Revision date	**6/25/2024**
Revision	**5.0**
Supersedes date	**6/18/2021**

SAFETY DATA SHEET

Mineral Wool with ECOSE® Technology

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product name	Mineral Wool with ECOSE® Technology
Product number	KI_DP_101
Other means of identification	None.
Synonyms; trade names	Earthwool®, Earthwool® glasswool, ecoinsulation®, DriTherm®, Knauf Insulation

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

Identified uses	Thermal and/or acoustic insulation for use in : Technical applications, industrial applications and in building construction.

Details of the supplier of the safety data sheet

Supplier	PO Box 244 Cannon Hill Brisbane QLD 4170 Australia www.knaufinsulation.com.au / www.knaufinsulation.co.nz sds@knaufinsulation.com
Region	Australia / New Zealand
Country Contact	tech.au@knaufinsulation.com / tech.nz@knaufinsulation.com

Emergency telephone number

Emergency telephone	Tel +61 (0) 7 3393 7300 (Monday - Friday - 08:00 hrs - 17:00 hrs)

SECTION 2: Hazards identification

Classification of the substance or mixture

Physical hazards	Not Classified
Health hazards	Not Classified
Environmental hazards	Not Classified

Classification according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) 3rd Rev. Ed.

Classification according to GHS	Not Classified

Label elements

Hazard statements	Not Classified
Contains	None.
Hazard pictogram	None.
Signal word	None.
Precautionary statements	None.
Supplemental label information	None.

Other hazards

Physical hazards	None.
Health hazards	Mechanical irritation of the skin, eyes and upper respiratory system.
Environmental hazards	None.
Most important symptoms/effects	Mechanical irritation of the skin, eyes and upper respiratory system.

Persistent Bioaccumulative Toxic	Not relevant

SECTION 3: Composition/information on ingredients

Mixtures

Biosoluble glass mineral wool	**(1)**
	87 - 100%
CAS number:	_
Classification	**Not Classified**
Ingredient notes	(1) 650-016-00-2 - Man made vitreous (silicate) fibres with random orientation with alkaline oxide and alkali earth oxide ($Na_2O+K_2O+CaO+MgO+BaO$) content greater than 18% by weight meeting the requirements of Note Q of regulation n° 1272/2008 and therefore not classified as carcinogenic.
Thermo set, inert polymer bonding agent derived from plant starches	
	0 - 13%
CAS number:	_
Classification	**Not Classified**

Full text of R-phrases: see section 16

Other information	Possible facing or encapsulation materials: glass veil, or polyester mat or aluminium or Kraft paper or encapsulated in low density polyethylene (LDPE) and metallised LDPE film.

SECTION 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.

Inhalation	Remove from exposure. Rinse the throat and clear dust from airways.
Ingestion	Wash out mouth with water and afterwards drink plenty of water
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	Mechanical irritation of the skin, eyes and upper respiratory system.

Indication of any 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.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media	Water, foam, carbon dioxide (CO2), and dry powder.
Unsuitable extinguishing media	None.

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.
Hazchem code	Not applicable

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Minimise 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 minimise 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.
Emergency procedures	Use personal protection recommended in Section 8 of the SDS.

Environmental precautions

Environmental precautions	Not relevant

Methods and material for containment and cleaning up

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

Reference to other sections

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

SECTION 7: Handling and storage

Precautions for safe handling

Usage precautions Assure proper respiratory protection if potential dust exposure exceeds occupational exposure limits.

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.

SECTION 8: Exposure Controls/personal protection

Control parameters

Occupational exposure limits **Biosoluble glass mineral wool**

Exposure standards (Safe Work Australia) : Long-term exposure limit (8-hour TWA) 2 mg/m3 (inhalable dust) (A3)

Any MMVF that meet the requirements of Note Q in EC Regulation No. 1272/2008 page 353/335 are exempted from mandatory classification in the European Union as a carcinogen under the Globally Harmonized System for Classification and Labelling of Chemicals (GHS). Note IARC has classified mineral wools (glass wool, rock wool (stone wool), slag wool and continuous glass filament) as IARC Category 3: not classifiable as to carcinogenicity in humans.

New Zealand Workplace Exposure Standards: Long-term exposure limit (8-hour TWA) 2 mg/m3

Exposure limit values have been established by many authorities. Check on limit values that apply in your local situation

Notes (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.

Exposure controls/personal protection

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

SECTION 9: Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance Solid. Rolls. Panel. Loose fibre.

