SAFETY DATA SHEET
Glass Mineral Wool Insulation (Brown)

1. Identification

<table>
<thead>
<tr>
<th>Product identifier</th>
<th>Glass Mineral Wool Insulation (Brown)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product name</td>
<td>MA_DP_101</td>
</tr>
<tr>
<td>Synonyms; trade names</td>
<td>Akousti-Liner™, Akousti-Liner R™, Alley Wrap B™, Akousti-Shield™, Akousti-Board Black™, AK Board™, High Temperature Board, High Temperature Blanket, High Temperature Panel, High Temperature Batt, High Temperature HD Blanket, Alley K™ Pipe Insulation (*See section 2, 8, 10)</td>
</tr>
</tbody>
</table>

Revision date: 05/30/2018

Recommended use of the chemical and restrictions on use

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

Uses advised against: None known.

Details of the supplier of the safety data sheet

Supplier: Manson Insulation Products Ltd
One Knauf Drive
IN 46176-1 Shelbyville
800 825 4434
sds@knaufinsulation.com
www.imanson.com

Region: United States, Central & South America

Emergency telephone number

Emergency telephone: 24hrs: Chemtrec Tel: 800 424 9300
# Glass Mineral Wool Insulation (Brown)

## 2. Hazard(s) identification

### Classification of the substance or mixture

<table>
<thead>
<tr>
<th>OSHA Regulatory Status</th>
<th>This product is regulated as a nuisance dust under OSHA criteria.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical hazards</td>
<td>Not Classified</td>
</tr>
<tr>
<td>Health hazards</td>
<td>Not Classified</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>Not Classified</td>
</tr>
</tbody>
</table>

### Label elements

- **Hazard statements**: NC Not Classified
- **Contains**: None.
- **Hazard pictogram**: None.
- **Signal word**: None.
- **Precautionary statements**: None.
- **Supplemental label information**: None.

The following sentences and pictograms are printed on packaging:
The mechanical effect of fibers in contact with skin may cause temporary itching.

![Pictograms](http://www.knaufinsulation.com/comfort-and-handling)

Other hazards

- **Physical Hazards**: None.
- **Health Hazards**: Mechanical irritation of the skin, eyes and upper respiratory system.
- **Environmental Hazards**: None.

**Main symptoms**: Contact with skin, eyes and upper respiratory system may cause mechanical irritation. Biosoluble glass mineral wool is classified as a nuisance dust by OSHA.

**Heat-Up Precautions**: When heated to temperatures above 400°F for the first time, release of binder components and binder decomposition products can occur which, in high concentrations, may irritate eyes and the respiratory system. See section 8 & 10.
# Glass Mineral Wool Insulation (Brown)

## 3. Composition/Information on ingredients

<table>
<thead>
<tr>
<th>Mixtures</th>
<th>Percentage</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biosoluble glass mineral wool</td>
<td>87 - 100%</td>
<td>Not Classified</td>
</tr>
<tr>
<td>CAS number: —</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ingredient notes:(1)(2)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Classification                                                          |            |                  |
| Not Classified                                                          |            |                  |

<table>
<thead>
<tr>
<th>Mixtures</th>
<th>Percentage</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermo set, inert polymer bonding agent derived from plant starches</td>
<td>0 - 13%</td>
<td>Not Classified</td>
</tr>
<tr>
<td>CAS number: —</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- The full text for all hazard statements is displayed in Section 16.

### Ingredient notes

1. Man made vitreous (silicate) fibers with random orientation with alkaline oxide and alkali earth oxide (Na₂O+K₂O+CaO+MgO+BaO) content greater than 18% by weight meeting the requirements of Note Q of regulation n° 1272/2008 and therefore not classified carcinogenicity.

2. All Knauf Insulation products covered by this SDS are independently certified by EUCEB to be manufactured using biosoluble glass formulations and thus exempt from labeling under NTP or California Prop 65 requirements.

Specific chemical identity and/or exact percent concentration is withheld as trade secret.
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4. First-aid measures

Description of first aid measures

General information Show this Safety Data Sheet to the medical professional in attendance. If symptoms occur, follow first aid measures as appropriate.

Notes to Physician: No specific recommendations.

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

Ingestion Drink plenty of water if accidentally ingested.

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.

Most important symptoms and effects, both acute and delayed

General information Contact with skin, eyes and upper respiratory system may cause mechanical irritation. Biosoluble glass mineral wool is classified as a nuisance dust by OSHA.

Indication of immediate medical attention and special treatment needed

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

Specific treatments No specific recommendations.

5. Fire-fighting measures

Extinguishing media

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

Special hazards arising from the substance or mixture

General information 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.

