

Safety Data Sheets

1. Identification

Product Name	: Dye Sublimation Ink Sb410 Fluorescent Yellow T
Order No.	: SB410-FYT-2L
General Use	: Ink jet printing ink
Product Description	: Dye Sublimation Ink
SDS Number	: 037-W381084
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.	: +1-678-730-0700
Emergency Telephone No.	: +81-268-64-2281

2. Hazards Identification

[GHS Classification]

Physical Hazards

Flammable Liquids : Not classified

Health Hazards

Skin Corrosion / Irritation : Category 2

Eye Damage / Irritation : Category 2A

Sensitization – Skin : Category 1

Toxic to Reproduction : Category 2

Specific Target Organ Toxicity : Category 1(kidneys and liver)

(Repeated Exposure)

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

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[GHS Label Elements]

Symbol



Signal Word

Danger

Hazard Statements

- H315 Cause 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 (kidney, liver)

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

[Response]

- 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.
- P314 Get medical advice/attention if you feel unwell.
- 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.

[Storage]

- P405 Store locked up.

[Disposal]

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

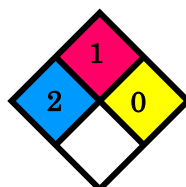
NFPA Rating (scale 0 – 4)

Health = 2

Flammability = 1

Instability = 0

Special =



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CANADIAN WHMIS SYMBOLS

D2A, D2B



3. Composition / Information on Ingredients

No	Chemical Name	Wt%	CAS No.
1	Diethylene glycol	10-30	111-46-6
2	Glycerin	1-15	56-81-5
3	Dye	1-10	Trade Secret
4	Water	50-65	7732-18-5
5	Other	<10	Trade Secret

4. First Aid Measures

- Inhalation : Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.
- Eye Contact : Flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
- Skin Contact : 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.
- Ingestion : If swallowed, get medical attention.
- Most Important Symptoms/Effects
- Acute : allergic skin reaction, skin irritation, eye irritation
- Delayed : allergic skin reaction, kidney damage, liver damage, reproductive effects
- Indication of Immediate Medical Attention and Special Treatment : Treat symptomatically and supportively.
- Needed, If Needed

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5. Fire Fighting Measures

Flammable Properties	: Flash point Not flammable
Extinguishing Media	: carbon dioxide, regular dry chemical, water spray, alcohol resistant foam
Unsuitable Extinguishing Media	: Do not use high-pressure water streams.
Special Hazards Arising from the Chemical	: Negligible fire hazard.
Hazardous Combustion Products	: oxides of carbon, acrolein, oxides of sulfur
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.
Special Protective Equipment and Precautions for Firefighters	: Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

6. Accidental Release Measures


Personal Precautions, Protective Equipment and Emergency Procedures	: Wear personal protective clothing and equipment, see Section 8. Avoid release to the environment.
Methods and Materials for Containment and Cleaning Up	: Eliminate all ignition sources if safe to do so. 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.

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7. Handling and Storage

Precautions for Safe Handling	: Obtain SDS (Safety Data Sheet) and printer's Operation Manual before use. Do not handle until all safety precautions have been read and understood. Do not breathe gas/mist/vapors. Avoid contact with eyes, skin and clothing. Do not eat, drink, or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.
Conditions for Safe Storage, including any Incompatibilities	: Store and handle in accordance with all current regulations and standards. Store in a well-ventilated place. Keep container tightly closed. Keep cool. Keep separated from incompatible substances.

8. Exposure Controls / Personal Protection

Exposure Limit Values	: Glycerin (56-81-5) OSHA: 15 mg/m ³ TWA (mist, total particulate); 5 mg/m ³ TWA (mist, respirable fraction) Mexico 10 mg/m ³ TWA LMPE-PPT (mist)
Component Biological Limit Values	: There are no biological limit values for the component(s) of this product.
Exposure Controls	
Occupational Exposure Controls	
Appropriate Engineering Controls	: Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.
Personal Protection	
Respiratory Protection	: Consult with a health and safety professional for specific respirators appropriate for your use.
 Vapor Respirator	
Hand Protection	: Wear appropriate chemical resistant gloves.

