MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

<table>
<thead>
<tr>
<th>Product form</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade name</td>
<td>HYDROCHLORIC ACID EXTRA PURE</td>
</tr>
<tr>
<td>EC index no</td>
<td>017-002-01-X</td>
</tr>
<tr>
<td>EC no</td>
<td>231-595-7</td>
</tr>
<tr>
<td>CAS No</td>
<td>7647-01-0</td>
</tr>
<tr>
<td>Product code</td>
<td>0172A</td>
</tr>
</tbody>
</table>

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 : 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 - 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]

Skin corrosion/irritation, Category 1B
Specific target organ toxicity — Single exposure, Category 3,
Respiratory tract irritation

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

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

C: R34
Xi: R37
HYDROCHLORIC ACID EXTRA PURE
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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](image)
![GHS07](image)

Signal word (CLP) : Danger
Hazard statements (CLP) : H314 - Causes severe skin burns and eye damage
H335 - May cause respiratory irritation
Precautionary statements (CLP) : P280 - Wear protective gloves, protective clothing, eye protection, face 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 doctor
P261 - Avoid breathing vapours, dust, fume, gas

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance
Name : HYDROCHLORIC ACID EXTRA PURE
CAS No : 7647-01-0
EC no : 231-595-7
EC index no : 017-002-01-X

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 victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Call a POISON CENTER or doctor/physician if you feel unwell.
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.
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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 or doctor/physician.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/injuries: Causes severe skin burns and eye damage.
Symptoms/injuries after inhalation: May cause respiratory irritation.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media
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: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. 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: Avoid contact with skin and eyes. Do not breathe vapours. Use only outdoors or in a well-ventilated area. Provide good ventilation in process area to prevent formation of vapour.
Hygiene measures: Wash contaminated clothing before reuse. 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: Keep container tightly closed. Store in a well-ventilated place.

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 : Solid
Colour : Clear colourless.
Odour : Pungent odor.
Odour threshold : No data available
pH : No data available
Relative evaporation rate (butylacetate=1) : No data available
Melting point : -30 °C
Freezing point : No data available
Boiling point : 110 °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 : 225 hPa at 20°C
Relative vapour density at 20 °C : No data available
Relative density : No data available
Density : 1.2 g/cm³
Solubility : Water: Soluble
Log Pow : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : 2.3 mPa.s at 15°C
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
Direct sunlight. Air contact. Water, humidity.

#### 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**: Not classified
- **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
- **Specific target organ toxicity (single exposure)**: May cause respiratory irritation.
- **Specific target organ toxicity (repeated exposure)**: Not classified
- **Aspiration hazard**: Not classified

### HYDROCHLORIC ACID EXTRA PURE (7647-01-0)

**Viscosity, kinematic**: 1.91666667 mm²/s
## 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...

## SECTION 14: Transport information

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

### 14.1. UN number

<table>
<thead>
<tr>
<th>Description</th>
<th>UN-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN-No. (ADR)</td>
<td>1789</td>
</tr>
<tr>
<td>UN-No. (IMDG)</td>
<td>1789</td>
</tr>
<tr>
<td>UN-No.(IATA)</td>
<td>1789</td>
</tr>
<tr>
<td>UN-No.(ADN)</td>
<td>1789</td>
</tr>
<tr>
<td>UN-No. (RID)</td>
<td>1789</td>
</tr>
</tbody>
</table>

### 14.2. UN proper shipping name

<table>
<thead>
<tr>
<th>Description</th>
<th>Proper Shipping Name</th>
<th>Transport document description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name (ADR)</td>
<td>HYDROCHLORIC ACID</td>
<td>UN 1789 HYDROCHLORIC ACID, 8, II, (E)</td>
</tr>
<tr>
<td>Proper Shipping Name (IMDG)</td>
<td>HYDROCHLORIC ACID</td>
<td>UN 1789 HYDROCHLORIC ACID, 8, II</td>
</tr>
<tr>
<td>Proper Shipping Name (IATA)</td>
<td>HYDROCHLORIC ACID</td>
<td>UN 1789 HYDROCHLORIC ACID, 8, II</td>
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<tr>
<td>Proper Shipping Name (ADN)</td>
<td>HYDROCHLORIC ACID</td>
<td>UN 1789 HYDROCHLORIC ACID, 8, II</td>
</tr>
<tr>
<td>Proper Shipping Name (RID)</td>
<td>HYDROCHLORIC ACID</td>
<td>UN 1789 HYDROCHLORIC ACID, 8, II</td>
</tr>
</tbody>
</table>

