

## Safety Data Sheets

### Section 1 - PRODUCT AND COMPANY IDENTIFICATION

**Material Name**

Uvink LH-100 Black

**Product Description**

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

**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 AUSTRALIA PTY LTD.  
Unit 14, 38-46 South Street, Rydalmere, NSW 2116, Australia

Telephone number: + 61-2-8036-4500

**Emergency telephone number**+61 2 8014 4558 (within Australia only)  
18000 74234 (within Australia only)  
+65 3158 1074

### 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 Classification**

Acute Toxicity - Oral - Category 4 (34% unknown )

Skin Corrosion/Irritation - Category 2

Serious Eye Damage/Eye Irritation - Category 1

Skin Sensitization - Category 1A

Carcinogenicity - Category 2

Reproductive Toxicity - Category 2

Specific Target Organ Toxicity - Repeated Exposure - Category 2 ( lungs , respiratory system , Immune system )

Hazardous to the Aquatic Environment - Acute - Category 1

Hazardous to the Aquatic Environment - Chronic - Category 1

**GHS Label Elements****Symbol(s)****Signal Word**

Danger

**Hazard Statement(s)**



Product Name: UVink LH-100 Black  
SDS No. 037-U061762  
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## Safety Data Sheets

Harmful if swallowed.  
Causes skin irritation.  
Causes serious eye damage.  
May cause allergic skin reaction.  
Suspected of causing cancer.  
Suspected of damaging fertility or the unborn child.  
May cause damage to organs through prolonged or repeated exposure.  
Very toxic to aquatic life with long lasting effects.

### Precautionary Statement(s)

#### Prevention

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Use Personal Protective equipment as required.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Wash thoroughly after handling.  
Contaminated work clothing should not be allowed out of the workplace.  
Do not eat, drink or smoke when using this product.  
Avoid release to the environment.

#### Response

IF exposed or concerned: Get medical advice/attention.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.  
Immediately call a POISON CENTER or doctor/physician.  
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.  
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
Rinse mouth.  
Collect spillage.

#### Storage

Store locked up.

#### Disposal

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

#### Statement(s) of Unknown Acute Toxicity

34% of the mixture consists of ingredient(s) of unknown acute toxicity.

#### Potential Environmental Effects

Very toxic to aquatic life with long lasting effects.

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

None known.

#### Main Symptoms and Emergency Overview

Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause allergic skin reaction.  
Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

### Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
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Product Name: UVink LH-100 Black  
SDS No. 037-U061762  
First issue: 2017/01/10  
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## Safety Data Sheets

Proprietary	Acryl acid esters	30-40
3524-68-3	Pentaerythritol triacrylate	10-30
13048-33-4	1,6-Hexanediol diacrylate	25-30
Proprietary	Initiators	10-15
Proprietary	Additives	0.1-5
1333-86-4	Carbon black	<5

### 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.

#### 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.

#### Most Important Symptoms/Effects

##### Symptoms: Immediate

Harmful if swallowed, allergic skin reaction, skin irritation, eye damage

##### Symptoms: Delayed

allergic skin reaction, reproductive effects, immune system disorders

#### 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.

#### Hazardous Combustion Products

Oxides of carbon, oxides of nitrogen

#### 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.



Product Name: UVink LH-100 Black  
SDS No. 037-U061762  
First issue: 2017/01/10  
Revised: 2019/08/20

## Safety Data Sheets

Hazchem/Emergency Action Code  
3Z

### 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. Collect spillage.

#### 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

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe vapor or mist. Avoid contact with eyes, skin and clothing. Do not eat, drink, or smoke when using this product. Use Personal Protective equipment as required. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment.

#### Conditions for Safe Storage, Including any Incompatibilities

Store locked up.

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

Acids, bases, oxidizing materials, peroxides, metal oxides

### Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Component Exposure Limits

Carbon black	1333-86-4
Safe Work Australia.	3 mg/m <sup>3</sup> TWA
ACGIH:	3 mg/m <sup>3</sup> TWA inhalable particulate matter

#### EU - Occupational Exposure (98/24/EC) - Binding Biological Limit Values and Health Surveillance Measures

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.

