

# Material Safety Data Sheets

## 1. Product and Company Identification

Product Name : UV ink LH-100 White  
Product Code : SPC-0597W / SPC-0659W  
General Use : Inkjet Ink  
Product Description : UV Inkjet Ink  
MSDS Number : 031-35U06WC  
Manufacture  
Company Name : MIMAKI ENGINEERING Co., Ltd  
Address : 2182-3 Otsu, Shigeno, 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. : 1-678-730-0100  
Emergency Telephone No. : +81-268-64-2413

## 2. Hazards Identification

Emergency Overview : May be harmful if swallowed.  
May be harmful in contact with skin  
Causes skin irritation.  
May cause allergic skin reaction.  
Causes serious eye irritation.  
May cause respiratory irritation.  
May cause harm to breast-fed children.  
Toxic to aquatic life.

Potential Health Effects

Inhalation : Respiratory Tract Irritation  
Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Eye Contact : Serious Eye Irritation  
Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

# Material Safety Data Sheets

**Skin Contact** : Skin Irritation  
 Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.  
 : Allergic Skin Reaction (non-photo induced)  
 Signs/symptoms may include redness, swelling, blistering, and itching.

**Ingestion** : Gastrointestinal Irritation  
 Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

**Carcinogens** : Contains a chemical or chemicals which can cause cancer.

Ingredient	: Titanium dioxide
CAS No.	: 13463-67-7
Class Description	: Group 2B
Regulation	: International Agency for Research on Cancer

**Medical Conditions** : Contains a chemical or chemicals which can cause harm to breast-fed children.

HMIS Rating (scale 0 – 4)  
 Health = 2  
 Flammability= 1  
 Reactivity = 1  
 Protective Equipment = G



NFPA Rating (scale 0 – 4)  
 Health: 2  
 Flammability: 1  
 Instability: 2  
 Special: None



### 3. Composition / Information On Ingredients

No	Chemical Name	Wt%	CAS No.	Chemical Formula
1	Acrylic ester	60-80	Trade Secret	Trade Secret
2	Diphenyl (2,4,6, -trimethylbenzoyl) phosphine oxide	10-15	Trade Secret	Trade Secret
3	Titanium dioxide	10-15	13463-67-7	Trade Secret
4	Additives	0.1-5	Trade Secret	Trade Secret

### 4. First Aid Measures

**Inhalation** : If inhaled, immediately remove to fresh air and keep warm and calm.  
 If breathing irregularly or not breathing, give artificial respiration

## Material Safety Data Sheets

	and consult a doctor immediately.
Eye Contact	: Immediately flush eyes with large amounts of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get immediate medical attention.
Skin Contact	: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. The product don't evaporate therefore staying on the skin or clothing for a long time. If no washing or no taking off the clothing, it may cause inflammation on the skin. Wash contaminated clothing and clean shoes before reuse.
Ingestion	: Do not induce vomiting. If swallowed, keep calm and consult a doctor immediately. Keep from swallowing vomit.
Concise statement on the most important symptom	: No relevant information found.
Protection to first-aiders	: Wear tools for appropriate protection. Ventilate. See section 7 and 8.
Note to physician	: See section 7 and 8.

### 5. Fire Fighting Measures

Flammable Properties	Autoignition temperature	: Not available
	Flash Point	: 130 degree C
	Flammable Limits – LEL	: Not available
	Flammable Limits – UEL	: Not available
Extinguishing Media	: Foam, carbon dioxide, dry chemical, water spray. Never splash water.	
Protection of Fire Fighters		
Special Fire Fighting Procedures	: Wear tools for appropriate protection. Eliminate ignition sources. Stay upwind. Keep people away.	

## Material Safety Data Sheets

Keep wetted with water surrounding equipment.  
Avoid discharge chemical substances to rivers and sewers.

### 6. Accidental Release Measures

Personal precautions	: Wear tools for appropriate protection. Keep unnecessary and unprotected personnel from entering in vicinity of spill. Ventilate. See section 8.
Environmental precautions	: Avoid discharge to rivers and environmental effects.
Steps to be taken if material is spilled	: Small spills: Absorb with nonflammable absorbent such as dry sand and dirt. Large spills: Pump spills into a sealing container and remove to safe place. Use non-sparking equipment during recovery operation and ground equipment. See section 13, Disposal Considerations, for disposing of waste.
Second-accident precautions	: Prepare proper fire extinguishers and eliminate all sources of ignition in vicinity of spill. Avoid walking on the spills. Use safety tools to prevent sparks.

