

Safety Data Sheets

1. Identification

Product Name	: Maintenance Liquid 14
Order No.	: ML014-Z-BA / ML014-Z-K1 / ML014-Z-22 / ML014-Z-1L
Ink Ver.	: 1
General Use	: Maintenance liquid for ink jet printer
Product Description	: Solvent clear liquid
SDS Number	: 037-C035541
Manufacture	
Company Name	: Mimaki Engineering Co., Ltd.
Address	: 2182-3 Shigeno-otsu, Tomi-shi, Nagano 389-0512 JAPAN
Telephone No.	: +81-268-64-2413
Importer / Distributor Established in USA	
Company Name	: MIMAKI USA, INC.
Address	: 150 Satellite Boulevard, suite A, Suwanee, Georgia 30024, U.S.A.
Telephone No.	: +1-678-730-0170
Emergency Telephone No.	: +1 866 928 0789 (within United States only, Toll free) +1 215 207 0061

2. Hazards Identification

[GHS Classification]

Physical Hazards

Flammable Liquids : Category 4

Health Hazards

Acute Toxicity – Oral : Not classified

Acute Toxicity – Dermal : Not classified

Acute Toxicity – Inhalation : Not classified

Eye Damage / Irritation : Category 2

Specific Target Organ Toxicity : Category 3

(Single Exposure) (Respiratory irritation, drowsiness or dizziness)

Environmental Hazards

Hazardous to the Aquatic : Not classified

Environment - Acute Hazard

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Hazardous to the Aquatic Environment - Long Term Hazard : Not classified

The above list does not include category being non-classifiable or not-applicable.

[GHS Label Elements]

Symbol



Signal Word
Warning

Hazard Statements

- H227 Combustible liquid
- H319 Causes serious eye irritation
- H335 May cause respiratory irritation
- H336 May cause drowsiness or dizziness

Precautionary Statements

[Prevention]

- P210 Keep away from open flames and other ignition sources. No smoking.
- P261 Avoid breathing gas/mist/vapours.
- P264 Wash hands and eyes thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

[Response]

- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a POISON CENTER/doctor if you feel unwell.

P337+P313 If eye irritation persists: Get medical advice/attention.

P370+P378 In case of fire: Use Alcohol-resistant-related fire foam for extinguish.

[Storage]

P403+P233+P235 Store in a well-ventilated place. Keep container tightly closed.
Keep cool.

P405 Store locked up.

[Disposal]

P501 Dispose of contents/container in accordance with
local/regional/national/international regulation (to be specified).

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HMIS Rating (scale 0 – 4)

Health = 1

Flammability= 2

Reactivity = 1

Protective Equipment =B

①	Health
②	Flammability
①	Reactivity
B	Protective Equipment

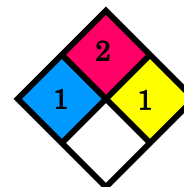
NFPA Rating (scale 0 – 4)

Health =1

Flammability = 2

Instability = 1

Special = 0



CANADIAN WHMIS SYMBOLS

Not applicable (Manufactured article)

3. Composition / Information on Ingredients

No	Chemical Name	wt%	CAS No.	Chemical Formula
1	Dipropylene glycol monomethyl ether	35-45	34590-94-8	C ₇ H ₁₆ O ₃
2	Diethylene glycol diethyl ether	35-45	112-36-7	C ₈ H ₁₈ O ₃
3	Triethylene glycol monomethyl ether	15-25	112-35-6	C ₇ H ₁₆ O ₄

OSHA Hazardous

Components 1 is hazardous components.

Components

(29 CFR 1910. 1200)

4. First Aid Measures

- Inhalation : Remove subject to ventilated fresh air. If not breathing, give artificial respiration right away. If breathing is difficult, give oxygen. Seek immediate medical attention.
- Eye Contact : Immediately flush with room temperature, low pressure, clean water for at least 15 minutes. Seek medical attention if eye irritation continues.
- Skin Contact : Wash surface areas with soap and water. Wash soiled clothing before rewearing. Consult a physician if irritation continues.
- Ingestion : Seek medical advice; and attention if stomach continues to be upset. If swallowed, do not induce vomiting.
- Protection To First-Aiders : Wear a tool for appropriate protection. Ventilate.

