

**CAS-No.: 10294-33-4 MSDS**

## MATERIAL SAFETY DATA SHEET (MSDS)

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Substance  
:  
EC-No. : 233-657-9  
CAS-No. : 10294-33-4  
Product code : 2223B

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial  
For professional use only

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.  
107 Wode House Road, Jehangir Villa, Colaba  
400005 Mumbai - INDIA  
T +91 22 6663 6663 - F +91 22 6663 6699  
[info@lobachemie.com](mailto:info@lobachemie.com) - [www.lobachemie.com](http://www.lobachemie.com)

#### 1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (9:00am - 6:00 pm)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), H300  
Category 1  
Acute toxicity (inhal.), H330  
Category 2  
Skin corrosion/irritation, H314  
Category 1A

Full text of H statements : see section 16

##### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

T+; R26/28  
C; R35  
R14

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Full text of R-phrases: see section 16

### Adverse physicochemical, human health and environmental effects

No additional information available

## 2.2. Label elements

### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

GHS06

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H300+H330 - Fatal if swallowed or if inhaled  
H314 - Causes severe skin burns and eye damage.

Precautionary statements (CLP) :

P260 - Do not breathe vapours, spray, dust, fume, gas.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P280 - Wear protective gloves, protective clothing, eye protection, face protection.  
P284 - Wear respiratory protection.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 - Immediately call a POISON CENTER/doctor

## 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name : BORON TRIBROMIDE 99% Extra Pure  
CAS-No. : 10294-33-4  
EC-No. : 233-657-9

Full text of R- and H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.  
First-aid measures after skin contact : Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER/doctor.

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- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
- First-aid measures after ingestion : Rinse mouth. Immediately call a POISON CENTER/doctor. Do NOT induce vomiting.

### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/effects : Causes severe skin burns and eye damage.
- Symptoms/effects after ingestion : Fatal if swallowed.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Dry powder.
- Unsuitable extinguishing media : Do not use extinguishing media containing water.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Use personal protective equipment as required.
- Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Do not allow water (or moist air) contact with this material.

### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Collect spillage. On land, sweep or shovel into suitable containers.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Do not breathe vapours. Avoid contact with skin and eyes. Provide good ventilation in process area to prevent formation of vapour.
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Comply with applicable regulations.
- Storage conditions : Store in dry protected location to prevent any moisture contact.

### 7.3. Specific end use(s)

No additional information available

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

Hand protection	: Protective gloves
Eye protection	: Chemical goggles or face shield
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: Wear respiratory protection.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Molecular mass	: 250.52 g/mol
Colour	: Colorless to yellow.
Odour	: Pungent.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: -46 °C
Freezing point	: No data available
Boiling point	: 90 °C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 53 hPa at 14°C
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 2.6 g/cm <sup>3</sup> at 20°C
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

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Explosive properties : No data available

Oxidising properties : No data available

Explosive limits : No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Highly reactive material. Reacts violently with water.

### 10.4. Conditions to avoid

Moisture. Direct sunlight. Open flame.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Thermal decomposition generates : Corrosive vapours.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Oral: Fatal if swallowed. Inhalation: Fatal if inhaled.

Skin corrosion/irritation : Causes severe skin burns and eye damage.

Serious eye damage/irritation : Serious eye damage, category 1, implicit

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms : Fatal if swallowed.

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### SECTION 12: Ecological information

#### 12.1. Toxicity

No additional information available

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Product/Packaging disposal recommendations	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Additional information	: Do not allow water (or moist air) contact with this material.
Ecology - waste materials	: Hazardous waste due to toxicity.

