

Safety Data Sheet

1. Chemical product and company identification

Product name : 0.1mol/L Potassium iodide solution (N/10)

Company information

Name of manufacturer : KANTO CHEMICAL CO., INC.
Address : 2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, JP
Name of section : Business Administration Department, Reagent Division
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Mail address : BC32@kanto.co.jp
Reference No : 32857

2. Hazards identification

GHS classification

Health hazards	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)

Hazard
pictograms



Signal word : Danger

Hazard statements : May damage fertility or the unborn child
May cause harm to breast-fed children
May cause damage to organs (thyroid)
May cause damage to organs (skin, thyroid, systemic toxicity) through prolonged or repeated exposure

Precautionary statements

Prevention : Do not handle until all safety precautions have been read and understood.
Do not breathe mist/vapors.
Avoid contact during pregnancy and while nursing.
Wash hands, forearms and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.

Response : IF exposed or concerned: Call a POISON CENTER or doctor.
IF exposed or concerned: Get medical advice/attention.
Get medical advice/attention if you feel unwell.

Storage : Store locked up.



Disposal : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

3. Composition/information on ingredients

Distinction of substance or mixture : Mixture

Chemical name	Concentration (%)	Formula	TSCA	EC-No.	CAS RN
Potassium iodide	1.6	KI	Listed	231-659-4	7681-11-0

4. First aid measures

First aid measures

First-aid measures after inhalation : Remove the victim to fresh air, and make him blow his nose and gargle.

First-aid measures after skin contact : Wash the affected areas under running water.

First-aid measures after eye contact : Wash the affected areas under running water.

First-aid measures after ingestion : Give the victim water or salt water and induce vomiting. If necessary, get medical attention.

Personal Protection in First Aid and Measures : Rescuers should wear proper protective equipment like rubber gloves, goggles.

5. Fire fighting measures

Suitable extinguishing media : This product is noncombustible.

Unsuitable extinguishing media : None

Firefighting instructions : Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area.

Personal protection (Emergency response) : Firefighters should wear protective equipment.

6. Accidental release measures

Personal Precautions, Protective Equipment and Emergency Procedures

General measures : Wear proper protective equipment and avoid contact with skin and inhalation of vapor. Conduct operations from upwind and evacuate people downwind. Keep away personnel except for authorized ones from spillage area by stretching ropes.

Environmental precautions

Environmental precautions : Attention should be given to avoid discharge of spilled product into rivers and resulting environmental damage. When diluting spill with large amounts of water, discharge of untreated wastewater into the environment must be avoided.

Methods and Equipment for Containment and Cleaning up

For containment : Absorb spill with inert material (e.g, diatomaceous earth, sand) and flush spillage area with copious amounts of water.



7. Handling and storage

Handling

- Technical measures : If necessary, wear appropriate protective equipment to avoid contact with skin or inhalation of vapor.
- Precautions for safe handling : Use with an enclosed system or a local exhaust ventilation. Use in well-ventilated areas.

Storage

- Storage conditions : Store in a dark, cool place and tightly closed.
- Material used in packaging/containers : Glass, polyethylene, polypropylene.

8. Exposure controls / Personal protection equipment

Potassium iodide	
ACGIH TWA	0.01 ppm (IFV)

- Appropriate engineering controls : Use with an enclosed system or a local exhaust ventilation.

Protective equipment

- Respiratory protection : If necessary, wear dust mask
- Hand protection : Impervious protective gloves
- Eye protection : Safety goggles
- Skin and body protection : Protective clothing, protective boots

9. Physical and chemical properties

- Physical state : Solid
- Color : Colorless
- Odor : Odorless
- pH : No data available
- Melting point : No data available
- Freezing point : No data available
- Boiling point : No data available
- Flash point : No data available
- Auto-ignition temperature : No data available
- Decomposition temperature : No data available
- Flammability (solid, gas) : Non flammable
- Vapor pressure : No data available
- Relative density : No data available
- Density : No data available
- Relative gas density : No data available
- Solubility : Water: Miscible
- Partition coefficient n-octanol/water (log Pow) : No data available
- Explosive limits (vol %) : No data available
- Viscosity, kinematic : No data available
- Particle characteristics : No data available



10. Stability and reactivity

Reactivity	: May react with oxidizing substances.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Stable under normal conditions of use.
Conditions to avoid	: Light, heat.
Incompatible materials	: Oxidizing substances.
Hazardous decomposition products	: Iodine, hydrogen iodide.

