1. PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Barium Metaphosphate

Chemical Formula: $Ba(PO_3)_2$

Manufacturer Item Number: BA-0445

Manufacturer:
Lorad Chemical Corporation
1200 19th Street North
Saint Petersburg, Florida, 33713
United States of America

Telephone: +1 (727) 826–5511

Fax: +1 (727) 826–5510

Emergency Contact:
(800) 255–3924 (US & Canada)
+1 (813) 248–0573 (International)

2. HAZARD IDENTIFICATION

Hazard Classification
Acute Toxicity, Oral (Category 4)
Acute Toxicity, Inhalation (Category 4)

Signal Word: Warning

Pictograms:



Hazard Statements:

H302 Harmful if swallowed.
H332 Harmful if inhaled.

Precautionary Statements:

Prevention

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

Response

P301+317 IF SWALLOWED: Get medical help.
P304+340 IN INHALED: Remove to fresh air and keep comfortable for breathing.
P330 Rinse mouth.

Storage

P403+233 Store in a well-ventilated place. Keep container tightly closed
P405 Store locked up.

Disposal

P501 Dispose of contents / container to an approved waste disposal plant.

Other Hazards No Data Available.

3. COMPOSITION

Additional Names: Barium dimetaphosphate, Barium(2+) metaphosphate, Barium salt of Metaphosphoric Acid, Barium Polyphosphate

Percentage:	**Component**	**Classification**	**Concentration**
	Barium Metaphosphate	Acute Tox. 4 (Oral, Inhalation); H302, H332	100% wt

CAS #: 13762-83-9

EC #: 237-362-6

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 specific treatment required. Treat symptomatically.

Important Symptoms: Muscle weakness, gastrointestinal distress, cardiac irregularities

Inhalation: If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.

Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Do not induce vomiting. Do not attempt to neutralize. Consult a physician.

Skin: For skin contact, flush with large amounts of soap and water while removing contaminated clothing. Consult a physician.

Eyes: Immediately flush eyes with fresh water for at least 15 minutes while holding the eyelids open. Remove contact lenses if present and easy to do. Continue rinsing. Consult a physician.

5. FIREFIGHTING MEASURES

Special Hazards from Substance: Thermal decomposition may produce barium oxide and phosphorus 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: Use appropriate personal protective equipment. Avoid dust formation. Avoid breathing dust, vapors, mist, or gas. Isolate spill area and provide ventilation. Pick up and arrange dispose without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

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

7. HANDLING AND STORAGE

Handling Conditions: Wear personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion or inhalation. Avoid dust formation.

Storage Conditions: Keep container tightly closed in a dry, cool, and well-ventilated place. Do not store near incompatible materials, or strong reducing agents.

Work / Hygienic Maintenance: Handle in accordance with good industrial hygiene and safety procedures. Do not use tobacco or food in the work area. Wash thoroughly before eating, drinking, or smoking.

Ventilation: Ensure good ventilation / exhaust in any work area.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits:

Authority	Basis	Limit	Remarks
OSHA	PEL	0.5 mg/m³	Soluble barium compounds, 8-hour time weighted average
ACGIH	TLV	0.5 mg/m³	Soluble barium compounds, 8-hour time weighted average
NIOSH	REL	0.5 mg/m³	Soluble barium compounds, 10-hour time weighted average
NIOSH	IDLH	50 mg/m³	Immediately dangerous to life or health concentration for soluble barium compounds
EU	IOELV	0.5 mg/m³	Soluble barium compounds

References:

PEL	Permissible Exposure Limit
REL	Recommended Exposure Limit
TWA	Time Weighted Average
IDLH	Immediately Dangerous to Life or Health
TLV	Threshold Limit Value
IOELV	Indicative Occupational Exposure Limit Value

Special Equipment: Handle in accordance with good industrial hygiene and safety practices.

Respiratory Protection: Where exposure may exceed applicable limits, use a NIOSH approved particulate respirator. For dust, use N95 or P95 (US) or P1 (EN 143). For higher exposure, use P100 (US) or P3 (EN 143). Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Protective Gloves: Use chemical resistant gloves (e.g., nitrile). 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 goggles. Use equipment for eye protection tested and approved under appropriate 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 hazardous substance at the workplace.

