



SAFETY DATA SHEET
0.05 M IODINE

1. Identification of the substance and of the supplier

Product identifier

Chemical name 0.05 M IODINE

Recommended use of the chemical and restrictions on use

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Manufacturer/ supplier details

Company name	Ya Thai Chemical Co., Ltd.
Company address	78/9 Moo 5 Takam, Bangpakong, Chachoengsao 24130 THAILAND
Phone number	66-3857-4400
Fax	66-3857-3700
Emergency phone number	-

2. Hazard Identification

GHS classification of the substance/ mixture

Health hazards

Skin corrosion/ irritation	Category 3
Serious eye damage/ eye irritation	Category 3
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Specific target organ toxicity - repeated exposure (thyroid)	Category 2

Other hazard than mentioned above are "Not classified", "Classification not possible" or "Not applicable".

GHS label elements

Pictogram



Signal word

Danger

Hazard statements

H316 Causes mild skin irritation.
H320 Causes eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H373 May cause damage to thyroid through prolonged or repeated exposure.

Precautionary statements

Prevention

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash face, hands and any exposed skin thoroughly after handling.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves.

P284 [In case of inadequate ventilation] wear respiratory protection.

Response

P304+P340 IF INHALED: remove person to fresh air and keep comfortable for breathing.

P302+P352 IF ON SKIN: Wash with plenty of water.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332+P317 If skin irritation occurs: Get medical help.

P337+P317 If eye irritation persists: Get medical help.

P342+P316 If experiencing respiratory symptoms: Get emergency medical help immediately.

P362+P364 Take off contaminated clothing and wash it before reuse.

P319 Get medical help if you feel unwell.

Disposal

P501 Dispose of contents/ container in accordance with local/ regional/ national/ international regulations.

3. Composition/ Information on Ingredients

Substance/ mixture	Mixture (liquid)		
Components		CAS No.	Concentration %
Potassium iodide		7681-11-0	2-5%
Iodine		7553-56-2	1-2
Water		7732-18-5	Balance

4. First Aid Measures

Description of first aid measure

Inhalation

Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

Eye contact

Check remove contact lenses if possible to do. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Ingestion

Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. Fire Fighting Measures

Extinguishing media

Suitable extinguishing media

Water, foam, dry chemical powder, and carbon dioxide (CO₂).

Unsuitable extinguishing media

No information available.

Special hazards arising from the substance or mixture

Gives off irritating or toxic fumes (or gases) in a fire.

When heated to decomp it emits toxic fumes of hydrogen iodide, potassium oxides and various iodine compounds.

Special protective equipment and precautions for fire-fighters

Wear self-contained breathing apparatus (SCBA) for firefighting if necessary.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required.

Keep unprotected persons away.

In case of insufficient ventilation, wear suitable respiratory equipment.

Environmental precautions

Do not let product enter drains. Keep water away from release.

Stop or control the leak, if this can be done without undue risk.

Methods and materials for containment and cleaning up

Liquid form, collect for reclamation or absorb in vermiculite, dry sand, earth, or a similar material.

For small spills, add absorbent or sand, scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

7. Handling and Storage

Precautions for safe handling

Use personal protective equipment as required.

Avoid contact with eyes, skin and clothing.

Wash face, hands and any exposed skin thoroughly after handling.

In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Keep container in a cool, well-ventilated area.

8. Exposure Controls/ Personal Protection

Control parameters

Component	ACGIH (TLV)	NIOSH (REL)	OSHA (PEL)
Potassium iodide 7681-11-0	- TWA: 0.01 ppm	-	-
Iodine 7553-56-2	- TWA: 0.01 ppm (inhalable fraction and vapor) [2007] - STEL: 0.1 ppm (vapor fraction) [2007]	- Ceiling: 0.1 ppm (1 mg/m ³) - IDLH: 2 ppm	- Ceiling: 0.1 ppm (1 mg/m ³)

ACGIH:

American Conference of Governmental Industrial Hygienists

OSHA:

Occupational Safety and Health Administration

NIOSH IDLH:

The National Institute for Occupational Safety and Health - Immediately Dangerous to Life or Health

Appropriate engineering controls

Use ventilation, local exhaust ventilation.

Personal protective equipment

Respiratory protection

Use local exhaust or respirator masks.

Skin protection

Protective gloves.

Eye/ face protection

Wear safety goggles, safety glasses, face shield.

Body protection

Chemical suit, boots, aprons.

Work/ hygienic practices

Handle in accordance with good industrial hygiene and safety practice.

Avoid contact with the eyes and skin.

Wash hands before breaks and at the end of work.

