

SDS No. MW0007
Date of Issue: June 2020

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1. IDENTIFICATION

- a) **Product identifier used on the label:** MG-1900 Board
- b) **Other means of identification:** MG-1900 Board

c) **Recommended use of the chemical and restrictions on use:**

Application as thermal insulation heat shields, heat containment, gaskets, expansion joints, industrial furnaces, ovens, kilns, boilers and other process equipment and in the aerospace, automotive and appliance industries, and as passive fire protection systems and firestops. (Please refer to specific technical data sheet for more information).

d) **Name, address, and telephone number**

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d) **Emergency phone number**

FOR A CHEMICAL EMERGENCY,
CALL +1 (877) 318-2430 Emergency number

2. HAZARDS IDENTIFICATION

a) **Classification of the chemical in accordance with paragraph (d) of §1910.1200**

Not classified. Read the entire safety data sheet.

b) **Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200**

None.

Emergency Overview

c) Describe any hazards not otherwise classified that have been identified during the classification process

Mild mechanical irritation to skin, eyes and upper respiratory system may result from exposure. These effects are usually temporary.

d) Mixture rule

Not applicable.

3. COMPOSITION / INFORMATION ON INGREDIENTS**a) Composition table**

<u>COMPONENTS</u>	<u>CAS NUMBER</u>	<u>% By WEIGHT</u>
Alkaline-Earth Silicate wool	436083-99-7	30-90
Inert inorganic material	Not Applicable	< 20
Silica, Amorphous	7631-86-9	5-60
Starch	9005-25-8	1-10

CAS definition: Alkaline Earth Silicate Wool (AES) consisting of silica (55-80 wt %), calcia and magnesia (25-45 wt %), alumina, titania and zirconia (less than 6 wt %), and trace oxides.
The inert inorganic material used could be Al₂O₃, CaO, MgO or other.

b) Common Name

Synonyms: Alkaline earth silicate fiber, Synthetic vitreous fiber (SVF), man made vitreous fiber (MMVF), man made mineral fiber (MMMMF), Calcium – magnesium - silicate fiber (CMS).

c) Impurities and stabilizing additives

Not applicable.

4. FIRST AID MEASURES**a) Description of necessary measures, subdivided according to the different routes of exposure, i.e., inhalation, skin and eye contact, and ingestion****SKIN**

Handling of this material may cause mild mechanical temporary skin irritation. If this occurs, rinse affected areas with water and wash gently. Do not rub or scratch exposed skin.

Using a skin cream or lotion after washing may be helpful.

EYES

In case of eye contact, flush abundantly with water; have eye wash available. Do not rub eyes.

RESPIRATORY TRACT

If respiratory tract irritation develops, move the person to a dust free location. See Section 8 for additional measures to reduce or eliminate exposure.

NOSE AND THROAT

If these become irritated move to a dust free area, drink water and blow nose.

If symptoms persist, seek medical advice.

b) Most important symptoms/effects, acute and delayed

Mild mechanical irritation to skin, eyes and upper respiratory system may result from exposure. These effects are usually temporary.

c) Indication of immediate medical attention and special treatment needed, if necessary

5. FIRE FIGHTING MEASURES

a) Suitable (and unsuitable) extinguishing media

Use extinguishing agent suitable for surrounding combustible materials.

b) Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products):

Non-combustible products, class of reaction to fire is zero.
Packaging and surrounding materials may be combustible

Thermal decomposition of starch during initial heating of this product may release oxides of carbon and trace of ammonia. carbon monoxide, and carbon dioxide. Starch is an organic hydrocarbon and as such will emit water vapor, oxides of carbon (e.g., carbon dioxide, carbon monoxide, etc.) and traces of ammonia when heated. The fumes may cause discomfort and irritation to some people if released into an unventilated area. Initial use of this products shall be in area with enough ventilation or air movement.

c) Special protective equipment and precautions for fire-fighters

NFPA Codes: Flammability: 0 Health: 1 Reactivity: 0 Special: 0

6. ACCIDENTAL RELEASE MEASURES

a) Personal precautions, protective equipment, and emergency procedures

Minimize airborne dust. Compressed air or dry sweeping should not be used for cleaning. See Section 8 "Exposure Controls / Personal Protection" for exposure guidelines.

b) Methods and materials for containment and cleaning up

Frequently clean the work area with HEPA filtered vacuum or wet sweeping to minimize the accumulation of debris. Do not use compressed air for clean-up.

7. HANDLING AND STORAGE

a) Precautions for safe handling

Handle fiber carefully to minimize airborne dust. Limit use of power tools unless in conjunction with local exhaust ventilation. Use hand tools whenever possible.

b) Conditions for safe storage, including any incompatibilities

Store in a manner to minimize airborne dust.

