

## Safety Data Sheets

### 1. Identification

Product Name	: LUS-350 White
Order No.	: LUS35-W-BA
Ink Ver.	: 2
General Use	: Ink jet printing ink
Product Description	: UV Inkjet Ink
SDS Number	: 037-U131077
Manufacture	
Company Name	: Mimaki Engineering Co., Ltd.
Address	: 2182-3 Shigeno-otsu, 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.	: +1-678-730-0170
Emergency Telephone No.	: +81-268-64-2281

### 2. Hazards Identification

#### [HCS Classification]

##### Physical Hazards

Flammable Liquids : Not classified

##### Health Hazards

Acute Toxicity – Oral : Category 4

Acute Toxicity – Dermal : Category 4

Skin Corrosion / Irritation : Category 2

Serious Eye Damage / Irritation : Category 2A

Sensitization / Skin : Category 1A

Toxic to Reproduction : Category 2

Specific Target Organ Toxicity : Category 1 (liver, respiratory system)

(Repeated Exposure)

##### Environmental Hazards

Hazardous to the Aquatic : Category 1

Environment - Acute Hazard

## Safety Data Sheets

Hazardous to the Aquatic : Category 1

Environment - Long Term Hazard

The above list does not include category being non-classifiable or not-applicable.

[HCS Label Elements]

Symbol



Signal Word

Danger

Hazard Statements

H302 Harmful if swallowed

H312 Harmful in contact with skin

H315 Causes skin irritation

H317 May cause an allergic skin reaction

H319 Causes serious eye irritation

H361 Suspected of damaging fertility or the unborn child

H372 Causes damage to organs through prolonged or repeated exposure  
(liver, respiratory tract stimulative)

H410 Very toxic to aquatic life with long lasting effects

Precautionary Statements

[Prevention]

P201 Obtain SDS (Safety Data Sheet) and printer's operation manual before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

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

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

P273 Avoid release to the environment.

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

[Response]

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

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

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

P308+P313 IF exposed or concerned: Get medical advice/attention.

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

(P301)+P330 (IF SWALLOWED): Rinse mouth.

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

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

P362+P364 Take off contaminated clothing and wash before reuse.

P391 Collect spillage.

[Storage]

P405 Store locked up.

[Disposal]

## Safety Data Sheets

P501 Dispose of contents/container in accordance with  
local/regional/national/international regulation (to be specified).

[Statement(s) of Unknown Acute Toxicity]

85% of the mixture consists of ingredient(s) of unknown acute toxicity.

HMIS Rating (scale 0 – 4)

Health = 2

Flammability= 1

Reactivity = 1

Protective Equipment =

②	Health
①	Flammability
①	Reactivity
○	Protective Equipment

### 3. Composition / Information on Ingredients

No	Chemical Name	Wt%	CAS No.
1	Photosensitive resin	70-80	Trade Secret
2	Titanium dioxide	5-15	13463-67-7
3	Photoinitiator	5-15	Trade Secret
4	Pigment	1-5	Trade Secret
5	Additive	1-5	Trade Secret
6	Silicic acid	1-5	1343-98-2

### 4. First Aid Measures

Inhalation	: Wrap a patient with blanket or the like, immediately to settle him/her, and bring him/her to a place under fresh air. : In case breathing is getting difficult or has stopped, apply artificial respiration and seek medical care, immediately.
Eye Contact	: Wash the contamination out of eyes, even reverse side of eyelids, immediately with plenty of running water for more than 15 minutes, Seek medical attention as soon as possible.
Skin Contact	: Take off immediately all contaminated clothing and shoes, and wash contaminated parts of body and skin with water and soap, and then with running water. : If pain remains or inflammation is caused in skins, get medical attention immediately.
Ingestion	: If swallowed product, should not let patient vomit forcibly, because

## Safety Data Sheets

vomited articles may be a cause of such danger that it might block patient's tracheae.

: Should get medical attention, immediately.

: Rinse mouth.

### 5. Fire Fighting Measures

Flammable Properties : Flash point : 100°C

Extinguishing Media : Powders, bubbles, carbon dioxide, dry sand, mists of a reinforcement liquid

Unsuitable Extinguishing Media : Water jet

Fire Fighting Measures : Transfer a container to a safe place immediately.  
: If unable to move the container, cool it and the surroundings down by sprinkling water thereto.  
: Fire should be extinguished with the dedicated extinguishant.  
: Remove immediately all flammable materials surrounding fire.

Specific protective equipment for firefighters : For fighting a fire, be sure to wear appropriate protectors. Do not work at the lee side of fire.

