

Safety Data Sheet

Date of issue : 10 Sep. 1997
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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name : Colormetry reagent cartridge CMU-H2
 Company Name : MIURA CO.,LTD.
 Address : 7 Horie, Matsuyama, Ehime, 799-2696 Japan
 Contact point : SDS Section
 Telephone number :
 Facsimile number :
 Emergency contact :
 Recommended use and restrictions on use : Chemical for analytical use
 Product code : S199-003-5120-0
 SDS No. : KMSDS-00021

2. HAZARDS IDENTIFICATION

GHS Classification
 Health hazards

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 1 (central nervous system, kidneys, heart, respiratory system) Category 3 (Respiratory tract irritation)
Specific target organ toxicity (repeated exposure)	Category 1 (central nervous system, heart, respiratory system)

Label elements
 Pictogram or symbol



Signal word : Danger
 Hazard statements : Causes skin irritation
 May cause an allergic skin reaction
 Causes serious eye irritation
 May cause respiratory irritation
 Causes damage to organs (central nervous system, kidneys, heart, respiratory system)
 Causes damage to organs through prolonged or repeated exposure (central nervous system, heart, respiratory system)

Precautions
 [Prevention] : Do not disassembly the reagent cartridge.
 Do not breathe dust/fume/gas/mist/vapours/spray.
 Wash hands and any exposed skin thoroughly after handling.
 Rinse mouth.
 Do not eat, drink or smoke when using this product.
 Use only outdoors or in a well-ventilated area.
 Contaminated work clothing should not be allowed out of the workplace.
 Wear protective gloves, protective clothing and either eye protection or face protection.

[Response] : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
 IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. 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. Drink plenty of water or milk. Do NOT induce vomiting. Get immediate medical advice/attention.
 IF exposed or concerned: Call a POISON CENTER/doctor. Get medical advice/attention if you feel unwell.

[Storage]	: Store in a well-ventilated place. Store in a cool and dark place. Store locked up. Keep container tightly closed.
[Disposal]	: Dispose of contents/container by entrusting to an industrial waste disposer licensed by the prefectural governor.
Country/area information	: Prepared for Japan

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance or Mixture	: Mixture
Chemical name or commercial name	: Colormetry reagent cartridge CMU-H2

Ingredient name	Chemical formula	Concentration (wt.%)	CAS No.	Gazette Notification	
				ENCS No.	ISHL No.
Triethanolamine	$N(C_2H_4OH)_3$	20 ~ 29	102-71-6	(2)-308	–
Ethylene Glycol	$(CH_2OH)_2$	67.4	107-21-1	(2)-230	–
Eriochrome Black T	$C_{20}H_{12}O_7N_3SNa$	Confidential	1787-61-7	(5)-2113	–
Catalyst	Confidential	Confidential	Confidential	Confidential	–

Impurities and stabilizing additives that contribute to the classification	: None
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4. FIRST - AID MEASURES

Inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
Skin contact	: Wash immediately with plenty of soap and water for at least 15 minutes. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs get medical advice/attention.
Eye contact	: Rinse cautiously with clean running water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists get medical advice/attention.
Ingestion	: Do NOT induce vomiting. Rinse mouth. Drink plenty of water or milk. Get immediate medical advice/attention.
Expected immediate and delayed symptoms	: Causes skin irritation May cause an allergic skin reaction Causes serious eye irritation May cause respiratory irritation Causes damage to organs (central nervous system, kidneys, heart, respiratory system) Causes damage to organs through prolonged or repeated exposure (central nervous system, heart, respiratory system)

