

Safety Data Sheets

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

Maintenance Liquid 11

Product Description

ML011-Z-K2 / ML011-Z-B2

Product Use

Cleaning solution for ink jet printer.

Restrictions on Use

None known.

Manufacturer InformationMimaki Engineering Co., Ltd
2182-3 Shigeno-otsu, Tomi-shi, Nagano 389-0512 Japan
Phone: +81-268-64-2413**Importer / Distributor Information**MIMAKI AUSTRALIA PTY LTD.
Unit 14, 38-46 South Street, Rydalmere, NSW 2116, Australia
Phone: + 61-2-8036-4500**Emergency telephone number**+61 2 8014 4558 (within Australia only)
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Section 2 - HAZARDS IDENTIFICATION

Classified to Globally Harmonised System of Classification and Labelling of Chemicals, Third revised edition, published by the United Nations as modified under Schedule 6 of the Work Health and Safety Regulation.

GHS ClassificationSkin Corrosion/Irritation - Category 2
Serious Eye Damage/Eye Irritation - Category 2A
Skin Sensitization - Category 1
Hazardous to the Aquatic Environment - Chronic - Category 3**GHS Label Elements****Symbol(s)****Signal Word**

Warning

Hazard Statement(s)Causes skin irritation.
Causes serious eye irritation.



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May cause an allergic skin reaction.
Harmful to aquatic life with long lasting effects.

Precautionary Statement(s)

Prevention

Wear protective gloves/protective clothing/eye protection/face protection.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.

Response

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 ON SKIN: Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

Take off contaminated clothing and wash before reuse.

Call a POISON CENTER or doctor if you feel unwell.

Storage

None needed according to classification criteria.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Potential Environmental Effects

Harmful to aquatic life with long lasting effects.

Other Hazards Which Do Not Result in Classification

None known.

Main Symptoms and Emergency Overview

Causes skin irritation. Causes serious eye irritation. May cause allergic skin reaction.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

| CAS | Component Name | Percent |
|--------------|---------------------------------|---------|
| Trade Secret | Higher Alcohols | 30-50 |
| 1559-34-8 | 3,6,9,12-Tetraoxahexadecan-1-ol | 35-45 |
| Trade secret | Other | 15-30 |
| 124-28-7 | 1-Octadecanamine, N,N-dimethyl- | <1 |

Section 4 - FIRST AID MEASURES

Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.

Skin

Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation or rash occurs: Get medical advice/attention.

Eyes



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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.

Ingestion

If swallowed, get medical attention.

Most Important Symptoms/Effects

Symptoms: Immediate

May be harmful in contact with skin, skin irritation, eye irritation, allergic skin reaction

Symptoms: Delayed

allergic skin reaction

Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

carbon dioxide, regular dry chemical, water spray, alcohol resistant foam

Unsuitable Extinguishing Media

Do not scatter spilled material with high-pressure water streams.

Special Hazards Arising from the Chemical

Negligible fire hazard. Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition.

Hazardous Combustion Products

oxides of carbon

Special Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Fire Fighting Measures

Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Avoid inhalation of material or combustion by-products.

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Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

Environmental Precautions

Avoid release to the environment.

Methods and Materials for Containment and Cleaning Up

Avoid heat, flames, sparks and other sources of ignition. Stop leak if possible without personal risk. Reduce vapors with water spray. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Large spills: Dike for later disposal. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

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Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke when using this product. Wear protective gloves/clothing and eye/face protection. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Conditions for Safe Storage, Including any Incompatibilities

None needed according to classification criteria.

Further information on storage conditions: Store and handle in accordance with all current regulations and standards. Store in a well-ventilated area. Keep container tightly closed. Keep cool. Keep separated from incompatible substances.

Incompatible Materials

oxidizing materials, acids, halogens, metal salts, peroxides

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Australia and ACGIH have not developed exposure limits for any of this product's components.

ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust or process enclosure ventilation system.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection

Wear appropriate chemical resistant clothing.

