

**\*\*\*Section 1 - IDENTIFICATION\*\*\*****Product Identifier: LF-140C****Product Description**

SPC-0727C / SPC-0728C

**Product Use**

UV cure ink for ink jet printer

**Restrictions on Use**

None known.

**Manufacturer Information**Mimaki Engineering Co., Ltd  
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389-0512 Japan

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**Importer / Distributor Information**MIMAKI SINGAPORE PTE. LTD.  
31 Kaki Bukit Road 3 Singapore 417818 TechLink #02-03

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**\*\*\*Section 2 - HAZARDS IDENTIFICATION\*\*\*****SPRING/SS 586-2:2014**

Acute Toxicity (Oral), Category 4 (~50% unknown)

Skin Corrosion / Irritation, Category 2

Serious Eye Damage/Eye Irritation, Category 2A

Skin sensitizer, Category 1

Specific Target Organ Toxicity - Repeated Exposure, Category 1 (central nervous system, blood, respiratory system, and thyroid gland)

Specific Target Organ Toxicity - Repeated Exposure, Category 2 (nose)

Hazardous to the aquatic environment - acute hazard, Category 2

Hazardous to the aquatic environment - chronic hazard, Category 2

**LABEL ELEMENTS****Symbol(s)****Signal Word**

DANGER

**Hazard Statement(s)****H302** Harmful if swallowed.**H315** Causes skin irritation.**H319** Causes serious eye irritation.**H317** May cause an allergic skin reaction.

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**H372** Causes damage to central nervous system, blood, respiratory system, and thyroid through prolonged or repeated exposure.

**H373** May cause damage to nose through prolonged or repeated exposure.

**H411** Toxic to aquatic life with long lasting effects.

### Precautionary Statement(s)

#### Prevention

**P260** Do not breathe dust/fume/gas/mist/vapours/spray.

**P270** Do not eat, drink or smoke when using this product.

**P280** Wear protective gloves/protective clothing/eye protection/face protection.

**P264** Wash thoroughly after handling.

**P272** Contaminated work clothing should not be allowed out of the workplace.

**P273** Avoid release to the environment.

#### Response

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

**P302+P352** IF ON SKIN: Wash with plenty of soap and water.

**P333+P313** If skin irritation or rash occurs: Get medical advice/attention.

**P362** Take off contaminated clothing and wash before reuse.

**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

**P301+P312** IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

**P330** Rinse mouth.

**P391** Collect spillage.

#### Storage

None needed according to classification criteria.

#### Disposal

**P501** Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Other Hazards Which Do Not Result in Classification

None known.

### \*\*\*Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS\*\*\*

CAS	Component	Percent
Proprietary	Acryl acid ester	65-75
13048-33-4	1,6-Hexanediol diacrylate	16.03
Proprietary	Initiator	10-15
Proprietary	Additive	0.1-5
Proprietary	Phthalocyanine series pigment	1.8

### \*\*\*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 re-use. If skin irritation or rash occurs: Get medical advice/attention. Contaminated clothing should be removed and laundered before reuse.

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### Eyes

Flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention.

### Ingestion

If swallowed, get medical attention.

### Note to Physicians

Treat symptomatically and supportively.

### Symptoms: Immediate

skin irritation, eye irritation, allergic skin reaction

### Symptoms: Delayed

allergic skin reaction, central nervous system damage, blood damage, respiratory system damage, thyroid effects

## \*\*\*Section 5 - FIRE FIGHTING MEASURES\*\*\*

### Flammable Properties

Negligible fire hazard.

### 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.

### 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.

### Hazardous Combustion Products

**Combustion:** oxides of carbon, oxides of nitrogen, oxides of sulfur

## \*\*\*Section 6 - ACCIDENTAL RELEASE MEASURES\*\*\*

### Personal Precautions

Wear personal protective clothing and equipment, see Section 8.

### Environmental Precautions

Avoid release to the environment. Collect spillage.

### Methods for Containment

Avoid heat, flames, sparks and other sources of ignition. Stop leak if possible without personal risk. Reduce vapors with water spray.

### Cleanup Methods

**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

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

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## Conditions for Safe Storage

Store and handle in accordance with all current regulations and standards. Store in a well-ventilated place. Keep container tightly closed. Keep cool. Keep separated from incompatible substances.

**Incompatibilities:** acids, bases, oxidizing materials, peroxides

## \*\*\*Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION\*\*\*

### Component Exposure Limits

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

### Biological exposure limits

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

### Engineering Controls

Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

## PERSONAL PROTECTIVE EQUIPMENT

### Eyes/Face

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

### Protective Clothing

Wear appropriate chemical resistant clothing.

### Glove Recommendations

Wear appropriate chemical resistant gloves.

### Respiratory Protection

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

## \*\*\*Section 9 - PHYSICAL AND CHEMICAL PROPERTIES\*\*\*

<b>Physical State:</b>	Liquid	<b>Appearance:</b>	cyan liquid
<b>Color:</b>	cyan	<b>Physical Form:</b>	liquid
<b>Odor:</b>	unique odor	<b>Odor Threshold:</b>	Not available
<b>pH:</b>	Not available	<b>Melting Point:</b>	Not available
<b>Boiling Point:</b>	Not available	<b>Flash Point:</b>	>93 °C
<b>Decomposition Temperature:</b>	Not available	<b>Evaporation Rate:</b>	Not available
<b>LEL:</b>	Not available	<b>UEL:</b>	Not available
<b>Vapor Pressure:</b>	Not available	<b>Vapor Density (air = 1):</b>	Not available
<b>Density:</b>	Not available	<b>Specific Gravity (water = 1):</b>	1.07 (25 °C)
<b>Water Solubility:</b>	Not available	<b>Log KOW:</b>	Not available
<b>Coeff. Water/Oil Dist:</b>	Not available	<b>Auto Ignition Temperature:</b>	Not available
<b>Viscosity:</b>	23±3 mPa/s (25°C)	<b>Volatility:</b>	Not available
<b>Oxidizing Properties:</b>	Not available	<b>Explosive Properties:</b>	Not available
<b>Flammability (solid, gas):</b>	Not applicable		

### Other Property Information

No additional information is available.