### 7. Handling And Storage

Handling	: Handle in well-ventilated area. Prohibit use of fire, sparks and heat source. Use antistatic clothing and shoes. Ground equipment against electrostatics and use spark-proof tools. Keep from increasing of temperature for flammable substance. Use local exhaust system and proper protection if working in closed area. Use proper protection (gloves, masks, aprons, goggles, etc.)
Storage	: Keep container tightly closed, store at cool and aired place, open and handle carefully. Protect from light. Protect from heat/overheating.

# Material Safety Data Sheets

Avoid contact with peroxides or other free radical initiators.

## 8. Exposure Controls / Personal Protection

### 8.1. Exposure limit values

No	Chemical Name		TWA	STEL	Ceiling	Skin	SEN
1	Titanium dioxide	2000/39/EC	N.E.	N.E.	N.E.	N.E.	N.E.
		ACGIH TLV	10mg/m <sup>3</sup>	N.E.	N.E.	N.E.	N.E.

### 8.2. Exposure controls

**Engineering controls** : Use explosion-proof equipment if handle in volume.  
 Use exhaust system to prevent vapor build-up.  
 Keep heat or fire sources from handling area.  
 If working indoors, use proper equipment to protect workers from direct exposure or use local exhaust system to protect workers from exposure.

**Respiratory protection** : Wear protective masks for hazardous materials.



**Eye protection** : Wear chemical goggles.



**Hand protection** : Wear gloves resistant to organic solvents and chemicals.



**Skin protection** : Wear clothing to protect skin from direct exposure.



Wear protective clothing resistant to chemicals.

## 9. Physical And Chemical Properties

Appearance - Physical state : Liquid  
 - Color : White

## Material Safety Data Sheets

Odor	: Acrylate odor
pH	: Not available
Boiling Point / Boiling Range	: Not available
Melting Point / Melting Range	: Not available
Flash Point	: 130 degree C
Autoignition Temperature	: Not available
Flammable Limits	: Not available
Vapor Pressure	: Not available
Specific Gravity	: 1.19(25 degree C)
Water Solubility	: Not available
Viscosity	: 22±3mPa·s (25 degree C)
Vapor Density	: Not available

### 10. Stability And Reactivity

Stability	: Stable under the usual handling condition.
Condition to avoid	: Excessive heat and cold, sparks, ignition sources, light and high humidity. May result in polymerization.
Materials to avoid	: Oxidant, explosive substances, catalysts, alkaline, free radical initiators.
Hazardous decomposition products	: To burn this product may be produce toxic gases such as CO and low-molecular-weight monomers.
Other	: Plastic and rubbers might be melted.

### 11. Toxicological Information

Acute Toxicity	-Oral	: Rats LD50 2318mg/kg
	-Dermal	: Rabbit LD50 2920mg/kg
Carcinogenicity		: Titanium dioxide IARC category 2B (Not possible to classify as a printing ink)
Others		: Not available

### 12. Ecological Information

General notes	: Handling is noted because it might influence the environment
---------------	--

## Material Safety Data Sheets

when leaking and abandoning it.

Especially, note that the product doesn't flow directly to ground, the river, and the drain ditch.

Ecological toxicity : Not available  
Persistence and degradability : Not available  
Bioaccumulative potential : Not available  
Mobility : Not available

### 13. Disposal Considerations

- Have waste inks, containers and other materials disposed by licensed industrial waste disposer.
- Do not dump drainage flushed containers and equipment into sewers, on the ground.
- Dispose of wastes from drainage or incineration, in compliance with the laws and regulations.
- Adsorb to diatom earth and others to dispose waste inks, and use open incinerator.
- Dispose of wastes by licensed industrial waste disposer to comply with the local laws and regulations.
- Empty inks and other materials out of containers if disposed.

### 14. Transport Information

Check a thing without a leak in a container.

Perform prevention of collapse of cargo surely.

UN, IMO, ICAO: Not regulated

### 15. Regulatory Information

TSCA Status : All components on TSCA INVENTORY.

SARA Title

Section 311/312 : Fire Hazard: No  
(40 CFR 370) Pressure Hazard: No  
Reactivity Hazard: No  
Immediate Hazard: Yes  
Delayed Hazard: Yes

California Proposition 65 : This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer and/or

## Material Safety Data Sheets

reproductive toxicity.

### 16. Other Information

This information is furnished without warranty, express or implied, except that it is accurate to the best knowledge of Mimaki Engineering Corporation. It relates only to the specific material designated herein, and does not relate to use in combination with any other material or process. Mimaki Engineering Corporation assumes no legal responsibility for use or reliance upon this information.

#### Revision history

Version	Date	Content
1.0	04/10/2009	First issue
2.0	01/22/2010	No.1 Addition of SPC-0659W