Rock Mineral Wool
Insulation Products
1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Generic product name : Knauf Insulation Rock Mineral Wool

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Thermal and/or acoustic insulation for use in technical applications, industrial applications and in building construction.

1.3. Details of the supplier of the safety data sheet

Producer : Knauf Insulation
Head Office,
Am Bahnhof
97346 Iphofen
Germany
Web: www.knaufinsulation.com

Region Contact Telephone numbers Email

Serbia Head Office +381 11 33 10 800 sds@knaufinsulation.com
Country Contact +381 63 40 01 88 jovica.misic@knaufinsulation.com

1.4. Emergency telephone number

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

European directive 67/548/EEC : The product is not classified.
Regulation (CE) n° 1272/2008 : The product is not classified.

2.2. Label elements

There are no Risk Phrases associated with this product

2.3. Other hazards

Most important hazards : The mechanical effect of fibres in contact with the skin can cause a temporary itching.
Specific hazards : not applicable
3. COMPOSITION / INFORMATION on INGREDIENTS

3.2. Mixtures

<table>
<thead>
<tr>
<th>Substance</th>
<th>C.A.S. number</th>
<th>weight (%)</th>
<th>Classification and labelling (Regulation (CE) n°1272/2008)</th>
<th>Classification and labelling (European directive 67/548/EEC as amended 97/69/EC)</th>
<th>REACH Registration Number</th>
<th>EC number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rock mineral wool (1)</td>
<td>None</td>
<td>90 – 100%</td>
<td>Not Classified</td>
<td>Not Classified</td>
<td>01-2119472313</td>
<td>926-099-9</td>
</tr>
<tr>
<td>Thermo set, inert polymer based on cured phenol formaldehyde resins</td>
<td>None</td>
<td>0 – 10%</td>
<td>Not Classified</td>
<td>Not Classified</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1): Mineral wool man (machine) made vitreous fibre (mmvf), alkali and alkaline earth (CaO + MgO + NaO + K₂O) > 18 % in weight meeting the requirements of Note Q of directive 97/69/EEC

(2): C.A.S.: Chemical Abstract Service

(3): Rock mineral wool insulation fibres are not classified carcinogenic according to regulation n° 1272/2008 (page 335 of the JOCE L353 of December 31, 2008)

Possible facing materials: glass veil, or polyester mat or aluminium or Kraft paper, wired mats.

4. FIRST AID MEASURES

4.1. Description of first aid measures

Exposure route:
- Inhalation : Remove from exposure. Rinse the throat and blow nose to clear dust
- Skin contact : If mechanical irritation occurs, remove contaminated clothing and wash skin gently with cold water and soap.
- Eyes contact : Rinse abundantly with water for at least 15 minutes.
- Ingestion : Drink plenty of water if accidentally ingested.

4.2. Most important symptoms and effects, both acute and delayed

The mechanical effect of fibres in contact with the skin can cause a temporary itching.

4.3. Indication of any immediate medical attention and special treatment needed

If any adverse reaction or discomfort continues from any of the above exposures, seek professional medical advice.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media : Water, foam, carbon dioxide (CO₂) and dry powder.

5.2. Special hazards arising from the substance or mixture

: Products do not pose a fire hazard in use; however, some packaging materials or facings may be combustible. Products of combustion from product and packaging - carbon dioxide, carbon monoxide and some trace gases such as ammonia, nitrogen oxides and volatile organic substances.

5.3. Advice for firefighters

: In large fires in poorly ventilated areas or involving packaging materials respiratory protection / breathing apparatus may be required.
### 6. ACCIDENTAL RELEASE MEASURES

#### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions**: In case of presence of high concentrations of dust, use the same personal protective equipment as mentioned in section 8.

