SECTION 1. IDENTIFICATION

Product Identifier: Barium Magnesium Aluminate

Product Code: BA-MGALO-01-C

CAS Number: 63774-55-0

Relevant identified uses of the substance: Scientific research and development

Supplier details:

American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351
Emergency telephone number:
+1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW -

CAUTION:
White Solid. Harmful if swallowed. Harmful if inhaled. May cause skin, eye and respiratory tract irritation. Avoid breathing dust. Avoid contact with skin and eyes. Hygroscopic.

Principle Routes of Exposure: Inhalation, Eye contact, Skin contact

POTENTIAL HEALTH EFFECTS

Eye Contact: May cause irritation. Avoid contact with eyes.
Skin Contact: May cause irritation. Avoid contact with skin.

Inhalation: Harmful by inhalation. Dust may be irritating to respiratory tract. This product contains a micropowder containing particles in the range of 0.001 to 2.0 microns. These particles may become airborne and result in exposure via inhalation. See also Section 8.

Ingestion: Harmful if swallowed.

Carcinogenic Effects: Does not contain any substances listed by IARC (International Agency for Research on Cancer), NTP (National Toxicology Program), OSHA (Occupational Safety and Health Administration), ACGIH (American Conference for Governmental Industrial Hygienists) or EU (European Union). See also Section 11.

Target Organ Effects: Lungs, Eyes, Skin

Medical Conditions Aggravated
by Exposure:
Asthma, Respiratory disorder
Potential Environmental Effects: Unknown. Avoid release into the environment.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name Barium Magnesium Aluminate
CAS Number 63774-55-0
EINECS Number 264-456-4
Weight % 100
EU Classification Xn;R20/22

SECTION 4. FIRST AID MEASURES

Skin Contact: Wash thoroughly with soap and water. Seek medical attention if redness, swelling, itching, or burning occurs.
Eye Contact: Flush eyes immediately with large amounts of water for 15 minutes. Seek medical attention if redness, swelling, itching, burning or visual disturbances occur.
Inhalation: If cough, shortness of breath or other breathing problems occur, move to fresh air. Seek medical attention if symptoms persist. If necessary, restore normal breathing through standard first aid measures.
Ingestion: Do not induce vomiting. If conscious, give several glasses of water. Never give anything by mouth to an unconscious person.
Notes to Physician: Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Flash Point: No data available
Explosion Limits in Air - Upper (%): No data available
Explosion Limits in Air - Lower (%): No data available
OSHA Flammability Classification: N/A
Autoignition Temperature: No data available
Method: No data available
Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special Protective Equipment for Firefighters: Wear suitable protective equipment. In the event of fire, wear self-contained breathing apparatus.
Specific Hazards: Keep dry. Do not expose to water or moisture. May absorb carbon dioxide and ammonia from air.
Hazardous Decomposition and/or Combustion Products:
None known.
Risk of Dust Explosion: N/A

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid dust formation. Remove all sources of ignition. Ensure adequate ventilation.
Use personal protective equipment. See also Section 8.
Methods for Cleaning Up: Clean up promptly by vacuum. Use of a vacuum with high efficiency particulate air (HEPA) filtration is recommended. Do not create a dust cloud by using a brush or compressed air. Pick up and transfer to properly labelled containers. See Section 13.
Environmental Precautions: Do not allow material to contaminate groundwater system. Local authorities should be advised if significant spillages cannot be contained. See also Section 13.

SECTION 7. HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. Do not breathe dust. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. Do not create a dust cloud by using a brush or compressed air. Take precautionary measures against static discharge. All metal parts of the mixing and processing equipment must be earthed/grounded. Ensure all equipment is electrically earthed/grounded before beginning transfer operations. Fine dust is capable of penetrating electrical equipment and may cause electrical shorts.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS
Barium, Soluble compounds as BA, CAS RN 63774-55-0:
Austria - MAK: 0.5 mg/m³, TWA
2.0 mg/m³, STEL
Belgium - OEL: 0.5 mg/m³, TWA
Finland: 0.5 mg/m³, TWA
France - INRS: 0.5 mg/m³, TWA/VME
Germany - TRGS 900: 0.5 mg/m³
Ireland: 0.5 mg/m³, TWA
Italy - OEL: 0.5 mg/m³, TWA
Spain: 0.5 mg/m³, TWA
United Kingdom - WEL: 0.5 mg/m³, TWA
US ACGIH - TLV: 0.5 mg/m³, TWA
US OSHA - PEL: 0.5 mg/m³, TWA
INRS: Institut National de Recherche et de Securite (National Institute of Research and Security)
MAC: Maximaal Aanvaarde Concentraties (Maximum allowed concentration)
MAK: Maximale Arbeitsplatzkonzentration (Maximum Workplace Concentration)
OEL: Occupational Exposure Limit
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value
TRGS: Technische Regeln für Gefahrstoffe (Technical Rule for Hazardous Materials)
TWA: Time Weighted Average
US ACGIH: United States American Conference of Governmental Industrial Hygienists
US OSHA: United States Occupational Safety and Health Administration
VME: Valeur Moyenne d'Exposition (Average Level of Exposure)
WEL: Workplace Exposure Limit

ENGINEERING CONTROLS
Ensure adequate ventilation to maintain exposures below occupational limits.
Provide appropriate exhaust ventilation at machinery and at places where dust can be generated.

