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Toyo Roshi Kaisha, Ltd. Issued: September 27, 2000 Revised: December 3, 2019

Safety Data Sheet

1. Chemical product and Company Information

Reference No.: MC-0026J-15

Name of chemical : Ion Test Paper Chrome Check, Chrome Check A

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 : Cr⁶⁺ measurement

(Chrome Check Effective range: $0\sim200$ mg/L) (Chrome Check A Effective range: $0\sim50$ mg/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 : Not classified.

Environmental hazard : Classification not possible.

GHS Label element : None.

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) 1,5-diphenylcarbonohydrazine (CAS No. 140-22-7) Malonic acid (CAS No. 141-82-2) 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.

: (3)-2202 1,5-diphenylcarbonohydrazine

(2)-912 Malonic acid (9)-1152 Phenolphthalein (5)-4278 Methyl orange

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

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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.

: Immediately wash thoroughly with clean running water. In case of abnormality, Eye contact

consult with a physician.

: The patient must drink a sufficient amount of water or salt water and then spit it Ingestion

out. Immediately consult with a physician.

5. Fire Fighting Measures

Appropriate extinguishing media : Plenty of water (spray), dry chemicals, carbon dioxide,

foam chemicals, and halogen media.

: No data available. Unacceptable extinguishing media

6. Accidental Release Measures

Personal precautions, Protective equipment and

emergency procedures : No data available. : No data available. Precautions for environment Containment and purification procedures and equipment

: No data available.

7. Handling and Storage

Handling : Be careful in handling fire.

: In order to prevent the alteration and/or deterioration Storage

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. Reference No.: MC-0026J-15

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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. pН : 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 : Strong oxidizers.

Hazardous decomposition products : Carbon monoxide, Sulfur oxides, Nitrogen oxides.

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 $LD_{50} = 60 \text{ mg} / \text{kg}$

Rabbit oral $LD_{50} = 150 \text{ mg} / \text{kg}$ (Methyl orange)

Category 4 Harmful if swallowed.

Rat oral $LD_{50} = 1,310 \text{ mg/kg}$ (Malonic acid) Although the oral lethal dose in rats is mentioned as >1,000 mg/kg, the category cannot be classified. (Phenolphthalein)

Dermal : Not classified.

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Inhalation: gas : Not classified.

(As an ingredient)

Rat dermal $LC_{50} = 8,90mg / m^3 / 1H$ (Malonic acid)

Inhalation: vapour : Not classified.

Inhalation: dust, mist : Classification not possible due to lack of data.

Skin corrosion / Irritation : Classification not possible due to lack of data.

Serious eye damage and eye irritation : Classification not possible due to lack of data.

Respiratory / Skin sensitization : Classification not possible due to lack of data.

(As an ingredient)

In humans allergic symptoms can occur as skin irritation or fixed drug eruptions that appear on the

same body part repeatedly, causing skin

hyperpigmentation; however, it is unclassifiable due to insufficient data. (Phenolphthalein)

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 carcinogenicity 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)

: Classification not possible due to lack of data.

(As an ingredient)

Oral ingestion may cause nausea, vomiting or stomach ache but cannot be classified due to lack of data. (Methyl orange)

Specific target organ toxicity (Repeated exposure)

: Classification not possible due to lack of data.

(As an ingredient)

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

Aspiration hazard : Classification not possible due to lack of data.

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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

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture etc. Japanese Chemical Substances Control Act.

: Existing Chemical Substances(3)-2202 1,5-diphenylcarbonohydrazine

Existing Chemical Substances(2)-912 Malonic acid
Existing Chemical Substances(9)-1152 Phenolphthalein
Existing Chemical Substances(5)-4278 Methyl orange

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

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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)