11. Toxicological information

Acute toxicity (oral)	: Classification not possible
Acute toxicity (dermal)	: Classification not possible
Acute toxicity (inhalation)	: No classification (gas) No classification (vapor) Classification not possible (dust, mist)
Skin corrosion/irritation	: Classification not possible Potassium iodide : Besides, edema of the face and neck is described as acute toxicity signs in humans, but the details are unknown.
Serious eye damage/irritation	: No classification Potassium iodide : Based on the documented test result on rabbit eyes that instillation of 3% solution to cornea caused only slight reaction, and graded 17 out of the maximum scale of 100, it was classified into category 2B. However, the content of this product is below the cut-off value.
Respiratory sensitization	: Classification not possible Potassium iodide : Besides, an asthmatic attack is listed as an adverse effect in the long-term repeated use of this substance.
Skin sensitization	: Classification not possible Potassium iodide : Besides, it is reported that it sensitization was not observed after application of a 25% aqueous solution of this substance in humans, but it was judged to be insufficient data to be used for the classification due to unknown details. Moreover, rash and urticaria are listed as adverse effects in the long-term repeated use of this substance. Besides, Japan Society for Occupational Health classified iodine and its compounds as a skin sensitizer group 2, but there is a cautionary statement that not all compounds were identified.
Germ cell mutagenicity	: Classification not possible Potassium iodide : There are no in vivo data, and as for in vitro, a mouse lymphoma test in cultured mammalian cells was negative.
Carcinogenicity	: No classification Potassium iodide : ACGIH classifies iodine compounds as A4 (not classifiable as a human carcinogen).



Reproductive toxicity	: May damage fertility or the unborn child May cause harm to breast-fed children Potassium iodide : Excessive iodine ingestion in humans causes thyroid failure, and effects on sexual function such as menstrual abnormality could occur as secondary effects, and there is the information that absorbed iodine is excreted into body milk, and it is possible that iodine transferred to newborns via body milk causes developmental disorder in infants. Because it is hard to say that there is sufficient evidence of reproductive toxicity caused by excessive exposure to iodide in humans, the substance was classified into category 1B in this hazard class, and the category of effects by lactation was added.
STOT-single exposure	: May cause damage to organs (thyroid) Potassium iodide : It is written that acute excessive iodine ingestion causes a transient decrease in thyroid hormone production. Because this substance has effects on thyroid, it was classified into category 1 (thyroid). Based on the content, this product was classified into category 2 (thyroid).
STOT-repeated exposure	: May cause damage to organs (skin, thyroid, systemic toxicity) through prolonged or repeated exposure Potassium iodide : In the oral administration of this substance as drug therapy, iodine eruption is observed. It is characterized by acneiform pustules, and proliferating nodular lesions which coalesce with cysts were found on the face, extremities, trunk and so on in multiple cases. Moreover, cases were reported where fever was observed in using this substance as drug therapy. Furthermore, by excessive oral exposure to this substance, thyroidism was found, but on the other hand, cases showing hyperthyroidism were also reported. Besides these, as serious adverse effects in long-term repeated use, other than lesions in skin and thyroid, laryngitis, bronchitis, glottal edema, asthmatic attack, salivary gland edema, parotitis, gastritis, along with iodine cachexia such as generalized weakness, palpitation, depression, sleeplessness, and nervousness are listed as iodine poisoning. As above, other than skin and thyroid, various systemic signs for which it is difficult to identify a target organ were observed. Therefore, the substance was classified into category 1 (skin, thyroid, systemic toxicity). Based on the content, this product was classified into category 2 (skin, thyroid, systemic toxicity).
Aspiration hazard	: Classification not possible

12. Ecological information

Ecotoxicity

Aquatic acute	: Classification not possible
Aquatic chronic	: Classification not possible

Persistence and degradability

No additional information available

Bioaccumulative potential

No additional information available



Mobility in soil

No additional information available

Hazardous to the ozone layer

Ozone : Classification not possible

13. Disposal considerations

Ecology - waste materials : Dilute with copious water and adjust the pH to neutral, then flush in drains. Or entrust approved waste disposal companies with the disposal.

Contaminated container and packaging : In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information**International Regulations****Transport by sea(IMDG)**

UN-No. (IMDG) : Not applicable

Proper Shipping Name (IMDG) : Not applicable

Packing group (IMDG) : Not applicable

Transport hazard class(es) (IMDG) : Not applicable

Air transport(IATA)

UN-No. (IATA) : Not applicable

Proper Shipping Name (IATA) : Not applicable

Packing group (IATA) : Not applicable

Transport hazard class(es) (IATA) : Not applicable

Marine pollutant : Not applicable

15. Regulatory information

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

16. Other information

Data sources : Encyclopaedia Chimica, Kyoritsu Shuppan Co, Ltd. (1963) .
Dangerous Properties of Industrial Materials, 6th ed.
N. I. Sax Van Nostrand Reinhold Company (1984) .
Japanese Pharmacopoeia 17th revised description, Hirokawa Publishing Co. (2016) .
NITE Chemical Risk Information Platform (NITE-CHRIP), National Institute of Technology and Evaluation.

The information contained herein is based on several references and the present state of our knowledge. However the SDS does not always cover all information about the product, handle the product carefully. The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements. The information herein is only provision of information, and it does not represent a guarantee the properties of the product. The Safety Data Sheet (SDS) is prepared based on JIS Z7253.

