

## MATERIAL SAFETY DATA SHEET (MSDS)

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

#### 1.1. Product identifier

Product form : Mixture  
Trade name : BORON TRIBROMIDE 1M IN DICHLOROMETHANE  
Product code : 2223F

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

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

##### 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 1  
Skin corrosion/irritation, H314  
Category 1A  
Carcinogenicity, Category H351  
2

Full text of classification categories and H statements : see section 16

#### Adverse physicochemical, human health and environmental effects

No additional information available

# BORON TRIBROMIDE 1M IN DICHLOROMETHANE

## Safety Data Sheet

### 2.2. Label elements

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

Hazard pictograms (CLP)

:



GHS05



GHS06



GHS08

Signal word (CLP)

: Danger

Hazard statements (CLP)

: H300+H330 - Fatal if swallowed or if inhaled  
H314 - Causes severe skin burns and eye damage  
H351 - Suspected of causing cancer

Precautionary statements (CLP)

: P260 - Do not breathe vapours, dust, fume, gas  
P264 - Wash ... thoroughly after handling  
P280 - Wear protective gloves, protective clothing, eye protection, face protection  
P284 - [In case of inadequate ventilation] wear respiratory protection  
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER/doctor/...  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Trichloromethane	(CAS No) 67-66-3 (EC no) 200-663-8 (EC index no) 602-006-00-4	75 - 99	Acute Tox. 4 (Oral), H302 Carc. 2, H351 Skin Irrit. 2, H315 STOT RE 2, H373
Boron tribromide solution	(CAS No) 10294-33-4	25 - 50	Acute Tox. 2 (Inhalation), H330 Acute Tox. 1 (Oral), H300 Skin Corr. 1A, H314

Full text of H-phrases: see section 16

# BORON TRIBROMIDE 1M IN DICHLOROMETHANE

## Safety Data Sheet

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general	: Suspected of causing cancer.
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
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 or doctor/physician.
First-aid measures after ingestion	: Rinse mouth. Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

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

Symptoms/injuries	: Causes severe skin burns and eye damage. Causes damage to organs.
Symptoms/injuries after inhalation	: Fatal if inhaled.
Symptoms/injuries after ingestion	: Fatal if swallowed.

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

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media	: Carbon dioxide. Dry powder. Foam. Water spray.
Unsuitable extinguishing media	: Do not use a heavy water stream.

#### 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

Avoid release to the environment.

#### 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 during pregnancy/while nursing. Obtain special instructions before use. Avoid contact with skin and eyes.
-------------------------------	---

# BORON TRIBROMIDE 1M IN DICHLOROMETHANE

## Safety Data Sheet

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 a well-ventilated place. Keep container tightly closed.

### 7.3. Specific end use(s)

No additional information available

## 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
Colour	: Clear Yellow.
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available

# BORON TRIBROMIDE 1M IN DICHLOROMETHANE

## Safety Data Sheet

Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
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

Thermal decomposition generates : Corrosive vapours.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Overheating. Open flame. Heat. Sparks.

### 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.

ATE CLP (oral)	0.5 mg/kg bodyweight
ATE CLP (gases)	10 ppmv/4h
ATE CLP (vapours)	0.05 mg/l/4h
ATE CLP (dust,mist)	0.005 mg/l/4h

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	: Suspected of causing cancer.

Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified

# BORON TRIBROMIDE 1M IN DICHLOROMETHANE

## Safety Data Sheet

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

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

### 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 ...

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)	: 3390
UN-No. (IMDG)	: 3390
UN-No.(IATA)	: 3390
UN-No.(ADN)	: 3390
UN-No. (RID)	: 3390

# BORON TRIBROMIDE 1M IN DICHLOROMETHANE

## Safety Data Sheet

### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S.
Proper Shipping Name (IMDG)	: TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S.
Proper Shipping Name (IATA)	: TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S.
Proper Shipping Name (ADN)	: TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S.
Proper Shipping Name (RID)	: TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S.
Transport document description (ADR)	: UN 3390 TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S., 6.1 (8), I, (C/D)
Transport document description (IMDG)	: UN 3390 TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S., 6.1 (8), I
Transport document description (IATA)	: UN 3390 TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S., 6.1, I
Transport document description (ADN)	: UN 3390 TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S, 6.1 (8), I
Transport document description (RID)	: UN 3390 TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S., 6.1 (8), I