## \*\*\*Section 10 - STABILITY AND REACTIVITY\*\*\*

## Safety Data Sheets

### 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.

### Materials to Avoid (Incompatibilities)

acids, bases, oxidizing materials, peroxides

### Hazardous Decomposition:

**Combustion:** oxides of carbon, oxides of nitrogen, oxides of sulfur

* * *Section 11 - TOXICOLOGICAL INFORMATION* * *
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### Acute and Chronic Toxicity

#### Component Analysis - LD50/LC50

The component(s) of this material have been reviewed in various sources and the following selected endpoints are published:

#### **1,6-Hexanediol diacrylate (13048-33-4)**

Oral LD50 Rat 5 g/kg

### Immediate Effects

allergic skin reaction, skin irritation, eye irritation

### Delayed Effects

allergic skin reaction, central nervous system damage, blood damage, respiratory system damage, thyroid effects

### Irritation/Corrosivity Data

skin irritation, eye irritation

### Respiratory Sensitizer

No information available for the product.

### Dermal Sensitizer

Available data characterizes components of this product as dermal sensitization hazards.

### Carcinogenicity

#### Component Carcinogenicity

No data listed by ACGIH, IARC, NTP, DFG or OSHA is available for the component(s) of this product.

### Mutagenic Data

No information available for the product.

### Reproductive Effects Data

No information available for the product.

### Specific Target Organ Toxicity - Single Exposure

No target organs identified.

### Specific Target Organ Toxicity - Repeated Exposure

central nervous system, blood, respiratory system, thyroid, nose

### Aspiration Hazard

Not expected to be an aspiration hazard.

### Medical Conditions Aggravated by Exposure

No information available for the product.

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### \*\*\*Section 12 - ECOLOGICAL INFORMATION\*\*\*

#### Ecotoxicity

Toxic to aquatic life with long lasting effects.

#### Component Analysis - Aquatic Toxicity

No LOEL ecotoxicity data are available for the component(s) of this product.

#### Bioaccumulation

No information available for the product.

#### Bioconcentration

No information available for the product.

#### Biodegradation

No information available for the product.

#### Persistence

No information available for the product.

#### Mobility

No information available for the product.

#### Other Information

No additional information is available.

### \*\*\*Section 13 - DISPOSAL CONSIDERATIONS\*\*\*

#### Disposal Methods

Dispose in accordance with all applicable regulations.

#### Component Waste Information

There is no applicable waste information for this product's components.

### \*\*\*Section 14 - TRANSPORT INFORMATION\*\*\*

#### IATA Information

**Proper Shipping Name:** Environmentally hazardous substance, liquid, n.o.s. (Contains: 1,6-Hexanediol diacrylate, Acryl acid ester)

**UN #:** UN3082 **Hazard Class:** 9 **Packing Group:** III

**Required Label(s):** 9

Special Provision : A197 \*1

#### ICAO Information

**Shipping Name:** Environmentally hazardous substance, liquid, n.o.s. (Contains: 1,6-Hexanediol diacrylate, Acryl acid ester)

**UN #:** UN3082 **Hazard Class:** 9 **Packing Group:** III

**Required Label(s):** 9

#### IMDG Information

**Shipping Name:** Environmentally hazardous substance, liquid, n.o.s. (Contains: 1,6-Hexanediol diacrylate, Acryl acid ester)

**UN #:** UN3082 **Hazard Class:** 9 **Packing Group:** III

**Required Label(s):** 9

Special Provision : 2.10.2.7 \*1

## Marine Pollutant

No component(s) of this material is specifically listed in the IMDG Code as an identified marine pollutant.

\*1 Single or inner packaging less than 5 L (liquid) or 5 Kg net (solids) is excepted from Dangerous Goods regulations -- see UN Special Provision.

### \*\*\*Section 15 - REGULATORY INFORMATION\*\*\*

#### Singapore Regulations

#### Component Analysis

No information was found for the substance(s) in Singapore regulations.

#### Component Analysis - Inventory

Component	CAS	US	CA	EU	AU	PHIL	JP	KR	CN	NZ
1,6-Hexanediol diacrylate	13048-33-4	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Phthalocyanine series pigment	Proprietary	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes

### \*\*\*Section 16 - OTHER INFORMATION\*\*\*

#### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; CAS - Chemical Abstracts Service; CLP - Classification, Labelling and Packaging; EEC - European Economic Community; EIN (EINECS) - European Inventory of Existing Commercial Chemical Substances; ELN (ELINCS) - European List of Notified Chemical Substances; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IMDG - International Maritime Dangerous Goods; IBC Code - International Bulk Chemical Code; Kow - Octanol/water partition coefficient; LC50 - Lethal Concentration, 50%; LD50 - Lethal Dose, 50%; LEL - Lower Explosive Limit; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NTP = National Toxicology Program; REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - European Rail Transport; STEL - Short-term Exposure Limit; TWA - Time Weighted Average; UEL - Upper Explosive Limit

#### 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.

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