

## Safety Data Sheet

### 1. Identification of the substance/mixture and of the company/undertaking

#### Product identifier:

Product name: 0.5mol/L Hydrochloric acid

Product code (SDS NO): 95206jis\_J\_E2-1

#### Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-cho, Koshigaya-shi, Saitama 343-0844, Japan

Division: Quality Assurance Department

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e-mail address: shiyaku-t@junsei.co.jp

Emergency telephone number: shiyaku-t@junsei.co.jp

### 2. Hazards identification

#### GHS classification and label elements of the product

#### Classification of the substance or mixture

##### HEALTH HAZARDS

Skin corrosion/irritation: Category 1

Serious eye damage/eye irritation: Category 1

Respiratory sensitization: Category 1

Specific target organ toxicity – single exposure: Category 2(respiratory system)

Specific target organ toxicity – repeated exposure: Category 2(tooth, respiratory system)

##### ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Acute): Category 3

(Note) GHS classification without description: Not applicable/Out of classification/Not classifiable

#### Label elements



Signal word: Danger

#### HAZARD STATEMENT

Causes severe skin burns and eye damage

Causes serious eye damage

May cause allergy or asthma symptoms or breathing difficulties if inhaled

May cause damage to organs after single exposure

May cause damage to organs through prolonged or repeated exposure

Harmful to aquatic life

#### PRECAUTIONARY STATEMENT

##### Prevention

Avoid release to the environment.

Do not breathe dust/fume/gas/mist/vapors/spray.

In case of inadequate ventilation wear respiratory protection. (as specified by the manufacturer/supplier or the competent authority.)

Wash contaminated parts thoroughly after handling.

Wear protective gloves, protective clothing or face protection.

Wear eye protection/face protection.

0.5mol/L Hydrochloric acid, JUNSEI CHEMICAL CO., LTD., 95206jis\_J\_E2-1, 05/02/2019

Do not eat, drink or smoke when using this product.

#### Response

Get medical advice/attention if you feel unwell.

Immediately call a POISON CENTER or doctor/physician.

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Wash contaminated clothing before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

#### Storage

Store locked up.

#### Disposal

Dispose of contents/container in accordance with local/national regulation.

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### 3. Composition/information on ingredients

#### Mixture/Substance selection:

##### Mixture

Ingredient name: Hydrogen chloride

Content(%): ca. 1.8(w/v)

Chemical formula: ClH

Chemicals No, Japan: 1-215

CAS No.: 7647-01-0

MW: 36.46

ECNO: 231-595-7

Ingredient name: Water

Content(%): Residual quantity of the ingredient mentioned above.

Chemical formula: H<sub>2</sub>O

CAS No.: 7732-18-5

MW: 18.02

ECNO: 231-791-2

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### 4. First-aid measures

#### Descriptions of first-aid measures

##### General measures

Get medical attention/advice if you feel unwell.

Immediately call a POISON CENTER or doctor/physician.

##### IF INHALED

Remove person to fresh air and keep comfortable for breathing.

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Call a POISON CENTER or doctor/physician if you feel unwell.

##### IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water/shower.

If skin irritation or rash occurs: Get medical advice/attention.

##### IF IN EYES

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

**IF SWALLOWED**

Rinse mouth. Do NOT induce vomiting.  
Call a POISON CENTER or doctor/physician if you feel unwell.

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**5. Fire-fighting measures****Extinguishing media****Suitable extinguishing media**

Use appropriate extinguishing media suitable for surrounding facilities.

The product is non-flammable.

**Specific hazards arising from the substance or mixture**

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

**Advice for firefighters****Specific fire-fighting measures**

Evacuate non-essential personnel to safe area.

**Special protective equipment and precautions for fire-fighters**

Wear fire/flame resistant/retardant clothing.

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

Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

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**6. Accidental release measures****Personnel precautions, protective equipment and emergency procedures**

Ventilate area until material pick up is complete.

Wear proper protective equipment.

**Environmental precautions**

Avoid release to headsprings, rivers, lakes, ocean and groundwater.

**Methods and materials for containment and cleaning up**

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

**Preventive measures for secondary accident**

Collect spillage.

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**7. Handling and storage****Precautions for safe handling****Preventive measures**

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire and explosion)

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

**Exhaust/ventilator**

Exhaust/ventilator should be available.

**Safety treatments**

Avoid contact with skin.

Avoid contact with eyes.

Avoid breathing dust, fume, gas, mist or vapor.

**Safety Measures/Incompatibility**

Wear protective gloves, protective clothing or face protection.

Wear eye protection/face protection.

Use personal protective equipment as required.

When using do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities

Recommendation for storage

Store in a well-ventilated place. Keep container tightly closed.

Keep cool. Protect from sunlight.

Store locked up.

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## 8. Exposure controls/personal protection

Control parameters

No control value data available in MHLW

Adopted value

(Hydrogen chloride)

JSOH(2014) (ceiling) 2ppm; 3.0mg/m<sup>3</sup>

ACGIH(2000) STEL: C 2ppm (URT irr)

OSHA-PEL

(Hydrogen chloride)

STEL: C 5ppm, 7mg/m<sup>3</sup>

Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures

Respiratory protection

Wear respiratory protection.

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

Safety and Health measures

Wash ... thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wash contaminated clothing before reuse.