Advice for firefighters

General information In large fires in poorly ventilated areas involving packaging materials respiratory protection / breathing apparatus may be required.
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6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions
Minimize direct contact with skin in order to prevent mechanical itching. In dusty environments, use suitable respiratory protection such as 3M 8210, N95 or equivalent. Use glasses or goggles when working with mineral wool insulation above shoulder height or in dusty environments. Where possible, use natural ventilation during installation in order to minimize dust levels.

After contact with the product, rinse skin in cold water to reduce potential effects of mechanical itching. Dispose of surplus product in accordance with local regulations.

Use personal protection recommended in Section 8 of the SDS.

Environmental precautions
Not relevant.

Methods and material for containment and cleaning up

Methods for cleaning up
In dusty environments, use vacuum equipment where possible to minimize dust levels.

Reference to other sections
For personal protection, see Section 8. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions
Assure proper respiratory protection if dust potential exceeds PEL/TLV.

Conditions for safe storage, including any incompatibilities

Storage precautions
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.

Specific end use(s)

Specific end use(s)
Thermal and/or acoustic insulation for use in technical applications, industrial applications and in building construction.
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8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

Biosoluble glass mineral wool

Long-term exposure limit (8-hour TWA): ACGIH, (Notes: (A3)) 1 f/cc Glass wool fibers

Long-term exposure limit (8-hour TWA): NIOSH 5 mg/m³ Mineral wool fiber, total particulate

Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³ Particulates not otherwise regulated (PNOR), respirable fraction

Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³ Particulates not otherwise regulated (PNOR), total dust

ACGIH = American Conference of Governmental Industrial Hygienists.
OSHA = Occupational Safety and Health Administration.
NIOSH = The National Institute for Occupational Safety and Health.

Ingredient comments

(A3) - Fibers longer than 5 μm; diameter less than 3 μm; aspect ratio greater than 5:1 as determined by the membrane filter method at 400-450X magnification (4-mm objective) phase contrast illumination.
Biosoluble glass mineral wool - See section 3.

Exposure controls

Appropriate engineering controls

Maintain sufficient mechanical or natural ventilation to assure fiber concentrations remain below PEL/TLV. Use local exhaust if necessary. Power equipment should be equipped with properly designed dust collection devices.

Eye/face protection

Use glasses or goggles when working with mineral wool insulation above shoulder height or in dusty environments.

Other skin and body protection

Minimize direct contact with skin in order to prevent mechanical itching.

Hygiene measures

After contact with the product, rinse skin in cold water to reduce potential effects of mechanical itching.

Respiratory protection

In dusty environments, use suitable respiratory protection.

Thermal hazards

Not relevant.

* Heat-Up Precautions:

When heated to temperatures above 400°F for the first time, release of binder components and binder decomposition products can occur which, in high concentrations, may irritate eyes and the respiratory system. The duration of release is dependant upon the thickness of the insulation, binder content and the temperature applied. Adequate ventilation should be provided. In confined spaces or where ventilation is not possible, occupants should wear appropriate self-contained breathing apparatus.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance

Solid.
Rolls. Panel. Loose fiber.

Color

Brown.

Odor

Not relevant.

Odor threshold

No data available.

pH

Not relevant.

Melting point

Not relevant.

Initial boiling point and range

Not relevant.
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<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Relative density</td>
<td>7 - 96 kg/m³</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Generally chemically inert and insoluble in water.</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not relevant</td>
</tr>
<tr>
<td>Nominal diameter of fibers.</td>
<td>3 - 8μm</td>
</tr>
<tr>
<td>Length weight geometric mean diameter less 2 standard errors</td>
<td>&lt; 6 μm</td>
</tr>
<tr>
<td>Orientation of fibers</td>
<td>Random</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

| Reactivity                                     | None.                                   |
| Stability                                      | Binder will decompose above 400°F       |
| Possibility of hazardous reactions             | None.                                   |
| Conditions to avoid                            | Heating above 400°F                     |
| Materials to avoid                             | Hydrofluoric acid will react with and dissolve glass. |
| Hazardous decomposition products               | None in normal conditions of use. When heated to temperatures above 400°F for the first time, release of binder components and binder decomposition products can occur which, in high concentrations, may irritate eyes and the respiratory system. The duration of release is dependant upon the thickness of the insulation, binder content and the temperature applied. Adequate ventilation should be provided. In confined spaces or where ventilation is not possible, occupants should wear appropriate self-contained breathing apparatus. |

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral
Glass Mineral Wool Insulation (Brown)

**Notes (oral LD₅₀)**
No data were identified for the product as a whole. Data are for constituents:
- Biosoluble glass mineral wool - Not applicable.
- Thermo set, inert polymer bonding agent derived from plant starches - Not applicable.