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5. Fire Fighting Measures

Flammable Properties	: Combustible liquid under Hazard Communication Standard (HCS, U.S.A). Flash point: about 76°C (Cleveland open cup) Autoflammability: None Explosive limits: 1.3~10.4v/v% as dipropylene glycol mono-methyl ether
Extinguishing Media	: Water spray, dry chemical, carbon dioxide or, alcohol foam
Fire Fighting Instructions	: Extinguish to use fire fighting media or plentiful fog water. Put protection wear without fail in case of fire fighting work; do not work in the leeward. Wear full fire-fighting turn-out gear (full bunker gear) and respiratory protection (self-contained breathing apparatus).

6. Accidental Release Measures

Personal Precautions	: Remove the person of the leeward. Keep away the person from periphery of the place of the leakage. Ventilate sufficiently during clean-up in case of inside of a house. Eye or Skin protection required during clean-up. Use proper ventilation.
Environmental Precautions	: Do not release to sewer, surface- or ground-water.
Methods for cleaning up	: If a spill occurs, use sponges to wipe-up ink, then rinse area with damp cloth. Place waste in closed container for disposal. Do not dispose of waste to the sewer. Wash hands with soap and water.
Reference to other sections	: Please refer SECTION 13 for disposal.

7. Handling and Storage

Handling	: Use proper ventilation and no fire in work place. Use spark-proof tools. Keep out of reach of children and do not drink ink. Make sure cartridge or bottle is dry. Do not dismantle cartridge. Avoid contact with skin, eyes or clothing. In the case of skin contact,
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wash with soap and water.

Storage : Do not store the cartridge or bottle in high or freezing temperatures. Keep cartridge or bottle out of direct sunlight. Do not store the cartridge or bottle with oxidizing agents or explosives.

8. Exposure Controls / Personal Protection

Exposure Limit Values

No	Chemical Name		TWA	STEL	Ceiling	Skin	SEN
1	Dipropylene glycol monomethyl ether	OSHA PEL	600mg/m ³ 100ppm	900mg/m ³ 150ppm	N.E.	N.E.	N.E.
		ACGIH TLV	100ppm	150ppm	N.E.	N.E.	N.E.
		California OELs (8h)	600mg/m ³ 100ppm	N.E.	N.E.	N.E.	N.E.
2	Diethylene glycol diethyl ether	California OELs (8h)	33mg/m ³ 5ppm	N.E.	N.E.	N.E.	N.E.

Exposure Controls

Occupational Exposure Controls

Engineering Controls : Use exhaust ventilation to keep airborne concentration below exposure limits.

Personal Protection

Respiratory Protection : Put self-contained breathing apparatus or organic canister mask.



Hand Protection : Put safety gloves that resist organic solvents and chemicals.



Eye Protection : Wear coverall, chemical goggles and face shield when handling.



Skin Protection : To prevent any contact, wear impervious clothing such as gloves,

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apron, boots, or whole body suits made from neoprene, as appropriate.

Environmental Exposure Controls

: Not established

9. Physical and Chemical Properties

Appearance	- Physical State	: Liquid
	- Color	: Clear
Odor		: Slightly
pH		: Not Applicable
Boiling Point / Boiling Range		: No data available
Melting Point / Melting Range		: No data available
Flash Point		: 76 °C / 169 ° F (Cleveland open cup method, JIS K2265-4)
Flammability (Solid, Gas)		: Not Applicable
Explosive Limits		: No data available
Relative Density		: No data available
Solubility		: No data available
Water Solubility		: Slightly soluble
Partition Coefficient (n-octanol / Water)		: No data available
Viscosity		: No data available
Vapor Density		: No data available

10. Stability and Reactivity

Conditions to Avoid	: High and freezing temperatures
Stability	: Stable under normal temperature
Materials to Avoid	: Oxidizers and explosives
Hazardous Reactions / Decomposition Products	: Harmful gas may produce when the fire broke out.