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## 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical properties

Appearance: Liquid

Color: Colorless

Odor data N.A.

pH: pH ≤ 2 (strong acidic)

Phase change temperature

Initial Boiling Point/Boiling point data N.A.

Melting point/Freezing point data N.A.

Decomposition temperature data N.A.

Flash point data N.A.

Auto-ignition temperature data N.A.

Explosive properties data N.A.

Vapor pressure data N.A.

Vapor density data N.A.

Specific gravity/Density data N.A.

Solubility

Solubility in water: Miscible

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## 10. Stability and Reactivity

### Reactivity

Runaway polymerization will not occur.

### Chemical stability

Stable under normal storage/handling conditions.

### Possibility of hazardous reactions

It reacts violently with bases and is corrosive.

Reacts violently with oxidants. This produces toxic gas.

### Conditions to avoid

Contact with incompatible materials.

Heat.

### Incompatible materials

Strong bases, Strong oxidizing agents

### Hazardous decomposition products

Chlorine, Hydrogen.

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## 11. Toxicological Information

### Information on toxicological effects

#### Acute toxicity

##### Acute toxicity (Oral)

[GHS Cat. Japan, base data]

(Hydrogen chloride) rat LD50=238mg/kg (SIDS, 2009)

##### Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

(Hydrogen chloride) mist: rat LC50=0.42mg/L/4hr (SIDS, 2009)

#### Labor standard law, Japan; Toxic

Hydrogen chloride

#### Irritant properties

##### Skin corrosion/irritation

[GHS Cat. Japan, base data]

(Hydrogen chloride) rabbit/mouse/rat/human : corrosive (SIDS, 2009)

##### Serious eye damage /irritation

[GHS Cat. Japan, base data]

(Hydrogen chloride) rabbit : corrosive (SIDS, 2002)

#### Sensitization

##### Respiratory sensitization

[GHS Cat. Japan, base data]

(Hydrogen chloride) cat. 1; Occupational/Environmental Allergy Society, Japan

#### No Mutagenic effects data available

#### Carcinogenicity

(Hydrogen chloride)

IARC-Gr.3 : Not Classifiable as a Human Carcinogen

ACGIH-A4(2000) : Not Classifiable as a Human Carcinogen

#### No reproductive toxicity data available

#### Delayed and immediate effects and also chronic effects from short- and long-term exposure

#### STOT

##### STOT-single exposure

[cat.1]

[GHS Cat. Japan, base data]

(Hydrogen chloride) respiratory apparatus/system (ACGIH, 2003)

STOT-repeated exposure

[cat.1]

[GHS Cat. Japan, base data]

(Hydrogen chloride) teeth; respiratory apparatus/system (SIDS, 2002)

No Aspiration hazard data available

Additional data

There are no data available on the preparation itself.

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## 12. Ecological Information

Ecotoxicity

Aquatic toxicity

Harmful to aquatic life

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

(Hydrogen chloride) Crustacea (Daphnia magna) EC50=0.492mg/L/48hr (SIDS, 2005)

Water solubility

(Hydrogen chloride) 67 g/100 ml (30°C) (ICSC, 2000)

No Persistence and degradability data available

Bioaccumulative potential

(Hydrogen chloride) log Pow=0.25 (ICSC, 2000)

Additional data

There are no data available on the preparation itself.

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## 13. Disposal considerations

Waste treatment methods

Avoid release to the environment (- if this is not the intended use).

Dispose of contents/container in accordance with local/national regulation.

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## 14. Transport Information

UN No, UN CLASS

UN No.: 1789

Proper Shipping Name : HYDROCHLORIC ACID

Class or division : 8

Packing group : III

ERG GUIDE No.: 157

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 1789

Proper Shipping Name : HYDROCHLORIC ACID

Class or division : 8

Packing group : III

IATA Dangerous Goods Regulations

UN No.: 1789

Proper Shipping Name : HYDROCHLORIC ACID

Class or division : 8

Hazard labels : Corrosive

Packing group : III

Environmental hazards

MARPOL Annex III - Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

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## 15. Regulatory Information

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

Environmental hazards

Transport in bulk according to Annex II of MARPOL73/78 and IBC Code

Noxious Liquid ; Cat. Z

Hydrogen chloride

Non Noxious Liquid ; Cat. OS

Water

US major regulations

TSCA

Hydrogen chloride; Water

Other regulatory information

We are not able to check up the regulatory information in regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.

Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

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## 16. Other information

GHS classification and labelling

Skin Corr. 1: H314 Causes severe skin burns and eye damage

Eye Dam. 1: H318 Causes serious eye damage

Resp. Sens. 1: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

STOT SE 2: H371 May cause damage to organs after single exposure

STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure

Aquatic Acute 3: H402 Harmful to aquatic life

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN

IMDG Code (Amendment 38-16) 2016

IATA Dangerous Goods Regulations (59th Edition) 2018

Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2018 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/ENG/Classification/index.php>

Supplier's data/information

NITE Chemical Risk Information Platform (NITE-CHRIP)

[https://www.nite.go.jp/en/chem/chrip/chrip\\_search/systemTop](https://www.nite.go.jp/en/chem/chrip/chrip_search/systemTop)

GHS Classification Guidance for Enterprises 2013 Revised Edition (Aug. 2013, METI)

General Disclaimer

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It are advised to make their own tests to determinate the safety and suitability of each such product or combination for their own purposes.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2017).