#### 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.



Product Name: UVink LH-100 Black  
SDS No. 037-U061762  
First issue: 2017/01/10  
Revised: 2019/08/20

## Safety Data Sheets

### 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	Black liquid	Physical State	liquid
Odor	unique odor	Color	Black
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	Not available
Boiling Point Range	Not available	Freezing point	Not available
Evaporation Rate	Not available	Flammability (solid, gas)	Not available
Autoignition Temperature	Not available	Flash Point	136 °C
Lower Explosive Limit	Not available	Decomposition temperature	Not available
Upper Explosive Limit	Not available	Vapor Pressure	Not available
Vapor Density (air=1)	Not available	Specific Gravity (water=1)	1.11 (25 °C )
Water Solubility	Not available	Partition coefficient: n-octanol/water	Not available
Viscosity	22 ±3 mPa/s (25 °C )	Solubility (Other)	Not available
Density	Not available	Physical Form	liquid
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

Acids, bases, oxidizing materials, peroxides, metal oxides

### Hazardous decomposition products

Oxides of carbon, oxides of nitrogen

## Safety Data Sheets

### Section 11 - TOXICOLOGICAL INFORMATION

#### Information on Likely Routes of Exposure

##### Inhalation

irritation, nausea, headache, drowsiness, dizziness, loss of coordination, difficulty breathing, reproductive effects

##### Skin Contact

allergic reactions, irritation, nausea, headache, drowsiness, dizziness, immune system disorders

##### Eye Contact

eye damage

##### Ingestion

irritation, nausea, headache, drowsiness, dizziness, loss of coordination, unconsciousness

#### 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:

##### Pentaerythritol triacrylate (3524-68-3)

Oral LD50 Rat 1350 mg/kg

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

Oral LD50 Rat 5 g/kg

##### Carbon black (1333-86-4)

Oral LD50 Rat >15400 mg/kg

#### Product Toxicity Data

##### Acute Toxicity Estimate

Oral	1578.3689 mg/kg
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##### Immediate Effects

Harmful if swallowed, allergic skin reaction, skin irritation, eye damage

##### Delayed Effects

allergic skin reaction, reproductive effects, immune system disorders

##### Irritation/Corrosivity Data

skin irritation, eye damage

##### Respiratory Sensitization

No information available for the product.

##### Dermal Sensitization

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

##### Component Carcinogenicity

<b>Carbon black</b>	<b>1333-86-4</b>
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC:	Monograph 93 [2010] ; Monograph 65 [1996] (Group 2B (possibly carcinogenic to humans))
DFG:	Category 3B (could be carcinogenic for man ;inhalable fraction )
OSHA:	Present
NIOSH:	potential occupational carcinogen

##### Germ Cell Mutagenicity

No information available for the product.



Product Name: UVink LH-100 Black  
SDS No. 037-U061762  
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## Safety Data Sheets

### Reproductive Toxicity

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

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 this product's components

### 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 is available.

## Section 13 - DISPOSAL CONSIDERATIONS

### Disposal Methods

Dispose in accordance with all applicable regulations. Empty containers may contain product residue.

## Section 14 - TRANSPORT INFORMATION

### ADG Information:

**Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (Contains: 1,6-Hexanediol diacrylate , Acryl acid ester )

**Hazard Class:** 9

**UN#:** UN3082

**Packing Group:** III

**Required Label(s):** 9

### IATA Information:

**Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (Contains: 1,6-Hexanediol diacrylate , Acryl acid ester )

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Special Provision : A197 \*1



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## Safety Data Sheets

### ICAO Information:

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**Required Label(s):** 9

### IMDG Information:

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**Hazard Class:** 9

**UN#:** UN3082

**Packing Group:** III

**Required Label(s):** 9

Special Provision : 2.10.2.7 \*1

### Component Marine Pollutants (IMDG)

Not regulated as dangerous goods.

This material does not contain any chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

### Hazchem/Emergency Action Code

3Z

\*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

### 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

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

#### Pentaerythritol triacrylate (3524-68-3)

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

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





Product Name: UVink LH-100 Black  
SDS No. 037-U061762  
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## Safety Data Sheets

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

### Carbon black (1333-86-4)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - Annex 1	KR - 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 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; KECI - Korea Existing Chemicals Inventory; KECL - Korea Existing Chemicals List; 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:



Product Name: UVink LH-100 Black  
SDS No. 037-U061762  
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Revised: 2019/08/20

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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.