


1. Identification

Product identifier	Colormetry Reagent Cartridge CMU-G2	
Other means of identification	Not available.	
Recommended use	Miscellaneous	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	Miura Co.,Ltd	
Address	7 Horie-cho Matsuyama, Ehime 799-2696 Japan	
Telephone	+81-89-979-7123	
E-mail	Not available.	
Emergency phone number	Not available.	
Supplier	Miura America Co., Ltd. 2200 Steven B Smith Blvd Rockmart, GA 30153 US Emergency Phone: 1-800-424-9300 (CHEMTREC) Fax: 678-685-0930 Phone: 678-929-5901 Toll Free: 855-825-4547	

2. Hazard identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
	Specific target organ toxicity, repeated exposure	Category 2
Environmental hazards	Not classified.	
WHMIS 2015 defined hazards	Not classified	
Label elements		
Signal word	Danger	
Hazard statement	Harmful if swallowed. May cause damage to organs through prolonged or repeated exposure.	
Precautionary statement		
Prevention	Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe mist or vapor.	
Response	IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. Get medical attention if you feel unwell.	
Storage	Store locked up.	
Disposal	Dispose of container in accordance with local, regional, national and international regulations.	
WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC)	None known	
WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC)	None known	
Hazard(s) not otherwise classified (HNOC)	None known.	
Supplemental information	None.	

3. Composition/Information on ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
Ethylene glycol		107-21-1	80 - 100 *
Triethanolamine		102-71-6	1 - 5 *

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments *CANADA GHS: The exact percentage (concentration) of composition has been withheld as a trade secret.
US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

4. First-aid measures

Inhalation	If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
Skin contact	Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.
Eye contact	Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.
Ingestion	Rinse mouth. Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious or is convulsing. Obtain medical attention.
Most important symptoms/effects, acute and delayed	Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Symptoms may be delayed. Treat patient symptomatically.
General information	Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire-fighting measures

Suitable extinguishing media	Dry powder. Water fog. Foam. Carbon dioxide.
Unsuitable extinguishing media	Not available.
Specific hazards arising from the chemical	Not available.
Special protective equipment and precautions for firefighters	Firefighters should wear full protective clothing including self-contained breathing apparatus.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.
Hazardous combustion products	May include and are not limited to: Oxides of carbon.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not breathe mist or vapor. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Stop leak if you can do so without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Never return spills to original containers for re-use. Clean surface thoroughly to remove residual contamination. Following product recovery, flush area with water. Prevent entry into waterways, sewer, basements or confined areas. For waste disposal, see section 13 of the SDS.
Environmental precautions	Do not discharge into lakes, streams, ponds or public waters.

7. Handling and storage

Precautions for safe handling	Avoid contact with eyes, skin and clothing. Wear appropriate personal protective equipment. Do not breathe mist or vapor. Use only with adequate ventilation. Avoid contact during pregnancy/while nursing. Avoid prolonged exposure. Observe good industrial hygiene practices. Wash thoroughly after handling.
Conditions for safe storage, including any incompatibilities	Store locked up. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children.

8. Exposure controls/Personal protection

Occupational exposure limits

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Ethylene glycol (CAS 107-21-1)	Ceiling	100 mg/m ³
Triethanolamine (CAS 102-71-6)	TWA	5 mg/m ³

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	Ceiling	100 mg/m ³	Aerosol.
		50 ppm	Vapor.
	STEL	20 mg/m ³	Particulate.
	TWA	10 mg/m ³	Particulate.
Triethanolamine (CAS 102-71-6)	TWA	5 mg/m ³	

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	STEL	10 mg/m ³	Aerosol, inhalable.
		50 ppm	Vapor fraction
	TWA	25 ppm	Vapor fraction
Triethanolamine (CAS 102-71-6)	TWA	5 mg/m ³	

Canada. New Brunswick OELs: Threshold Limit Values (TLVs) Based on the 1991 and 1997 ACGIH TLVs and BEIs Publication (New Brunswick Regulation 91-191), as amended

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	Ceiling	100 mg/m ³	Aerosol.
Triethanolamine (CAS 102-71-6)	TWA	5 mg/m ³	

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	STEL	10 mg/m ³	Aerosol, inhalable.
Triethanolamine (CAS 102-71-6)	TWA	3.1 mg/m ³	
		0.5 ppm	

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	Ceiling	127 mg/m ³	Vapor and mist.
		50 ppm	Vapor and mist.
Triethanolamine (CAS 102-71-6)	TWA	5 mg/m ³	

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	Ceiling	100 mg/m ³	Aerosol.
Triethanolamine (CAS 102-71-6)	15 minute	10 mg/m ³	
	8 hour	5 mg/m ³	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	STEL	10 mg/m ³	Aerosol, inhalable.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
		50 ppm	Vapor fraction
	TWA	25 ppm	Vapor fraction
Triethanolamine (CAS 102-71-6)	TWA	5 mg/m3	
Biological limit values	No biological exposure limits noted for the ingredient(s).		
Exposure guidelines	Chemicals listed in section 3 that are not listed here do not have established limit values for ACGIH or OSHA PEL.		
Appropriate engineering controls	Ensure adequate ventilation.		
Individual protection measures, such as personal protective equipment			
Eye/face protection	Wear safety glasses with side shields (or goggles).		
Skin protection			
Hand protection	Impervious gloves. Confirm with reputable supplier first.		
Other	As required by employer code.		
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.		
Thermal hazards	Not applicable.		
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. When using do not eat or drink.		