Respiratory Protection

Consult with a health and safety professional for specific respirators appropriate for your use.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|---------------------------------|--------------------|----------------------------------|--------------------|
| Appearance | transparent liquid | Physical State | liquid |
| Odor | faint odor | Color | transparent |
| Odor Threshold | Not available | pH | Not available |
| Melting Point | Not available | Boiling Point | 280 - 360 °C |
| Boiling Point Range | Not available | Freezing point | Not available |
| Evaporation Rate | Not available | Flammability (solid, gas) | Not available |
| Autoignition Temperature | Not available | Flash Point | 128 °C |
| Lower Explosive Limit | 0.48 % | Decomposition temperature | Not available |
| Upper Explosive Limit | 8 % | Vapor Pressure | <1.3 Pa (at 20 °C) |

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| | | | |
|-----------------------|-------------------|--|---------------|
| Vapor Density (air=1) | 9.85 | Specific Gravity (water=1) | 0.92 at 25 °C |
| Water Solubility | (Poorly soluble) | Partition coefficient: n-octanol/water | Not available |
| Viscosity | Not available | Solubility (Other) | Not available |
| Density | Not available | Molecular Weight | Not available |

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable under normal conditions of use.

Possibility of Hazardous Reactions

Will not polymerize.

Conditions to Avoid

Avoid flames, sparks, and other sources of ignition. Containers may rupture or explode if exposed to heat. Avoid contact with incompatible materials.

Incompatible Materials

oxidizing materials, acids, halogens, metal salts, peroxides

Hazardous decomposition products

oxides of carbon

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

irritation

Skin Contact

May be harmful in contact with skin, skin irritation, allergic skin reaction

Eye Contact

eye irritation

Ingestion

No information on significant adverse effects.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Higher Alcohols (Trade Secret)

Oral LD50 Rat >5000 mg/kg (25% aqueous suspension ;no deaths occurred)

3,6,9,12-Tetraoxahexadecan-1-ol (1559-34-8)

Oral LD50 Rat 5175 mg/kg

Dermal LD50 Rat >4000 mg/kg

Other (Trade secret)

Oral LD50 Rat >3200 mg/kg

1-Octadecanamine, N,N-dimethyl- (124-28-7)

Oral LD50 Rat 2116 mg/kg (in corn oil)

Dermal LD50 Rabbit 3432 mg/kg



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Product Toxicity Data Acute Toxicity Estimate

| | |
|--------|--------------|
| Dermal | > 2000 mg/kg |
| Oral | > 2000 mg/kg |

Immediate Effects

May be harmful in contact with skin, skin irritation, eye irritation, allergic skin reaction

Delayed Effects

allergic skin reaction

Irritation/Corrosivity Data

skin irritation, eye irritation

Respiratory Sensitization

No information available for the product.

Dermal Sensitization

May cause an allergic skin reaction.

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA

Germ Cell Mutagenicity

No information available for the product.

Reproductive Toxicity

No information available for the product.

Specific Target Organ Toxicity - Single Exposure

No target organs identified.

Specific Target Organ Toxicity - Repeated Exposure

No target organs identified.

Aspiration hazard

Not expected to be an aspiration hazard.

Medical Conditions Aggravated by Exposure

No data available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects.

Component Analysis - Aquatic Toxicity

| | |
|---------------------------------|---|
| Higher Alcohols | Trade Secret |
| Fish: | LC50 96 h Brachydanio rerio >1000 mg/L |
| Invertebrate: | EC50 48 h Daphnia magna 40 mg/L IUCLID |
| 3,6,9,12-Tetraoxahexadecan-1-ol | 1559-34-8 |
| Algae: | EC50 96 h Pseudokirchneriella subcapitata >1000 mg/L IUCLID |
| Invertebrate: | EC50 48 h Daphnia magna >1000 mg/L IUCLID |
| Other | Trade secret |

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| | |
|---------------|--|
| Fish: | LC50 96 h Pimephales promelas >1.55 mg/L [static] |
| Invertebrate: | EC50 48 h Daphnia magna >1.46 mg/L IUCLID |

Persistence and Degradability

No information available for the product.

Bioaccumulative Potential

No information available for the product.

Mobility in soil

No information available for the product.