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

UN-No. (ADR)	: 2692
UN-No. (IMDG)	: 2692
UN-No. (IATA)	: 2692
UN-No. (ADN)	: 2692
UN-No. (RID)	: 2692

#### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: BORON TRIBROMIDE
Proper Shipping Name (IMDG)	: BORON TRIBROMIDE
Proper Shipping Name (IATA)	: Boron tribromide
Proper Shipping Name (ADN)	: BORON TRIBROMIDE
Proper Shipping Name (RID)	: BORON TRIBROMIDE
Transport document description (ADR)	: UN 2692 BORON TRIBROMIDE, 8, I, (E)
Transport document description (IMDG)	: UN 2692 BORON TRIBROMIDE, 8, I
Transport document description (IATA)	: UN 2692 Boron tribromide, 8
Transport document description (ADN)	: UN 2692 BORON TRIBROMIDE, 8, I

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Transport document description (RID) : UN 2692 BORON TRIBROMIDE, 8, I

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR) : 8

Danger labels (ADR) : 8



#### IMDG

Transport hazard class(es) (IMDG) : 8

Danger labels (IMDG) : 8



#### IATA

Transport hazard class(es) (IATA) : 8

#### ADN

Transport hazard class(es) (ADN) : 8

Danger labels (ADN) : 8



#### RID

Transport hazard class(es) (RID) : 8

Danger labels (RID) : 8



### 14.4. Packing group

Packing group (ADR) : I

Packing group (IMDG) : I

Packing group (IATA) : Not applicable

Packing group (ADN) : I

Packing group (RID) : I

### 14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

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### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR)	: C1
Limited quantities (ADR)	: 0
Excepted quantities (ADR)	: E0
Packing instructions (ADR)	: P602
Mixed packing provisions (ADR)	: MP8, MP17
Portable tank and bulk container instructions (ADR)	: T20
Portable tank and bulk container special provisions (ADR)	: TP2
Tank code (ADR)	: L10BH
Vehicle for tank carriage	: AT
Transport category (ADR)	: 1
Special provisions for carriage - Operation (ADR)	: S20
Hazard identification number (Kemler No.)	: X88
Orange plates	:



Tunnel restriction code (ADR)	: E
EAC code	: 4WE
APP code	: B

#### - Transport by sea

Packing instructions (IMDG)	: P602
Tank instructions (IMDG)	: T20
Tank special provisions (IMDG)	: TP2, TP13
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: C
Stowage and handling (IMDG)	: SW1, H2
Properties and observations (IMDG)	: Colourless fuming liquid. Reacts violently with water, evolving toxic and corrosive fumes. Decomposes when heated, evolving toxic fumes. In the presence of moisture, highly corrosive to most metals. Liquid and vapour cause severe burns to skin, eyes and mucous membranes.
MFAG-No	: 157

#### - Air transport

PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: Forbidden
PCA max net quantity (IATA)	: Forbidden
CAO packing instructions (IATA)	: Forbidden
CAO max net quantity (IATA)	: Forbidden
Special provisions (IATA)	: A2
ERG code (IATA)	: 8L

#### - Inland waterway transport

Classification code (ADN)	: C1
Limited quantities (ADN)	: 0
Excepted quantities (ADN)	: E0



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Equipment required (ADN) : PP, EP  
Number of blue cones/lights (ADN) : 0

### - Rail transport

Classification code (RID) : C1  
Limited quantities (RID) : 0  
Excepted quantities (RID) : E0  
Packing instructions (RID) : P602  
Mixed packing provisions (RID) : MP8, MP17  
Portable tank and bulk container instructions (RID) : T20  
Portable tank and bulk container special provisions (RID) : TP2  
Tank codes for RID tanks (RID) : L10BH  
Special provisions for RID tanks (RID) : TU38, TE22  
Transport category (RID) : 1  
Hazard identification number (RID) : X88

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

BORON TRIBROMIDE 99% Extra Pure is not on the REACH Candidate List

BORON TRIBROMIDE 99% Extra Pure is not on the REACH Annex XIV List

#### 15.1.2. National regulations

##### Germany

Reference to AwSV : Water hazard class (WGK) 3, Highly hazardous to water (Classification according to AwSV; ID No. 2345)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

##### Denmark

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Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Full text of R-, H- and EUH-statements:

Acute Tox. 1 (Oral)	Acute toxicity (oral), Category 1
Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
H300	Fatal if swallowed.
H314	Causes severe skin burns and eye damage.
H330	Fatal if inhaled.
R14	Reacts violently with water
R26/28	Very toxic by inhalation and if swallowed
R35	Causes severe burns
C	Corrosive
T+	Very toxic

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*