

1. PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Barium Aluminate

Chemical Formula: BaAl_2O_4

Manufacturer Item Number: BA-0280

Manufacturer: Lorad Chemical Corporation
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United States of America

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2. HAZARD IDENTIFICATION

Signal Word: Warning

Pictograms:



Hazard Statements: H302 Harmful if swallowed.
H332 Harmful if inhaled.

Precautionary Statements: **Prevention**

P264 Wash thoroughly after handling.
P270 Do not eat, drink, or smoke when using this product.
P261 Avoid breathing dust / fumes / gas / mist / vapors / spray.
P271 Use only outdoors or in a well-ventilated area.

Response

P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER or physician if you feel unwell.
P301+312 IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.
P330 Rinse mouth.

Storage

P405 Store locked up.
P420 Store away from other materials.

Disposal

P501 Dispose of contents / container in accordance with local / regional / national / international regulations.

Other Hazards

HMIS Ratings (0-4)

- Health: 2
- Flammability: 0
- Physical: 0

3. COMPOSITION

Additional Names: Barium Aluminum Oxide

Percentage:	Component	Classification	Concentration
	Barium Aluminate	Acute Tox. 4, oral; H302, Acute Tox. 4, inhalation; H332	100 wt%

CAS #: 12004-04-5

EC #: 234-445-9

4. FIRST AID PROCEDURES

General Treatment Consult a physician. Show this SDS to the doctor in attendance. Move out of dangerous area.

Special Treatment: No Data Available.

Important Symptoms: No Data Available.

Inhalation: Remove from exposure, supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult a physician.

Ingestion: Clean mouth with water and drink plenty of water. Consult a physician if symptoms occur.

Skin: Immediately wash with soap and warm water and rinse thoroughly for at least 15 minutes. If irritation persists, consult a physician.

Eyes: Flush eyes with large amounts of water for 15 minutes. Separate eyelids with fingers. If irritation persists, consult a physician.

5. FIREFIGHTING MEASURES

Special Hazards from Substance: Fumes of Barium oxides, Aluminum oxides

Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

Special Fire Fighting Procedures: Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

If Material is Released / Spilled: Avoid dust formation. Avoid breathing dust, vapors, mist, or gas. Ensure adequate ventilation. Wear personal protective equipment and keep unprotected persons away. Sweep up or vacuum up spillage and collect in a suitable container for disposal. Dispose of waste in accordance with applicable federal, state, local, and provincial environmental regulations.

Environmental Precautions: Prevent further leakage or spills if safe to do so. Do not allow to enter drain, sewers, or watercourses.

7. HANDLING AND STORAGE

Handling Conditions: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Storage Conditions: Keep container tightly closed in a dry and well-ventilated place. Moisture sensitive.

Work / Hygienic Maintenance: Follow personal protection guidelines in Section 8.

Ventilation: Keep in a well-ventilated place.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible Exposure Limits:	Authority	Basis	Limit	Remarks
	OSHA	PEL	0.5 mg/m ³	Barium, soluble compounds (as Ba), Table Z-1 Limits for Air Contaminants
	California	PEL	0.5 mg/m ³	Barium, soluble compounds (as Ba), California permissible exposure limit for chemical contaminants (Title 8, Article 107)
Threshold Limit Value:	Authority	Basis	Limit	Remarks
	NIOSH	REL	0.5 mg/m ³	Barium, soluble compounds (as Ba), Up to 10-hour time weighted average.
	ACGIH	TLV	0.5 mg/m ³	Barium, soluble compounds (as Ba), 8-hour time weighted-average
Special Equipment:	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineered controls to maintain airborne levels below recommended exposure limits.			
Respiratory Protection:	Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).			
Protective Gloves:	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.			
Eye Protection:	Safety glasses with side-shields (or goggles). Use equipment for eye protection tested and approved under government standards such as NIOSH (US) or EN 166 (EU).			
Body Protection:	Wear appropriate protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.			

9. PHYSICAL AND CHEMICAL CHARACTERISTICS

Color:	White	Molecular Weight:	255.29 g/mol
Forms:	Powder	Theoretical Density:	No Data Available.
Odor:	Odorless	pH:	No Data Available.
Water Solubility:	Insoluble	Auto-Ignition Temperature:	No Data Available.
Boiling Point:	No Data Available.	Evaporation Rate:	No Data Available.
Melting Point / Freezing Point:	> 1,827°C (> 3,320.6°F)	Flammability or Explosive Limits:	No Data Available.
Vapor Pressure:	No Data Available.	Partition Coefficient: n-octanol/ water	No Data Available.
Vapor Density:	No Data Available.	Decomposition Temperature:	No Data Available.

