

EPIGRAL LTD., UNIT-Dahej

| MATERIAL SAFETY DATA SHEET | MSDS NO.: | REVISION DATE: | PAGE | EPIGRAL |
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| Hydrochloric Acid | 09 | 31/08/2023 | 1 of 8 | |

Epigral Ltd. urges the customers receiving this Material Safety Data Sheet (MSDS) to study it carefully to become aware of hazards, if any, of the product involved. In the interest of Safety, you should notify your employee, agent & contractors about the information on this sheet, furnish a copy of each of your customers for the product, and request your customers to inform their employees and customers as well.

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

Product Name Hydrochloric acid

CAS-No 7647-01-0
Synonyms Muriatic acid
Recommended Use Laboratory chemicals.

1.2 Details of the supplier of the safety data sheet

Company : Epigral Limited
Plot No. CH1.CH2, Industrial Estate
Dahej, Taluka : Vagra
Bharuch-392 130
Gujarat
INDIA

1.4 Emergency telephone number

Emergency Phone # : +91 6359605550

SECTION 2 : Hazards identification

Classification of the substance or mixture Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard

Label elements

Labelling according Regulation (EC) No 1272/2008



Pictogram

Signal word

Danger

Hazard statement(s)

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

Precautionary statement(s)

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P305 + P351 + P338 +

P310

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Supplemental Hazard

Statements

none

Other hazards

This substance/mixture contains no components considered to be either persistent,

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bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula : H2O4S
Molecular weight : 98,08 g/mol
CAS-No. : 7664-93-9

| Component | Classification | Concentration |
|----------------|--|---------------|
| Sulphuric Acid | Met. Corr. 1; Skin Corr. 1A; Eye Dam. 1; H290, H314, H318 Concentration limits: >= 15 %: Skin Corr. 1A, H314; 5 - < 15 %: Skin Irrit. 2, H315; 5 - < 15 %: Eye Irrit. 2, H319; >= 1 %: Met. Corr. 1, H290; | <= 100 % |

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

Description of first aid measuresGeneral advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Fire fighting measures

Extinguishing media Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

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Sulphur oxides

Advice for fire-fighters

Wear self-contained breathing apparatus for fire fighting if necessary.

Further information

No data available

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate Ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

Precautions for safe

handling Avoid inhalation of vapour or mist. For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.

Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

Control parameters

Components with workplace control parameters

Derived No Effect Level (DNEL)

| Application Area | Exposure routes | Health effect | Value |
|------------------|-----------------|-------------------------|----------------------|
| Workers | Inhalation | Acute local effects | 1 mg/m ³ |
| Workers effects | Inhalation | Long-term local effects | 05 mg/m ³ |

Predicted No Effect Concentration (PNEC)

| Compartment | Value |
|-----------------|--------------|
| Marine water | 0,00025 mg/l |
| Fresh water | 0,0025 mg/l |
| Marine sediment | 0,002 mg/kg |
| Fresh water | 0,002 mg/kg |

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| | |
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| sediment | |
| Onsite sewage treatment plant | 8,8 mg/l |

Exposure controls Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Full contact

Material: Fluorinated rubber

Minimum layer thickness: 0,7 mm

Break through time: 480 min

Material tested: Vitoject® (KCL 890 / Aldrich Z677698, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,2 mm

Break through time: 30 min

Material tested: Dermatrill® P (KCL 743 / Aldrich Z677388, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole Means of protection, use a full-face supplied air respirator. Use respirators and Components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

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SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

- a) Appearance Form : clear, liquid
- b) Odour No data available
- c) Odour Threshold No data available
- d) pH 1,2 at 5 g/l
- e) Melting point/freezing point 3 °C
- f) Initial boiling point and boiling range 290 °C - lit.
- g) Flash point Not applicable
- h) Evaporation rate No data available
- i) Flammability (solid, gas) No data available
- j) Upper/lower flammability or explosive limits No data available
- k) Vapour pressure 1,33 hPa at 145,8 °C
- l) Vapour density 3,39 - (Air = 1.0)
- m) Relative density 1,84 g/cm³ at 25 °C
- n) Water solubility soluble
- o) Partition coefficient: n-octanol/water No data available
- p) Auto-ignition temperature No data available
- q) Decomposition temperature No data available
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available

Other safety information

Surface tension 55,1 mN/m at 20 °C
Relative vapour density 3,39 - (Air = 1.0)

SECTION 10: Stability and reactivity

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

No data available

Incompatible materials

Bases, Halides, Organic materials, Carbides, fulminates, Nitrates, picrates, Cyanides, Chlorates, alkali halides, Zinc salts, permanganates, for example potassium permanganate, Hydrogen peroxide, Azides, Perchlorates., Nitromethane, phosphorous, Reacts violently with: cyclopentadiene, cyclopentanone oxime, nitroaryl amines, hexalithium disilicide, phosphorous(III) oxide, Powdered metals Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Sulphur oxides

Other decomposition products - No data available

In the event of fire: see section 5

SECTION 11: Toxicological information

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11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - 2.140 mg/kg

Remarks: (ECHA)

LC50 Inhalation - Mouse - male and female - 4 h - 0,85 mg/l
(OECD Test Guideline 403)

Skin corrosion/irritation

Skin - Rabbit

Result: Extremely corrosive and destructive to tissue.

Remarks: (IUCLID)

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

Ames test

Salmonella typhimurium

Result: negative

(HSDB)

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: WS5600000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Pulmonary edema. Effects may be delayed.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

After inhalation of aerosols: damage to the affected mucous membranes. After skin contact: severe burns with formation of scabs. After eye contact: burns, corneal lesions.

After swallowing: severe pain (risk of perforation!), nausea, vomiting and diarrhoea.

After a latency period of several weeks possibly pyloric stenosis.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

Toxicity

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Toxicity to fish static test LC50 - Lepomis macrochirus (Bluegill sunfish) - > 16 - <

28 mg/l - 96 h

Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae static test ErC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201)

Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

Bio accumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects

Biological effects:

Harmful effect due to pH shift.

Caustic even in diluted form.

Does not cause biological oxygen deficit.

Endangers drinking-water supplies if allowed to enter soil and/or waters in large quantities. Neutralisation possible in waste water treatment plants.

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

UN number

ADR/RID: 1830 IMDG: 1830 IATA: 1830

UN proper shipping name

ADR/RID: SULPHURIC ACID

IMDG: SULPHURIC ACID

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IATA: Sulphuric acid

Transport hazard class(es)

ADR/RID: 8 IMDG: 8 IATA: 8

Packaging group

ADR/RID: II IMDG: II IATA: II

Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

Special precautions for user

No data available

SECTION 15: Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)

Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

SECTION 16: Other information: --

MANUFACTURERS / SUPPLIERS DATA

| | | |
|-------------------------|--|-------------------------------------|
| Name of the firm | EPIGRAL LTD., | Contact Person in Emergency: |
| Mailing Address | CH1/CH2,GIDC Industrial Estate,Dahej Dist.: Bharuch, Gujarat (INDIA) | UNITE HEAD |
| Telephone Nos. | Fact.: 91-9909995940 | |
| | | Rev No : 04 (31/08/2023) |

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