

Safety Data Sheet

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

Product identifier:

Product name: 0.1mol/L Silver nitrate solution

Product code(SDS NO): 95473jis_J_E2-1

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 2

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

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment – acute hazard: Category 1

Hazardous to the aquatic environment – long-term hazard: Category 3

(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

May cause damage to organs through prolonged or repeated exposure

Very toxic to aquatic life

Harmful to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

Prevention

Avoid release to the environment.

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

Wash contaminated parts thoroughly after handling.

Wear protective gloves.

Wear eye protection/face protection.

Response

Collect spillage.

Get medical advice/attention if you feel unwell.

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.

0.1mol/L Silver nitrate solution, JUNSEI CHEMICAL CO., LTD., 95473jis_J_E2-1, 24/10/2017

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.

Disposal

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

3. Composition/information on ingredients

Mixture/Substance selection:

Mixture

Ingredient name: Silver nitrate

Content(%): ca. 1.7(w/v)

Chemical formula: AgNO₃

Chemicals No, Japan: 1-8

CAS No.: 7761-88-8

MW: 169.87

ECNO: 231-853-9

Ingredient name: Water

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

Chemical formula: H₂O

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.

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.

Runoff from fire control or dilution water may cause pollution.

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.

6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Keep unauthorized personnel away.

In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.

Ventilate area after material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Avoid release to the 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.

Stop leak if you can do it without risk.

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, fume, gas, mist or vapor.

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

No control value data available

Adopted value

(Silver nitrate)

JSOH(1991) 0.01mg-Ag/m³

ACGIH(1992) TWA: (soluble compounds)0.01mg-Ag/m³ (Argyria)

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. Recommended material(s): neoprene, nitrile, butyl rubber, viton, PVC, impermeable or chemical resistant rubber

Consult with your glove and/or personnel equipment manufacturer for selection of appropriate compatible materials.

Eye protection

Wear safety glasses with side-shields.

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: None

pH data N.A.

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

Reactivity

Runaway polymerization will not occur.

Chemical stability

Stable under normal storage/handling conditions.

Conditions to avoid

Contact with incompatible materials.

Heat.

Incompatible materials

Strong reducing agents

Hazardous decomposition products

Nitrogen oxides, Silver oxides.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

(Silver nitrate) rat LD50=1170 mg/kg (IUCLID, 2000)

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]

(Silver nitrate) corrosive (CICAD 44, 2003)

Serious eye damage /irritation

[GHS Cat. Japan, base data]

(Silver nitrate) severe corrosive (CICAD 44, 2003)

No Allergenic and sensitizing effects data available

No Mutagenic effects data available

No Carcinogenic 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]

(Silver nitrate) Respiratory tract irritation (PATTY 6th, 2012)

STOT-repeated exposure

[cat.1]

[Japan published data]

(Silver nitrate) respiratory apparatus/system (ACGIH 7th, 2001)

No Aspiration hazard data available

Additional data

There are no data available on the preparation itself.

12. Ecological Information

Toxicity

Aquatic toxicity

Very toxic to aquatic life

Harmful to aquatic life with long lasting effects

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

(Silver nitrate) Crustacea (Daphnia magna) EC50=0.0014mg/L/48hr (CICADs 44, 2002)

Aquatic chronic toxicity component(s) data

[GHS Cat. Japan, base data]

(Silver nitrate) Fish (rainbow trout) LOEC = 0.00016 mg/L/60 days (CICADs 44, 2002)

Water solubility

(Silver nitrate) very good (ICSC, 1998)

No Persistence and degradability data available

Bioaccumulative potential

(Silver nitrate) BCF=600 (Registered chemicals data check & review, Japan)

Additional information

There are no data available on the preparation itself.

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.

14. Transport Information

UN No, UN CLASS

UN number: 3082

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport hazard class(es): 9

Packing group: III

ERG GUIDE NO.: 171

15. Regulatory Information

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

US major regulations

TSCA

Water; Silver nitrate

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. 2: H319 Causes serious eye irritation

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

Aquatic Acute 1: H400 Very toxic to aquatic life

Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects

Reference Book

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

Recommendations on the TRANSPORT OF DANGEROUS GOODS 19th edit., 2015 UN

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

2012 EMERGENCY RESPONSE GUIDEBOOK(US DOT)

2017 TLVs and BEIs. (ACGIH)

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

Supplier's data/information

NITE Chemical Risk Information Platform (NITE-CHRIP) <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 is advised to make their own tests to determine 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 2015).