


Safety Data Sheet

1. Chemical product and Company Information

Name of chemical	: Ion Test Paper Iron Check
Supplier's name, address and phone number	
Company	: Toyo Roshi Kaisha, Ltd.
Address	: Hibiya-Kokusai BLDG 5F, 2-2-3, Uchisaiwaicho, Chiyoda-ku, Tokyo, 100-0011 Japan
Section in charge	: Quality Assurance Division
Phone	: +81-3-5521-2176
Fax	: +81-3-5521-2177
Mail address	: trk-hinsho@advantec.co.jp
Recommended application	: Fe ²⁺ measurement (Effective range: 0~1,000mg/L)
Use restrictions	: In case of other purpose of use, please contact us to discuss.

2. Hazard Summary

GHS classification of chemicals	
Physical hazard	: Not classified.
Human health hazard	
Serious eye damage and eye irritation:	Category 2B
Specific target organ toxicity - Single exposure	: Category 1 Nervous system
Specific target organ toxicity - Repeated exposure	: Category 1 Teeth, Respiratory system
Environmental hazard	: Classification not possible.
GHS Label element	
Pictograms or symbols	: 
Signal words	: Warning.
Hazard statements	: May be harmful if swallowed. Harmful in contact with skin. Causes skin irritation. Causes eye irritation.
Precautionary statements	
Safety measure	: Wash hands thoroughly after handling. When handling, wear protective gloves if necessary. Avoid release to the environment. Avoid breathing dust, fume, gas, mist, and vapours.
First aid measures	: When feeling ill, contact a doctor. In case of skin contact, wash with plenty soap and water. In case of skin irritation, consult with a physician for treatment. In case of eye contact, rinse cautiously with water. Remove contact lenses, if present and easy to do.

Continue rinsing.

In case eye irritation continues, consult with a physician for treatment.

In case of inhalation, and if breathing is difficult, remove person to fresh air and keep rest in a position comfortable for breathing.

When any symptom regarding breathing appear, contact a doctor.

3. Composition and Information on ingredients

Chemical substances/Mixtures : Mixtures

Chemical name or general name : Test Paper

Ingredients and Concentration or concentration range

: Cellulose (CAS No. 9004-34-6)

2,2'-Bipyridyl (CAS No. 366-18-7)

Phenolphthalein (CAS No. 77-09-8)

Methyl orange (CAS No. 547-58-0)

Reference Number in Gazetted List in Japan

Law Concerning the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.

: (5)-3723 2,2'-Bipyridyl

(9)-1152 Phenolphthalein

(5)-4278 Methyl orange

Japan's Industrial Safety and Health Law : Not applicable.

4. First Aid Measures

Inhalation : Not applicable.

Skin contact : Immediately rinse the adhesion area and/or contact area with a copious amount of clean running water.

Eye contact : Immediately wash thoroughly with clean running water.

In case of abnormality, consult with a physician.

Ingestion : In case of abnormality, consult with a physician.

5. Fire Fighting Measures

Appropriate extinguishing media : Plenty of water (spray), dry chemicals, carbon dioxide, foam chemicals, and halogen media.

Unacceptable extinguishing media : No data available.

6. Accidental Release Measures

Personal precautions, Protective equipment and

emergency procedures : No data available.

Precautions for environment : No data available.

Containment and purification procedures and equipment

: No data available.

7. Handling and Storage

Handling	: Be careful with the handling of firearms.
Storage	: In order to prevent the alteration and/or deterioration caused by moisture absorption, seal the container tightly and store the container at a cool and dark place. Do not store with oxides and/or organic peroxides. If a total stored amount exceeds 1,000 kg, follow Fire Defense Law (specific combustible material : rag and paper waste).

8. Exposure controls / Personal protection

Acceptable concentration	Japan Society for Occupational Health : No data available.
ACGIH	: No data available.
Facility provision	: Take as needed.
Protective equipment	: Use appropriate protective tools if necessary.

9. Physical and Chemical Properties

Physical state	: Solid, Paper with a smooth surface.
Color	: White, yellow-green.
Odor	: None.
Melting point / Freezing point	: No data available.
Boiling point or initial boiling point and Boiling range	: No data available.
Flammability	: Yes.
Lower limit and Upper limit of explosion/ Flammable limit	: Not applicable.
Flash point	: Not applicable.
Spontaneous firing point	: Not applicable.
Decomposition temperature	: Not applicable.
pH	: No data available.
Kinematic viscosity	: Not applicable.
Solubility	: No data available.
n-octanol / water partition coefficient	: No data available.
Steam pressure	: No data available.
Density or relative density	: No data available.
Relative gas density	: Not applicable.
Particle characteristics	: No data available.

10. Stability and Reactivity

Reactivity	: Stable under normal handling.
Chemical stability	: Stable under normal handling.
Possibility of hazardous reactions	: No data available.
Conditions to avoid	: Direct sunshine, ultraviolet, wetting, high temperature, high humidity, open-air storage.
Incompatible materials	: Oxidizers, strong bases.
Hazardous decomposition products	: Carbon monoxide, Carbon dioxide, Sulfur oxide, Bromine, Hydrogen bromide, and Nitrogen oxides, Chlorine, Hydrochloric acid.

