

Otto Chemie Pvt Ltd

An ISO 9001 : 2015 & GMP Certified Company
Office : No 603, 6th Floor, Tardeo AC Market, 87, Tardeo Road,
Tardeo, Mumbai, Maharashtra 400034, India (BHARAT)
Tel : + 91 98200 41841 Email : info@ottokemi.com Web : www.ottokemi.com

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Product identifiers

Product Name : 2-Bromo-2-nitro-1,3-propanediol, 98%
Product Code : B 2168
CAS No: 52-51-7

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification
OTTO CHEMIE PVT LTD
No 603, 6th Floor, Tardeo AC Market, 87, Tardeo Road,
Tardeo, Mumbai, Maharashtra 400034, India (BHARAT)

1.4. Emergency telephone number

Phone no. : + 91 98200 41841 (10 : 00 am – 06 : 00 pm)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Dermal (Category 4), H312

Skin irritation (Category 2), H315

Serious eye damage (Category 1), H318

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal word Danger

Hazard statement(s)

H302 + H312

H315

H318

H335

H410

statement(s)

P273

P280

P280

P302 + P352 + P312

P305 + P351 + P338 + P310

P501

Supplemental Hazard

Statements

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Harmful if swallowed or in contact with skin

Causes skin irritation.

Causes serious eye damage.

May cause respiratory irritation.

Very toxic to aquatic life with long lasting effects.

Avoid release to the environment.

Wear eye protection/ face protection.

Wear protective gloves/ protective clothing.

IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/doctor 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. Immediately call a POISON CENTER/doctor.

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

none

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SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : Bronopol
Formula : C3H6NO4Br
Molecular weight : 199.99 g/mol
CAS-No. : 52-51-7
EC-No. : 200-143-0

Component	Classification	Concentration
2-Bromo-2-nitropropane-1,3-diol		
CAS-No 52-51-7 EC-No 200-143-0	Acute Tox. 4; Skin Irrit. 2; Eye Dam. 1; STOT SE 3; Aquatic Acute 1; Aquatic Chronic 1; H302, H312, H315, H318 H335, H400, H410 M-Factor - Aquatic Acute: 10	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

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

In case of skin contact

Wash off with soap and plenty of water. Consult a physician. In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NOx), Hydrogen bromide gas

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains . Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Storage class (TRGS 510): Flammable solid hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

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. Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (EN 143) respirator cartridges as a backup to engineering controls. If full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance Form:	crystalline
Colour:	beige
b) Odour	No data available
c) Odour Threshold	No data available
d) pH	5 - 7
e) Melting point/freezing point	Melting point/range: 130 - 133 °C - lit.
f) Initial boiling point and boiling range	No data available
g) Flash point	167 °C
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	0.00005 hPa at 20 °C
l) Vapour density	No data available
m) Relative density	No data available
n) Water solubility	soluble
o) Partition coefficient: octanol/water	n- log Pow: 0.18
p) Auto-ignition temperature	No data available
q) Decomposition temperature	>= 90 °C -

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r) Viscosity No data available
s) Explosive properties No data available
t) Oxidizing properties No data available
9.2 Other safety information
No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available
10.2 Chemical stability
Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions
No data available
10.4 Conditions to avoid
No data available
10.5 Incompatible materials
Strong oxidizing agents, Strong bases, Strong reducing agents
10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx),
Hydrogen bromide gas
Other decomposition products - No data available
In the event of fire: see

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals:
Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg
Inhalation LC50 Rat: > 50mg/L.
Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH.
Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant).
Special Remarks on Toxicity to Animals: Not available.
Special Remarks on Chronic Effects on Humans: Not available.
Special Remarks on other Toxic Effects on Humans: Not available.

SECTION 12: Ecological information

12.1 Toxicity
Toxicity to fish
Toxicity to daphnia and other aquatic invertebrates
Toxicity to algae
LC50 - Oncorhynchus mykiss (rainbow trout) - 41.2 mg/l - 96 h(2-Bromo-2- nitropropane-1,3-diol)
LC50 - Lepomis macrochirus (Bluegill) - 35.7 mg/l - 96 h(2-Bromo-2- nitropropane-1,3-diol)
EC50 - Daphnia magna (Water flea) - 1.6 mg/l - 48 h(2-Bromo-2-nitropropane- 1,3-diol)
static test EC50 - Daphnia magna (Water flea) - 1.4 mg/l - 48 h(2-Bromo-2- nitropropane-1,3-diol)
(OECD Test Guideline 202)
EC50 - Selenastrum capricornutum (green algae) - 0.37 mg/l - 72 h(2-Bromo- 2-nitropropane-1,3-diol)
(OECD Test Guideline 201)
12.2 Persistence and degradability
Biodegradability Result: 50 % - Partially biodegradable.
(OECD Test Guideline 302B)
12.3 Bioaccumulative potential
Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.
12.4 Mobility in soil
No data available(2-Bromo-2-nitropropane-1,3-diol)
12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. 12.6 Other adverse effects
Very toxic to aquatic life with long lasting effects.

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chem scrubber. Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number

ADR/RID: 3241

IMDG: 3241

IATA: 3241

14.2 UN proper shipping name

ADR/RID: 2-BROMO-2-NITROPROPANE-1,3-DIOL

IMDG: 2-BROMO-2-NITROPROPANE-1,3-DIOL

IATA: 2-Bromo-2-nitropropane-1,3-diol

14.3 Transport hazard class(es)

ADR/RID: 4.1

IMDG: 4.1

IATA: 4.1 (HEAT)

14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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