Transport document description (ADR) : UN 1789 HYDROCHLORIC ACID, 8, II, (E)
Transport document description (IMDG) : UN 1789 HYDROCHLORIC ACID, 8, II
Transport document description (IATA) : UN 1789 HYDROCHLORIC ACID, 8, II
Transport document description (ADN) : UN 1789 HYDROCHLORIC ACID, 8, II
Transport document description (RID) : UN 1789 HYDROCHLORIC ACID, 8, II
### 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 |
|      | Hazard labels (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) | 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

14.6. Special precautions for user

- Overland transport
  Classification code (ADR) : C1
  Special provision (ADR) : 520
  Limited quantities (ADR) : 1L
  Excepted quantities (ADR) : E2
  Packing instructions (ADR) : P001, IBC02
  Mixed packing provisions (ADR) : MP15
  Portable tank and bulk container instructions (ADR) : T8
  Portable tank and bulk container special provisions (ADR) : TP2
  Tank code (ADR) : L4BN
  Vehicle for tank carriage : AT
  Transport category (ADR) : 2
  Hazard identification number (Kemler No.) : 80
  Orange plates : 80 1789
  Tunnel restriction code (ADR) : E
  EAC code : 2R

- Transport by sea
  Limited quantities (IMDG) : 1 L
  Excepted quantities (IMDG) : E2
  Packing instructions (IMDG) : P001
  IBC packing instructions (IMDG) : IBC02
  IBC special provisions (IMDG) : B20
  Tank instructions (IMDG) : T8
  Tank special provisions (IMDG) : TP2
  EmS-No. (Fire) : F-A
  EmS-No. (Spillage) : S-B
  Stowage category (IMDG) : C
  MFAG-No : 157

- Air transport
  PCA Excepted quantities (IATA) : E2
  PCA Limited quantities (IATA) : Y840
  PCA limited quantity max net quantity (IATA) : 0.5L
  PCA packing instructions (IATA) : 851
  PCA max net quantity (IATA) : 1L
  CAO packing instructions (IATA) : 855
  CAO max net quantity (IATA) : 30L
  Special provision (IATA) : A3
  ERG code (IATA) : 8L
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- Inland waterway transport
  Classification code (ADN) : C1
  Special provisions (ADN) : 520
  Limited quantities (ADN) : 1 L
  Excepted quantities (ADN) : E2
  Carriage permitted (ADN) : T
  Equipment required (ADN) : PP, EP
  Number of blue cones/lights (ADN) : 0

- Rail transport
  Classification code (RID) : C1
  Special provision (RID) : 520
  Limited quantities (RID) : 1L
  Excepted quantities (RID) : E2
  Packing instructions (RID) : P001, IBC02
  Mixed packing provisions (RID) : MP15
  Portable tank and bulk container instructions (RID) : T8
  Portable tank and bulk container special provisions (RID) : TP2
  Tank codes for RID tanks (RID) : L4BN
  Transport category (RID) : 2
  Colis express (express parcels) (RID) : CE6
  Hazard identification number (RID) : 80

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
HYDROCHLORIC ACID EXTRA PURE is not on the REACH Candidate List
HYDROCHLORIC ACID EXTRA PURE is not on the REACH Annex XIV List

15.1.2. National regulations

Germany
AwSV/VwVwS Annex reference : Water hazard class (WGK) 1, slightly hazardous to water (Classification according to VwVwS, Annex 2; WGK No 238)
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
15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corr. 1B</td>
<td>Skin corrosion/irritation, Category 1B</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
<tr>
<td>R34</td>
<td>Causes burns</td>
</tr>
<tr>
<td>R37</td>
<td>Irritating to respiratory system</td>
</tr>
<tr>
<td>C</td>
<td>Corrosive</td>
</tr>
<tr>
<td>Xi</td>
<td>Irritant</td>
</tr>
</tbody>
</table>

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.