

Material Safety Data Sheets

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

1. Product and Company Identification

Product Name	: UV Ink White
Product Code	: SPC-0371W-6
General Use	: For ink jet
Product Description	: UV curable ink
MSDS Number	: 031-37U01WC
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	: ADVERSE HUMAN HEALTH HAZARDS Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact. Titanium dioxide (TiO ₂) , IARC Group 2B, is possibly carcinogenic to humans.
	: ENVIRONMENTAL EFFECTS Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Potential Health Effects	
Inhalation	: Irritating to respiratory system.
Eye Contact	: Irritating to eyes.
Skin Contact	: Irritating to skin. May cause sensitization by skin contact. May cause sensitization by skin contact.
Carcinogens	: Titanium dioxide (TiO ₂) , IARC Group 2B, is possibly carcinogenic to humans.
Potential Environmental Effects	: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Material Safety Data Sheets

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

Hazard Label

Xi : Irritant



N : Dangerous for the environment

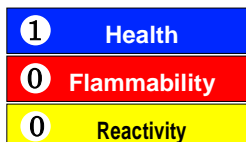


HMIS Rating (scale 0 – 4)

Health = 1

Flammability = 0

Reactivity = 0

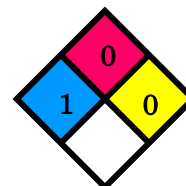


NFPA Rating (scale 0 – 4)

Health = 1

Flammability = 0

Reactivity = 0



3. Composition / Information On Ingredients

No	Chemical Name	Wt%	CAS No.	Chemical Formula
1	Acrylates	65~75	Registered	-
2	Titanium dioxide(TiO2)	<20	Registered	-
3	Additives	< 15	Registered	-

4. First Aid Measures

Inhalation	: Supply fresh air and to be sure call for a doctor. In case of unconsciousness place patient stably in side position for transportation.
Eye Contact	: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
Skin Contact	: Immediately wash with water and soap and rinse thoroughly.
Ingestion	: If symptoms persist consult doctor.

Material Safety Data Sheets

Page 3 of 10

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

5. Fire Fighting Measures

Flammable Properties	Self-ignition temperature	: No Data Available
	Flash Point	: 131 degree C
	Flammable Limits – LEL	: No Data Available
	Flammable Limits – UEL	: No Data Available
Extinguishing Media		: Use fire fighting measures that suit the environment.
Fire Fighting Instructions		: No special measures required.

6. Accidental Release Measures

Person-related safety precautions	: Not required.
Environmental precautions	: Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water.
Methods and material for containment and cleaning up	: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.

7. Handling And Storage

Handling	
General protective and hygienic measures:	: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.
Information for safe handling	: Keep away from heat and direct sunlight. Keep receptacles tightly sealed. Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols.
Information about protection against explosions and fires	: No special measures required.
Storage	: Store product in tightly closed original containers in dry and cool place protected from sunlight fluorescent light, preferably at below 25 degree C on impermeable ground. Keep away from sources of ignition.
Requirements to be met by storerooms and receptacles	: No special requirements.
Information about storage in one common storage facility	: Store away from oxidizing agents.

Material Safety Data Sheets

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

Further information about storage : Keep receptacle tightly sealed.
 conditions:

8. Exposure Controls / Personal Protection

Ingredients with limit values that require monitoring at the workplace	Exposure Limit Values
Titanium dioxide: (CAS No. 13463-67-7)	OSHA: Permissible Exposure Limit (PEL) - Time Weighted Averages (TWA) 3.5 mg/m ³
	ACGIH: Threshold Limits Values- Time Weighted Averages (TLV-TWA) 3.5mg/m ³

Additional information about design of technical systems

: No further data; see item 7.

Additional information

: The lists that were valid during the creation were used as basis.

Personal Protection

Respiratory Protection

: In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.