Flash Point: No Data Available.**Viscosity:** No Data Available.**10. REACTIVITY****Stability:** Stable under recommended storage conditions.**Reacts with:** Strong Acids, Oxidizing agents**Incompatible Conditions:** Moisture**Hazardous Decomposition Products:** Barium oxides, fumes of Aluminum or Aluminum Oxide**11. TOXICOLOGICAL INFORMATION****Acute Toxicity****Eyes:** No Data Available.**Skin:** No Data Available.**Ingestion:** Harmful if swallowed.**Inhalation:** Harmful if inhaled.**Chronic Toxicity****Skin Corrosion / Irritation:** No Data Available.**Serious Eye Damage / Irritation:** No Data Available.**Respiratory / Skin Sensitization:** Prolonged inhalation may be harmful.**Mutagenic Effects:** No Data Available.**Reproductive / Teratogenic Effects:** No Data Available.**Specific Target Organ Toxicity:** No Data Available.
(single exposure)**Specific Target Organ Toxicity:** No Data Available.
(repeated exposure)**Aspiration Hazard:** No Data Available.**Other Adverse Effects:** In high concentrations, vapors are anesthetic and may cause headache, fatigue, dizziness, and central nervous system effects. In general, Barium compounds may cause severe gastroenteritis, including abdominal pain, vomiting and diarrhea, tremors, faintness, paralysis of the arms and legs, and slow or irregular heartbeat. Inhalation of fumes may cause sore throat, coughing, labored breathing, and irritation of the respiratory tract. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.**Carcinogenicity:****IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable or confirmed human carcinogen by IARC.**ACGIH:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.**NTP:** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.**OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.**Additional Information:**

12. ECOLOGICAL INFORMATION

Aquatic Toxicity:	No Data Available.
Persistence and degradability:	No Data Available.
Bioaccumulative potential:	No Data Available.
Notes:	No Data Available.

13. DISPOSAL CONSIDERATIONS

Disposal:	Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Empty containers should be taken to an appropriate waste handling site for recycling or disposal. Dispose of in accordance with local, state, or national regulations.
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14. TRANSPORTATION DATA

Hazardous:	DoT: Hazardous for Transportation
	IMDG: Hazardous for Transportation
	IATA: Hazardous for Transportation

Pictogram:



Hazard Class:	6.1 Toxic Substances
Packing Group:	III
UN Number:	UN1564

US DoT **Proper Name:** Barium compound, n.o.s. (Barium Aluminate)

Marine Pollutant: No

IMDG **Proper Name:** BARIUM COMPOUND, N.O.S. (Barium Aluminate)

EMS-No: F-A, S-A

Marine Pollutant: No

IATA **Proper Name:** BARIUM COMPOUND, N.O.S. (Barium Aluminate)

15. REGULATORY INFORMATION

Toxic Substance Control Act Yes

SARA 302 Components No chemical in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components The following components are subject to the reporting levels established by SARA Title III, Section 313:

Barium Compounds (Barium Aluminate) (CAS No. 12004-04-5).

SARA 311/312 Hazards	Acute Health Hazard, Chronic Health Hazard
Massachusetts Right to Know Components	No components are subject to the Mass. Right to Know Act.
Pennsylvania Right to Know Components	The follow compound is known to the State of Pennsylvania to be an environmental hazard: Barium Compounds (Barium Aluminate) (CAS No. 12004-04-5).
New Jersey Right to Know Components	No components are subject to the New Jersey Worker and Community Right to Know Act.
California Prop. 65 Components	This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Copyright 2021 Lorad Chemical Corporation. 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 does not constitute a hazard assessment and should not be used in place of the user's own assessment of work place risks as required by other health and safety legislation. The information in this sheet does not represent a guarantee of the properties of the product. Lorad Chemical Corporation and its Affiliates make no warranty with respect to the accuracy of the information or the suitability of this product for any particular application, and shall not be held liable for any damage resulting from handling or from contact with the above product.

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