

460-S0209 (SOLN Barium Chloride Crystals, Form So)

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 460-S0209 (SOLN Barium Chloride Crystals, Form So)

Other means of identification : Not applicable.

Recommended use : REAGENT

Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.

Company : Nalco Company
1601 W. Diehl Road
Naperville, Illinois 60563-1198
USA
TEL: (630) 305-1000

Emergency telephone number : (800) 424-9300 (24 Hours) CHEMTREC

Issuing date : 03/04/2026

Section: 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity (Oral) : Category 3
Acute toxicity (Inhalation) : Category 4
Eye irritation : Category 2A

GHS Label element

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : Toxic if swallowed.
Causes serious eye irritation.
Harmful if inhaled.

Precautionary Statements : **Prevention:**
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Wear eye protection/face protection.
Response:
IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards : None known.

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Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Concentration: (%) *
Barium Chloride	10361-37-2	60 - 100

* Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

Section: 4. FIRST AID MEASURES

In case of eye contact	: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
In case of skin contact	: Wash off with soap and plenty of water. Get medical attention if symptoms occur.
If swallowed	: Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
If inhaled	: Remove to fresh air. Treat symptomatically. Get medical attention.
Protection of first-aiders	: In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
Notes to physician	: Treat symptomatically.
Most important symptoms and effects, both acute and delayed	: See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	: None known.
Specific hazards during firefighting	: Not flammable or combustible.
Hazardous combustion products	: Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus
Special protective equipment for firefighters	: Use personal protective equipment.
Specific extinguishing methods	: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

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Section: 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Do not allow contact with soil, surface or ground water.
- Methods and materials for containment and cleaning up : Sweep up and shovel into suitable containers for disposal.

Section: 7. HANDLING AND STORAGE

- Advice on safe handling : Avoid contact with skin and eyes. Do not ingest. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.
- Conditions for safe storage : Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers.
- Suitable material : The following compatibility data is suggested based on similar product data and/or industry experience: Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.
- Unsuitable material : not determined

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Barium Chloride	10361-37-2	TWA	0.5 mg/m3 (as Ba)	NIOSH REL
		TWA	0.5 mg/m3 (as Ba)	OSHA Z1
		TWA	0.5 mg/m3 (as Ba)	ACGIH

- Engineering measures : Effective exhaust ventilation system Maintain air concentrations below occupational exposure standards.

Personal protective equipment

- Eye protection : Safety glasses with side-shields
- Hand protection : Wear protective gloves.
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Skin protection : Wear suitable protective clothing.
- Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

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Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

The Personal Protective Equipment (PPE) recommendations provided above have been made in good faith based on typical expected conditions of use. PPE selection should always be completed in conjunction with a proper risk assessment and in accordance with a PPE management program.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	: Crystalline
Colour	: Clear
Odour	: None
Flash point	: does not flash
pH	: no data available
Odour Threshold	: no data available
Melting point/freezing point	: MELTING POINT: 113 °C
Boiling point, initial boiling point and boiling range	: no data available
Evaporation rate	: no data available
Flammability	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: no data available
Relative vapour density	: no data available
Relative density	: 3.1, (23.9 °C),
Density	: 25.76 lb/gal
Water solubility	: no data available
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: no data available
Decomposition temperature	: no data available
Viscosity, dynamic	: no data available
Viscosity, kinematic	: no data available
Molecular weight	: no data available
VOC	: 0 %, Calculation method
Particle characteristics	: no data available

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Section: 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions, including those associated with foreseeable emergencies	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: Extremes of temperature Moisture
Incompatible materials	: Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.
Hazardous decomposition products	: Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Eye contact, Skin contact

Potential Health Effects

Eyes	: Causes serious eye irritation.
Skin	: Health injuries are not known or expected under normal use.
Ingestion	: Toxic if swallowed.
Inhalation	: Harmful if inhaled. Inhalation may cause central nervous system effects.
Chronic Exposure	: Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	: Redness, Pain, Irritation
Skin contact	: No symptoms known or expected.
Ingestion	: No information available.
Inhalation	: Dizziness, Drowsiness

Toxicity

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Acute oral toxicity	: Acute toxicity estimate: 100 mg/kg
Acute inhalation toxicity	: Acute toxicity estimate: 1.5 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	: no data available
Skin corrosion/irritation	: no data available
Serious eye damage/eye irritation	: no data available
Respiratory or skin sensitization	: no data available
Carcinogenicity	: no data available
Reproductive effects	: no data available
Germ cell mutagenicity	: no data available
Teratogenicity	: no data available
STOT - single exposure	: no data available
STOT - repeated exposure	: no data available
Aspiration toxicity	: no data available

Section: 12. ECOLOGICAL INFORMATION

Toxicity

Environmental Effects : This product has no known ecotoxicological effects.