Remove contaminated clothing and protective equipment before entering eating areas.

9. Physical and Chemical Properties

Appearance and colour	Liquid, dark brown
Odour	Weak odour
Odour threshold	Not available
pH	3.00-4.00
Melting point/ freezing point	Not available
Initial boiling point and boiling range	> 100 °C
Flash point	Not flammable
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Upper/ lower flammability or explosive limits	Not available
Vapour pressure	Not available
Vapour density	Not available
Specific density	1.00-1.05
Water solubility	Soluble in water
Partition coefficient: n-octanol/water log Pow	Not available
Auto ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available

10. Stability and Reactivity**Reactivity**

Not available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Will not occurred.

Conditions to avoid

Not available.

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

When heated to decomp it emits toxic fumes of hydrogen iodide, potassium oxides and various iodine compounds.

11. Toxicological Information**Numerical measures of toxicity**

Classification of health hazards

Acute toxicity

Acute oral toxicity

Not classified

Acute dermal toxicity	Not classified
Acute inhalation toxicity	Not classified
Skin corrosion/ irritation	H316 Causes mild skin irritation.
Serious eye damage/ eye irritation	H320 Causes eye irritation.
Respiratory or skin sensitization	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H317 May cause an allergic skin reaction.
Germ cell mutagenicity	All ingredients in this mixture are not germ cell mutagenicity effect.
Carcinogenicity	All ingredients in this mixture are not carcinogenicity effect.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Components	ACGIH	IARC	NTP	OSHA
Potassium iodide 7681-11-0	Not listed	Not listed	Not listed	Not listed
Iodine 7553-56-2	Not listed	Not listed	Not listed	Not listed

Reproductive toxicity	All ingredients in this mixture are not reproductive toxicity.
Specific target organ toxicity (single exposure)	All ingredients in this mixture are not specific target organ toxicity (single exposure) effect.
Specific target organ toxicity (repeated exposure)	H373 May cause damage to thyroid through prolonged or repeated exposure.
Aspiration hazard	All ingredients in this mixture are not aspiration hazard effect.

12. Ecological Information

Ecotoxicity

Component	Algae/ aquatic plants	Fish	Crustacea
Potassium iodide 7681-11-0	-	- Oncorhynchus mykiss (rainbow trout): LC ₅₀ 896 mg/L/96hr ^{Static}	-
Iodine 7553-56-2	-	- Oncorhynchus mykiss (rainbow trout): LC ₅₀ 0.53 mg/L/96hr ^{Static}	- Daphnia magna (water flea): LC ₅₀ 0.16 mg/L/48hr

Acute (short-term) aquatic hazard	Summation method: EC50 _{mix} : >100 mg/l = Classified not possible
Long-term aquatic hazard	Not classified
Persistence and degradability	Not available
Bio-accumulative potential	Not available
Mobility in soil	Not available
Other adverse effects	Not available
Environmental effects	Not available

13. Disposal Consideration

Waste treatment methods

Dispose in accordance with local/ national/ international regulations.

Contaminated packaging

Dispose of as unused product.

Dispose of container in accordance with local/ national/ international regulations.

14. Transport Information

International regulation

UN number	Not available
UN proper shipping name	Not available
Transport hazard class	Not available
Packaging group	Not available
Environmental hazards	Not available
Transport in bulk	Not available
Special precautions for user	Not available

15. Regulatory Information

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

Thailand

Notification of Ministry of Industry Subject: This chemical not listed on the hazardous List of hazardous substances B.E. 2556 substances inventory. (2013) (Annex 5.1)

Thailand

Notification of Ministry of Labour Subject: List of hazardous chemicals This chemical not listed on the hazardous chemicals inventory. B.E. 2556 (2013)

Chemical safety assessment

For this product a chemical safety assessment was not carried out.

16. Other Information

Created September 15, 2023

Reference

- 1) GHS Classification Data from NIH (National Institutes of Health) Web Site: <https://pubchem.ncbi.nlm.nih.gov/>
- 2) <https://echa.europa.eu/home>
- 3) <http://www.inchem.org/>
- 4) <https://www.osha.gov/chemicaldata/index.html>
- 5) <https://cfpub.epa.gov/ecotox/>
- 6) Thailand: Notification of Ministry of Industry Subject: List of hazardous substances B.E. 2556 (2013) (Annex 5.1)
- 7) Thailand: Notification of Ministry of Labour Subject: List of hazardous chemicals B.E. 2556 (2013)

NOTE:

This information herein is given in good faith, but no warranty, express or implied, is made. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used in caution. Although certain hazards are described herein. We cannot quarantine that These are the only hazards which exist.