

CAS-No.: MSDS

## MATERIAL SAFETY DATA SHEET (MSDS)

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

#### 1.1. Product identifier

Product form : Mixture  
:  
Product code : 2259B

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

##### 1.2.1. Relevant identified uses

Industrial/Professional use spec : For professional use only  
Industrial

##### 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 H330  
(inhalation:dust,mist)  
Category 1  
Skin corrosion/irritation, H314  
Category 1  
Hazardous to the aquatic H400  
environment — Acute  
Hazard, Category 1

Full text of H statements : see section 16

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

No additional information available

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### 2.2. Label elements

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

Hazard pictograms (CLP)



GHS05

GHS06

GHS09

Signal word (CLP)

: Danger

Hazard statements (CLP)

: H314 - Causes severe skin burns and eye damage.  
H330 - Fatal if inhaled.  
H400 - Very toxic to aquatic life.

Precautionary statements (CLP)

: P260 - Do not breathe dust/fume/gas/mist/vapours/spray.  
P273 - Avoid release to the environment.  
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

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
WATER AR	(CAS-No.) 7732-18-5 (EC-No.) 231-791-2	92.5 - 95	Not classified
BROMINE AR	(CAS-No.) 7726-95-6 (EC-No.) 231-778-1 (EC Index-No.) 035-001-00-5	6.8 - 7.05	Acute Tox. 2 (Inhalation), H330 Skin Corr. 1A, H314 Aquatic Acute 1, H400

Full text of H-statements: see section 16

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### 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. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice.
First-aid measures after skin contact	: Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. If you feel unwell, seek medical advice.

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

Symptoms/effects	: Causes severe skin burns and eye damage.
Symptoms/effects after inhalation	: Fatal if inhaled.

#### 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	: dry chemical powder, alcohol-resistant foam, carbon dioxide (CO <sub>2</sub> ).
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 attempt to take action without suitable protective equipment.
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### 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.
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##### 6.1.2. For emergency responders

Protective equipment	: Use personal protective equipment as required.
Emergency procedures	: Stop release.

#### 6.2. Environmental precautions

Very toxic to aquatic life.

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

Methods for cleaning up	: Clear up rapidly by scoop or vacuum.
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#### 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 get in eyes, on skin, or on clothing.
Hygiene measures	: 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

Storage conditions	: Direct sunlight. Store in a well-ventilated place. Store in original container. Protect from moisture.
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### 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 safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: Wear appropriate mask

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Colour	: Reddish brown solution.
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
Relative density	: No data available
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

No additional information available

### 10.4. Conditions to avoid

Direct sunlight.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Inhalation:dust,mist: Fatal if inhaled.

ATE CLP (dust,mist)	0.005 mg/l/4h
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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

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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

No additional information available

### SECTION 14: Transport information

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

#### 14.1. UN number

UN-No. (ADR)	: 1744
UN-No. (IMDG)	: 1744
UN-No. (IATA)	: 1744
UN-No. (ADN)	: 1744
UN-No. (RID)	: 1744

#### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: BROMINE SOLUTION
Proper Shipping Name (IMDG)	: BROMINE SOLUTION
Proper Shipping Name (IATA)	: Bromine solution
Proper Shipping Name (ADN)	: BROMINE SOLUTION
Proper Shipping Name (RID)	: BROMINE SOLUTION
Transport document description (ADR)	: UN 1744 BROMINE SOLUTION, 8 (6.1), I, (C/D), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG)	: UN 1744 BROMINE SOLUTION, 8 (6.1), I, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA)	: UN 1744 Bromine solution, 8, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN)	: UN 1744 BROMINE SOLUTION, 8 (6.1), I, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID)	: UN 1744 BROMINE SOLUTION, 8 (6.1), I, ENVIRONMENTALLY HAZARDOUS

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### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR) : 8 (6.1)

Danger labels (ADR) : 8, 6.1



#### IMDG

Transport hazard class(es) (IMDG) : 8 (6.1)

Danger labels (IMDG) : 8, 6.1



#### IATA

Transport hazard class(es) (IATA) : 8 (6.1)



#### ADN

Transport hazard class(es) (ADN) : 8 (6.1)

Danger labels (ADN) : 8, 6.1



#### RID

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

Danger labels (RID) : 8, 6.1



### 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

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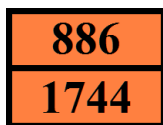
### 14.5. Environmental hazards

Dangerous for the environment	: Yes
Marine pollutant	: Yes
Other information	: No supplementary information available

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR)	: CT1
Limited quantities (ADR)	: 0
Excepted quantities (ADR)	: E0
Packing instructions (ADR)	: P804
Mixed packing provisions (ADR)	: MP2
Portable tank and bulk container instructions (ADR)	: T22
Portable tank and bulk container special provisions (ADR)	: TP2, TP10
Tank code (ADR)	: L21DH(+)
Tank special provisions (ADR)	: TU14, TU33, TC5, TE21, TT2, TM3, TM5
Vehicle for tank carriage	: AT
Transport category (ADR)	: 1
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13, CV28
Special provisions for carriage - Operation (ADR)	: S14
Hazard identification number (Kemler No.)	: 886
Orange plates	:



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

#### - Transport by sea

Packing instructions (IMDG)	: P804
Tank instructions (IMDG)	: T22
Tank special provisions (IMDG)	: TP2, TP10, TP13
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: D
Stowage and handling (IMDG)	: SW1, SW2, H2
Segregation (IMDG)	: SG6, SG16, SG17, SG19
Properties and observations (IMDG)	: Very dark brown, heavy liquid with an extremely irritating odour. Density: 3.1 (pure product). Boiling point: 59°C . Powerful oxidant; may cause fire in contact with organic materials such as wood, cotton or straw. Highly corrosive to most metals. Solutions have the same properties to a lesser degree, depending on concentration. Toxic if swallowed, by skin contact or by inhalation. Causes burns to skin, eyes and mucous membranes.

#### - 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



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CAO packing instructions (IATA)	: Forbidden
CAO max net quantity (IATA)	: Forbidden
Special provisions (IATA)	: A2
ERG code (IATA)	: 8P

### - Inland waterway transport

Classification code (ADN)	: CT1
Special provisions (ADN)	: 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)	: CT1
Limited quantities (RID)	: 0
Excepted quantities (RID)	: E0
Packing instructions (RID)	: P804
Mixed packing provisions (RID)	: MP2
Portable tank and bulk container instructions (RID)	: T22
Portable tank and bulk container special provisions (RID)	: TP2, TP10
Tank codes for RID tanks (RID)	: L21DH(+)
Special provisions for RID tanks (RID)	: TU14, TU33, TU38, TC5, TE21, TE22, TE25, TT2, TM3, TM5
Transport category (RID)	: 1
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW28
Hazard identification number (RID)	: 886

### 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 REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

#### 15.1.2. National regulations

##### Germany

Reference to AwSV : Water hazard class (WGK) 3, severe hazard 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)

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### Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed  
SZW-lijst van mutagene stoffen : None of the components are listed  
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed  
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed  
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

### Denmark

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 H- and EUH-statements:

Acute Tox. 1 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 1
Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Skin Corr. 1	Skin corrosion/irritation, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
H314	Causes severe skin burns and eye damage.
H330	Fatal if inhaled.
H400	Very toxic to aquatic life.

*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*