



**SAFETY DATA SHEET**  
**BioSoluble Insulation Boards : MG-1900**

**SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION**

- Product Name:** BioSoluble Insulating Boards: MG-1900
- Other Names:** MG-1900, Alkaline Earth Silicate Wool (AES), Synthetic vitreous fiber (SVF), man-made vitreous fiber (MMVF), man-made mineral fiber (MMMMF), alkaline-earth-silicate fiber, magnesium silicate fiber, high temperature insulation wool (HTIW).
- Chemical Family:** AES wool (synthetic fibers, alkaline earth silicate)
- CAS #:** 436083-99-7
- EC / List #:** 610-130-5
- Primary Use:** Manufactured specifically for the refractory industry, the boards offer a cost effective and high strength solution for secondary insulation packages
- Identified Uses:** Applications include but are not limited to the following:
- Industrial furnaces, ovens, kilns boilers, and other process equipment for automotive, petrochemical, electrical, aerospace, aluminum, steel, glass, and ceramic industries.
  - Thermal insulation heat shields and containment
  - Gaskets, expansion joints, firestops, and passive fire protection systems
  - Replacement of mineral wool and other secondary insulation packages

**Distributor / Manufacturer:**

CeraMaterials  
525 Silver Lake Rd  
Dingmans Ferry, PA 18328  
Emergency Contact: Jerry Weinstein  
Product Stewardship: 518.701.6722  
E-Mail: sales@ceramaterials.com  
www.ceramaterials.com

**24hr Emergency Contact Info:**

Poison Control Center:	877.671.4608
CHEMTREC US Transportation:	800.424.9300
CHEMTREC International Transportation:	703.741.5500



**SECTION 2 - HAZARDS IDENTIFICATION**

<b>OSHA/HCS Status</b>	AES wools are not classified following self-classification guidelines of the OSHA Hazard Communication Standard (HCS) 2012 and not a dangerous product according to HPR classification criteria of WHMIS 2015. The assessment of all available toxicological data on AES during the classification process resulted in a "no classification" conclusion. While this material is considered not classified by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.
<b>Classification of substance</b>	Not classified.
<b>GHS Label Elements</b>	
<b>Signal word</b>	No signal word. Not applicable.
<b>Hazard statement</b>	No known significant effects or critical hazards. Mild mechanical irritation to skin, eyes and upper respiratory system may result from exposure. These effects are usually temporary.
<b>Precautionary Statements</b>	
<b>Prevention</b>	Minimize exposure to airborne dust. See section 8.
<b>Response</b>	Not applicable
<b>Storage</b>	Not applicable
<b>Disposal</b>	Not applicable
<b>Hazards not otherwise classified</b>	Mild mechanical irritation to skin, eyes, and upper respiratory system may result from exposure. These effects are usually temporary. Minimize exposure to airborne dust.

**SECTION 3 - COMPOSITION**

<u>Chemical &amp; Common Name</u>	<u>CAS#</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 %

Concentrations shown as a range to protect confidentiality and/or is due to batch variation.  
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 Al<sub>2</sub>O<sub>3</sub>, CaO, MgO, or other.



## SECTION 4 - FIRST AID MEASURES

**Description of necessary measures, subdivided according to the different routes of exposure, i.e., inhalation, skin and eye contact, and ingestion.**

**General Measures:**

Remove individual from area of exposure.

**Inhalation:**

If irritation occurs, remove affected personnel to an exposure-free environment and keep at rest in a position comfortable for breathing. Blow nose, and/or drink water. Give oxygen if breathing is difficult. Get medical attention if continued irritation develops or persist.

**Skin**

Handling of this material may cause mild mechanical temporary skin irritation. If this occurs, remove contaminated clothing, brush material off skin, wash affected area with plenty of soap and water. Do not rub or scratch exposed skin. Using a skin cream or lotion after washing may be helpful. Get medical attention if continued irritation develops or persist.