### 6. Accidental Release Measures

Personal Precautions : Evacuate persons at the lee.  
: Do not allow persons to enter into an area where leakage is occurring by means of extending ropes around the leaked place.  
: Remove possible sources of ignition presenting nearby, immediately.  
: For fighting a fire, be sure to wear appropriate protectors.  
: Should work from the windward.  
: When the product has leaked into an interior, ventilate well the room until the leaked had been cleaned completely.  
: For fighting a fire, wear appropriate protectors such as gloves, masks, aprons and goggles.  
: Collect leakage into a sealable container, and the container should be transferred to a safe place.  
: Articles contaminated with product and the wastes must be

## Safety Data Sheets

	disposed in accordance with the related statutes.
	: Collect the liquid being spilled over by means of a tool made of a material which does not spark due to impact or friction.
	: Do not touch leaked liquid and/or broken container without wearing appropriate protectors.
Environmental	: Do not drain waste wash into a river without treatment.
Precautions	: Collecting of spilled-over-product and water used for washing it must be done by absorbing them with dry sand, soil, wiping rags or any other unflammable materials.
	: When a great amount of product is leaked, block the leakage by constructing banks there around with soil.
	: Do not release into the environment.
Methods for cleaning up	: Leaked product should be blocked with sand and soil, and lead the stream of the leakage toward a safe place.
	: Collect spilt-over product as much as possible into a sealable container.
	: Recover spilled portion of product, and wash out the spoiled floor with sufficient water using dispersing agent such as neutral detergent.

### 7. Handling and Storage

Precautions for Safe	: Keep fire away from the workplace where product is handled.
Handling	Exhaust ventilation system for the workplace should be operated properly.
	: Put on appropriate protective wears and implements so as not to inhale chemicals and cause contact with eyes, skin and/or clothing.
	: Close container tightly every time after use.
	: Prevent diffusion of volatile as much as possible, so that the concentration of volatile in a working environment can be less than the concentration to be controlled.
	: Cloth piece used for wiping product should be burn or discarded immediately.
	: Avoid contact with skins, and do not inhale or swallow product accidentally.
	: Pay attention to fire. Ventilate the operation area thoroughly, and

## Safety Data Sheets

	<p>handle the product in a place without exposure to direct sunlight nor ultraviolet ray.</p> <ul style="list-style-type: none"> <li>: When working suit has been contaminated with product, clean it out and replaced with a new working suit. Prevent skins from being touched with the contaminated part for a long time.</li> <li>: Wash hands and gargle thoroughly after handling.</li> <li>: Make sure not to handle product without completing to read and understanding the safety precaution.</li> </ul>
Technical measures	<ul style="list-style-type: none"> <li>: Be sure to ground apparatuses, equipments, etc. for securing to prevent generation of static electricity.</li> <li>: Take measures such as wearing electroconductive working clothes, electroconductive working shoes, and so on.</li> </ul>
local evacuation, entire evacuation	<ul style="list-style-type: none"> <li>: Refer to 8. Exposure Controls / Personal Protection.</li> </ul>
Storage	<ul style="list-style-type: none"> <li>: Containers should be tightly closed, made distinguishable from the others, and stored in a dark, cool well-ventilated place.</li> <li>: Keep away from heat source, such as boilers, and combustible materials.</li> <li>: Never store in the same place where oxidizer and organic peroxides are stored.</li> <li>: This product must be stored in a warehouse specially used for dangerous chemicals conforming to Fire Service Act.</li> <li>: Product must be stored in an original container or drum.</li> <li>: Store product under lock and key.</li> <li>: In order to prevent from being polymerized with heat or ultraviolet rays, charge into a sealable containers and store in a designated well-ventilated, dark and cool place.</li> </ul>

### 8. Exposure Controls / Personal Protection

#### Component Exposure Limits

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

ACGIH	: 10 mg/m <sup>3</sup> TWA
NIOSH	: 5000 mg/m <sup>3</sup> IDLH
OSHA	: 15 mg/m <sup>3</sup> TWA total dust
Mexico	: 10 mg/m <sup>3</sup> TWA VLE-PPT as Ti 20 mg/m <sup>3</sup> STEL [PPT-CT ] as Ti

## Safety Data Sheets

### Exposure Controls

#### Occupational Exposure Controls

Equipment : For indoor operations, make sure to seal up the source of leakage, or install a ventilation system for workplace as a whole. Upon necessity, install on-the-spot ventilation.

### Individual Protection Measures, such as Personal Protective Equipment

Respiratory Protection : Wear the respirator against toxic gas.



**Vapor  
Respirator**

Glove : Wear the oil resistant protective gloves

#### Recommendations



**Gloves**

Eye /Face Protection : Wear coverall, chemical goggles and face shield when handling.



**Safety  
Glasses**

Skin Protection : To prevent any contact, wear impervious clothing such as gloves, apron, boots, or whole body suits made from neoprene, as appropriate.



**Protective  
Apron**

Appropriate sanitary requirement : A cartridge used for a respirator must be renewed either regularly or appropriately corresponding to breakthrough time of use.