9. Physical and chemical properties

Appearance	Liquid
Physical state	Liquid.
Form	Liquid within a cartridge
Color	Dark blue / Dark purple
Odor	Slight amine
Odor threshold	Not available.
pH	9.6
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	1.1
Partition coefficient (n-octanol/water)	Not available.
Flash point	269.6 °F (132.0 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and reactivity

Reactivity	May react with incompatible materials.
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Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Strong oxidizing agents. Acids.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon.

11. Toxicological information

Routes of exposure Eye, Skin contact, Inhalation, Ingestion.

Information on likely routes of exposure

Ingestion	Harmful if swallowed. May cause stomach distress, nausea or vomiting.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity Although animal toxicity values do not meet criteria, ethylene glycol is toxic to humans. There are numerous human case reports of toxicity and death published in the literature.

Components	Species	Test Results
Ethylene glycol (CAS 107-21-1)		
Acute		
<i>Dermal</i>		
LD50	Mouse	> 3500 mg/kg, ECHA
<i>Inhalation</i>		
LC50	Rat	> 2.5 mg/L, 6 Hours, ECHA
<i>Oral</i>		
LD50	Cat	1670 mg/kg, CCID - New Zealand
	Human	1110 - 1665 mg/kg, HSDB
	Rat	7712 mg/kg, ECHA
Triethanolamine (CAS 102-71-6)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg, ECHA
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	6400 mg/kg, ECHA
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Exposure minutes	Not available.	
Erythema value	Not available.	
Oedema value	Not available.	
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.	
Corneal opacity value	Not available.	
Iris lesion value	Not available.	
Conjunctival reddening value	Not available.	
Conjunctival oedema value	Not available.	
Recover days	Not available.	
Respiratory or skin sensitization		
Canada - Alberta OELs: Irritant		
Ethylene glycol (CAS 107-21-1)		Irritant
Triethanolamine (CAS 102-71-6)		Irritant

Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.
Mutagenicity	Not classified.
Carcinogenicity	See below.

IARC Monographs. Overall Evaluation of Carcinogenicity

Triethanolamine (CAS 102-71-6)

Volume 77 - 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not listed.

Reproductive toxicity	Not classified.
Teratogenicity	Not classified.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	Not classified.
Chronic effects	Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity See below

Ecotoxicological data

Components		Species	Test Results
Ethylene glycol (CAS 107-21-1)			
Crustacea	EC50	Daphnia	46300 mg/L, 48 Hours
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	8050 mg/L, 96 hours
Triethanolamine (CAS 102-71-6)			
Algae	IC50	Algae	216 mg/L, 72 Hours
Aquatic			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	565.2 - 658.3 mg/L, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	10610 - 13010 mg/L, 96 hours
Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential	No data available.		
Mobility in soil	No data available.		
Mobility in general	Not available.		
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		

13. Disposal considerations

Disposal instructions	Dispose of container in accordance with local, regional, national and international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

Transport of Dangerous Goods (TDG) Proof of Classification Classification Method: Classified as per Part 2, Sections 2.1 – 2.8 of the Transportation of Dangerous Goods Regulations. If applicable, the technical name and the classification of the product will appear below.

U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

Transportation of Dangerous Goods (TDG - Canada)

Not regulated as dangerous goods.

15. Regulatory information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Canada Priority Substances List (Second List): Listed substance

Ethylene glycol (CAS 107-21-1) Listed.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

WHMIS 2015 Exemptions Controlled

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Ethylene glycol (CAS 107-21-1) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical Yes

Classified hazard categories Acute toxicity (any route of exposure)
Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Ethylene glycol	107-21-1	80 - 100 *

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Ethylene glycol (CAS 107-21-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

US state regulations See below

US - California Hazardous Substances (Director's): Listed substance

Ethylene glycol (CAS 107-21-1) Listed.

US - Illinois Chemical Safety Act: Listed substance

Ethylene glycol (CAS 107-21-1)

US - Louisiana Spill Reporting: Listed substance

Ethylene glycol (CAS 107-21-1) Listed.

US - Minnesota Haz Subs: Listed substance

Ethylene glycol (CAS 107-21-1) Listed.

Triethanolamine (CAS 102-71-6) Listed.

US - Texas Effects Screening Levels: Listed substance

Ethylene glycol (CAS 107-21-1) Listed.

Triethanolamine (CAS 102-71-6) Listed.

US - Washington Chemical of High Concern to Children: Listed substance

Ethylene glycol (CAS 107-21-1)

US. Massachusetts RTK - Substance List

Ethylene glycol (CAS 107-21-1)

Triethanolamine (CAS 102-71-6)

US. New Jersey Worker and Community Right-to-Know Act

Ethylene glycol (CAS 107-21-1)

Triethanolamine (CAS 102-71-6)

US. Pennsylvania Worker and Community Right-to-Know Law

Ethylene glycol (CAS 107-21-1)

Triethanolamine (CAS 102-71-6)
US. Rhode Island RTK
 Ethylene glycol (CAS 107-21-1)
 Triethanolamine (CAS 102-71-6)

US. California Proposition 65

WARNING: This product can expose you to chemicals including ethylene glycol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Developmental toxin

Ethylene glycol (CAS 107-21-1) Listed: June 19, 2015

Inventory status

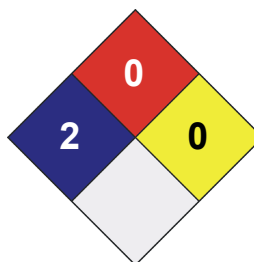
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	* 2
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



Disclaimer

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Prepared by

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Further information

Not available.

Other information

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.