**Acute toxicity - dermal**
No data were identified for the product as a whole. Data are for constituents:
- Biosoluble glass mineral wool - Not applicable.
- Thermo set, inert polymer bonding agent derived from plant starches - Not applicable.

**Skin corrosion/irritation**
May cause mechanical irritation to skin.

**Serious eye damage/irritation**
May cause mechanical irritation to eyes.

**Respiratory sensitization**
No data were identified for this product or its constituents.

**Skin sensitization**
No data were identified for this product or its constituents.

**Germ cell mutagenicity**
No data were identified for this product or its constituents.

**Genotoxicity - in vitro**
No data were identified for this product or its constituents.

**Genotoxicity - in vivo**
No data were identified for this product or its constituents.

**Carcinogenicity**
Results from a biopersistence test by intratracheal instillation has shown that fibers in this product longer than 20 μm have a weighted half-life less than 40 days, thus this product is not classified as a carcinogen. None of the components of this product are listed as a carcinogen by OSHA, IARC or NTP.

**Reproductive toxicity**
- **Reproductive toxicity - fertility**
  No data available for this product or its constituents.
- **Reproductive toxicity - development**
  No data available for this product or its constituents.

**Specific target organ toxicity - single exposure**
- **STOT - single exposure**
  No data were identified for this product or its constituents.

**Specific target organ toxicity - repeated exposure**
- **STOT - repeated exposure**
  No data were identified for this product or its constituents.

**Aspiration hazard**
Not relevant.

**Inhalation**
Mechanical irritation to upper respiratory tract.

**Ingestion**
Non-hazardous when ingested.

**Skin Contact**
Mechanical irritation to skin.

**Eye contact**
Mechanical irritation to eyes.
Glass Mineral Wool Insulation (Brown)

Medical Symptoms
Contact with skin, eyes and upper respiratory system may cause mechanical irritation. Biosoluble glass mineral wool is classified as a nuisance dust by OSHA.

12. Ecological Information

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

Persistence and degradability
Inert inorganic product with Thermo set, inert polymer bonding agent derived from plant starches; 0 - 13%

Bioaccumulative potential
Bio-Accumulative Potential
Will not bioaccumulate.

Partition coefficient
Not relevant.

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

13. Disposal considerations

Waste treatment methods
General information
Dispose of in accordance with all applicable regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Disposal methods
This product is not regulated under RCRA Hazardous Waste Regulations. May be disposed in landfill. If unsure, contact the local office of the USEPA, your local public health department or the local landfill regulators.

14. Transport information

General
The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

UN Number
Not applicable.

UN proper shipping name
Not applicable.

Transport hazard class(es)
No transport warning sign required.

Packing group
Not applicable.

Environmental hazards
Environmentally Hazardous Substance
No.

Special precautions for user
Not applicable.
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Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

15. Regulatory information

Regulatory Status
This product is regulated as a nuisance dust under OSHA criteria. In accordance with industry practice, Manson 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.

US Federal Regulations
SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
Not regulated.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
Not regulated.

SARA 313 Emission Reporting
Not listed.

SARA (311/312) Hazard Categories
Not regulated.

US State Regulations
California Proposition 65 Carcinogens and Reproductive Toxins
This product is exempt from labeling requirements under this Act.

Inventories
US - TSCA
All the ingredients are listed or exempt.

16. Other information

Abbreviations and acronyms used in the safety data sheet
CAS: Chemical Abstracts Service.
IARC: International Agency for Research on Cancer.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
NIOSH: The National Institute for Occupational Safety and Health.
OSHA: Occupational Safety and Health Administration.
PBT: Persistent, Bioaccumulative and Toxic substance.
PEL: Permissible Exposure Limit.
SARA: Superfund Amendments and Reauthorization Act.
TLV: Threshold Limit Value.
TSCA: Toxic Substances Control Act.
USEPA: United States Environmental Protection Agency.
vPvB: Very Persistent and Very Bioaccumulative.

General information
All products manufactured by Manson Insulation are made of non-classified fibers and are certified by EUCEB. Products meeting EUCEB certification requirements can be recognised by the EUCEB logo printed on the packaging.
Glass Mineral Wool Insulation (Brown)

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

Revision comments  §1 [CA, US]
Supersedes date     9/27/2016
Revision date       5/30/2018
Revision            2.1
SDS No.             4616

Other information  In 2001, the International Agency for Research on Cancer (IARC) reclassified glass 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/)

This Safety Data Sheet / Product 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.