11. Toxicological Information

Acute toxicity

Oral

: Not classified.

Due to added result, acute toxicity estimated value (ATE) of above component in composite is determined.

(As an ingredient)

Category 3 Harmful if swallowed.

Rat oral LD₅₀ = 100 mg / kgMouse oral LD₅₀ = 330 mg / kg (2,2'-Bipyridyl)Rat oral LD₅₀ = 60 mg / kgRabbit oral LD₅₀ = 150 mg / kg (Methyl orange)

Dermal

: Not classified.

Due to added result, acute toxicity estimated value (ATE) of above component in composite is determined.

(As an ingredient)

Category 3 In case to contact skin

Rat skin absorption LD₅₀ => 400 mg / kg

(2,2'-Bipyridyl)

Inhalation: gas

: Not classified.

Inhalation: vapour

: Not classified.

Inhalation: dust, mist

: Classification not possible due to lack of data.

Skin corrosion / Irritation

: Not classified.

Serious eye damage and eye irritation

: Category 2B

(As an ingredient)

Category 2B Causing irritation to human's eyes

Middle to medium level irritation to rabbits' eyes.

(2,2'-Bipyridyl)

Respiratory / Skin sensitization

: Classification not possible due to lack of data.

Germ cell mutagenicity

: Classification not possible due to lack of data.

(As an ingredient)

Category 2 Concern of suspicious disease.

It is mentioned as "negative" in the chromosomal

aberration test, using bone marrow of mouse by

in vivo mutagenicity test of somatic cells, but

mentioned as "positive" in the six micronucleus test

using red blood cells.

(Phenolphthalein)

Carcinogenicity

: Classification not possible due to lack of data.

(As an ingredient)

Category 2 IARC: Group 2B carcinogen

(Substance that has high possibility of carcinogeni-

-city in human body with insufficient evidence)

(Phenolphthalein)

Reproductive toxicity

: Classification not possible due to lack of data.

(As an ingredient)

Category 1B Risk of adverse effect to reproductive

ability or to fetus.

(Phenolphthalein)

Specific target organ toxicity (Single exposure)

: Category 1

(As an ingredient)

Category 2 Potential risk of damage to nervous system. It is reported that oral dosage to rats with (LD50: 100mg/kg) causes inhibiting behavior or lack of order in muscles and 50-250 mg/kg of oral dosage causes tremulousness or light drooping.

(2,2'-Bipyridyl)

Specific target organ toxicity (Repeated exposure)

: Category 1

(As an ingredient)

Category 1 Intestinal disorder by long-time or repeated exposure. (Phenolphthalein)

Category 2 Potential risk of damage to kidney by long-time or repeated exposure.

It is reported that oral dosage in drinking water to rats with (7,13,35.6 mg/kg/day) for 90 days causes kidney problem that is, calcium stone and nephrosclerosis in some of the rats. It is also reported that thickening in Bowman's glomerular sac or brownish pigmentation on tubular epithelium is expressed in some of the rats.

(2,2'-Bipyridyl)

Aspiration hazard

: Classification not possible due to lack of data.

12. Ecological Information

Ecotoxicity

Hazardous to the aquatic environment (acute)

: Classification not possible due to lack of data.

Hazardous to the aquatic environment (chronic)

: Classification not possible due to lack of data.

Persistence and Degradability

: No data available.

Bioaccumulative potential

: No data available.

Mobility in soil

: No data available.

Ozone layer hazard

: Classification not possible due to lack of data.

13. Disposal Considerations

Dispose in accordance with federal, state and local regulations.

Just like disposal of general industrial waste, ask for industrial waste disposer accepted by prefectural governors or for a local public agency for disposal.

When incinerating the material, use the specific incineration facility. Take appropriate procedure that satisfies Clean Air Act, Waste Disposal and Public Cleaning Law, and Clean Water Law. (We recommend disposing the material as industrial waste.)

14. Transport Information

Regulatory information and local regulations

: Fire Defense Law under flammable objects.

15. Regulatory Information

Fire Service Act : Article 9-4 (Standard for storage and handling of hazardous material with less than specified amount) Article 1-12 on regulations of hazardous materials, and Group 4 specific flammable materials (Rag and paper waste. If a total amount is 1,000 kg, follow Fire Defense Law. If a total amount is less than 1,000 kg, follow the regulations defined by municipal ordinance for storage and handling of the material).

Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof : Class II Designated Chemical Substances (Cabinet Order No.74)

Phenolphthalein

16. Other information

Handling of written contents

Contents of this data sheet are based on materials, information, and data acquirable at this point and are subject to revision due to new knowledge.

In addition, contents such as contained amount, physical and chemical properties, and hazards identification are not subject of any guarantee. These precautions are applied only during standard handling. If the material is used in a special way, take appropriate safety measures that correspond to actual applications and usages.

Each user is responsible to take appropriate measures with due consideration of contents in this sheet.

Please note that this Material Safety Data Sheet is created according to Japanese law.

List of references

- Classification method of chemicals based on GHS(JIS Z 7252: 2019)
 - Hazard communication of chemicals based on GHS - Labelling and Safety Data Sheet (SDS) (JIS Z 7253: 2019)
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