Components

Toxicity to fish : Barium Chloride
LC50 Danio rerio (zebra fish): > 152 mg/l
Exposure time: 96 h

Components

Toxicity to daphnia and other aquatic invertebrates : Barium Chloride
EC50 Daphnia magna (Water flea): 22 mg/l
Exposure time: 48 h

Components

Toxicity to algae : Barium Chloride
EC50 Pseudokirchneriella subcapitata (algae): > 45.6 mg/l
Exposure time: 72 h

Components

Toxicity to fish (Chronic toxicity) : Barium Chloride
NOEC: > 61.1 mg/l
Exposure time: 33 d
Species: Danio rerio (zebra fish)

Components

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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Barium Chloride
NOEC: 4.4 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

Persistence and degradability

The product does not contain any organic substances.

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.

If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air : <5%
Water : <5%
Soil : <5%

The portion in water is expected to be soluble or dispersible.

Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it could meet the criteria of a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Before disposal, it should be determined if the waste meets the criteria of a hazardous waste.

Hazardous Waste: : D005

Disposal methods : Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of contents/container in accordance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

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Land transport (DOT)

Proper shipping name : BARIUM COMPOUNDS, N.O.S.
Technical name(s) : Barium Chloride
UN/ID No. : UN 1564
Transport hazard class(es) : 6.1
Packing group : III

Air transport (IATA)

Proper shipping name : BARIUM COMPOUNDS, N.O.S.
Technical name(s) : Barium Chloride
UN/ID No. : UN 1564
Transport hazard class(es) : 6.1
Packing group : III

Sea transport (IMDG/IMO)

Proper shipping name : BARIUM COMPOUNDS, N.O.S.
Technical name(s) : Barium Chloride
UN/ID No. : UN 1564
Transport hazard class(es) : 6.1
Packing group : III

Section: 15. REGULATORY INFORMATION

TSCA list : No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This product does not contain a RQ substance, or this product contains a substance with a RQ, however the calculated RQ exceeds the reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard

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

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

Barium Chloride	10361-37-2	100 %
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California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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INTERNATIONAL CHEMICAL CONTROL LAWS :

United States TSCA Inventory

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

EU. EINECS

The substances in this preparation have been reviewed for compliance with the EINECS or ELINCS inventories.

Australia. Australian Industrial Chemicals Introduction Scheme (AICIS)

All substances in this product comply with the Australian Industrial Chemicals Introduction Scheme (AICIS)

Canadian Domestic Substances List (DSL)

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

Japan. ENCS - Existing and New Chemical Substances Inventory

All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

Korea. Korean Existing Chemicals Inventory (KECI)

On the Korea Existing Chemicals Inventory.

Philippines Inventory of Chemicals and Chemical Substances (PICCS)

All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

China Inventory of Existing Chemical Substances

All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

New Zealand Inventory of Chemicals (NZIoC)

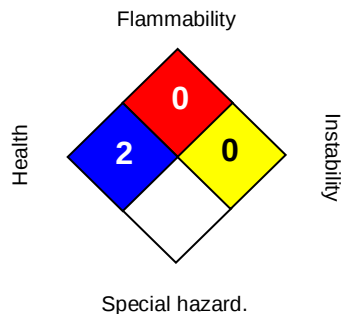
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996, and are listed on or are exempt from the New Zealand Inventory of Chemicals.

Taiwan Chemical Substance Inventory

not determined

Section: 16. OTHER INFORMATION

NFPA:



HMIS® IV / CED:

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Revision Date : 03/04/2026

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Version Number : 1.2
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text. For additional copies of an SDS visit www.ecolab.com/sds and request access.