



Safety Data Sheet

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

Product identifier:

Product name: Gram's stain solution II

SDS No. : E0046E-1

Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

Address: 3-1, Honmachibashi, Chuo-ku,Osaka ,JAPAN

Division: Safety Management Dept. of Chemicals

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2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS

Acute toxicity (Inhalation): Category 4

Reproductive toxicity: Category 1B

Reproductive toxicity – effects on or via lactation: Additional category

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Acute): Category 3

Hazardous to the aquatic environment (Long-term): Category 3

(Note) GHS classification without description: Not classified/Classification not possible

Label elements



Signal word: Danger

HAZARD STATEMENT

Harmful if inhaled

May damage fertility or the unborn child

May cause harm to breast-fed children

Harmful 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.

Use only outdoors or in a well-ventilated area.

Wash contaminated parts thoroughly after handling.

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

Response

IF exposed or concerned: Get medical advice/attention.

Call a POISON CENTER or doctor/physician if you feel unwell.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Disposal

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



3. Composition/information on ingredients

Mixture/Substance selection:

Mixture

Ingredient name:Iodine

Content (%):0.33

Chemical formula:I₂

CAS No.:7553-56-2

MW:253.81

ECNO:231-442-4

Ingredient name:Potassium iodide

Content (%):0.67

Chemical formula:IK

Chemicals No, Japan:1-439

CAS No.:7681-11-0

MW:166.00

ECNO:231-659-4

Ingredient name:Water

Content (%):99

Chemical formula:H₂O

CAS No.:7732-18-5

MW:18.02

ECNO:231-791-2

Note : The figures shown above are not the specifications of the product.

4. First-aid measures

Descriptions of first-aid measures

General measures

IF exposed or concerned: Get medical advice/attention.

Call a POISON CENTER or doctor/physician 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.

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.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

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 until material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

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 and 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.

Safety Measures

Use only outdoors or in a well-ventilated area.

Wear protective gloves, protective clothing or face protection.

When using do not eat, drink or smoke.

Any incompatibilities

See "10.Stability and Reactivity"

Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

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

**Storage**

Conditions for safe storage

Keep container tightly closed.

Store in a cool, dry place. Do not store in direct sunlight.

Container and packaging materials for safe handling

Glass

Polyethylene

8. Exposure controls/personal protection

Control parameters

Adopted value

(Iodine)

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)

STEL: 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.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Liquid

Color: Brown

Odor: Practically odourless

Melting point/Freezing point data is not available.

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

Flammability (gases, liquids and solids) data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Flash point data is not available.

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

pH data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Soluble

n-Octanol/water partition coefficient data is not available.

Vapor pressure data is not available.

Density and/or relative density: 1.0



Relative vapor density (Air=1) data is not available.

No Particle characteristics data is not available.

10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

(Iodine)

Decomposes on heating. This produces toxic fumes. The substance is a strong oxidant. It reacts with combustible and reducing materials. Reacts violently with metal powders, antimony, ammonia, acetaldehyde and acetylene. This generates fire and explosion hazard. (ICSC 0167)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Reducing agents, Combustible materials, Metal powders, Antimony, Ammonia, Acetaldehyde, Acetylene

Hazardous decomposition products

Iodine compounds

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

(Iodine)

rat LD50=315mg/kg (EPA Pesticide, 2006)

Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

(Iodine)

vapor: rat LC50=35ppm/4hr (EPA Pesticide, 2006)

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]

(Iodine)

human skin irritation (PATTY 6th, 2012)

Serious eye damage/irritation

[GHS Cat. Japan, base data]

(Iodine)

eyes irritation (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

Mutagenic effects data is not 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. 1B; CICAD 72, 2009; ATSDR, 2004

(Potassium iodide)

cat. add; CICAD 72, 2009; ATSDR, 2004

STOT

STOT-single exposure

[cat.3 (resp. irrit.)]

[GHS Cat. Japan, base data]

(Iodine)

respiratory tract irritation (HSDB, 2014)

STOT-repeated exposure data is not available.

Aspiration hazard data is not available.

12. Ecological Information

Ecotoxicity

Aquatic toxicity

Harmful to aquatic life

Harmful to aquatic life with long lasting effects

Hazardous to the aquatic environment (Acute)

[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)

Persistence and degradability

Persistence and degradability data is not available.

Bioaccumulative potential

(Iodine)

log Pow=2.49 (ICSC, 2004)

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

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. or ID No.: Not applicable
Not applicable to IMDG Code
Not applicable to IATA Dangerous Goods Regulations
Environmental hazards
MARPOL Annex III – Prevention of pollution by harmful substances
Marine pollutants (yes/no) : no
MARPOL Annex V – Prevention of pollution by garbage discharge
Reproductive toxicity: cat.1, 1A, 1B
Potassium iodide
Maritime transport in bulk according to IMO instruments
Noxious Liquid ; Cat. Y equiv.
Potassium iodide
Non Noxious Liquid ; Cat. OS
Water

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture
Chemicals listed in TSCA Inventory
Iodine; Potassium iodide; Water
Other regulatory information
Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. Other information

GHS classification and labelling
Acute Tox. 4: H332 Harmful if inhaled
Repr. 1B: H360 May damage fertility or the unborn child
Lact.: H362 May cause harm to breast-fed children
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, (7th revised edition, 2017), UN
Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN
IMDG Code, 2018 Edition (Incorporating Amendment 39-18)
IATA Dangerous Goods Regulations (61th Edition) 2020
Classification, labelling and packaging of substances and mixtures (Table 3 ECNO6182012)
2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2020 TLVs and BEIs. (ACGIH)
<http://monographs.iarc.fr/ENG/Classification/index.php>
Supplier's data/information
General Disclaimer
This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.
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



KISHIDA

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