

Safety Data Sheet

Glass Wool

Creation Date: November 17, 1993

Revised Date: July 08, 2025

1. Identification

GHS product identifier (product name): Glass Wool

Supplier's details, Company name: MAG-ISOVER K.K.

Address: 7, 3-Chome, Kojimachi, Chiyoda-ku, Tokyo, JAPAN

Phone number: Call Center (81)3-288-6308

Emergency Phone number: Quality Department (81)29-831-1011

Recommended Use: (1) Thermal insulation materials: For thermal insulation of boiler, tank, duct for air conditioning, various pipes and so on. For core material of panel. Products are installed in the wall and attic for thermal insulation, sound absorption and soundproof of buildings.
(2) Thermal insulation materials for dwellings
(3) Sound absorbing materials
(4) Decorative sound absorption boards: Interior decoration of the building.
(5) For thermal insulation of industrial equipment.

Restrictions on use: Do not use as a reinforcement agent for cement.

2. Hazard identification

GHS classification

Physical hazards:	Explosives	Not classified
	Flammable gases	Not classified
	Aerosols	Not classified
	Oxidizing gases	Not classified
	Gases under pressure	Not classified
	Flammable liquids	Not classified
	Flammable solids	Not classified [Non-combustible (ICSC 2012)]
	Self-reactive substances and mixtures	Not classified
	Pyrophoric liquids	Not classified
	Pyrophoric solids	Not classified [Non-flammable (ICSC 2012)]
	Self-heating substances and mixtures	Not classified [Non-combustible (ICSC 2012)]
	Substances and mixtures which, in contact with water, emit flammable gases	Not classified
	Oxidizing liquids	Not classified
	Oxidizing solids	Not classified (Does not react)

	Organic peroxides	Not classified
	Corrosive to metals	Classification not possible
	Desensitized explosives	Not classified
Health hazards:	Acute toxicity (Oral)	Classification not possible
	Acute toxicity (Dermal)	Classification not possible
	Acute toxicity (inhalation: gases)	Not classified
	Acute toxicity (inhalation: vapours)	Classification not possible
	Acute toxicity (inhalation: dusts)	Classification not possible
	Acute toxicity (inhalation: mists)	Not classified
	Skin corrosion/irritation	Not classified (Temporary itching)
	Serious eye damage/eye irritation	Not classified
	Respiratory sensitization	Classification not possible
	Skin sensitization	Not classified (JHSA 2011)
	Germ cell mutagenicity	Classification not possible
	Carcinogenicity	Not classified (IARC 2002, Group 3)
	Reproductive toxicity	Classification not possible
	Specific target organ toxicity(single exposure)	Not classified
	Specific target organ toxicity(repeated exposure)	Not classified
	Aspiration hazard	Classification not possible
Environmental hazards:	Short-term (acute) aquatic hazard	Classification not possible
	Long term (chronic) aquatic hazard	Classification not possible
	Hazardous to the ozone layer	Classification not possible
GHS label elements		
	Pictograms and symbols:	None
	Signal words:	None
	Hazard statements:	None
	Precautionary statements:	None

3. Composition / Information on ingredients

Substance or mixture

Chemical identity of the substance:	Glass wool (Glass wool fibers)
Common names, synonyms, of the substance:	MMMF (Man made mineral fibers) MMVF (Man-made vitreous fibers) SVFs (Synthetic vitreous fibers)

Ingredients and concentrations or concentration ranges:

Fibrous glass	≥ 90 wt. %
Thermosetting resin (binder)	≤ 10 wt. %
Mineral oil	< 1 wt. %
MnO(Contained in the glass matrix)	< 1 wt. %

CAS number:

No.65997-17-3 [Fibrous glass (Wool)]

4. First-aid measures

If inhaled:	Get medical advice/attention if you feel unwell.
If on skin:	Rinse affected areas with water and soap. Then rinse with clean or slightly hot water. If the pain or discomfort persists, get medical attention.
If in eyes:	Do not rub eyes. Rinse with clean water until the sensation of foreign materials in the eyes disappears. If eye irritation persists, have a medical examination by ophthalmologist.
If swallowed:	Rinse mouth. Get medical advice/attention if you feel unwell.
Most important symptoms/effects, acute and delayed:	Redness, itching, or pain affecting the eyes and/or skin, discomfort in the respiratory tract.
Precautions for the personal protection of first-aid responders:	No data available
Special cautions to doctors:	No data available

