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: n-Bromosuccinimide, GR 99%

Product Code: B 2207 CAS No: 128-08-5

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

Oxidizing solids, (Category 3)
Corrosive to Metals, (Category 1)
Skin irritation, (Category 2)
Eye irritation, (Category 2)
Skin sensitization, (Sub-category
Skin sensitization, (Sub-category

H272: May intensify fire; oxidizer.
H290: May be corrosive to metals.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H317: May cause an allergic skin reaction.
Germ cell mutagenicity,

1B)

(Category 2)

Short-term (acute) aquatic H400: Very toxic to aquatic life.

hazard, (Category 1)

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word Warning

Hazard Statements

H272 May intensify fire; oxidizer.
H290 May be corrosive to metals.
H315 Causes skin irritation.
H317 May cause an allergic skin irritation.

H317

H319

H341

H341

May cause an allergic skin reaction.
Causes serious eye irritation.
Suspected of causing genetic defects.
Very toxic to aquatic life.

Precautionary Statements

P210 Keep away from heat, hot surfaces, sparks, open flames and

other ignition sources. No smoking. Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face

protection.

P302 + P352 iF ON SKIN: Wash with plenty of water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue

rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

none

Supplemental Hazard Statements

Reduced Labeling (<= 125 ml)

Pictogram

P273

Signal Word Warning

Hazard Statements

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H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.

Precautionary Statements

P280 Wear protective gloves/ protective clothing/ eye protection/ face

protection.

P302 + P352 IF ON SKIN: Wash with plenty of water.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Supplemental Hazard Statements none

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. Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula : C4H4BrNO2
Molecular weight : 177,98 g/mol
CAS-No. : 128-08-5
EC-No. : 204-877-2

Component		Classification	Concentration
N-bromosuccinimide			C I W
CAS-No. EC-No	128-08-5 204-877-2	Ox. Sol. 3; Met. Corr. 1; Skin Irrit. 2; Eye Irrit. 2; Skin Sens. 1B; Muta. 2; Aquatic Acute 1; H272, H290, H315, H319, H317, H341, H400 M-Factor - Aquatic Acute: 1	<= 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

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with

water/ shower. Consult a physician.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). 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 section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

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SECTION 5: Firefighting measures

5.1 Extinguishing media

No data available

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Nitrogen oxides (NOx)

Hydrogen bromide gas

Combustible.

Caution! in contact with water product releases:

corrosive vapours

Fire may cause evolution of:

hydrogen bromide, nitrogen oxides

Development of hazardous combustion gases or vapours possible in the event of fire.

Has a fire-promoting effect due to release of oxygen.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

No metal containers.

Protected from light. Tightly closed. Away from combustible materials and sources of ignition and heat. Do not store near combustible materials.

Recommended storage temperature see product label.

Storage class

Storage class (TRGS 510): 5.1B: Oxidizing hazardous materials

7.3 Specific end use(s)

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

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

Eye/face protection

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

Body Protection

protective clothing

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties powder, finecrystalline

a) Physical state b) Color white

c) Odor characteristic

Melting point: 174 °C d) Melting

point/freezing point e) Initial boiling point

and boiling range

No data available f) Flammability (solid, The product is not flammable. - Test N.1: Test method for

readily combustible solids

gas)

g) Úpper/lower flammability or explosive limits h) Flash point

i) Autoignition temperature j) Decomposition

temperature k) pH

I) Viscosity

m) Water solubility

n) Partition coefficient: n-octanol/water o) Vapor pressure <

p) Density 2,1 g/cm3 at 20 °C

Relative density g) Relative vapor density r) Particle

characteristics

s) Explosive properties

t) Oxidizing properties

9.2 Other safety information Bulk density 750 kg/m3

Not applicable > 400 °C

No data available

- Relative self-ignition temperature for solids

ca. 180 °C

No data available

Viscosity, kinematic: No data available Viscosity, dynamic: No data available 14,8 g/l at 20 °C - (decomposition), soluble

No data available

1 hPa at 20 °C - OECD Test Guideline 104

No data available No data available

No data available

No data available

The substance or mixture is classified as oxidizing with the

category 3.strong oxidising agent

SECTION 10: Stability and reactivity

10.1 Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Exothermic reaction with:

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Violent reactions possible with:

Alcohols

Amines

Ammonia

anilines

Hvdrazine hvdrate

iron/iron-containing compounds

can decompose violently in contact with:

Water

Risk of explosion with:

Nitriles

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

iron/iron-containing compoundsMetals

10.6 Hazardous decomposition products

In the event of fire: see section 5

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 semi-static test LC50 - Cyprinus carpio (Carp) - 0,4 mg/l - 96 h

(OECD Test Guideline 203)

Toxicity to daphnia

and other aquatic

invertebrates

static test EC50 - Daphnia magna (Water flea) - 0,65 mg/l - 48 h

(OECD Test Guideline 202)

Toxicity to algae static test EC50 - Pseudokirchneriella subcapitata (green algae) - 1,3

mg/l - 72 h

(OECD Test Guideline 201)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 35 d

Result: 98 % - Readily biodegradable.

(OECD Test Guideline 301A)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

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 Endocrine disrupting properties

Product:

Assessment:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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12.7 Other adverse effects No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

No data available

SECTION 14: Transport information

14.1 UN number

ADR/RID: 3085 IMDG: 3085 IATA: 3085

14.2 UN proper shipping name

ADR/RID: OXIDIZING SOLID, CORROSIVE, N.O.S. (N-bromosuccinimide)
IMDG: OXIDIZING SOLID, CORROSIVE, N.O.S. (N-bromosuccinimide)
IATA: OXIDIZING SOLID, CORROSIVE, N.O.S. (N-bromosuccinimide)

14.3 Transport hazard class(es)

ADR/RID: 5.1 (8) IMDG: 5.1 (8) IATA: 5.1 (8)

14.4 Packaging group
ADR/RID: II IMDG: II IATA: II

ADR/RID: II IMDG: II IATA: II

14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA: no

14.6 Special precautions for user Tunnel restriction code : (E)

Further information : No data available

SECTION 15: Regulatory information

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

This material safety data sheet complies with the requirements of Regulation (EC) No.

1907/2006.

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. P8 OXIDISING LIQUIDS AND

SOLIDS

E1 ENVIRONMENTAL HAZARDS

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

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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