EMPTY CONTAINERS

Product packaging may contain residue. Do not reuse.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

a) OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available

<u>COMPONENT</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>MANUFACTURER REG</u>
Alkaline-Earth Silicate wool	None established*	0.2 f/cc TLV, 8-hr. TWA	1 f/cc, 8-hr. TWA
Inert inorganic material	5 mg/m ³ PEL (resp. dust) 15 mg/m ³ PEL (total dust)	None established	None established
Silica, Amorphous	80mg/m ³ + % SiO ₂ or 20mppcf	None established	None established
Starch	5 mg/m ³ PEL (resp. dust) 15 mg/m ³ PEL (total dust)	10 mg/m ³	None established

OTHER OCCUPATIONAL EXPOSURE LEVELS (OEL)

Industrial hygiene standards and occupational exposure limits vary between countries and local jurisdictions. Check which exposure levels apply to your facility and comply with local regulations. If no regulatory dust or other standards apply, a qualified industrial hygienist can assist with a specific workplace evaluation including recommendations for respiratory protection.

b) Appropriate engineering controls

Use engineering controls such as local exhaust ventilation, point of generation dust collection, down draft work stations, emission controlling tool designs and materials handling equipment designed to minimize airborne fiber emissions.

c) Individual protection measures, such as personal protective equipment
Skin Protection.

Wear personal protective equipment (e.g gloves), as necessary to prevent skin irritation. Washable or disposable clothing may be used. If possible, do not take unwashed clothing home. If soiled work clothing must be taken home, employees should be informed on best practices to minimize non-work dust exposure (e.g., vacuum clothes before leaving the work area, wash work clothing separately, and rinse washer before washing other household clothes).

PPE - Eye

As necessary, wear goggles or safety glasses with side shields.

PPE - Respiratory

When engineering and/or administrative controls are insufficient to maintain workplace concentrations below the appropriate REG/PEL/REL, the use of appropriate respiratory protection, pursuant to the requirements of OSHA Standards 29 CFR 1 91 0.1 34 and 29 CFR 1 926.1 03, is recommended. A NIOSH certified respirator with a filter efficiency of at least 95% should be used. The 95% filter efficiency recommendation is based on NIOSH respirator selection logic sequence for exposure to particulates. Selection of filter efficiency (i.e. 95%, 99% or 99.97%) depends on how much filter leakage can be accepted and the concentration of airborne contaminants. Other factors to consider are the NIOSH filter series N, R or P. (N) Not resistant to oil, (R) Resistant to oil and (P) oil

Proof. These recommendations are not designed to limit informed choices, provided that respiratory protection decisions comply with 29 CFR 1 91 0.1 34. The evaluation of workplace hazards and the identification of appropriate respiratory protection is best performed, on a case by case basis, by a qualified industrial hygienist.

You may also refer to health and safety information on the HTIW Coalition website www.HTIWCoalition.org

9. PHYSICAL AND CHEMICAL PROPERTIES

(a) Appearance	White odorless material with a wool type appearance	(j) Upper/lower flammability or explosive limits	Not applicable
(b) Odor	Not applicable	(k) Vapor pressure	Not applicable
(c) Odor threshold	Not applicable	(l) Vapor density	Not applicable
(d) pH	Not applicable	(m) Relative density	2.6
(e) Melting point	1270° C (2320° F)	(n) Solubility	Less than 1 mg/litre
(f) Initial boiling point and boiling range	Not applicable	(o) Partition coefficient: n-octanol/water	Not applicable
(g) Flash point	Not applicable	(p) Auto-ignition temperature	Not applicable
(h) Evaporation rate	Not applicable	(q) Decomposition temperature	Not applicable
(i) Flammability	Not applicable	(r) Viscosity	Not applicable

10. STABILITY AND REACTIVITY

a) Reactivity

AES is non-reactive.

b) Chemical stability

As supplied AES is stable and inert.

c) Possibility of hazardous reactions

None.

d) Conditions to avoid

Please refer to handling and storage advice in Section 7.

e) Incompatible materials

None.

f) Hazardous decomposition products

Thermal decomposition of starch during initial heating of this product may release oxides of carbon and trace of ammonia. carbon monoxide, and carbon dioxide. Starch is an organic hydrocarbon and as such will emit water vapor, oxides of carbon (e.g., carbon dioxide, carbon monoxide, etc.) and traces of ammonia when heated. The fumes may cause discomfort and irritation to some people if released into an unventilated area. Initial use of this products shall be

in area with enough ventilation or air movement.

11. TOXICOLOGICAL INFORMATION

a) TOXICOKINETICS, METABOLISM AND DISTRIBUTION

b) Acute Toxicity

IRRITANT PROPERTIES

That fibers are negative when tested using approved methods (Directive 67/548/EEC, Annex 5, Method B4). Like all man-made mineral fibers and some natural fibers, fibers contained in this product can produce a mild mechanical irritation resulting in temporary itching or rarely, in some sensitive individuals, in a slight temporary reddening. Unlike other irritant reactions, this is not the result of allergy or chemical skin damage but is caused by mechanical effects.

c) Epidemiology

d) Toxicology

The fibers contained in the products listed in the title have been designed to be rapidly cleared from lung tissue. This has been confirmed in many studies on AES using EU protocol ECB/TM/27(rev 7). When inhaled, even at very high doses, they do not accumulate to any level capable of producing a serious adverse biological effect. In lifetime chronic studies there was no exposure-related effect more than would be seen with any "inert" dust. Subchronic studies at the highest doses achievable produced at worst a transient mild inflammatory response. Fibers with the same ability to persist in tissue do not produce tumors when injected into the peritoneal cavity of rats.