#### 6.2. Environmental precautions

**Environmental protection**: not relevant

#### 6.3. Methods and material for containment and cleaning up

**Methods for cleaning up**: Vacuum cleaner or dampen down with water spray prior to brushing up.

#### 6.4. Reference to other sections

**Reference to other sections**: For personal protection, see section 8. For waste disposal, see section 13.

### 7. HANDLING and STORAGE

#### 7.1. Precautions for safe handling

- **Technical measures**: No specific measure. Use preferably a knife, do not use a saw or use power tools.
- **Precautions**: Ensure adequate ventilation of workplace.
- **Safe handling advice**: Avoid unnecessary handling of unwrapped product.

#### 7.2. Conditions for safe storage, including any incompatibilities

- **Technical measures**: No specific measure, palletised products should be stored in accordance with Knauf Insulation guidance sheet and site specific risk assessment.
- **Suitable storage condition**: Store products removed from pallet and packaging or loose unpalletised product, in a dry location.
- **In-compatible materials**: none
- **Packaging material**: Delivered packed in polyethylene film and or on wooden pallets.

#### 7.3. Specific end use(s)

**Specific end use(s)**: not relevant.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

**Exposure Limit Value**: None at European level, refer to member state guidelines and legislation:

Serbia: Respirable dust 4mg/m³; total dust 12mg/m³

8.2. Exposure controls

**Engineering controls**: No specific requirements

**Individual protection equipments:**

- **Respiratory protection**: Wearing a face mask type in accordance with EN 149 FFP1 is recommended when using products in confined atmosphere or during operations which can generate emission of any dust

- **Hand protection**: Gloves to avoid itching in conformity with EN 388

- **Eyes protection**: Goggles especially if working above shoulders. Eye protection to EN 166 is advised

- **Skin protection**: Cover exposed skin.

- **Hygiene measures**: After contact, wash hands with cold water and soap

The following sentence and pictograms are printed on packaging:

"The mechanical effect of fibres in contact with skin may cause temporary itching"

- Cover exposed skin. When working in unventilated area wear disposable face mask
- Rinse in cold water before washing
- Clean using vacuum equipment
- Ventilate working area if possible
- Waste should be disposed of according to local regulations
- Wear goggles when working overhead
9. PHYSICAL and CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Form</td>
<td>Roll or panel</td>
</tr>
<tr>
<td>Colour</td>
<td>Ochre</td>
</tr>
<tr>
<td>Odour</td>
<td>not relevant</td>
</tr>
<tr>
<td>pH</td>
<td>not relevant</td>
</tr>
<tr>
<td>Boiling point</td>
<td>not relevant</td>
</tr>
<tr>
<td>Flash point</td>
<td>not relevant</td>
</tr>
<tr>
<td>Flammability</td>
<td>not relevant</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>not relevant</td>
</tr>
<tr>
<td>Density</td>
<td>From 30 to 250 kg/m³</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Generally chemically inert and insoluble in water.</td>
</tr>
<tr>
<td>Fat solubility</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

9.2. Other information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fibre melting point</td>
<td>&gt;1000°C according to DIN 4102-17</td>
</tr>
<tr>
<td>Approximate nominal diameter of fibres</td>
<td>3 to 7 µm</td>
</tr>
<tr>
<td>Length weight geometric mean diameter less 2 standard errors</td>
<td>approx. 6 µm</td>
</tr>
<tr>
<td>Orientation of fibres</td>
<td>Random</td>
</tr>
</tbody>
</table>

10. STABILITY and REACTIVITY

10.1. Reactivity                  : None.
10.2. Chemical Stability          : Binder will decompose above 200 °C
10.3. Possibility of hazardous reactions : None in normal conditions of use
10.4. Conditions to avoid         : Heating above 200 °C.
10.5. Incompatible materials      : None.
10.6. Hazardous decomposition products : None in normal condition of use. Decomposition of binder above 200 °C may produce carbon dioxide and some trace gases. The duration of release is dependant upon the thickness of the insulation, binder content and the temperature applied.
### 11. TOXICOLOGICAL INFORMATION

**11.1. Information on toxicological effects**

- **Acute effect**
  - The mechanical effect of fibres in contact with the skin can cause a temporary itching.

