

9. Physical and chemical properties

Physical state: Tube containing powder reagent
1.1 g x 50 tubes/kit (5 tubes per one aluminum laminated packaging)
Color: White (powder), semi-transparent (polyethylene tube)
Odor: Characteristic odor
pH: 2

Melting point, boiling point, flash point, ignition point, lower explosion limit, vapor pressure, density, relative density, solubility, Pow, kinetic viscosity: not available as a mixture

10. Stability and reactivity

Avoid leaving in a place where high temperature, humid or under direct sunlight. Stable under normal use conditions and no dangerous reactions under specific conditions are expected. No information on hazardous decomposition product is available.

11. Toxicological information

No data on mixture is available. Data on each substance are shown.

Iodic Acid:

Skin corrosion/ irritation:

Since pH of aqueous solution is about 0.8, and causes severe irritation to the skin, it is classified into category 1B.

Serious eye damage/ eye irritation:

Since pH of aqueous solution is about 0.8, and causes corrosivity to the eyes, it was classified into category 1.

Polyethylene:

Acute toxicity:

Oral: Rat LD₅₀ > 7,950 mg/kg (used 7,950 mg/kg for the calculation of ATEmix below)

Carcinogenicity: IARC Group 3 (not classifiable as to carcinogenicity to humans).

Other data: Not available

GHS classifications as a mixture are shown below.

[Skin corrosion/ irritation]

Classified as Category 1 (Danger, causes severe skin burns and eye damage.). pH of mixture is less than 2.

[Serious eye damage/ eye irritation]

Classified as Category 1 (Danger, causes serious eye damage.). pH of mixture is less than 2.

[Acute toxicity(Oral, Dermal, Inhalation)], [Respiratory or skin sensitization], [Germ cell mutagenicity],

[Carcinogenicity], [Reproductive toxicity], [Specific target organ toxicity (single exposure)],

[Specific target organ toxicity (repeated exposure)], [Aspiration hazard]

Classification is not possible because of data lack.

12. Ecological information

No data on mixture is available. Data on each substance are shown.

Iodic acid and Polyethylene: No eco-toxicological information is available.

GHS classifications as a mixture are shown below.

[Hazardous to the aquatic environment, short-term (acute)],

[Hazardous to the aquatic environment, long-term (chronic)]

Classification is not possible because of data lack.

[Harmful effects on the ozone layer]:

Classification is not possible because each of the substances is not described in Annex to Montreal Protocol.

13. Disposal considerations

Liquid waste after the measurement is less than pH 2.

3. Composition/ information on ingredients

Discrimination of single substance or mixture: Mixture

Reagent name	K-1 reagent		
Chemical name	Iodic Acid	Other (not regulated)	Polyethylene
Content	1 – 4.9 %	5 – 9.9 %	90 – 99 %
Chemical formula	HIO ₃	–	(C ₂ H ₄) _n
METI No. (reference number under CSCL in Japan)	(1)-367	–	(6)-1
CAS No.	7782-68-5	–	9002-88-4

4. First-aid measures

If reagents or developed sample;

Enter in eyes: Immediately rinse eyes with water for more than 15 minutes followed by the treatment by an ophthalmologist.

Contact with skin: Immediately wash out contaminated site with plenty of water.

Enter into mouth: Immediately rinse mouth with plenty of water.

If any symptoms appear after above measures, immediately get medical advice or treatment.

Especially in case ingested reagents or test solutions, immediately drink plenty of water or milk and immediately get medical advice or treatment.

5. Fire-fighting measures

Extinguishing methods: Cut off ignition sources and extinct by a suitable media.

Suitable extinguishing media: Water (mist), powder, carbon dioxide and dry sand.

6. Accidental release measures

In case of outdoor use: Avoid spill of reagents and waste solutions.

In case of indoor use: If spilled on a table or floor, wipe off immediately spilled reagents and dispose of them.

Concentrated solutions should not be released into sewer or rivers.

7. Handling and storage

Handling: K-1 reagent is pH2. Avoid eyes contact, skin contact, ingestion and inhalation of reagents.

Especially for outdoor use, ensure to bring back reagents, liquid waste after the measurement and used containers.

Storage: Avoid direct sunlight and store in a well-ventilated, dry and dark place at room temperature.

8. Exposure controls and personal protection

Administrative control level

Working environment standard: Not established

Occupational exposure limits

Japan Society for Occupational health: Not established

ACGIH (TLVs): Not established

OSHA (PEL): Not established

Protective equipment: Recommend to wear protective glasses and gloves

Always dispose according to local regulations.

14. Transport information

In addition to precautionary measures regarding handling and storage, avoid rough handling so as not to break containers. It is recommended to ship by air because under high temperature for long period may lead to deterioration.

UN classification and number: 3085
Proper shipping name: Oxidizing solid, corrosive, n.o.s.
UN classification: Class 5.1 (Oxidizing substances)
Packing group: III
Civil Aeronautics Act: Same as above. Applicable for Excepted Quantities of Dangerous Goods.
Fire Service Act: Not applicable
Total weight of the product: ca. 140 g/kit

15. Regulatory information

Poisonous and Deleterious Substances Control Act: Not applicable
PRTR Act: Not applicable
Industrial Safety and Health Act: Applicable
This product contains more than 1% of Iodic Acid.
: "Cabinet order, article 18, shall be indicated the Name of the substances, #2"
: "Cabinet order, article 18-2, shall be notified the Name of the substances, #2"

Waste Disposal and Cleaning Act: Applicable
Applicable to the Special Controlled Industrial Waste of the Act, because pH of liquid waste after measurement is less than 2.

16. Other information

Reference literature

15,911 no Kagaku Shouhin, The Chemical Diary Co., Ltd. (2011)
Safety Data Sheet No.20033, KANTO CHEMICAL CO., INC. (2017.3.1)
Material Safety Data Sheet No.051110033, TOSOH CORPORATION (2004.07.09)
Koukuu Kikenbutsu Yusou Houreisyu, Ed. MLIT, HOUBUN SHORIN CO., LTD.(2019)
JIS Z 7252:2019 Classification of chemicals based on "Globally Harmonized System of Classification and Labelling of Chemicals (GHS)" (Japanese Industrial Standards Committee)
JIS Z 7253:2019 Hazard communication of chemicals based on GHS-Labeling and Safety Data Sheet (SDS) (Japanese Industrial Standards Committee)
UN GHS (tentative translation, forth revised version), GHS Kankei Syocho Renraku Kaigi (2011)
Ministry of Economy, Trade and Industry, GHS Classification Guidance for Enterprises 2013 Revised Edition (2013)

NOTE) This information is not always exhaustive and use with care.
This data sheet only provides information but any description cannot be warranted.
Descriptions may possibly be changed because of new findings or modification of the current knowledge.
Precautions only cover normal handling.
This English SDS is prepared in the cooperation with the Chemicals Evaluation and Research Institute (CERI), Japan