Rock Mineral Wool with ECOSE Technology
SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier
Knauf Insulation Rock mineral wool.

Product name: Rock Mineral Wool with ECOSE® Technology

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified use(s): 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
Head Office
Knauf Insulation
Am Bahnhof
97346 Iphofen
Germany
Tel:+32 (0) 1048 8460
sds@knaufinsulation.com
www.knaufinsulation.com

Country Contact:
UK

Tel:+44 (0) 1744 766 666
technical.uk@knaufinsulation.com

1.4. Emergency telephone number
Tel: +44 (0) 1744 766 766
(Monday to Friday - 08:00 hrs - 17:00 hrs)
SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture
GHS/CLP CE N° 1272/2008 The product is not classified.

2.2. Label elements
There are no Risk Phrases associated with this product.

The following sentences and pictograms are printed on packaging:

http://www.knaufinsulation.com/comfort-and-handling

2.3. Other hazards
The mechanical effect of fibres in contact with skin may cause temporary itching.

Specific hazards: Not applicable.
SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

GHS/CLP CE N°1272/2008

<table>
<thead>
<tr>
<th>%:</th>
<th>CAS-No.:</th>
<th>EC No.:</th>
<th>REACH Reg. No:</th>
<th>Chemical name:</th>
<th>Hazard classification:</th>
<th>Notes:</th>
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</thead>
<tbody>
<tr>
<td>90 - 100</td>
<td>-</td>
<td>926-099-9</td>
<td>01-2119472313-</td>
<td>Rock Mineral Wool</td>
<td>-</td>
<td>(1), (2)</td>
</tr>
<tr>
<td>0 - 10</td>
<td>-</td>
<td>-</td>
<td></td>
<td>Thermo set, inert polymer bonding agent derived from plant starches</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Notes: (1) Man made vitreous (silicate) fibres with random orientation with alkaline oxide and alkali earth oxide \((\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{CaO}+\text{MgO}+\text{BaO})\) content greater than 18% by weight meeting the requirements of Note Q of regulation n° 1272/2008 and therefore not classified carcinogenicity. (2) CAS-No.: Chemical Abstract Service

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

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation: Remove from exposure. Rinse the throat and clear dust from airways.

Skin contact: If mechanical irritation occurs, remove contaminated clothing and wash skin gently with cold water and soap.

Eye 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 skin may cause 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.
SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media
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 involving packaging materials respiratory protection / breathing apparatus may be required.

SECTION 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 precautions: 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
For personal protection, see section 8. For waste disposal, see section 13.
SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Safe handling advice: Avoid unnecessary handling of unwrapped product.

Technical measures: No specific measures. Cut using a knife, do not use a saw or use power tools.

Technical precautions: Provide adequate ventilation.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: To ensure optimum product performance; when packaging is removed or opened; products should be stored inside or covered to protect them from ingress of rain water or snow.

Storage arrangements should ensure stability of stacked products and use on a first in first out basis (FIFO) is recommended.

No incompatible groups noted.

Delivered packed in polyethylene film and or on wooden pallets.

7.3. Specific end use(s)

Specific use(s): Not relevant.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits: None at European level, refer to member state guidelines and legislation:

8.1. Control parameters

UK:

Occupational exposure limits:

<table>
<thead>
<tr>
<th>CAS-No.:</th>
<th>Chemical name:</th>
<th>As:</th>
<th>Exposure limits:</th>
<th>Type:</th>
<th>Notes:</th>
<th>References:</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>Machine-made mineral fibre (except for refractory ceramic fibres and special purpose fibres)</td>
<td>-</td>
<td>2 fibres/ml</td>
<td>5 mg/m3</td>
<td>TWA</td>
<td>EH40</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Engineering measures: No specific measures.

Respiratory equipment: 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: Use gloves to avoid itching in conformity with EN 388.

Eye protection: Use goggles especially if working above shoulders. Eye protection according to EN 166 is advised.

Skin protection: Cover exposed skin.

Hygiene measures: After contact, wash hands with cold water and soap.
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance: Solid.
Form: Roll or panel.
Colour: Ochre.
Odour: Not relevant.
pH: Not relevant.
Boiling point: Not relevant.
Flash point: Not relevant.
Flammability (solid, gas): Not relevant.
Explosion limits: Not relevant.
Relative density: 30 - 250 kg/m³
Solubility: Generally chemically inert and insoluble in water.

9.2. Other information

Fibre melting point: < 1000 °C according to DIN 4102-17.

Nominal diameter of fibres: < 5 µm
Length weight geometric mean diameter less 2 standard errors: < 6µm
Orientation of fibres: Random.
SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
Reactivity: None.

10.2. Chemical stability
Stability: Binder will decompose above 200°C.

10.3. Possibility of hazardous reactions
Hazardous Reactions: None in normal conditions of use.

10.4. Conditions to avoid
Conditions/materials to avoid: Heating above 200 °C.

10.5. Incompatible materials
Incompatible materials: None.

10.6. Hazardous decomposition products
Hazardous decomposition products: None in normal conditions 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.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects
The mechanical effect of fibres in contact with skin may cause temporary itching.

Classification not applicable for this product; in accordance with European Regulation 1272/2008, note Q.
### SECTION 12: ECOLOGICAL INFORMATION

#### 12.1. Toxicity
Ecotoxicity: This product is not ecotoxic to air, water or soil, by composition.

#### 12.2. Persistence and degradability
Degradability: Inert inorganic product with Thermoset, polymer bonding agent derived from plant starches; 0 - 10%

#### 12.3. Bioaccumulative potential
Bioaccumulative potential: Will not bio-accumulate.

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

#### 12.5. Results of PBT and vPvB assessment
PBT/vPvB: Not relevant.

#### 12.6. Other adverse effects
Other adverse effects: None known.

### SECTION 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.

Contaminated packaging: Dispose of in accordance with regulations and procedures in force in country of use or disposal.

EWC-code: 17 06 04, Non-hazardous substance.
SECTION 14: TRANSPORT INFORMATION

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number
UN-No: -

14.2. UN proper shipping name
Proper Shipping Name: -

14.3. Transport hazard class(es)
Class: -

14.4. Packing group
Packing group: -

14.5. Environmental hazards
Marine pollutant: -
Environmentally Hazardous substance: -

14.6. Special precautions for user
Special precautions: None known.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Transport in bulk: Not relevant.
SECTION 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 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 / Product Data Sheet is in accordance with the EU directives 1907/2006, 1272/2008 and 453/2010.

15.2. Chemical Safety Assessment

CSA status: Not relevant.
SECTION 16: OTHER INFORMATION

All products manufactured by Knauf Insulation are made of non-classified fibres and are certified by EUCEB. EUCEB, 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 Regulation (EC) 1272/2008.

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,
• 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.

Products meeting EUCEB certification requirements can be recognised by the EUCEB logo printed on the packaging.

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


Additional information: Change to Sections: 1.4, 2.1, 2.2, 2.3, 3.2, 4.1, 5.3, 9.2, 11.1, 15.1, 16

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/)

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user.