

# LITHIUM PERCHLORATE (TRIHYDRATE) EXTRA PURE MSDS

CAS No: 5996-10-1 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  
:  
CAS No : 5996-10-1  
Product code : 4447D

#### 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]

Oxidising Solids, H272  
Category 2  
Skin corrosion/irritation, H315  
Category 2  
Serious eye damage/eye H319  
irritation, Category 2  
Specific target organ H335  
toxicity — Single  
exposure, Category 3,  
Respiratory tract irritation

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

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### Classification according to Directive 67/548/EEC or 1999/45/EC

O; R8

Xi; R36/37/38

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) :



GHS03

GHS07

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H272 - May intensify fire; oxidiser  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H335 - May cause respiratory irritation

Precautionary statements (CLP) :

P220 - Keep/Store away from clothing/.../combustible materials  
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray  
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

Name : LITHIUM PERCHLORATE (TRIHYDRATE) Extra Pure

CAS No : 5996-10-1

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

### 3.2. Mixture

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. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention.

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- 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 out with water. If you feel unwell, seek medical advice.

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

- Symptoms/injuries after inhalation : May cause respiratory irritation.
- Symptoms/injuries after skin contact : Causes skin irritation.
- Symptoms/injuries after eye contact : Causes serious eye irritation.

### 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 : 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 attempt to take action without suitable protective equipment.

## 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 : Stop release.

### 6.2. Environmental precautions

Avoid release to the environment.

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

- Methods for cleaning up : Clear up rapidly by scoop or vacuum.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- 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 : Store in original container. Keep container tightly closed. Store in a dry place.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

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### 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	: Solid
Molecular mass	: 160.44 g/mol
Colour	: White crystalline.
Odour	: odourless.
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
Density	: 1.841 g/cm <sup>3</sup>
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

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### 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. Air contact. Moisture.

### 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 : Not classified

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : May cause respiratory irritation.

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

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### 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)	: 1481
UN-No. (IMDG)	: 1481
UN-No.(IATA)	: 1481
UN-No.(ADN)	: 1481
UN-No. (RID)	: 1481

### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: PERCHLORATES, INORGANIC, N.O.S.
Proper Shipping Name (IMDG)	: PERCHLORATES, INORGANIC, N.O.S.
Proper Shipping Name (IATA)	: PERCHLORATES, INORGANIC, N.O.S.
Proper Shipping Name (ADN)	: PERCHLORATES, INORGANIC, N.O.S.
Proper Shipping Name (RID)	: PERCHLORATES, INORGANIC, N.O.S.
Transport document description (ADR)	: UN 1481 PERCHLORATES, INORGANIC, N.O.S., 5.1, II, (E)
Transport document description (IMDG)	: UN 1481 PERCHLORATES, INORGANIC, N.O.S., 5.1, II
Transport document description (IATA)	: UN 1481 PERCHLORATES, INORGANIC, N.O.S., 5.1, II
Transport document description (ADN)	: UN 1481 PERCHLORATES, INORGANIC, N.O.S., 5.1, II
Transport document description (RID)	: UN 1481 PERCHLORATES, INORGANIC, N.O.S., 5.1, II

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR)	: 5.1
Danger labels (ADR)	: 5.1

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### IMDG

Transport hazard class(es) (IMDG) : 5.1

Danger labels (IMDG) : 5.1



### IATA

Transport hazard class(es) (IATA) : 5.1

Hazard labels (IATA) : 5.1



### ADN

Transport hazard class(es) (ADN) : 5.1

Danger labels (ADN) : 5.1



### RID

Transport hazard class(es) (RID) : 5.1

Danger labels (RID) : 5.1



### 14.4. Packing group

Packing group (ADR) : II

Packing group (IMDG) : II

Packing group (IATA) : II

Packing group (ADN) : II

Packing group (RID) : II

### 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)	: O2
Limited quantities (ADR)	: 1kg
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P002, IBC06
Mixed packing provisions (ADR)	: MP2
Portable tank and bulk container instructions (ADR)	: T3
Portable tank and bulk container special provisions (ADR)	: TP33
Tank code (ADR)	: SGAV
Tank special provisions (ADR)	: TU3
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Special provisions for carriage - Packages (ADR)	: V11
Special provisions for carriage - Bulk (ADR)	: VC1, VC2, AP6, AP7
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV24
Special provisions for carriage - Operation (ADR)	: S23
Hazard identification number (Kemler No.)	: 50
Orange plates	: 
Tunnel restriction code (ADR)	: E
EAC code	: 1Y

#### - Transport by sea

Limited quantities (IMDG)	: 1 kg
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P002
IBC packing instructions (IMDG)	: IBC06
IBC special provisions (IMDG)	: B2
Tank instructions (IMDG)	: T3
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-H
EmS-No. (Spillage)	: S-Q
Stowage category (IMDG)	: A
Segregation (IMDG)	: SG38, SG49
MFAG-No	: 140

#### - Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y544
PCA limited quantity max net quantity (IATA)	: 2.5kg
PCA packing instructions (IATA)	: 558
PCA max net quantity (IATA)	: 5kg
CAO packing instructions (IATA)	: 562
CAO max net quantity (IATA)	: 25kg
Special provision (IATA)	: A3



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ERG code (IATA) : 5L

### - Inland waterway transport

Classification code (ADN) : O2  
Limited quantities (ADN) : 1 kg  
Excepted quantities (ADN) : E2  
Equipment required (ADN) : PP  
Number of blue cones/lights (ADN) : 0

### - Rail transport

Classification code (RID) : O2  
Limited quantities (RID) : 1kg  
Excepted quantities (RID) : E2  
Packing instructions (RID) : P002, IBC06  
Mixed packing provisions (RID) : MP2  
Portable tank and bulk container instructions (RID) : T3  
Portable tank and bulk container special provisions (RID) : TP33  
Tank codes for RID tanks (RID) : SGAV  
Special provisions for RID tanks (RID) : TU3  
Transport category (RID) : 2  
Special provisions for carriage – Packages (RID) : W11  
Special provisions for carriage – Bulk (RID) : VC1, VC2, AP6, AP7  
Special provisions for carriage – Loading and unloading (RID) : CW24  
Colis express (express parcels) (RID) : CE10  
Hazard identification number (RID) : 50

### 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

LITHIUM PERCHLORATE (TRIHYDRATE) Extra Pure is not on the REACH Candidate List

LITHIUM PERCHLORATE (TRIHYDRATE) Extra Pure is not on the REACH Annex XIV List

#### 15.1.2. National regulations

##### Germany

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

##### 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-phrases:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Ox. Sol. 2	Oxidising Solids, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H272	May intensify fire; oxidiser
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
R36/37/38	Irritating to eyes, respiratory system and skin
R8	Contact with combustible material may cause fire
O	Oxidising
Xi	Irritant

*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*