

Safety Data Sheet

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

Product identifier:

Product name: 0.1mol/L Zinc solution

Product code(SDS NO): 95000jis_J_E1-1

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

Division: 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 2

Serious eye damage/eye irritation: Category 2A

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

Label elements



Signal word : Warning

HAZARD STATEMENT

Causes skin irritation

Causes serious eye irritation

PRECAUTIONARY STATEMENT

Prevention

Wash contaminated parts thoroughly after handling.

Wear protective gloves.

Wear eye protection/face protection.

Response

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

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.

3. Composition/information on ingredients

Substance/Mixture:

Mixture

Ingredient name: Zinc nitrate

Content(%): 1.89w/v

0.1mol/L Zinc solution, JUNSEI CHEMICAL CO., LTD., 95000jis_J_E1-1,25/12/2015

Chemical formula: N_2O_6Zn
Chemicals No, Japan: 1-491
CAS No.: 7779-88-6
MW: 189.42
ECNO: 231-943-8

Ingredient name: Nitric acid
Content(%): <0.97w/v
Chemical formula: HNO_3
Chemicals No, Japan: 1-394
CAS No.: 7697-37-2
MW: 63.01
ECNO: 231-714-2

Ingredient name: Water
Content(%): Residual quantity of the ingredient mentioned above
Chemical formula: H_2O
CAS No.: 7732-18-5
MW: 18.02
ECNO: 231-791-2

4. First-aid measures

Descriptions of first-aid measures

IF INHALED

Remove person to fresh air and keep 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.

Wash with plenty of soap and water.

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

If skin irritation 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.

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.

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.

0.1mol/L Zinc solution, JUNSEI CHEMICAL CO., LTD., 95000jis_J_E1-1,25/12/2015

Wear protective gloves/protective clothing/eye protection/face 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

(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 protective gloves.

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.

8. Exposure controls/personal protection

Control parameters

Adopted value

(Nitric acid)

ACGIH(1992) TWA: 2ppm

STEL: 4ppm (URT & eye irr; dental erosion)

OSHA-PEL

(Nitric acid)

TWA 2ppm, 5mg/m³

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.

Take off contaminated clothing and wash it before reuse.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical properties

Appearance: Liquid

Color: Colorless

Odor data N.A.

pH: 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.

10. Stability and Reactivity**Chemical stability**

Stable under normal storage/handling conditions.

Conditions to avoid

Contact with incompatible materials.

Heat.

Incompatible materials

Strong bases

Hazardous decomposition products

Nitrogen oxides, Cobalt oxides

11. Toxicological Information

Information on toxicological effects

Acute toxicity**Acute toxicity (Oral)**

[GHS Cat. Japan, base data]

(Zinc nitrate) rat LD50 =1400 mg/kg (HSDB, 2003)

Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

0.1mol/L Zinc solution, JUNSEI CHEMICAL CO., LTD., 95000jis_J_E1-1,25/12/2015

(Nitric acid) mist : LC50=0.05~0.5 mg/L (ACGIH, 2001)

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]

(Nitric acid) human : corrosive (ICSC, 1994; HSDB, 2005)

(Zinc nitrate) skin irritating (HSFS, 2003et al)

Serious eye damage /irritation

[GHS Cat. Japan, base data]

(Nitric acid) human : blindness (ACGIH, 2001)

(Zinc nitrate) mild (HSFS, 2003et al)

No Allergenic and sensitizing effects data available

No Mutagenic effects data available

No Carcinogenic effects data available

No Teratogenic effects data available

No reproductive toxicity data available

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

STOT

STOT-single exposure

[cat.3(resp. irrit.)]

[Japan published data]

(Zinc nitrate) Respiratory tract irritation (HSFS, 2003)

No Aspiration hazard data available

Additional data

There are no data available on the preparation itself.

12. Ecological Information

Toxicity

No Aquatic toxicity data available

Water solubility

(Nitric acid) miscible (ICSC, 2006)

(Zinc nitrate) good (ICSC, 1994)

No Persistence and degradability data available

Bioaccumulative potential

(Nitric acid) log Pow=-0.21 (ICSC, 2006)

Additional information

There are no data available on the preparation itself.

13. Disposal considerations

Waste treatment methods

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

14. Transport Information

UN No, UN CLASS

Not applicable to UN NO.

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

Noxious Liquid ; Cat. Y...Nitric acid

Non Noxious Liquid ; Cat. OS...Water

15. Regulatory Information

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

US major regulations

TSCA

Zinc nitrate; Nitric 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 Irrit. 2: H315 Causes skin irritation

Eye Irrit. 2A: H319 Causes serious eye irritation

Reference Book

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

2015 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)

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.