9. PHYSICAL AND CHEMICAL CHARACTERISTICS

Color:	White	**Molecular Weight:**	295.27 g/mol
Forms:	Powder	**Theoretical Density:**	3.7 g/cm³
Odor:	Odorless	**pH:**	No Data Available.
Water Solubility:	Slight in water	**Auto-Ignition Temperature:**	No Data Available.
Boiling Point:	No Data Available.	**Evaporation Rate:**	No Data Available.
Melting Point / Freezing Point:	> 1,200°C (2,192°F) (decomposes)	**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 normal ambient conditions of storage and use.

Reacts with: Strong acids.

Incompatible Conditions: Moisture, excessive heat, and contact with acids.

Hazardous Decomposition Products: Barium oxide and phosphorus oxides under thermal decomposition.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity	Eyes:	Dust may cause mechanical irritation.
	Skin:	Dust may cause mechanical irritation.
	Ingestion:	Harmful if swallowed.
	Inhalation:	Harmful if inhaled.
Chronic Toxicity	Skin Corrosion / Irritation:	Not expected to cause skin corrosion. Prolonged exposure to dust may cause mechanical irritation.
	Serious Eye Damage / Irritation:	Dust may cause mechanical irritation to eyes.
	Respiratory / Skin Sensitization:	Not expected to be a sensitizer.
	Mutagenic Effects:	Not expected to be mutagenic.
	Reproductive / Teratogenic Effects:	No evidence of teratogenic effects.
	Specific Target Organ Toxicity: (single exposure)	May cause respiratory irritation due to dust inhalation. Systemic effects may occur following significant exposure to soluble barium.
	Specific Target Organ Toxicity: (repeated exposure)	Prolonged or repeated exposure to soluble barium compounds may affect the cardiovascular system and muscles.
	Aspiration Hazard:	No expected aspiration hazard.
	Other Adverse Effects:	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.
	EU:	No component of this product present at levels greater than or equal to 0.1% is classified as a carcinogen under Regulation (EC) No. 1272/2008 (CLP).

Additional Information: No Data Available.

12. ECOLOGICAL INFORMATION

Aquatic Toxicity: Toxic to aquatic life due to release of barium ions. Limited compound specific data available.

Persistence and degradability: No applicable to inorganic substances.

Bioaccumulative potential: Low to moderate potential for bioaccumulation of barium ions in aquatic organisms.

Notes: Environmental impact depends on solubility and release of bioavailable barium. Avoid uncontrolled release to the environment.

13. DISPOSAL CONSIDERATIONS

Disposal: Dispose of contents and container in accordance with local, state, and federal regulations. This material should be handled as a hazardous waste due to the presence of barium compounds. Do not discharge to drains or the environment.

14. TRANSPORTATION DATA

Hazardous:

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

Pictogram:



Hazard Class: 6.1

Packing Group: III

UN Number: UN1564

US DoT

Proper Name: Barium compound, n.o.s. (Barium metaphosphate)

Marine Pollutant: No

IMDG

Proper Name: Barium compound, n.o.s. (Barium metaphosphate)

EMS-No: F-A, S-A

Marine Pollutant: No

IATA

Proper Name: BARIUM COMPOUND, N.O.S. (Barium Metaphosphate)

15. REGULATORY INFORMATION

Toxic Substance Control Act Listed.

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

SARA 313 Components Barium compounds are subject to the reporting requirements of SARA Title III, Section 313.

SARA 311/312 Hazards	Acute Health Hazard
Massachusetts Right to Know Components	Barium compounds are subject to the Massachusetts Right to Know Act.
Pennsylvania Right to Know Components	Barium compounds are listed in Appendix A of the Pennsylvania Worker and Community Right to Know Act.
New Jersey Right to Know Components	Barium compounds are listed on the New Jersey Right to Know Hazardous Substance List.
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.
EU Regulations	This substance is subject to Regulation (EC) No. 1907/2006 (REACH). Classification and labeling in accordance with Regulation (EC) No. 1272/2008 (CLP). Not classified as PBT or vPvB based on available information.

16. OTHER INFORMATION

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