5. FIRE - FIGHTING MEASURES

Extinguishing media	: Water, foam, carbon dioxide, dry chemical powder
Unsuitable extinguishing media	: No information available
Specific hazards	: Fire may produce irritating and/or toxic gases.
Special fire-fighting methods	: Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area.
Protective actions for fire-fighters	: Fire-fighters should wear appropriate protective equipment and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Wear proper protective equipment (refer to "8. EXPOSURE CONTROLS/PERSONAL PROTECTION") and avoid eye and skin contact.
Work from windward, and retract the people downwind.
Deny unnecessary entry other than the people involved by, for example, using a rope.
Remove all ignition sources.
- Environmental precautions : Use caution: Do not discharge leaked products into rivers, etc. and adversely affect the environment. Do not discharge waste water that contains this product without it being properly treated to suit the environment.
For other ecological information, refer to Section 12.
- Methods and materials for containment and cleaning up : Absorb dry soil, sand or non-flammable matter, or collect in an empty container which can be covered and sealed before implementing disposal processing.
Neutralize the spilled area with dilute acid. Then wash away with plenty of water.
- Measures for preventing secondary accidents : Clean contaminated objects and polluted areas thoroughly observing environmental regulations.
Prevent the substance from flowing into waterways, sewers, basement, or confined areas.
Remove nearby sources of ignition and prepare extinguishing media.

7. HANDLING AND STORAGE

- Handling
Technical measures : Do not use this product for other than the intended use.
Apply equipment measures described in "8. EXPOSURE CONTROLS/PERSONAL PROTECTION", and wear protective equipment.
Do not disassembly the product.
- Safety handling precautions : Avoid contact with skin, eyes, and clothing.
Wear personal protective equipment.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash hands and any exposed skin thoroughly after handling.
Rinse mouth.
Do not eat, drink or smoke when using this product.
- Storage
Safe storage conditions
Storage conditions : Protect from sunlight. Store locked up.
Store at temperatures not exceeding 40°C/104°F.
- Packaging material : Packaging (Polyethylene)
- Incompatible substances or mixtures : Refer to "10. STABILITY AND REACTIVITY".

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical name or common name	Administrative Control Level (Ministry of Health, Labour and Welfare)	Occupational Exposure Limits	
		Japan Society for Occupational Health	ACGIH
Triethanolamine	—	—	TWA: 5 mg/m ³ , STEL: —
Ethylene Glycol	—	—	STEL C: 100 mg/m ³ (H)
Eriochrome Black T	—	—	—
Catalyst	—	—	—

- Engineering controls : Provide the safety shower facility, and hand- and eye-wash facility close to the site of handling. Further, their position should be clearly marked.

Personal protective equipment	
Respiratory protection	: Protective mask
Hand protection	: Protective gloves
Eye protection	: Eye protection (safety goggles) or face protection
Skin and body protection	: Protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color etc.)	: Deep bluish purple liquid
Odor	: Slight amine smell
pH	: 10.0 (1% solution)
Melting point/freezing point	: No data available
Boiling point, initial boiling point, and boiling range	: No data available
Flash point	: 122°C (Cleveland Open Cup)
Explosive limits	: 3.2 – 15.3vol% (Ethylene Glycol) 1.3 - 8.5vol% (Triethanolamine)
Vapor pressure	: No data available
Vapor density (air = 1)	: No data available
Specific gravity (Relative density)	: 1.1
Solubility	: Water : Soluble
n-Octanol/water partition coefficient (log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Odor threshold	: No data available
Evaporation rate (butyl acetate = 1)	: No data available
Flammability (solid, gas)	: Not applicable
Viscosity	: No data available

10. STABILITY AND REACTIVITY

Stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: May cause ignition on contact with strong oxidizing substances. May ignite at high temperature. Reacts with acidic substances and generates heat.
Conditions to avoid	: Direct sunlight, Heating, High temperature, Fire, Spark
Incompatible materials	: Acidic substances, Oxidizing substances
Hazardous decomposition products	: No data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity: Oral	: ATEmix > 2000 (Out of category)
Dermal	: ATEmix > 2000 (Out of category)
Inhalation (gas)	: Inhalation gas is not possible, as it is liquid under GHS definitions, and thus not applicable.
Inhalation (vapor)	: Not possible to classify because of insufficient data.
Inhalation (mist)	: Not possible to classify because of insufficient data.
Skin corrosion/irritation	: Causes skin irritation (category 2)
Serious eye damage/irritation	: Causes serious eye irritation (category 2A)
Respiratory or skin sensitization	: Respiratory sensitization: Not possible to classify because of insufficient data. Skin sensitization: May cause an allergic skin reaction (category 1)
Germ cell mutagenicity	: Not possible to classify because of insufficient data.
Carcinogenicity	: Not possible to classify because of insufficient data.
Reproductive toxicity	: Not possible to classify because of insufficient data.
Specific target organ toxicity (single exposure)	: Causes damage to organs (central nervous system, kidneys, heart, respiratory system) (category 1) May cause respiratory irritation (category 3)