PERSONAL PROTECTIVE EQUIPMENT
Respiratory Protection: Approved respirator may be necessary if local exhaust ventilation is not adequate.
Skin and Body Protection: Wear suitable protective clothing. No special protective equipment required.
Other: Handle in accordance with good industrial hygiene and safety practice. Emergency eyewash and safety shower should be located nearby.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White Solid
Odor: No data available
pH: No data available
Vapor Pressure: No data available
Boiling Point/Range: No data available
Melting Point/Range: No data available
Water Solubility: Insoluble
Density: 3.8 g/cc
Specific Gravity: No data available
Evaporation Rate: No data available
Viscosity: No data available
Partition Coefficient (n-octanol/water): No data available

SECTION 10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous Polymerization: Hazardous polymerization does not occur.
Mechanical Sensitivity (shock): Not sensitive to mechanical impact.
Conditions to Avoid: None reported.
Hazardous Decomposition and/or Combustion Products:
None known.
Static Discharge Effects: Take precautionary measures against static discharges. Avoid formation of dust and aerosols. All metal parts of the mixing and processing equipment must be earthed/grounded. Ensure all equipment is electrically earthed/grounded before beginning transfer operations.
SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY
Oral LD50: No data available.
Inhalation LC50: No data available.
Dermal LD50: No data available.
Eye Irritation: No data available.
Skin Irritation: No data available.

SUBCHRONIC TOXICITY
No data available.

CHRONIC TOXICITY
Carcinogenic Effects: Does not contain any substances listed by IARC (International Agency for Research on Cancer), NTP (National Toxicology Program), OSHA (Occupational Safety and Health Administration), ACGIH (American Conference for Governmental Industrial Hygienists) or EU (European Union).
Mutagenic Effects: No data is available on the product itself.
Reproductive Toxicity: No data is available on the product itself.
Sensitizing Effects: No data available.
Synergistic Materials: None reasonably foreseeable.

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity: No data available

ENVIRONMENTAL FATE
Mobility: No data available.
Bioaccumulation: No data available.
Persistence / Degradability: No data available.
Distribution to Environmental Compartments:
No data available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disclaimer: Information in this section pertains to the product as shipped in its intended composition as described in Section 2 of this MSDS.
Contamination or processing may change waste characteristics and requirements. Regulations may also apply to empty containers, liners or rinsate.
State/provincial and local regulations may be different from federal regulations.
RCRA Classification (40 CFR 261): RCRA Class D005.
Unused and Uncontaminated Product: Product, as supplied, should be disposed of in accordance with the regulations issued by the appropriate federal, state and local authorities. Same consideration should be given to containers and packaging.
SECTION 14. TRANSPORT INFORMATION

UN Number: 1564
UN Proper Shipping Name: Barium compounds, n.o.s. (Barium Magnesium Aluminate)
UN Shipping Class: 6.1
UN Packing Group: III
IMDG (International Maritime Organization's Dangerous Goods Code):
Use UN classification listed above.
IATA (International Air Transport Association):
Use UN classification listed above.

SECTION 15. REGULATORY INFORMATION

Hazard Classification
Mexico - NOM-018-STPS-2000: Refer to HMIS Rating in Section 16.
Canada - WHMIS Classification (CPR, SOR/88-66): No data available.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and
the MSDS contains all the information required by the Controlled Products Regulations.
International Inventories
All components of this product are listed on or exempt from the following inventories:
NO - Australian Inventory of Chemical Substances (AICS)
NO - Canadian Domestic Substances List (DSL)
YES - Chinese Inventory
YES - European Inventory of Existing Commercial Chemical Substances (EINECS)
NO - Japanese Inventory of Existing and New Chemical Substances (ENCS)
NO - Korean Existing Chemicals List (KECL)
YES - New Zealand Hazardous Substances and New Organisms Act (HSNO)
YES - Philippine Inventory of Chemicals and Chemical Substances (PICCS)
YES - United States Toxic Substances Control Act (TSCA) Inventory
U.S. Federal Regulations
TSCA 12(b) Export Notification: This product does not contain any components that are subject to
TSCA 12(b) Export Notification.
Clean Air Act Amendments of 1990 (CAA, Section 112, 40 CFR 82): This product does not contain any
components listed as a Hazardous Air Pollutant, Flammable Substance, Toxic Substance, or Class 1 or 2 Ozone
Depletor.
Clean Water Act (CWA, 40 CFR 116) Priority Pollutants: This product does not contain any listed Priority
Pollutants.
Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, 40 CFR 302): This
product does not contain any listed Hazardous Substances.
Superfund Amendments and Reauthorization Act, Title III (SARA):
SARA Section 302 (40 CFR 355) Extremely Hazardous Substances: No components are listed as extremely
hazardous chemicals under SARA Section 302.
SARA Sections 311/312 (40 CFR 370) Hazard Category: ACUTE/IMMEDIATE HEALTH HAZARD.
SARA Section 313 (40 CFR 372) Toxics Release Inventory: This material contains the following chemicals on
the List of Toxic Chemicals:
Chemical Name SARA Section 313 Emission Reporting
Barium Magnesium Aluminate Listed
Pharmaceutical Information: Not permitted
U.S. State Regulations
California Proposition 65: This product does not contain any components listed on California Proposition 65.

16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2019 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.