPLICATION

Due to their acoustic properties boards are used as core elements in **road sound barriers** and other sound absorbing/insulation systems that are **exposed to air flow and other outside influences**.



## KNAUF INSULATION RSB BOARD (RSB B) Unfaced boards for road sound barriers

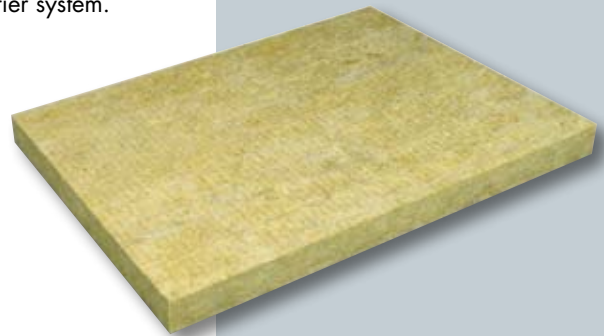
### DESCRIPTION

**KNAUF INSULATION RSB B** are boards made of rock mineral wool. Due to their acoustic properties they are used as core elements in road sound barriers. Boards provide sound absorption and sound insulation against noise produced by traffic or industry.

Unfaced Knauf Insulation RSB Board is designed for road sound barrier systems where protection against air flow is added separately. The dimensions of each board are customized according to the dimensions of each road sound barrier system.

### BENEFITS

- Excellent sound absorption
- Excellent noise insulation
- Mechanical stability throughout the product's lifetime
- Hydrophobic properties help to resist weathering
- Dimensional stability
- Reaction to fire: Euroclass A1
- Our production technology enables custom-made dimensions



### APPLICATION

Due to their acoustic properties boards are used as core elements in **road sound barriers** and other sound absorbing/insulation systems **where protection against air flow is added separately.**

## KNAUF INSULATION RSB BOARD GW (RSB B GW) Insulation boards for road sound barriers exposed to extreme outside influences

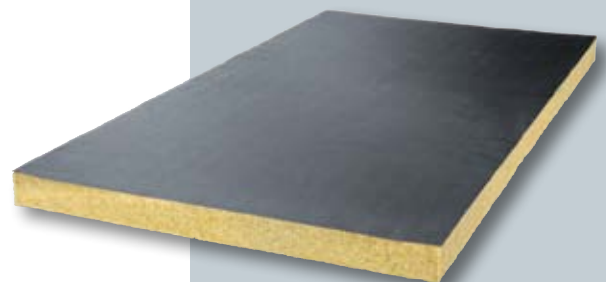
### DESCRIPTION

**KNAUF INSULATION RSB B GW** are boards made of rock mineral wool **faced with black glass tissue**. Black glass tissue facing protects the mineral wool boards from degradation caused by extreme outside influences such as air flow, stones, high-pressure water cleaning and snow removal.

Knauf Insulation RSB B GW provides sound absorption and insulation against noise produced by traffic or industry. The dimensions of each board are customized according to the dimensions of each road sound barrier system.

### BENEFITS

- Excellent sound absorption
- Excellent noise insulation
- Mechanical stability throughout the product's lifetime
- Requested air flow streaming resistance
- Hydrophobic properties help to resist weathering
- Dimensional stability
- Reaction to fire: Euroclass A2
- Our production technology enables custom-made dimensions



### APPLICATION

Due to their acoustic properties boards are used as core elements in **road sound barriers** and other sound absorbing/insulation systems that are **exposed to extreme outside influences.**



#### APPLICATION

- **Used alone** as a sound insulation/absorption and growing medium in green sound barriers.
- **Mixed with other growing media** (soil, coconut fibres, peat) to improve water absorption, water storage capacity and aeration of green sound barriers.

#### STANDARD DIMENSIONS

##### RSB Green Cubes

- Size 10 – 20 mm,
- Colour: grey/green

##### RSB Green Flocks

- Size 3 – 20 mm
- Colour: grey/green
- Packaging: 20 kg per bag/ 12 or 24 bags per pallet

## NATURAL AND ENVIRONMENT-FRIENDLY SOLUTIONS FOR SOUND BARRIER SYSTEMS

Due to increased environmental awareness many producers of sound barrier systems aim to be more environmentally friendly and use sound barriers as a growing medium for different types of plants in order to mitigate noise within a confined space and to make the barriers more aesthetically pleasing.

Due to its characteristics **KNAUF INSULATION RSB GREEN PRODUCTS** are an excellent solution for green/ecological noise protection barriers. Products combine the superb sound absorption and insulation properties of rock mineral wool fibers with the possibility of using them as a growing medium for different types of plants at the same time.

#### The benefits of using our rock mineral wool as a growing medium instead of soil in noise barriers are:

- Excellent sound absorption properties
- Excellent noise insulation properties
- Good support to plant roots
- High water absorption
- Excellent water retention – reduced watering frequency
- Better soil aeration
- Stronger root/plant growth

## KNAUF INSULATION RSB GREEN CUBES KNAUF INSULATION RSB GREEN FLOCKS Rock mineral cubes or flocks used as a high-quality water absorbent growing medium and soil or board enhancement product

#### DESCRIPTION

**Knauf Insulation RSB Green Cubes** or **RSB Green Flocks** are a bio-soluble water absorbent growing medium made of virgin rock mineral wool. RSB Green Cubes and RSB Green Flocks can be used primarily as a soil or rock mineral board enhancement product in green noise barriers.



#### BENEFITS

- Excellent sound absorption
- Excellent noise insulation
- Excellent water absorption and reabsorption characteristics
- No contamination
- Improves aeration
- Improves water storage capability
- Easy to work with



## HEALTH AND ENVIRONMENTAL PROTECTION

The incorporation of insulation material from mineral wool makes it possible to build healthy and comfortable living spaces as its properties improve the microclimate in a room and, at the same time ensure excellent thermal, sound and fire protection. Products are tested according to Directives 97/69/EC, for which they were granted the »Test Certificate of Bio-solubility«, demonstrating their health safety. Knauf Insulation products are also ecologically oriented, as they reduce the consumption of thermal energy sources, thereby reducing environmental pollution.

It is also of great importance that the production procedure of mineral wool is carried out in a closed circuit, i.e. production process waste is recycled in briquette manufacturing and then returned back to the production line.

As part of our policy of continuous product development, we reserve the right to revise specifications without notice. The information given in the brochure is correct to the best of our knowledge. It provides general information only and users should verify whether the products described are suitable for their specific requirements.



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