

**\*\*\*Section 1 - IDENTIFICATION\*\*\*****Product Identifier: LH-100W****Product Description**

LH100-W-BA / LH100-W-B2 / SPC-0597W / SPC-0659W

**Product Use**

UV cure ink for ink jet printer

**Restrictions on Use**

None known.

**Manufacturer Information**Mimaki Engineering Co., Ltd  
2182-3 Shigeno-otsu, Tomi-shi, Nagano  
389-0512 Japan

Telephone number: +81-268-64-2413

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

Telephone number: +65-6508-2789

**Emergency telephone number**+65 3165 2217 (within Singapore only)  
+65 3158 1074**\*\*\*Section 2 - HAZARDS IDENTIFICATION\*\*\*****SPRING/SS 586-2:2014**Skin Corrosion / Irritation, Category 2  
Serious Eye Damage/Eye Irritation, Category 1  
Skin sensitizer, Category 1  
Carcinogenicity, Category 2  
Toxic to reproduction, Category 2  
Specific Target Organ Toxicity - Repeated Exposure, Category 1 (lungs)  
Specific Target Organ Toxicity - Repeated Exposure, Category 2 (immune system)  
Hazardous to the aquatic environment - acute hazard, Category 1  
Hazardous to the aquatic environment - chronic hazard, Category 1**LABEL ELEMENTS****Symbol(s)****Signal Word**

DANGER

**Hazard Statement(s)****H315** Causes skin irritation.

## Safety Data Sheets

- H318 Causes serious eye damage
- H317 May cause an allergic skin reaction.
- H351 Suspected of causing cancer
- H361 Suspected of damaging fertility or the unborn child
- H372 Causes damage to lungs through prolonged or repeated exposure.
- H373 May cause damage to immune system through prolonged or repeated exposure.
- H410 Very toxic to aquatic life with long lasting effects.

### Precautionary Statement(s)

#### Prevention

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- 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

- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P302+P352 IF ON SKIN: Wash with plenty of 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.
- P310 Immediately call a POISON CENTER or doctor/physician.
- P391 Collect spillage.

#### Storage

- P405 Store locked up.

#### 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	40-60
13048-33-4	1,6-Hexanediol diacrylate	26
75980-60-8	Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide	13
13463-67-7	Titanium dioxide	12
Proprietary	Additive	0.1-5

### \*\*\*Section 4 - FIRST AID MEASURES\*\*\*

#### Inhalation

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

## Safety Data Sheets

- 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.
- 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**  
allergic skin reaction, skin irritation, eye damage
- Symptoms: Delayed**  
allergic skin reaction, cancer, reproductive effects, lung damage, immune system disorders

### \*\*\*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 titanium

### \*\*\*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**  
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

# Safety Data Sheets

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.

## 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. Store locked up. Keep separated from incompatible substances.

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

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

### Component Exposure Limits

**Titanium dioxide (13463-67-7)**

**Singapore:** 10 mg/m<sup>3</sup> PEL

**ACGIH:** 10 mg/m<sup>3</sup> TWA

### 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>	white liquid
<b>Color:</b>	white	<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>	130 °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>	1.19 (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>	22±3 mPa/s (25°C)	<b>Volatility:</b>	Not available

# Safety Data Sheets

<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\*\*\*

#### 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, metal oxides

#### Hazardous Decomposition:

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

### \*\*\*Section 11 - TOXICOLOGICAL INFORMATION\*\*\*

#### 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

##### **Titanium dioxide (13463-67-7)**

Oral LD50 Rat >10000 mg/kg

#### Immediate Effects

allergic skin reaction, skin irritation, eye damage

#### Delayed Effects

allergic skin reaction, cancer, reproductive effects, lung damage, immune system disorders

#### Irritation/Corrosivity Data

skin irritation, eye damage

#### Respiratory Sensitizer

No information available for the product.

#### Dermal Sensitizer

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

#### Carcinogenicity

##### Component Carcinogenicity

##### **Titanium dioxide (13463-67-7)**

**ACGIH:** A4 - Not Classifiable as a Human Carcinogen

**IARC:** Monograph 93 [2010]; Monograph 47 [1989] (Group 2B (possibly carcinogenic to humans))

**DFG:** Category 3A (could be carcinogenic for man, inhalable fraction with the exception of

## Safety Data Sheets

ultra small particles)

**OSHA:** Present

### Mutagenic Data

No information available for the product.

### Reproductive Effects Data

Available data characterizes components of this product as reproductive hazards.

### Specific Target Organ Toxicity - Single Exposure

No target organs identified.

### Specific Target Organ Toxicity - Repeated Exposure

lungs, immune system

### Aspiration Hazard

Not expected to be an aspiration hazard.

### Medical Conditions Aggravated by Exposure

No information available for the product.

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

### Ecotoxicity

Very toxic to aquatic life with long lasting effects.

### Component Analysis - Aquatic Toxicity

No LOLI 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

## Safety Data Sheets

**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

**Titanium dioxide (13463-67-7)**

**IBC Code:** Category Z (slurry)

\*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
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide	75980-60-8	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Titanium dioxide	13463-67-7	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



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## Safety Data Sheets

makes no warranty regarding such information and recommendations and disclaims all liability from reliance thereon.

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