Specific target organ toxicity (repeated exposure)	: Causes damage to organs through prolonged or repeated exposure (central nervous system, heart, respiratory system) (category 1)
Aspiration hazard	: Not possible to classify because of insufficient data.

12. ECOLOGICAL INFORMATION

Ecotoxicity	: Acute : Out of category Chronic: Out of category
Persistence and degradability	: No information available
Bioaccumulative potential	: No information available
Mobility in soil	: No information available
Hazardous to the ozone layer	: Not possible to classify because of insufficient data.

13. DISPOSAL CONSIDERATIONS

Waste from residues	: Dispose of in accordance with national/local laws and regulations.
Contaminated containers and contaminated packaging	: Dispose of in accordance with national/local laws and regulations.

14. TRANSPORT INFORMATION

International regulations	
UN Number	: Not applicable to UN Number
UN Proper Shipping Name	: -
UN Class	: -
Packing group	: -
Marine pollutant	: Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	: Noxious Liquid (Cat. Y)
Domestic regulations	
Information on road transport regulation	: As according to the regulation of the Fire Service Act
ERG GUIDE No.	: -
Special precautions	: Do not throw containers. Check for leakage from containers. Load so as to prevent containers from falling, dropping, and damage, and strictly execute the collapse prevention of loads. Refer to "6. ACCIDENTAL RELEASE MEASURES", "7. HANDLING AND STORAGE", and "8. EXPOSURE CONTROLS/PERSONAL PROTECTION" to adopt the most appropriate method.

15. REGULATORY INFORMATION

Poisonous and Deleterious Substances Control Act	: Not applicable
Pollutant Release and Transfer Register Law	: Not applicable
Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.	: Priority Assessment Chemical Substances (Triethanolamine, Ethylene Glycol)
Industrial Safety and Health Act	: Dangerous or Harmful Substances Subject to Be Indicated their Names, etc. (Triethanolamine, Ethylene Glycol) Dangerous Articles and Harmful Substances Whose Names, etc. Should Be Notified (Triethanolamine, Ethylene Glycol)
Fire Service Act	: Category IV, Class III petroleum, dangerous grade 3 water-soluble fluid
Act on Prevention of Marine Pollution and Maritime Disaster	: Noxious liquid substance (Triethanolamine, Ethylene Glycol)

16. OTHER INFORMATION

General Inquiry Point	: MIURA CO.,LTD. SDS Section Telephone number : +81-89-979-7123 Facsimile number : +81-89-979-7101
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References

JIS Z 7253 (2012), Japanese Standards Association
JIS Z 7252 (2014), Japanese Standards Association
Recommendations on the transport of dangerous goods-Model Regulations 17th revised edition, UN
Recommendations on the transport of dangerous goods-Manual of Tests and Criteria 5th revised edition, UN
Emergency Response Guidebook-Application to the Container Yellow Card Labeling System 4th revised
edition, Japanese Standards Association
“Chemical Database Search Service”, Japan Chemical Database Ltd.
International Chemical Safety Cards (ICSC) Japanese version
Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 5th revised edition, UN
National Institute of Technology and Evaluation (NITE), HP

The information in this Safety Data Sheet (SDS) is based on the latest information and data concerning revision date or preparation date. However, all information about the product is not covered in its entirety, and therefore, please handle with care. The precautions are intended for normal handling; therefore, please refrain from using for specialized applications. In addition, the descriptions of the content, physical/chemical properties, hazards, etc., are for nothing more than providing information, without any warranty of any kind.

End of Safety Data Sheet