Colour Brown

Odour Not relevant

Odour 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
Vapour pressure	Not relevant
Vapour density	Not relevant
Relative density	7 - 96 kg/m³
Solubility(ies)	Generally chemically inert and insoluble in water.
Auto-ignition temperature	Not relevant
Decomposition Temperature	Not relevant
Viscosity	Not relevant
Explosive properties	Not relevant
Oxidising properties	Not relevant

Other information

Devitrification temperature	Not relevant
Softening temperature	Not relevant
Nominal diameter of fibres	3 - 5 µm
Length weight geometric mean diameter less 2 standard errors	< 6 µm
Orientation of fibres	Random
Biopersistence	Weighted clearance half-life of fibres, with length greater than 20 µm after inter-tracheal instillation, is less than 40 days (results obtained from a test conforming to the European protocol).

SECTION 10: Stability and reactivity

Reactivity	None.
Chemical stability	Binder will decompose above 200°C.
Possibility of hazardous reactions	None under normal use
Conditions to avoid	None under normal use
Incompatible materials	Hydrofluoric acid will react with and dissolve glass.

Hazardous decomposition products

None under normal 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

Information on toxicological effects

Acute toxicity (oral) - LD50 oral	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) - LD50 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.
Acute toxicity (inhalation) - LC50 Inhalation	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	
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	SWA / WES requirements exempt biopersistant fibres as defined by notes. Results from a biopersistence test in line with the notes has shown that fibres in this product longer than 20 µm have a weighted half-life less than 40 days and meet the "Nota Q" requirements, thus this product is not classified as a carcinogen. None of the components of this product Reproductive toxicity are listed as a carcinogen.
Reproductive toxicity	
Reproductive toxicity - Fertility	No data were identified for this product or its constituents.
Developmental toxicity	No data were identified for this product or its constituents.
Specific target organ toxicity - single exposure	No data were identified for this product or its constituents.
Specific target organ toxicity - 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.
Most important symptoms/effects	Contact with skin, eyes and upper respiratory system may cause mechanical irritation.Biosoluble glass mineral wool is classified as a nuisance dust by OSHA.

SECTION 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

No bioaccumulation potential

Mobility in soil Not considered mobile.

Results of PBT and vPvB assessment

Not relevant

Endocrine disrupting properties

Not relevant

Other adverse effects None known.

SECTION 13: Disposal considerations

Waste treatment methods

General information	Dispose of in accordance with regulations and procedures in force in country of use or disposal.
For residues	Dispose of in accordance with regulations and procedures in force in country of use or disposal.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.
Disposal methods	May be disposed in landfill.

SECTION 14: Transport information

General information	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).
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/marine pollutant	None.
Special precautions for user	Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

National Regulations

International agreements:
Montreal Protocol (Ozone depleting substances): Not regulated.
The Stockholm Convention (Persistent Organic Pollutants): Not regulated.
The Rotterdam Convention (Prior Informed Consent): Not regulated.
Basel Convention (Hazardous Waste): Not regulated.
International Convention for the Prevention of Pollution from Ships (MARPOL): Not regulated.

Safety, Health and Environmental Regulations:
Australian Inventory of Chemical Substances (AICS): Listed.
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.

SECTION 16: Other information

Label in accordance with GHS: This product is not classified as hazardous.

General 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. The EUCEB trademark certifies that the manufactured fibres have a chemical composition within the ranges of exonerated reference fibres, which have been tested in accordance with European protocols and have been shown to be in conformity with Note Q, exoneration criteria for carcinogenicity, of the Regulation (EC) 1272/2008.

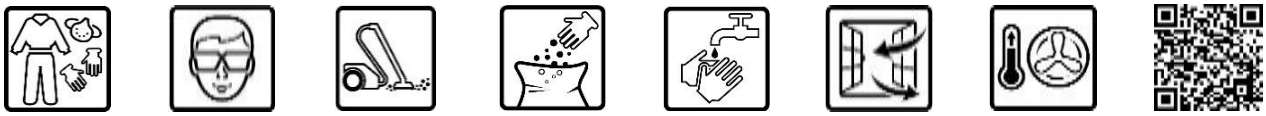
The mineral wool producers commit to EUCEB to:

- 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



Key literature references and sources for data	ChemAdvisor LOLI Hazardous Substances Information System (HSIS) European Chemicals Agency (ECHA) Dissemination Portal European Certification Board for Mineral Wool Products (EUCEB)
Revision	6/25/2024
Supersedes date	6/18/2021
SDS number	KI_DP_101
Revision	5.0
Other information	In 2001, the International Agency for Research on Cancer (IARC) reclassified 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/)