

Safety Data Sheet

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

Product identifier:

Product name: 0.05mol/L Iodine solution

Product code(SDS NO): 95713jis_E-2

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

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2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS

Skin sensitization: Category 1

Reproductive toxicity: Category 1B

Reproductive toxicity – effects on or via lactation: Additional category

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

Specific target organ toxicity – repeated exposure: Category 2(skin, thyroid, systemic toxicity)

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment – acute hazard: Category 3

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: Danger

HAZARD STATEMENT

May cause an allergic skin reaction

May damage fertility or the unborn child

May cause harm to breast-fed children

May cause damage to organs after single exposure

May cause damage to organs through prolonged or repeated exposure

Harmful to aquatic life

Harmful to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

Prevention

Do not handle until all safety precautions have been read and understood.

Avoid contact during pregnancy/while nursing.

Avoid release to the environment.

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

Wash contaminated parts thoroughly after handling.

0.05mol/L Iodine solution, JUNSEI CHEMICAL CO., LTD., 95713jis_E-2, 09/02/2017

Wear protective gloves.

Contaminated work clothing should not be allowed out of the workplace.

Use personal protective equipment as required.

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

Response

Get medical advice/attention if you feel unwell.

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

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

Take off contaminated clothing and wash it before reuse.

Storage

Store locked up.

Disposal

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

3. Composition/information on ingredients

Substance/Mixture:

Mixture

Ingredient name: Potassium iodide

Content(%): ca. 4.0 w/v

Chemical formula: IK

Chemicals No, Japan: 1-439

CAS No.: 7681-11-0

MW: 166.00

ECNO: 231-659-4

Ingredient name: Iodine

Content(%): ca. 1.3 w/v

Chemical formula: I₂

CAS No.: 7553-56-2

MW: 253.809 (AW 126.904)

ECNO: 231-442-4

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 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.

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

(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

Do not handle until all safety precautions have been read and understood.

Wear protective gloves, protective clothing or face protection.

- Wear protective gloves.
- 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.

8. Exposure controls/personal protection

Control parameters

No control value data available

Adopted value

(Iodine)

JSOH(1968) 0.1ppm; 1mg/m³

ACGIH(2007) TWA: 0.01ppm(IFV)

STEL: 0.1ppm(V) (Hypothyroidism; URT irr)

(Potassium iodide)

ACGIH(2007) TWA: 0.01ppm(IFV) (Hypothyroidism; URT irr)

OSHA-PEL

(Iodine)

C 0.1ppm, 1mg/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

- Avoid contact during pregnancy/while nursing.
- Wash ... thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Contaminated work clothing should not be allowed out of the workplace.
- 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: Dark brown
- Odor data N.A.
- 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

Chemical stability

Stable under normal storage/handling conditions.
Light sensitive.

Conditions to avoid

Contact with incompatible materials.
Heat. Light.

Incompatible materials

Strong reducing agents

Hazardous decomposition products

Iodides.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]
(Iodine) rat LD50=315 mg/kg (EPA Pesticide, 2006)

Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]
(Iodine) vapor : rat LC50=35 ppm/4hr (EPA Pesticide, 2006)

Labor standard law, Japan; Toxic

Iodine

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]
(Iodine) human : skin irritating (PATTY 6th, 2012)

Serious eye damage /irritation

[GHS Cat. Japan, base data]
(Iodine) eye : irritating (PATTY 6th, 2012)
(Potassium iodide) rabbit : only slight reaction (HSDB, 2015)

Sensitization

Skin sensitization

[GHS Cat. Japan, base data]
(Iodine) cat.1; PATTY 6th, 2012

No Mutagenic effects data available

Carcinogenicity

(Iodine)

ACGIH-A4(2007) : Not Classifiable as a Human Carcinogen
(Potassium iodide)

ACGIH-A4(2007) : Not Classifiable as a Human Carcinogen

Reproductive toxicity

[GHS Cat. Japan, base data]
(Potassium iodide) cat.add; CICAD 72, 2009
(Potassium iodide) cat.1B; CICAD 72, 2009

No Teratogenic effects 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]
(Potassium iodide) thyroid/thyroid gland (ATSDR, 2004)

[cat.3(resp. irrit.)]
[Japan published data]
(Iodine) Respiratory tract irritation (HSDB, 2014)

STOT-repeated exposure

[cat.1]
[Japan published data]
(Iodine) thyroid/thyroid gland (CICAD 72, 2009)
(Potassium iodide) skin; thyroid/thyroid gland; systemic toxicity (CICAD 72, 2009;
Medicine data, 2016(2015))

No Aspiration hazard data available

Additional data

There are no data available on the preparation itself.

12. Ecological Information

Toxicity

Aquatic toxicity

Harmful to aquatic life
Harmful to aquatic life with long lasting effects

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]
(Iodine) Crustacea (Daphnia magna) LC50=0.16mg/L/48hr (ECETOC TR91, 2003)

Water solubility

(Iodine) 0.03 g/100 ml (20°C) (ICSC, 2004)
(Potassium iodide) 148 g/100 g (HSDB, 2010)

No Persistence and degradability data available

Bioaccumulative potential

(Iodine) log Pow=2.49 (ICSC, 2004)

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

Not applicable to UN NO.

15. Regulatory Information

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

US major regulations

TSCA

Iodine; Potassium iodide; 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 Sens. 1: H317 May cause an allergic skin reaction

Repr. 1B: H360 May damage fertility or the unborn child

Lact.: H362 May cause harm to breast-fed children

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

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)

2016 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 (NITE published in 2015).