5. Fire-fighting measures

Suitable extinguishing media:	Use an extinguishing medium suitable for the surrounding fire.
Unsuitable extinguishing media:	None
Specific hazard:	Dispersion of dust
Specific fire-fighting methods:	Remove product/container away from the fire if safe to do so.
Special protective actions for fire-fighters:	Wear personal protective equipment (PPE) appropriate for the fire based on the information provided in "8. Exposure controls/personal protection."

6. Accidental release measures

Personal precautions, protective equipment and emergency measures:	Wear appropriate personal protective equipment (PPE) (See "8. Exposure controls/personal protection.") and take adequate measures to prevent exposure to eyes and skin.
Environmental precautions:	Do not release into the environment.
Methods and materials for containment and cleaning up:	Spills on floors or other surfaces must be collected using industrial vacuum cleaners or other equipment, taking care not to disperse dust. Collect spilled material into empty containers, bags, etc. and keep sealed. See "13. Disposal considerations" for information on disposal.
Preventive measures against secondary accident:	Same as above

7. Handling and storage

Handling

Engineering control measures (Local and general ventilation):

Install appropriate ventilation measures to maintain airborne dust concentration below administrative control limits.

Precautions for safe handling:

Workers must wear appropriate personal protective equipment (PPE) to prevent inhalation and contact with eyes and skin. See "8. Exposure controls/personal protection."

Avoidance of contact:

In addition to engineering control measures, whenever possible, use products in bagged form, products enclosed within an external cover material, or high-performance products.

Hygiene measures:

Do not eat, drink or smoke while working. Wash exposed areas of the skin thoroughly after handling.

Storage

Safe storage condition:

Place in bags, etc. to prevent dispersal. Do not allow contact with water. Store indoors in a place of low humidity. Protect from sunlight.

Safe packaging materials:

There is no restriction, but the product should be put in a packaging and container which are hard to be damaged.

8. Exposure controls/personal protection

Control parameters

Control value:

Working environment evaluation standards, Exposure limits in appended table (effective as of July 1, 2009):

Type of thing: Glass wool products are considered as minerals, and for

Exposure limit: 3.0 mg/m³ (work places falling under the regulations relating to dust)

Glass wool products are classified as minerals, and if the work falls under dust regulations, the free silicic acid content is 0%, so the control concentration for respirable dust is 3.0 mg/m³.

$$E = 3.0 / (1.19Q + 1)$$

E: Exposure limit [mg/m³]

Q: Percentage of free silica contained in the dust [%]

Allowable concentration (occupational exposure limits, biological limit values):

Japan Society for Occupational Health "Journal of occupational health" Volume 66 (2024):

Glass wool: 1 (fiber)/ml

Note 1: Dust permissible concentration:

• Respirable dust 2 mg/m³

• Total dust 8 mg/m³

Note 2: Allowable concentrations are also presented as number of fibers, but this value is mainly for classification of skin irritation. Dust is classified as Class 1 through Class 3 or separately as asbestos

dust. Allowable concentrations are specified separately for each type. Glass wool fiber dust is classified as Class 3 inorganic dust; this has the highest allowable concentration.

Threshold limit values (TLVs) by ACGIH (2023):

TLV-TWA: 1 (fiber)/cc (glass wool)

Note 1: Fibers with a length of 5 µm or more and an aspect ratio (length/diameter) of 3 or more.

Note 2: TLV (threshold limit values)-TWA (time weighted average) is the time-weighted average permissible concentration which is defined as the time-weighted average permissible concentration during a working time of 8 hours a day, 40 hours a week. Known as the airborne concentration (8 hour average value), this is the concentration at which the majority of workers, even if repeatedly exposed to this concentration every day, will not develop any adverse health effects.

Appropriate engineering controls:

If dust is scattered during handling, install ventilating equipment and other measures to keep dust level lower than the permissible concentration.

Individual protection measures, such as personal protective equipment (PPE)

Respiratory protection:

Wear dust masks if there is any possibility that dust concentrations within the workplace may exceed the above limits.