Other adverse effects

No additional information available.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose in accordance with all applicable regulations.

Section 14 - TRANSPORT INFORMATION

ADG Information:

No Classification assigned.

IATA Information:

No Classification assigned.

ICAO Information:

No Classification assigned.

IMDG Information:

No Classification assigned.

Component Marine Pollutants (IMDG)

Not regulated as dangerous goods.

This material contains one or more of the following chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

| | |
|---------------------------------|--|
| 1-Octadecanamine, N,N-dimethyl- | 124-28-7 |
| IBC Code: | Category X (related to Alkyl (C12+) dimethylamine) |

Transportation Special Precautions

No information available for the product.

Hazchem/Emergency Action Code

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Section 15 - REGULATORY INFORMATION

Australia Regulations

Work Health and Safety Regulations - Prohibited Carcinogens

No component(s) are listed on the Prohibited Carcinogens list.

Work Health and Safety Regulations - Restricted Carcinogens

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No component(s) are listed on the Restricted Carcinogens list.

Work Health and Safety Regulations - Restricted Hazardous Chemicals

No component(s) are listed on the Restricted Hazardous Chemicals list

Australia Work Health and Safety Regulations - Hazardous Chemicals Requiring Health Monitoring

None of this product's components are on the list.

Component Analysis - Inventory

Higher Alcohols (Trade Secret)

| US | CA | EU | AU | PH | JP - ENCS | JP - ISHL | KR KECI - Annex 1 | KR KECI - Annex 2 | KR - REACH CCA | CN | NZ | MX | TW |
|-----|-----|-----|-----|-----|-----------|-----------|-------------------|-------------------|----------------|-----|-----|----|-----|
| Yes | DSL | EIN | Yes | Yes | No | No | Yes | No | No | Yes | Yes | No | Yes |

3,6,9,12-Tetraoxahexadecan-1-ol (1559-34-8)

| US | CA | EU | AU | PH | JP - ENCS | JP - ISHL | KR KECI - Annex 1 | KR KECI - Annex 2 | KR - REACH CCA | CN | NZ | MX | TW |
|-----|-----|-----|-----|-----|-----------|-----------|-------------------|-------------------|----------------|-----|-----|----|-----|
| Yes | DSL | EIN | Yes | Yes | Yes | No | Yes | No | No | Yes | Yes | No | Yes |

Other (Trade secret)

| US | CA | EU | AU | PH | JP - ENCS | JP - ISHL | KR KECI - Annex 1 | KR KECI - Annex 2 | KR - REACH CCA | CN | NZ | MX | TW |
|-----|-----|-----|-----|-----|-----------|-----------|-------------------|-------------------|----------------|-----|-----|-----|-----|
| Yes | DSL | EIN | Yes | Yes | Yes | No | Yes | No | No | Yes | Yes | Yes | Yes |

1-Octadecanamine, N,N-dimethyl- (124-28-7)

| US | CA | EU | AU | PH | JP - ENCS | JP - ISHL | KR KECI - Annex 1 | KR KECI - Annex 2 | KR - REACH CCA | CN | NZ | MX | TW |
|-----|-----|-----|-----|-----|-----------|-----------|-------------------|-------------------|----------------|-----|-----|-----|-----|
| Yes | DSL | EIN | Yes | Yes | Yes | No | Yes | No | No | Yes | Yes | Yes | Yes |

Section 16 - OTHER INFORMATION

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania*; CAS - Chemical Abstracts Service; CFR - Code of Federal Regulations (US); CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC - European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing



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Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL) , KR - Korea; LD50/LC50 - Lethal Dose/ Lethal Concentration; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX – Mexico; NDSL – Non-Domestic Substance List (Canada); NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL- Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TCCA – Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW – Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); WHMIS - Workplace Hazardous Materials Information System (Canada).

Other Information

Disclaimer:

The information set forth in this Safety Data Sheet does not purport to be all-inclusive and should be used only as a guide. While the information and recommendations set forth herein are believed to be accurate, the company makes no warranty regarding such information and recommendations and disclaims all liability from reliance thereon.