Hand Protection

: Protective gloves



The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Material Safety Data Sheets

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye Protection

: Tightly sealed goggles



9. Physical And Chemical Properties

Appearance	- Physical state	: Liquid
	- Color	: White
Odor		: Characteristic
Viscosity		: 18-22mPa·sec (25 degree C)
Surface tension		: No data available
Melting Point / Melting Range		: No data available
Boiling Point / Boiling Range		: No data available
Flash Point		: 131 degree C
Self-ignition temperature		: No data available
Danger of explosion		: Product does not present an explosion hazard.
Density		: 1.20-1.22 (25 degree C)
Solubility in / Miscibility with		: Water: Not miscible or difficult to mix. Organic solvent: Miscible
Solvent content:		: Organic solvents: 0.0 %

10. Stability And Reactivity

Thermal decomposition / conditions to be avoided	: No decomposition if used according to specifications.
Possibility of hazardous reactions	: No dangerous reactions known.
Dangerous decomposition products	: No dangerous decomposition products known.

Material Safety Data Sheets

Page 6 of 10

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

11. Toxicological Information

Acute Toxicity	: No data available
Eye Irritation	: Irritating effect.
Skin Irritation	: Irritant to skin and mucous membranes.
Sensitization	: Sensitization possible through skin contact.
Additional toxicological information	: The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version: Irritant

12. Ecological Information

Ecotoxicity	: No Data Available
Persistence And Degradability	: No Data Available
Bioaccumulative Potential	: No Data Available
Other Adverse Effects	: No Data Available
Remark	: Toxic for fish

General notes:

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water. Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground. Also poisonous for fish and plankton in water bodies. Toxic for aquatic organisms.

13. Disposal Considerations

Product:

Recommendation : Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging:

Recommendation : Disposal must be made according to official regulations.

Material Safety Data Sheets

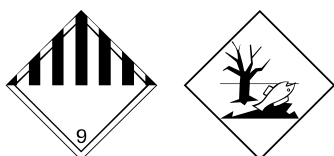
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14. Transport Information

Check a thing without a leak in a container.

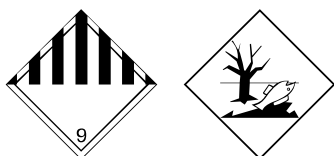
Perform prevention of collapse of cargo surely.

Land transport ADR/RID (cross-border)



ADR/RID class : 9 Miscellaneous dangerous substances and articles.
 Danger code (Kemler) : 90
 UN-Number : 3082
 Packaging group : III
 Special marking : Symbol (fish and tree)
 Description of goods : 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
 N.O.S. (isooctylacrylate)

Sea Transport (IMDG)

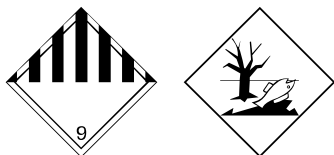


Class : 9
 Packing Group (PG) : III
 UN Number : 3082
 Label : 9
 EMS Number : F-A,S-F
 Proper Shipping Name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
 N.O.S. (isooctylacrylate)
 Marine Pollutant : Yes/Symbol (fish and tree)

Material Safety Data Sheets

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

Air Transport (ICAO/IATA)



Class : 9
 Packing Group(PG) : III
 UN Number : 3082
 Label : 9
 Proper Shipping Name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (isooctylacrylate)

UN "Model Regulation" : UN3082; ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.; 9; III

Special precautions for user : Warning: Miscellaneous dangerous substances and articles

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code : Not applicable.

15. Regulatory Information

CERCLA (40CFR302.4) : None of the ingredient is listed.
 SARA Title III
 Section 302 (40 CFR 355) : None of the ingredient is listed.
 Section 311/312 (40 CFR 370) : not evaluated
 Section 313 (40 CFR 372) : None of the ingredients is listed.
 TSCA Status : All ingredients are listed.
 Proposition 65 : Chemicals known to cause cancer: None of the ingredients is listed.
 Chemicals known to cause developmental toxicity: None of the ingredients is listed.
 Product related hazard : The product has been classified and marked in accordance with

Material Safety Data Sheets

Page 9 of 10

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

informations:	directives on hazardous materials.
Hazard symbols:	: Irritant : Dangerous for the environment
Risk informations:	: Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety informations	: Do not breathe gas/fumes/vapor/spray (appropriate wording to be specified by the manufacturer). Avoid contact with skin. Wear suitable gloves. Use appropriate container to avoid environmental contamination.
National regulations:	
Water hazard class:	: Water hazard class 2 (Self-assessment): hazardous for water.

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.

Material Safety Data Sheets

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Reglement internationale concernent le transport des marchandises dangereuses par chemin

de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

Revision history

Version	Date	Content
1.0	2011/08/31	First issue