11. Toxicological Information

Acute Toxicity	Oral LD50	: >2500mg/kg (rat)
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	Dermal LD50 : >2000mg/kg (rat)
Eye Irritation	: Mild irritant (Rabbit, OECD405)
Skin Irritation	: Mild irritant (Rabbit OECD 404)
Corrosivity	: Not meet the criteria for classification according to EU Directive 1999/45/EC
Skin Sensitization	: Non-sensitizer (LLNA, OECD429)
Mutagenicity	: Not meet the criteria for classification according to EU Directive 1999/45/EC
	: Negative (by Ames Test)
Carcinogenicity	: Not meet the criteria for classification according to EU Directive 1999/45/EC
	: Not contain any substances listed in IARC Monographs (1,2A and 2B)
Toxicity for reproduction	: Not meet the criteria for classification according to EU Directive 1999/45/EC

12. Ecological Information

Ecotoxicity	: No data available on the adverse effects of this ink on the environment
Persistence and Degradability	: No data available on the adverse effects of this ink on the environment
Bioaccumulative Potential	: No data available on the adverse effects of this ink on the environment
Results of PBT and vPvB assessment	: Has not carried out PBT and vPvB assessment
Other Adverse Effects	: No data available on the adverse effects of this ink on the environment

13. Disposal Considerations

: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Comply with all USA, national and local regulations.
Do not dump this product into sewers, on the ground or into any body of water.

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14. Transport Information

	Check a thing without a leak in a container.
	Perform prevention of collapse of cargo surely.
US DOT Information	: Not regulated as dangerous goods for transport. *1 *1 Class combustible liquid (NA1993), Packing group III for quantities of 450 liters (119 gallons) or more; not regulated for smaller quantities
UN number	: Not Applicable
UN proper shipping name	: Not Applicable
Transport hazard class	: Not Applicable
Packing group	: Not Applicable
Environmental hazards	: Not Applicable
Special precautions for user	: Not Applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	: Not Applicable

15. Regulatory Information

OSHA Status	: Dipropylene glycol monomethyl ether is hazardous under 29 CFR 1910. 1200. (CAS No. 34590-94-8)
TSCA Status	: All components on TSCA INVENTORY.
TSCA Section 4(a)	: Not regulated
Final Test Rules	
Regulated:	
TSCA Section 5	: Ingredient: Diethylene glycol diethyl ether(CAS No. 112-36-7)
Significant New Use	Reference: 76FR40850
Rule Regulation:	
proposed	
TSCA Section 8(a)	: Ingredient: Dipropylene glycol monomethyl ether
Preliminary Assessment	(CAS No.34590-94-8)
Information Rule(PAIR)	Reference: 60FR34879 (The reporting date, 10/3/1995 has passed.)
TSCA Section 12(b)	: Ingredient: Diethylene glycol diethyl ether(CAS No. 112-36-7)
One-Time Export	Reference: TSCA 5 Proposed SUNR.
Notification Regulated:	

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Clean Air Act Section 112, Hazardous Air Pollutants	: Diethylene glycol diethyl ether(CAS No. 112-36-7) Triethylene glycol monomethyl ether(CAS No. 112-35-6)
CERCLA Reportable Quantity (40 CFR 302)	: Diethylene glycol diethyl ether(CAS No. 112-36-7) RQ : Not established Triethylene glycol monomethyl ether(CAS No. 112-35-6) RQ : Not established
SARA TitleIII Section 302 (40 CFR 355)	: Not Applicable
Section 313 (40 CFR 372)	: Diethylene glycol diethyl ether (CAS No. 112-36-7) Triethylene glycol monomethyl ether (CAS No. 112-35-6)
California Proposition 65	: Not regulated
Canada Information	: WHMIS Controlled Product: Not applicable (Manufactured article)
Australia Information	: Statement of Hazardous Nature: Classified as Toxic and Irritant according to criteria of NOHSC
New Zealand Information	: Hazardous Substances and New Organisms Act 1996: Not regulated
Others	: Please refer to any other federal, state and local regulations.

16. Other Information

References	1) Occupational Safety & Health Administration (OSHA) Hazard Communication Standard (HCS) 2) US Environmental Protection Agency(EPA) Substance Registry Services(SRS)
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