**Eyes**

In case of eye contact, immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for & remove any contact lenses. Get medical attention if continued irritation develops or persist.

**Ingestion:**

Unlikely. If ingestion occurs, wash out mouth with water. Remove individual to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

**Most Important Symptoms /Effects, Acute & Delayed:**

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

**Indication of Immediate Medical Attention and Special Treatment:**

No other relevant information available.

Notes to physicians:

Skin and respiratory effects are the result of temporary, mild mechanical irritation; fiber exposure does not result in allergic manifestations. Treat symptomatically.



## SECTION 5 - FIRE FIGHTING MEASURES

### Extinguishing Media

Suitable extinguishing media	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	No information available.
Specific hazards arising from the material	Non-combustible products, class of reaction to fire is zero. Packaging and surrounding materials may be combustible.
Special protective actions for fire-fighters	No special measures are required.
Special protective equipments for fire-fighters	Fire-fighters should wear appropriate protective equipment suitable for surrounding fire.
NFPA Codes	Flammability: 0 Health: 1 Reactivity: 0 Special: 0

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment, and Emergency Procedures:

Minimize airborne dust. Wear appropriate respiratory and protective equipment specified in Section 8. Compressed air or dry sweeping should not be used for cleaning.

### Methods and Materials for Containment and Cleaning Up:

Avoid creating dust. Frequently clean the work area with a high efficiency particulate air (HEPA) filtered vacuum or wet sweeping to minimize the accumulation of debris. Do not use compressed air for clean-up. Placed debris material in a properly labeled closed container for further handling and disposal.

## SECTION 7 - HANDLING AND STORAGE

### Precautions for Safe Handling:

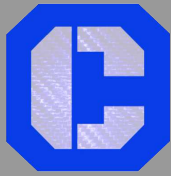
Handle fiber carefully to minimize and avoid creating airborne dust. Limit use of power tools unless in conjunction with local exhaust ventilation. Use hand tools whenever possible. See Section 8 for information on personal protection equipment.

### Conditions for Safe Storage:

Store in a manner to minimize airborne dust such as in sealed labeled containers. See Section 10 for more information on incompatible materials.

### Empty Containers:

Product packaging may contain residue. Do not reuse.



SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Thresold 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.

Table with 4 columns: Components, OSHA / PEL, ACGIH / TLV, Manufacturer Reg. Rows include Alkaline-Earth Silicate Wool (AES), Inert inorganic material, Silica, Amorphous, and Starch.

Occupational exposure levels (OEL):

Ensure 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.

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 and to meet established occupational exposure limits.

Individual Protection Measures, Such as Personal Protective Equipment

Table with 2 columns: Protection Measure, Description. Rows include Skin Protection, Eye Protection, and Respiratory Protection.



**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance &amp; State:</b>	White   Solid	<b>LEL/UEL:</b>	Not applicable
<b>Odor:</b>	Odorless	<b>Vapor pressure:</b>	Not applicable
<b>Odor threshold:</b>	Not applicable	<b>Vapor density:</b>	Not applicable
<b>pH:</b>	Not applicable	<b>Relative density:</b>	2.6 g/cc
<b>Melting point:</b>	2320°F (1270°C)	<b>Water Solubility:</b>	< 1 mg/l
<b>Boiling point:</b>	Not applicable	<b>Viscosity:</b>	Not applicable
<b>Flash point:</b>	Not applicable	<b>Autoignition temperature:</b>	Not applicable
<b>Evaporation rate:</b>	Not applicable	<b>Decomposition temperature:</b>	Not applicable
<b>Flammability (solid, gas):</b>	Not applicable	<b>Partition coefficient (n-octanol/water):</b>	Not applicable

**SECTION 10 - STABILITY AND REACTIVITY**

<b>Reactivity</b>	AES is non-reactive
<b>Chemical Stability</b>	As supplied AES is stable and inert.
<b>Possibility of hazardous reactions</b>	None.
<b>Conditions to avoid</b>	Please refer to handling and storage advice in Section 7.
<b>Incompatible materials</b>	None.
<b>Hazardous decomposition products</b>	Thermal decomposition of starch / binder 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 an area with enough ventilation or air movement.