- **Carcinogenic effect**
  - Classification not applicable for this product; in accordance with the directive 97/69/EC and European Regulation 1272/2008, nota Q. Weighted clearance half life of fibres, with length greater than 20µm after intra-tracheal instillation, is less than 40 days (result obtained from a test conform to the European protocol).

### 12. ECOLOGICAL INFORMATION

**12.1. Toxicity**
- This product is not ecotoxic to air, water or soil, by composition.

**12.2. Persistence and degradability**
- Inert inorganic product with Thermo set, inert polymer based on cured phenol formaldehyde resins; 0 to 10%.

**12.3. Bioaccumulative potential**
- Will not bio-accumulate.

**12.4. Mobility in soil**
- Not considered mobile. Less than 1% leachable organic carbon if landfilled.

**12.5. Results of PBT and vPvB assessment**
- Not relevant.

**12.6. Other adverse effects**
- None known.

### 13. DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods**

- **Waste from residues**
  - Dispose of in accordance with regulations and procedures in force in country of use or disposal.

- **Dirty packaging**
  - Dispose of in accordance with regulations and procedures in force in country of use or disposal.

- **European waste catalogue code**
  - 17 06 04, non hazardous.

### 14. TRANSPORT INFORMATION

**14.1. UN number**
- Not classified for transport

**14.2. UN proper shipping name**
- Not classified for transport

**14.3. Transport hazard class(es)**
- Not classified for transport

**14.4. Packing group**
- Not classified for transport

**14.5. Environmental hazards**
- Not classified for transport

**14.6. Special precautions for user**
- Not classified for transport

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
- Not classified for transport
15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

The European Regulation on Chemicals No 1907/2006, Registration, Evaluation, Authorisation & Restriction of Chemicals (REACH) enacted on June 1st 2007 requires the provision of Safety Data Sheet (SDS) for hazardous substances and mixtures / preparations.

Knauf insulation mineral wool products (panels, batts or rolls), are defined as articles under REACH and therefore a Safety Data Sheet for these products is not a legal requirement.

In accordance with industry practice and voluntary commitments, Knauf Insulation has decided to continue to provide its customers with the appropriate information for the purpose of assuring safe handling and use of mineral wool throughout the product life.

This material Safety data sheet is in accordance with the EU directives 67/548/EEC, 1999/45/EEC, 1907/2006, 1272/2008 and 453/2010

15.2. Chemical safety assessment           : not relevant.

16. OTHER INFORMATION

All products manufactured by Knauf Insulation are made of non-classified fibres and are certified by EUCEB.

EUCERB, European Certification Board of Mineral Wool Products - www.euceb.org, is a voluntary initiative by the mineral wool industry. It is an independent certification authority that guarantees that products are made of fibres, which comply with the exoneration criteria for carcinogenicity (Note Q) of the Directive 97/69/EC and the Regulation (EC) 1272/2008.

To ensure that fibres comply with the exoneration criteria all tests and supervision procedures are carried out by independent, expert qualified institutions. EUCERB ensures that the producers of mineral wool have put in place self-control measures.

The mineral wool producers commit to EUCEB to:
- supply sampling and analysis reports established by laboratories recognized by EUCEB, proving that the fibres comply with one of the four criteria of exoneration described in Note Q of the Directive 97/69/EC,
- be controlled, twice per year, of each production unit by an independent third party recognized by EUCEB (sampling and conformity to the initial chemical composition),
- put in place procedures of internal self-control in each production unit.

The products responding to the EUCEB certification are recognized by the EUCEB logo put on the packaging.

Further information can be obtained from:-
www.Eurima.org
www.knaufinsulation.com

Moreover, in 2001, the IARC, reclassified rock mineral wool fibres from Group 2B (possibly carcinogenic) to Group 3 « agent which cannot be classified as for their carcinogenicity to humans.» (See Monograph Vol 81, http://monographs.iarc.fr/)

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This Safety Data Sheet does not constitute a workplace assessment

Information contained in this document represents the state of our knowledge regarding this product as of the date of issue of the document. Attention of users is drawn to possible risks taken when the product is used for other applications than the ones it has been designed for.