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR)	: 6.1 (8)
Danger labels (ADR)	: 6.1, 8



#### IMDG

Transport hazard class(es) (IMDG)	: 6.1 (8)
Danger labels (IMDG)	: 6.1, 8



#### IATA

Transport hazard class(es) (IATA)	: 6.1 (8)
Hazard labels (IATA)	: 6.1, 8



#### ADN

Transport hazard class(es) (ADN)	: 6.1 (8)
Danger labels (ADN)	: 6.1, 8



#### RID

Transport hazard class(es) (RID)	: 6.1 (8)
----------------------------------	-----------

# BORON TRIBROMIDE 1M IN DICHLOROMETHANE

## Safety Data Sheet

Danger labels (RID) : 6.1, 8



### 14.4. Packing group

Packing group (ADR) : I  
Packing group (IMDG) : I  
Packing group (IATA) : I  
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

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR) : TC1  
Special provision (ADR) : 274  
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) : L10CH  
Tank special provisions (ADR) : TU14, TU15, TE19, TE21  
Vehicle for tank carriage : AT  
Transport category (ADR) : 1  
Special provisions for carriage - Loading, unloading and handling (ADR) : CV1, CV13, CV28  
Special provisions for carriage - Operation (ADR) : S9, S14  
Hazard identification number (Kemler No.) : 668  
Orange plates :



Tunnel restriction code (ADR) : C/D  
EAC code : 2XE  
APP code : B

#### - Transport by sea

Special provision (IMDG) : 274  
Limited quantities (IMDG) : 0  
Excepted quantities (IMDG) : E0  
Packing instructions (IMDG) : P602  
Tank instructions (IMDG) : T20



# BORON TRIBROMIDE 1M IN DICHLOROMETHANE

## Safety Data Sheet

Tank special provisions (IMDG)	: TP2, TP13
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: D
Stowage and handling (IMDG)	: SW2
MFAG-No	: 154

### - 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
ERG code (IATA)	: 6C

### - Inland waterway transport

Classification code (ADN)	: TC1
Special provisions (ADN)	: 274, 802
Limited quantities (ADN)	: 0
Excepted quantities (ADN)	: E0
Equipment required (ADN)	: PP, EP, TOX, A
Ventilation (ADN)	: VE02
Number of blue cones/lights (ADN)	: 2

### - Rail transport

Classification code (RID)	: TC1
Special provision (RID)	: 274
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)	: L10CH
Special provisions for RID tanks (RID)	: TU14, TU15, TU38, TE21, TE22
Transport category (RID)	: 1
Special provisions for carriage – Loading and unloading (RID)	: CW13, CW28, CW31
Hazard identification number (RID)	: 668

### 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

Contains no substances with Annex XVII restrictions

Contains no REACH candidate substance

Contains no REACH Annex XIV substances.

# BORON TRIBROMIDE 1M IN DICHLOROMETHANE

## Safety Data Sheet

### 15.1.2. National regulations

#### Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 3, strongly hazardous to water (Classification according to AwSV, Annex 1)

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

#### Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product  
Pregnant/breastfeeding women working with the product must not be in direct contact with the product  
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Full text of H- and EUH-phrases:

Acute Tox. 1 (Inhalation)	Acute toxicity (inhal.), Category 1
Acute Tox. 1 (Oral)	Acute toxicity (oral), Category 1
Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Carc. 2	Carcinogenicity, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H300	Fatal if swallowed
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H330	Fatal if inhaled
H351	Suspected of causing cancer
H373	May cause damage to organs through prolonged or repeated exposure

*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*

# **BORON TRIBROMIDE 1M IN DICHLOROMETHANE**

## **Safety Data Sheet**

---