**SECTION 11 - TOXICOLOGICAL INFORMATION****Information On Toxicological Information**

Likely Routes of Exposure                      Inhalation, skin and eyes.

Symptoms of Exposure                         May cause irritation to eyes and abraded skin. May cause respiratory irritation if inhaled.

**Epidemiology**                                      This product has not been the subject of epidemiological study. Epidemiological studies related to other fiber chemistries of similar solubility have not identified a statistically significant incidence of exposure-related respiratory disease.

**Toxicology**                                         A review of available scientific literature suggests an inverse relationship between dissolution rate and potential health effects; i.e the higher the dissolution rate of a fiber the lower its potential to produce health effects. The dissolution rate of AES fiber has been determined through standardized in vitro testing. The dissolution rate of AES fibers is higher than that of other fiber types that have been tested in chronic animal studies and did not produce respiratory disease.

The fibers in this product 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. Sub-chronic 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.

**Acute**

Irritant Properties                                 The 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 to the skin, eyes, or respiratory tract. Skin irritation results in temporary itching or rarely, in some sensitive individuals, 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.

**International Agency for Research on Cancer & National Toxicology Program**

This product has not been specifically evaluated by any regulatory authority or other classification entity, such as The International Agency for Research on Cancer (IARC) or the National Toxicology Program (NTP).



**SECTION 12 - ECOLOGICAL INFORMATION**

Ecotoxicity (aquatic & terrestrial, where available)	No known aquatic toxicity.
Persistence and degradability	These products are insoluble materials that remain stable over time and are chemically identical to inorganic compounds found in the soil and sediment; they remain inert in the natural environment.
Bioaccumulative potential	No bioaccumulative potential
Mobility in soil	No mobility in soil.
Other adverse effects	No adverse effects of this material on the environment are anticipated.

**SECTION 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 Methods:**

The generation of waste should be avoided or minimized wherever possible. This product as manufactured, is not classified as a listed or characteristic hazardous waste according to the 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. Disposal of this product, solutions, and any by-products should comply with the requirements of the environmental protection and waste disposal legislation in your geographical location.

**Product**

Dispose of in accordance with Federal, State, and Local regulations.

**Packaging**

Dispose of in accordance with Federal, State, and Local regulations.

**SECTION 14 - TRANSPORT INFORMATION**

<b>Shipping Regulations:</b>	Not regulated.
<b>UN Number &amp; UN Proper Shipping Name :</b>	Not applicable.
<b>Transport Hazard Class &amp; Packaging Group:</b>	Not applicable.
<b>Environmental Hazards (Marine Pollutant):</b>	Not a marine pollutant.
<b>Transport in Bulk (Annex II of MARPOL 73/78 &amp; IBC Code:</b>	Not regulated.
<b>Special precautions:</b>	Not applicable.
<b>Canadian TDG Hazard Class &amp; Pin:</b>	Not regulated.
<b>ADR (road), RID (train), or IMDG (ship):</b>	Not classified as dangerous.



**SECTION 15 - REGULATORY INFORMATION****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, fibers have been exempted from classification and labeling as a potential carcinogen.

**SECTION 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 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.

During removal operations, the use of a full face respirator is recommended to reduce inhalation exposure along with eye and respiratory tract irritation. A specific evaluation of workplace hazards and the identification of appropriate respiratory protection is best performed, on a case by case basis, by a qualified industrial hygiene professional.

**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

**Effective Date:** June 1, 2020

**Revision Summary:** Company Information updated.

**Revision Date:** March 3, 2021

**SDS Prepared By:** CeraMaterials

**Disclaimer**

The information presented herein is presented in good faith and believed to be accurate as 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 judgement; 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, CeraMaterials 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.