### Environmental Exposure Controls

: Not available

## 9. Physical and Chemical Properties

Appearance - Physical State : liquid  
- Color : white

## Safety Data Sheets

Odor	: Not available
pH	: Not available
Boiling Point / Boiling Range	: Not available
Melting Point / Melting Range	: Not available
Flash Point	: 100°C
Autogenous ignition temperature	: Not available
Decomposition temperature	: Not available
Upper / Lower Flammability or Explosive Limits	: Not available
Vapor Pressure	: Not available
Relative Density	: Not available
Solubility	: insoluble
Viscosity	: Not available
Vapor Density	: Not available
VOC	: <1%

### 10. Stability and Reactivity

Stability	: Physically stable under an ambient temperature or lower. : Polymerization may be caused due to heat or ultraviolet rays.
Conditions to Avoid	: If it is heated, the container could explode to be broken down. Do not subject the container to static electricity. : Keep away from high temperature and heating.
Dangerous substances mixed touch	: This product should not mix with strong oxidants and high-pressure gases. : Contact with heat, light, strong acids, peroxides, oxidizing agents, alkalis or radical initiator should be avoided.
Hazardous Reactions / Decomposition Products	: Toxic gases such as CO and NOx will be generated during combustion.

### 11. Toxicological Information

#### Acute Toxicity

Chemical Name	Oral	Dermal	inhalation: gases	inhalation: vapours	inhalation: dusts and mists
Titanium dioxide	Not classified	Not classified	-	-	Not classified



## Safety Data Sheets

### Information on Likely Routes of Exposure

Inhalation	: irritation, difficulty breathing, respiratory system damage.
Skin Contact	: irritation, allergic skin reaction.
Eye Contact	: irritation.
Ingestion	: nausea, vomiting, headache, dizziness, drowsiness, stomach pain.
Immediate Effects	: skin irritation, eye irritation, allergic skin reaction.
Delayed Effects	: allergic skin reaction, reproductive effects, liver damage, respiratory system damage.
Irritation/Corrosivity	: skin irritation, eye irritation.
Data	
Respiratory	: No information available for the product.
Sensitization	
Dermal Sensitization	: Available data characterizes components of this product as dermal sensitization hazards.
Component	: Titanium dioxide (13463-67-7)
Carcinogenicity	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 ultra small particles ) OSHA : Present NIOSH: potential occupational carcinogen
Germ Cell Mutagenicity	: No information available for the product.
Tumorigenic Data	: No data available
Reproductive Toxicity	: Available data characterizes components of this product as reproductive hazards.
Specific Target Organ	: No target organs identified.
Toxicity - Single Exposure	
Specific Target Organ	: liver, respiratory system
Toxicity - Repeated Exposure	
Aspiration hazard	: Not expected to be an aspiration hazard.
Medical Conditions	: No information available for the product.
Aggravated by Exposure	

## Safety Data Sheets

### 12. Ecological Information

Handling is noted because it might influence the environment when leaking and abandoning it.

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

Ecotoxicity	: Hazardous to the Aquatic Environment - Acute Hazard Category 1 : Hazardous to the Aquatic Environment - Long Term Hazard Category 1
Persistence and Degradability	: No information available
Bioaccumulative Potential	: No information available
Other Adverse Effects	: No information available

### 13. Disposal Considerations

- : Comply with all USA, national and local regulations.
  - : When this product is subjected to incineration, it must be done in accordance with the standard for disposing Industrial Waste.
  - : Use industrial waste disposal companies who is authorized by local municipal government for the disposal.
- Do not dump this product into sewers, on the ground or into any body of water.

### 14. Transport Information

Check a thing without a leak in a container.  
Perform prevention of collapse of cargo surely.

US DOT Information	
Shipping Name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard Class	: 9
UN/NA #	: UN3082
Packing Group	: III

## Safety Data Sheets

Required Label(s) : 9

International Bulk Chemical Code : This material contains one or more of the following chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.  
 Titanium dioxide (13463-67-7)  
 IBC Code: Category Z (slurry )

Remarks : Single or inner packaging less than 5 L (liquid) or 5 kg net (solids) is excepted from Dangerous Goods regulations.  
 Refer to ICAO/IATAA197, IMDG 2.10.2.7, ADR SP 375.

### 15. Regulatory Information

U.S. Federal Regulations : None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

SARA Section 311/312 (40 CFR 370 Subparts B and C) 2016 reporting categories : Acute Health: Yes Chronic Health: Yes Fire: No Pressure: No Reactivity: No

SARA Section 311/312 (40 CFR 370 Subparts B and C) 2017 reporting categories : Acute toxicity; Reproductive Toxicity; Skin Corrosion/Irritation; Respiratory/Skin Sensitization; Serious Eye Damage/Eye Irritation; Specific Target Organ Toxicity

U.S. State Regulations : The following components appear on one or more of the following state hazardous substances lists:

Componen	CAS	CA	MA	MN	NJ	PA
Titanium dioxide	13463-67-7	No	Yes	Yes	Yes	Yes

California Proposition 65

: **WARNING**



This product can expose you to chemicals including Titanium dioxide, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Canada Regulations  
 Canadian WHMIS  
 Ingredient Disclosure List (IDL)

: The components of this product are either not listed on the IDL or are present below the threshold limit listed on the IDL.



Product Name: LUS-350 White  
SDS No. 037-U131077  
First issue: 2015/12/09  
Revised: 2018/09/12

## Safety Data Sheets

### 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.