



MATERIAL SAFETY DATA SHEET

Product Name **Sodium Bromide Biocide** DIAMOND
Product id 2270B /SANI-BROM, BROM START
Revision date 19/11/2002 YELLOW ERASE
Supersedes 18/08/1999
Revision: 3

1. Identification of the substance & the company

Chemical name Sodium bromide

Chemical formula NaBr

Chemical family Inorganic bromide

Molecular weight 102.9

Type of product and use Biocide for industrial water treatment and for swimming pools

Supplier Clearon Corp.
95 MacCorkle Ave. SW, South Charleston, WV 25303, USA
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Emergency Telephone Chemtrec (800)424-9300

2. Composition / information on ingredients

Components	Weight %	ACGIH-TLV Data	OSHA (PEL) Data
Sodium Bromide 7647-15-6	98	Not determined	Not determined

3. Hazards identification

Emergency overview *White, odourless, crystalline solid*
None under recommended use instructions

Potential Health Effects:

- Eye Contact Mild irritant
- Skin contact Not irritant to intact skin. Slightly irritant on prolonged contact to abraded skin.
- Inhalation Irritant to upper respiratory tract.



MATERIAL SAFETY DATA SHEET

Product Name **Sodium Bromide Biocide**
Product id 2270B
Revision date 19/11/2002
Supersedes 18/08/1999

Revision: 3

- Ingestion Abdominal pain, nausea and vomiting. May cause falling asleep, muscular incoordination and respiratory depression.

Chronic effects/Carcinogenicity Repeated skin contact may cause dermatitis.

4. First-aid measures

Eye contact Holding the eyelids apart, flush eyes promptly with copious flowing water for at least 20 minutes.
Get medical attention immediately.

Skin contact Remove contaminated clothing. Wash skin thoroughly with mild soap and plenty of water for at least 15 minutes. Wash clothing before re-use.
Get medical attention if irritation occurs.

Inhalation In case of dust inhalation or breathing fumes released from heated material, remove person to fresh air.
Keep him quiet and warm. Apply artificial respiration if necessary and get medical attention immediately.

Ingestion If swallowed, wash mouth thoroughly with plenty of water and give water to drink.
Get medical attention immediately.

NOTE: Never give an unconscious person anything to drink.

Notes to the physician In case of ingestion induce vomiting in alert patient.
No specific antidote. Treat symptomatically and supportively.

5. Fire - fighting measures

Flash point None
Flammable/Explosion limits Not flammable
Auto-ignition temperature Not applicable
Suitable extinguishing media Material is not combustible. Use extinguishing media appropriate to surrounding fire conditions.

MATERIAL SAFETY DATA SHEET

Product Name Sodium Bromide Biocide
Product id 2270B
Revision date 19/11/2002
Supersedes 18/08/1999

Revision: 3

Fire fighting procedure Cool containers with water spray. In closed stores, provide fire-fighters with self-contained breathing apparatus in positive pressure mode.

Unusual fire and explosion hazards Will decompose from ca. 800°C releasing poisonous and corrosive fumes of hydrogen bromide and sodium oxide.

6. Accidental release measures

Personal precautions Wear respirator, chemical safety goggles, rubber gloves and boots.
Methods for cleaning up Sweep up, place in a bag and hold for waste disposal or possible re-use. Ventilate area and wash spill site after material pickup is complete.

7. Handling and storage

Handling Avoid bodily contact.
Keep containers tightly closed.

Storage Keep in a well-ventilated place away from incompatible materials (see "materials to avoid").

8. Exposure controls / personal protection

Ventilation requirements Provide adequate ventilation.

Personal protective equipment:

- **Respiratory protection** Dust respirator
- **Hand protection** Protective gloves
- **Eye protection** Chemical safety goggles
- **Skin and body protection** Body covering clothes and boots

Hygiene measures Safety shower and eye bath should be provided. Do not eat, drink or smoke until after-work showering and changing clothes.

