

reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

IF SWALLOWED Rinse mouth Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up.

Precautionary Statements - Disposal

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

Other Hazards

May be harmful if swallowed Harmful to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
Barium chloride dihydrate	10326-27-9	5

4. FIRST AID MEASURES

First Aid Measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Call a physician immediately.

Skin contact

Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. Call a physician immediately.

Inhalation

Remove to fresh air. If breathing is difficult, give oxygen. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Call a physician immediately.

Ingestion

Induce vomiting, but only if victim is fully conscious. Call a physician or poison control center immediately. Immediate medical attention is required. Never give anything by mouth to an unconscious person.

Self-protection of the first aider

Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Water spray, dry chemical, carbon dioxide (CO₂), or foam.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions

Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing.

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Absorb/Cover spill with sodium bicarbonate or sodium carbonate to neutralize, then place in a chemical waste container for later disposal. Dispose according to federal, state, and local regulations. Do not flush to sewer.

Methods for cleaning up Use personal protective equipment. Keep in suitable and closed containers for disposal. Clean contaminated surface thoroughly. Following product recovery, flush area with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Wear personal protective equipment. Ensure adequate ventilation. Use only in area provided with appropriate exhaust ventilation. Avoid contact with eyes, skin and clothing. Do not eat, drink, or smoke when using this product. See section 8.

Conditions for safe storage, including any incompatibilities

Storage Keep container tightly closed in a dry and well-ventilated place. Store in accordance with local regulations. Keep out of the reach of children.

Incompatible Products None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Barium chloride dihydrate 10326-27-9	TWA: 0.5 mg/m ³	TWA: 0.5 mg/m ³	IDLH: 50 mg/m ³ TWA: 0.5 mg/m ³

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear protective gloves/clothing. Gloves & Lab Coat. Nitrile rubber.

Respiratory protection Handle in an enclosing hood with exhaust ventilation. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state liquid
Appearance Clear, colorless
Odor None

Property **Values** **Remarks • Method**

pH	1
Melting point / freezing point	No information available
Boiling point / boiling range	No information available
Flash point	No information available
Evaporation rate	
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	No information available
Vapor density	No information available
Specific gravity	No information available
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions of use and storage.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure****Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Barium chloride dihydrate 10326-27-9	= 118 mg/kg (Rat)	Not Established	Not Established

Information on toxicological effects

Chemical name	ACGIH	IARC	NTP	OSHA
Barium chloride dihydrate 10326-27-9	Not Established	Not Established	Not Established	Not Established

*IARC (International Agency for Research on Cancer)
Group 3 - Not classifiable as to its carcinogenicity to humans*

ATEmix (oral)	2360
ATEmix (inhalation-dust/mist)	28.3 mg/l

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Barium chloride dihydrate 10326-27-9	Not Established	Not Established	14.5: 48 h Daphnia magna mg/L EC50

Persistence and degradability

No information available.

Bioaccumulation/Accumulation

Barium chloride is expected to significantly bioaccumulate in the environment.

Chemical name	Log Pow
Barium chloride dihydrate 10326-27-9	Not Established

13. DISPOSAL CONSIDERATIONS

Disposal Methods

This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261). Dispose according to federal, state, and local regulations.

Contaminated packaging

Do not reuse empty containers.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Barium chloride dihydrate 10326-27-9	(hazardous constituent - no waste number)	-	Not Established	Not Established

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Barium chloride dihydrate 10326-27-9	Not Established	Not Established	Not Established	Not Established

Chemical name	California Hazardous Waste Status
Barium chloride dihydrate 10326-27-9	-

14. TRANSPORT INFORMATION

DOT

Proper shipping name TOXIC LIQUID N.O.S. (5% BARIUM CHLORIDE SOLUTION)
UN-No 3287
Hazard Class 6.1
Packing group III

IATA

Proper shipping name TOXIC LIQUID N.O.S. (5% BARIUM CHLORIDE SOLUTION)
UN-No 3287
Hazard Class 6.1
Packing group III

IMDG/IMO

Proper shipping name TOXIC LIQUID N.O.S. (5% BARIUM CHLORIDE SOLUTION)
UN-No 3287
Hazard Class 6.1
Packing group III

15. REGULATORY INFORMATION

International Inventories

TSCA	Does not comply
DSL/NDSL	Does not comply
EINECS/ELINCS	Does not comply
ENCS	Complies
IECSC	Complies
KECL	Does not comply
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	SARA 313 - Threshold Values %
Barium chloride dihydrate 10326-27-9	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Barium chloride dihydrate 10326-27-9	Not Established	Not Established	Not Established	Not Established

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Barium chloride dihydrate 10326-27-9	-	Not Established	-

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals

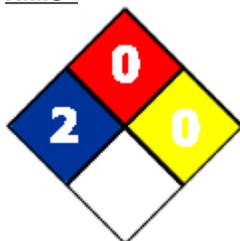
Chemical name	California Proposition 65
Barium chloride dihydrate 10326-27-9	Not Established

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Barium chloride dihydrate 10326-27-9	X	Not Established	X

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances**16. OTHER INFORMATION**

NFPA	Health hazard 2	Flammability 0	Instability 0	Physical and Chemical Hazards N/A
HMIS	Health hazard 2	Flammability 0	Stability 0	



Health Hazard	2
Fire Hazard	0
Reactivity	0

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Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Material Safety Data Sheet