International Agency for Research on Cancer and National Toxicology Program

Not applicable.

12. ECOLOGICAL INFORMATION

a) Ecotoxicity (aquatic and terrestrial, where available)

These products are not reported to have any ecotoxicity effects.

b) Bioaccumulative potential

No bioaccumulative potential.

c) Mobility in soil

No mobility in soil.

d) Other adverse effects (such as hazardous to the ozone layer)

No adverse effects of this material on the environment are anticipated.

13. DISPOSAL CONSIDERATIONS

Waste Management

To prevent waste materials from becoming airborne during waste storage, transportation and disposal, a covered container or plastic bagging is recommended.

Disposal

This product, as manufactured, is not classified as a listed or characteristic hazardous waste according to U. S. Federal regulations (40 CFR 261). Any processing, use, alteration or chemical additions to the product, as purchased, may alter the disposal requirements. Under U. S. Federal regulations, it is the waste generator's responsibility to properly characterize a waste material, to determine if it is a "hazardous" waste. Check local, regional, state or provincial regulations to identify all applicable disposal requirements.

14. TRANSPORT INFORMATION**a) UN number.**

Hazard Class: Not Regulated United Nations (UN) Number: Not Applicable

Labels: Not Applicable North America (NA) Number: Not Applicable

Placards: Not Applicable Bill of Lading: Product Name

b) UN proper shipping name

Not applicable.

c) Transport hazard class(es)

Not applicable.

d) Packing group, if applicable

Not applicable.

e) Environmental hazards (e.g., Marine pollutant (Yes/No))

No.

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

Not regulated.

g) Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises

Not applicable.

International

INTERNATIONAL

Canadian TDG Hazard Class & PIN: Not regulated.

Not classified as dangerous goods under ADR (road), RID (train) or IMDG (ship).

15. REGULATORY INFORMATION

15.1 UNITED STATES REGULATIONS

UNITED STATES REGULATIONS

SARA Title III: This product does not contain any substances reportable under Sections 302, 304, 313 (40 CFR 372). Sections 311 and 312 apply.

OSHA: Comply with Hazard Communication Standards 29 CFR 1910.1200 and 29 CFR 1926.59 and Respiratory Protection Standards 29 CFR 1910.134 and 29 CFR 1926.103.

TSCA: AES wools have been assigned several CAS numbers; however, as "article", they are not required to be listed on the TSCA inventory.

CERCLA: AES wool contains fibers with an average diameter greater than one micron and thus is not considered a CERCLA hazardous substance.

CAA: AES wool contains fibers with an average diameter greater than one micron and thus is not considered a hazardous air pollutant.

States: AES wools are not known to be regulated by any State. If in doubt, contact your local regulatory agency.

INTERNATIONAL REGULATIONS

Canada: **Canadian Workplace Hazardous Materials Information System (WHMIS):**
No Canadian Workplace Hazardous Materials Information System (WHMIS) categories apply to this product.
Canadian Environmental Protection Act (CEPA) - All substances in this product are listed, as required, on the Domestic Substance List (DSL).

European Union: **European Directive 97/69/EC -** By virtue of testing results, Supermag fiber has been exempted from classification and labeling as a potential carcinogen.

16. OTHER INFORMATION

Devitrification

PRECAUTIONARY MEASURES TO BE TAKEN AFTER SERVICE UPON REMOVAL

High temperature insulating wool (HTIW) is typically used in insulation applications to keep temperature exposure at 900°C or above in a closed space. The exposure temperature maximum occurs at the hot face surface of the insulation. The heat exposure on the insulation decreases from the hot face to the cold face as the insulation "insulates itself". As a result, only thin layers of the hot face surface of the insulation become devitrified and respirable dust generated during removal operations typically do not contain detectable levels of crystalline silica (CS). Toxicological evaluation of the effect of the presence of CS in artificially heated HTIW material has not shown any increased toxicity in vitro and in vivo. The results from different factor combinations such as increased brittleness of fibers or micro crystals embedded in the glass structure of the fiber and therefore not biologically available, may explain the lack of toxicological effects. IARC evaluation as provided in Monograph 68 is not relevant since CS is not biologically available in after-service HTIW.

Hazardous Materials Identification System (HMIS) Hazard Rating

HMIS Health	1
HMIS Flammable	0
HMIS Reactivity	0
HMIS Personal Protective Equipment	To be determined by user

Revision Summary: First issue of the document**Revision Date:** June/01/2020**SDS Prepared By:** Nutec Inc.**DISCLAIMER**

The information presented herein is presented in good faith and believed to be accurate as of the effective date of this Safety Data Sheet. Employers may use this SDS to supplement other information gathered by them in their efforts to assure the health and safety of their employees and the proper use of the product. This summary of the relevant data reflects professional judgment; employers should note that information perceived to be less relevant has not been included in this SDS. Therefore, given the summary nature of this document, Nutec does not extend any warranty (expressed or implied), assume any responsibility, or make any representation regarding the completeness of this information or its suitability for the purposes envisioned by the user.