We recommend using dust masks with replaceable filters for workplaces with high dust concentrations and disposable dust masks for those with relatively low concentrations.

Hand protection:

Wear appropriate protective gloves.

Eye/face protection:

If necessary, Wear protective equipment appropriate for the work, such as goggles and protective eyeglasses with side shields.

Skin/body protection:

Wear protective equipment appropriate for the work, such as loose-fitting long-sleeved work clothing.

9. Physical and chemical properties

Physical states:

Fibrous solid (ICSC 2012)

Color:

White or colored

Odor:

Classification not possible. Reports indicate a certain odor may be released in wet and poorly ventilated conditions, which, however, may be eliminated by drying and ventilation.

Melting point/freezing point:

No data available

Boiling point or initial boiling point and boiling range:

No data available

Flammability:

No data available

Lower and upper explosion limit/flammability limit:	Non-combustible (ICSC 2012)
Flash point:	Non-combustible (ICSC 2012)
Auto-ignition temperature:	Non-combustible (ICSC 2012)
Decomposition temperature:	No data available
pH:	No data available
Kinematic viscosity:	Not classified
Solubility:	Water: insoluble (HSDB 2017)
Partition coefficient n-octanol/water (log value):	The n-octanol/water partition coefficient is extremely low and cannot be measured. (HSDB 2017)
Vapor pressure:	The vapor pressure is extremely low and cannot be measured. (HSDB 2017)
Density and/or relative density:	Specific gravity: 2.5~2.6 g/cm ³ (HSDB 2017)
Relative vapor density:	Not classified
Particle characteristics:	No data available

10. Stability and reactivity

Reactivity:	No data available
Chemical stability:	Stable under normal conditions
Possibility of hazardous reactions:	No data available
Conditions to avoid:	No data available
Incompatible materials:	No data available
Hazardous decomposition products:	No data available

11. Toxicological information

Acute toxicity		
Ingestion:	No data available	
Skin contact:	No data available	
Inhalation:	Inhalation (gases)	Solid at normal temperatures
	Inhalation (vapors)	No data available
	Inhalation (dusts)	No data available
Skin corrosion/irritation:	Not classified	
	In a 24-hour patch test using glass wool involving 43 male and female adult subjects, all subjects were confirmed to be free of any reactions 24 hours after removal of the patch (JHSA 2011).	
	[Information from foreign reference sources]	
	<ul style="list-style-type: none"> Occupational exposure may cause skin irritation due to physical stimulation. These effects are temporary and can be prevented by appropriate workplace practices (ACGIH 2001). 	

- Physical irritation occurs mainly when the fiber diameter of the tested glass wool is 4.5–5.0 µm or larger but will often disappear with continued exposure (EHC 77, 1988).
- According to analysis of data from the Finnish Register of Occupational Diseases of the Finnish Institute of Occupational Health, the incidence of contact dermatitis due to irritation by glass wool is low at one to nine cases per 100,000 workers. Thus, exposure to glass wool is considered to be highly unlikely as a common cause of contact dermatitis. (HSDB 2012)

Serious eye damage/irritation:

Not classified

Isolated reports of temporary irritation of the eye, especially in workers applying loose insulation, have been made. No serious or chronic problems have been associated with these complaints. (ACGIH, 2001; ATSDR, 2004), and it was attributable to a foreign object that got in the eye but not caused particularly by the glass fiber dust (No incident reported). Therefore, " Not classified " is noted in this section.

Respiratory or skin sensitization:

No data available

Note that inhalation of glass wool fibers may cause transient irritation of the nose and upper respiratory tract. Irritation of the nose and upper respiratory tract has been reported at fiber count concentrations exceeding 1 (fiber)/cc (ACGIH 2001).

Germ cell mutagenicity:

Classification not possible

Carcinogenicity:

Not classified (Classified to Group 3 in IARC 2002)

Reproductive toxicity:

No data available

Specific target organ toxicity-single exposure:

Not classified (There have been no reports of health hazards.) It is believed that no incidents will occur in the future as long as the material is handled and stored in accordance with "7. Handling and storage" and "8. Exposure controls/personal protection."