9. Physical and chemical properties

Appearance White, odourless, crystalline solid
Melting point/range 755°C
Boiling point/range 1390°C
Vapour pressure 1 mm Hg at 806°C
Vapor density Not applicable under standard conditions

MATERIAL SAFETY DATA SHEET

Product Name Sodium Bromide Biocide
Product id 2270B
Revision date 19/11/2002
Supersedes 18/08/1999

Revision: 3

Evaporation rate (ether=1) Not applicable under standard conditions
Solubility:
- **Solubility in water** 94.6 gr/100ml at 25°C
- **Solubility in other solvents** ethanol 95%: 7 g/100g at 25°C
methanol: 14.8 g/100g at 25°C
Specific gravity 3.203
Decomposition temperature ~800°C

10. Stability and reactivity

Stability Stable under normal conditions
Materials to avoid Strong acids
Strong oxidants
Heavy metal salts
Conditions to avoid Reacts explosively with bromine trifluoride
Heating above decomposition temperature
Hazardous decomposition products
Hazardous polymerization Hydrogen bromide and sodium oxide
Will not occur

11. Toxicological information

Acute toxicity:
- **Rat oral LD50** 4200 mg/kg
- **Rabbit dermal LD50** >2000 mg/kg
- **Rat dermal LD50** >2000 mg/kg
- **Eye irritation (rabbit)** Slightly irritant
- **Dermal irritation (rabbit)** Not irritant
- **Dermal sensitization** Not a sensitizer
--(guinea pig)

Chronic toxicity Repeated skin contact may cause dermatitis.
Repeated oral intake of bromides (>9 mg/kg body weight/day) may affect the central nervous system. Warning symptoms include mental dullness, slurred speech, weakened memory, apathy, anorexia, constipation, drowsiness and loss of sensitivity to touch and pain.

Mutagenicity Does not induce DNA repair in cultured human epithelioid cells.
Not clastogenic in human lymphocytes metaphase analysis.
Not mutagenic by the Ames Test

MATERIAL SAFETY DATA SHEET

Product Name Sodium Bromide Biocide
Product id 2270B
Revision date 19/11/2002
Supersedes 18/08/1999

Revision: 3

Carcinogenicity Not known to be a carcinogen.
Not classified by IARC.
Not included in NTP 9th Report on Carcinogens.

Reproductive toxicity Sodium bromide has been shown to cause embryo-fetal toxicity and malformations in rats at dose levels which also produce maternal toxicity. The No-Observed Effect Level (NOEL) is 100 mg/kg/day, and the Acceptable Daily Intake (ADI) for sodium bromide from food and drinking water in humans is 1 mg/kg/day. Comparable high doses of sodium chloride (table salt) similarly cause malformations, embryo-fetal toxicity, and maternal toxicity in mice.

12. Ecological information

Environmental fate NaBr is an inorganic salt, which fully dissociates in aquatic environment to bromide and ammonium ions. It also undergoes degradation in soil to bromide ion (no further degradation or biodegradation will occur).

Aquatic toxicity :
- 96 Hour-LC50, Fish >1000 mg/l (rainbow trout)
>1000 mg/l (bluegill sunfish)
- 48 Hour-EC50, Daphnia magna >1000 mg/l

Avian toxicity:
- Oral LD50, Bobwhite quail >2250 mg/kg
- Dietary LC50, Mallard duck >5633 ppm
- Dietary LC50, Bobwhite quail >5633 ppm

Bioaccumulative potential Bioaccumulation is not likely to occur since this material is highly soluble in water.

Germany, water endangering classes (WGK) 1

13. Disposal considerations

Waste disposal Add into a large vessel containing water and drain into sewer with ample water. Avoid access to streams, lakes or ponds. Observe all federal, state and local environmental regulations when disposing of this material.

MATERIAL SAFETY DATA SHEET

Product Name Sodium Bromide Biocide
Product id 2270B
Revision date 19/11/2002
Supersedes 18/08/1999

Revision: 3

14. Transportation information

DOT Not regulated
IMO Not regulated
ICAO/IATA Not regulated

15. Regulatory information

USA Reported in the EPA TSCA Inventory
Canada Listed in DSL
EEC No. 231-599-9
Japan Listed in MITI (ENCS No.1-113)
Australia Listed in AICS
China inventory Listed
South Korea Listed in ECL (KE-31368)
Switzerland Giftklasse 3
Philippines Listed in PICCS

16. Other information

This data sheet contains changes from the previous version in section(s)
12,15



MATERIAL SAFETY DATA SHEET

Product Name	Sodium Bromide Biocide
Product id	2270B
Revision date	19/11/2002
Supersedes	18/08/1999

Revision: 3

Further information

The information in this Material Safety Data Sheet should be provided to all who will use, handle, store, transport, or otherwise be exposed to this product.

This information has been prepared for the guidance of plant engineering, operations and management and for persons working with or handling this product.

Additionally, if this Material Safety Data Sheet is more than three years old, you should contact Clearon at the phone number listed below to make certain that this sheet is current.

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End of safety data sheet