



SAFETY DATA SHEET

Vacuum Insulation Panel Core Material

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

1. Identification

Product identifier

- Knauf Insulation Glass mineral wool

Product name Vacuum Insulation Panel Core Material

Recommended use of the chemical and restrictions on use

Application Thermal insulation for use in industrial applications OEM DAP product.

Uses advised against None known.

Details of the supplier of the safety data sheet

Supplier Knauf Insulation
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Slovenia
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oem@knaufinsulation.com
www.oem.knaufinsulation.com

Region: United States, Central & South America

Emergency telephone number

Emergency telephone 24hrs: Chemtrec Tel: 800 424 9300

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2. Hazard(s) identification

Classification of the substance or mixture

OSHA Regulatory Status	This product is regulated as a nuisance dust under OSHA criteria.
Physical hazards	Not Classified
Health hazards	Not Classified
Environmental hazards	Not Classified

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.



<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.

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3. Composition/information on ingredients

Mixtures

<p>Biosoluble glass mineral wool > 99%</p> <p>CAS number: —</p> <p>Ingredient notes:(1)(2)</p>
<p>Classification</p> <p>Not Classified</p>

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.
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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.
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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.
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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

Environmental precautions	Not relevant.
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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 uses(s)

Specific end use(s) Thermal insulation for use in industrial applications OEM DAP product.

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.

Environmental exposure controls Not relevant.

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*** 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. Roll or panel.
Color	White.
Odor	Not relevant.
Odor threshold	No data available.
pH	Not relevant.
Melting point	Not relevant.
Initial boiling point and range	Not relevant.
Flash point	Not relevant.
Evaporation rate	Not relevant.
Flammability (solid, gas)	Not relevant.
Upper/lower flammability or explosive limits	Not relevant.
Vapor pressure	Not relevant.
Vapor density	Not relevant.
Relative density	100 - 160 kg/m ³
Solubility(ies)	Generally chemically inert and insoluble in water.
Partition coefficient	Not relevant.
Auto-ignition temperature	Not relevant.
Decomposition Temperature	Not relevant.
Viscosity	Not relevant.
Explosive properties	Not relevant.
Oxidizing properties	Not relevant.
Nominal diameter of fibers.	3 - 5 µm
Length weight geometric mean diameter less 2 standard errors	< 6 µm
Orientation of fibers	Random

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10. Stability and reactivity

Reactivity	None.
Stability	Stable in normal conditions of use.
Possibility of hazardous reactions	None.
Conditions to avoid	None.
Materials to avoid	Hydrofluoric acid will react with and dissolve glass.
Hazardous decomposition products	None.

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) No data available for this product or its constituents.

Acute toxicity - dermal

Notes (dermal LD₅₀) No data available for this product or its constituents.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) No data available for this product or its constituents.

Skin corrosion/irritation

Skin corrosion/irritation May cause mechanical irritation to skin.

Serious eye damage/irritation

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

Respiratory sensitization

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

Skin sensitization

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

Germ cell mutagenicity

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

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

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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

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.

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

Persistence and degradability Inert inorganic product

Bioaccumulative potential

Bio-Accumulative Potential Will not bioaccumulate.

Partition coefficient Not relevant.

Mobility in soil

Mobility Not considered mobile.

Other adverse effects

Other adverse effects None known.
Avoid the spillage or runoff entering drains, sewers or watercourses.

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

UN No. (International) Not applicable.

UN proper shipping name

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Proper shipping name (International) Not applicable.

Transport hazard class(es)

Transport Labels (International) No transport warning sign required.

Packing group

Packing group (International) Not applicable.

Environmental hazards

Environmentally Hazardous Substance

No.

Special precautions for user

Not applicable.

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, 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.

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 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

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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 Knauf 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.

Further information can be obtained from:

www.euceb.org www.knaufinsulation.com



Revision comments This is the first issue.

Revision date 9/11/2018

SDS No. 4855

EUCEB: Certificate N° 289

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.