Specific target organ toxicity-repeated exposure:

Not classified (Same as above)

Aspiration hazard:

No data available

12. Ecological information

Ecotoxicity:	No data available
Persistence and degradability:	No data available
Bioaccumulation potential:	No data available
Mobility in soil:	No data available
Hazardous to the ozone layer:	No data available

13. Disposal considerations

Information for proper disposal, recycling or reclamation of the mixture and/or its container to assist in the determination of safe and environmentally preferred waste management options.

Disposal of contaminated packaging:

Dispose of contents/containers in accordance with all laws and regulations and standards of the local government. Consign the disposal to licensed industrial waste disposal facilities certified by the governor of the prefecture or to facilities of the local government if they are in charge of the disposal.

Packaging shall be either recycled or disposed of in accordance with laws and regulations and the standards of the local government.

14. Transport information

UN number:

Not classified

UN proper shipping name:

Not classified

Transport hazard class(es):

Not a dangerous goods according to the definition by the recommendations on the transport of dangerous goods.

Packing group

Not classified

Special precautions for user:

When transporting, protect from direct sunlight. Load containers carefully to prevent damage, corrosion, and leakage. Be careful not to collapse after stacking.

Do not stack heavy loads on top of each other.

Restrictions imposed by domestic regulations:

Not classified (Japan)

15. Regulatory information

Names of applicable laws and regulations and related regulatory information

(Japan)

Pneumoconiosis Law:

(Stipulates the definition of pneumoconiosis, implementation of medical examinations, determination of pneumoconiosis supervision classification, and measures that must be implemented by the employer.)

Ordinance on prevention of hazards due to dust (Dust ordinance):

Glass wool is classified as a mineral. The Dust Ordinance applies to the following work:

- ① Work in locations where minerals (the present product) are cut, carved, or finished (Item 6 of Appended Table 1 of the Dust Ordinance)
- ② Work in locations where minerals (the present product) are crushed, ground or sieved by powered machines (Item 8 of Appended Table 1 of the Dust Ordinance)

Industrial safety and health act:

Substance subject to notice:

- Glass wool corresponds to item 314, man-made mineral fiber, in the Appended Table 9 of Article 57-2.

“Assessment of the potential for harm from Chemical Substances” in Article 57-3 applies to this product. The employer must first undertake a risk assessment of the potential for harm and hazards at the place of handling in the following cases:

- ① A new chemical substance is introduced to the workplace.
- ② A work method or work procedure involving the handling of the chemical substance is adopted for the first time or revised.
- ③ New information is provided regarding hazards, or the potential for hazard has or may potentially change.
 - Mineral oil

Act on the assessment of releases of specified chemical substances in the environment and the promotion of management improvement (PRTR act):

Boron compounds are among the Class I Designated Chemical Substances in Appended Table 1 of the Enforcement Order of the Act on the Assessment of Releases of Specified Chemical Substances in the Environment and the Promotion of Management Improvement. Glass wool is a “glass product” containing 1% or more boron as a constituent substance of glass. As long as the product is used within the normal range of use, it is not subject to notification under the PRTR system.

16. Other information

References:

- 1) International Chemical Safety Cards (ICSC)
- 2) American Conference of Governmental Industrial Hygienist (ACGIH)
- 3) Agency for Toxic Substances and Disease Registry (ATSDR)
- 4) WHO International Programme on Chemical Safety, Environmental Health Criteria 77 (EHC77)
- 5) International Agency for Research on Cancer (IARC)
- 6) Japan Society for Occupational Health (JSOH)
- 7) Hazardous Substances Data Bank (HSDB), the National Library of Medicine, USA
- 8) Japan Hair Science Association (JHSA)

This information is subject to revision based on new findings. Information on concentrations, physical/chemical properties, and other characteristics should not be construed as guaranteed values. The hazards assessment is based on materials and data available at the time this document was prepared. We make no guarantees regarding the completeness of the source materials and information provided herein. With regard to items for which sufficient knowledge is not available in Japan, we have harmonized their assessment with those made in European and US industries.

This SDS is made in Japanese and translated into English. The Japanese text is the original and the English text is only for reference purposes. If there is any conflict or inconsistency between these two texts, the Japanese text shall prevail.