

## Safety Data Sheets

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

Product identifier :

Product name : 0.25mol/L Sulfuric acid

Product code(SDS NO) :95736jis\_E-1

Details of the supplier of the safety data sheet

Manufacturer/Supplier :JUNSEI CHEMICAL CO., LTD.

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

Competent section :Quality Assurance Department

Telephone number :+81-48-986-6161

FAX :+81-48-989-2787

e-mail address :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

Specific target organ toxicity-single exposure : Category 2 (respiratory organs)

Specific target organ toxicity-repeated exposure : Category 2 (respiratory organs)

(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 causes damage to organs after single exposure

May causes damage to organs following repeated exposure

PRECAUTIONARY STATEMENT

Prevention

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

Wash contaminated parts thoroughly after handling.

Wear protective gloves, protective clothing or face protection.

Wear eye protection/face protection.

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

Response

Get medical advice/attention if you feel unwell.

Immediately call a POISON CENTRE or doctor/physician.

IF exposed or concerned: Call a POISON CENTER or doctor/physician.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

0.25mol/L Sulfuric acid, JUNSEI CHEMICAL CO., LTD., 95736jis\_E-1, 17/09/2014

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.

### 3. Composition/information on ingredients

#### Substance/Preparation :

##### Mixtures

Ingredient name: Sulfuric acid

content(%): ca. 2.5

Chemical formula: H<sub>2</sub>O<sub>4</sub>S

Chemicals No, Japan: 1-430

CAS No.: 7664-93-9

MW: 98.08

ECNO: 231-639-5

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

### 4. First-aid measures

#### Descriptions of first-aid measures

##### General measures

Get medical attention/advice if you feel unwell.

Immediately call a POISON CENTRE or doctor/physician.

IF exposed or concerned: Call a POISON CENTER or doctor/physician.

##### IF INHALED

Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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.

### 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.

Runoff from fire control or dilution water may cause pollution.

Advice for firefighters

Special protective equipment and precautions for fire-fighters

Wear fire/flame resistant/retardant clothing.

Wear cold insulating gloves/face shield/eye protection.

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

## 6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Ventilate area after material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Avoid release to the rivers, lakes, ocean, 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.

## 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 & 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, vapor, mist, or gas.

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

Keep cool . Protect from sunlight.

Store locked up.

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

## 8. Exposure controls/personal protection

Control parameters

Adopted value

0.25mol/L Sulfuric acid, JUNSEI CHEMICAL CO., LTD., 95736jis\_E-1, 17/09/2014

(Sulfuric acid)

ACGIH(2000) TWA: 0.2mg/m<sup>3</sup>(T) (Pulm func)

OSHA-PEL

(Sulfuric acid)

TWA 1mg/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 positive pressure self-contained breathing apparatus (SCBA).

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

odour data N.A.

pH :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

n-Octanol /water partition coefficient data N.A.

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## 10. Stability and Reactivity

Chemical stability

Stable under normal storage/handling conditions.

Conditions to avoid

Contact with incompatible materials.

Heat.

Incompatible materials

Bases

Hazardous decomposition products

## Sulfur oxides

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**11. Toxicological Information**

## Information on toxicological effects

## Acute toxicity

## Acute toxicity (Oral)

[GHS Cat. Japan, base data]

(Sulfuric acid) rat LD50=2140 mg/kg (SIDS, 2001)

## Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

(Sulfuric acid) mist : rat LC50=0.347 mg/L/4hr (SIDS, 2001)

## Irritant properties

## Serious eye damage /irritation

## Eye damage/irritation component(s) data

[GHS Cat. Japan, base data]

(Sulfuric acid) cat.1; ATSDR, 1998 ; SIDS, 2001

No Allergenic and sensitizing effects data available

No Mutagenic effects data available

No Teratogenic effects data available

## Carcinogenicity

(Sulfuric acid)

IARC-Gr.1 : Carcinogenic to humans.

ACGIH-A2(2000) : Suspected 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]

[Japan published data]

(Sulfuric acid) respiratory apparatus/system ( DFGOT,2001; ATSDR, 1998 )

## STOT-repeated exposure

[cat.1]

[Japan published data]

(Sulfuric acid) respiratory apparatus/system ( SIDS, 2001; ATSDR, 1998 )

No Aspiration hazard data available

## Additional data

There are no data available on the preparation itself.

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**12. Ecological Information**

## Toxicity

## Aquatic toxicity

## Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

(Sulfuric acid) Fish (bluegill) LC50=16 – 28mg/L/96hr (SIDS, 2003)

No Persistence and degradability data available

No Bioaccumulative potential data available

## Additional information

There are no data available on the preparation itself.

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**13. Disposal considerations**

## Waste treatment methods

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

#### 14. Transport Information

UN No, UN CLASS

UN number :2796

UN proper shipping name :

SULPHURIC ACID with not more than 51% acid or BATTERY FLUID, ACID

Transport hazard class(es) :8

Packing group :II

ERG GUIDE NO :157

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

Noxious Liquid ; Cat. Y... Sulfuric acid

Non Noxious Liquid ; Cat. O... Water

#### 15. Regulatory Information

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

US major regulations

TSCA

Sulfuric acid; 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.

#### 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

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

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

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (4th ed., 2011), UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 18th edit., 2013 UN Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012) 2012 EMERGENCY RESPONSE GUIDEBOOK(US DOT)

2014 TLVs and BEIs. (ACGIH)

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

Supplier's data/information

Chemical Risk Information Platform (CHRIP)(NITE) <http://www.safe.nite.go.jp/japan/db.html>

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

Other information

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



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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