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**Gloves**

Eye Protection : Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**Safety Glasses**

Skin Protection : Wear appropriate chemical resistant clothing.

**Protective Apron**

9. Physical and Chemical Properties

Appearance	- Physical State	: Liquid
	- Color	: Yellow
Odor		: unique odor
pH		: 7-9
Boiling Point / Boiling Range		: Not available
Melting Point / Melting Range		: Not available
Decomposition Temperature		: Not available
Flash Point		: Not flammable
Auto ignition temperature		: Not available
Flammability (Solid, Gas)		: Not available
Explosive Properties		: Not available
Oxidizing Properties		: Not available
Upper / Lower Flammability or Explosive Limits		: Not available
Vapor Pressure		
Specific Gravity		: 1.0-1.2 (25 ° C)
Solubility		: Not available
Water Solubility		: Soluble
Partition Coefficient (n-octanol / Water)		: Not available
Viscosity		: 4-6 mPa·s (25 °C)
Vapor Density		: Not available
Evaporation Rate		: Not available

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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. Avoid contact with incompatible materials.
Incompatible Materials	: acids, bases, oxidizing materials, metal oxides, peroxides, reducing agents, combustible materials, halocarbons, metals, metal salts
Hazardous Decomposition	: Combustion: oxides of carbon, acrolein, oxides of sulfur

11. Toxicological Information

Acute Toxicity	: The component(s) of this material have been reviewed in various sources and the following selected endpoints are published:
Component Analysis - LD50/LC50	Diethylene glycol (111-46-6) Oral LD50 Rat 12565mg/kg; Dermal LD50 Rabbit 11890 mg/kg Glycerin (56-81-5) Oral LD50 Rat 12600 mg/kg; Dermal LD50 Rabbit >10 g/kg; Inhalation LC50 Rat >570 mg/m ³ 1 h

Information on Likely Routes of Exposure

Inhalation	: irritation, difficulty breathing, headache, nausea
Ingestion	: fever, nausea, vomiting, diarrhea, headache, dizziness, sleep disturbances, blood disorders, kidney damage, paralysis, reproductive effects, convulsions, skin disorders, stomach pain, drowsiness, loss of coordination, unconsciousness
Skin Contact	: allergic reactions, irritation, nausea, headache, drowsiness, dizziness, loss of coordination
Eye Contact	: irritation
Immediate Effects	: allergic skin reaction, skin irritation, eye irritation
Delayed Effects	: liver damage, kidney damage, allergic skin reaction, reproductive effects

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Medical Conditions	: No information available for the product.
Aggravated by Exposure	
Irritation/Corrosivity	: skin irritation, eye irritation
Data	
Respiratory	: No information available for the product.
Sensitization	
Dermal Sensitization	: May cause an allergic skin reaction.
Germ Cell Mutagenicity	: No information available for the product.
Carcinogenicity	: Component Carcinogenicity No data listed by ACGIH, IARC, NTP, DFG or OSHA is available for the component(s) of this product.
Reproductive Toxicity	: Suspected of damaging fertility or the unborn child.
Specific Target Organ	: No target organs identified.
Toxicity - Single	
Exposure	
Specific Target Organ	: liver, kidneys
Toxicity - Repeated	
Exposure	
Aspiration Hazard	: Not expected to be an aspiration hazard.

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.
Component Analysis -	: Diethylene glycol (111-46-6)
Aquatic Toxicity	Fish: 96 Hr LC50 Oncorhynchus mykiss: 51600 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 41 - 47 mL/L [static]; 96 Hr LC50 Pimephales promelas: 51400 mg/L [static]; 96 Hr LC50 Pimephales promelas: 710 mg/L Algae: 96 Hr EC50 Pseudokirchneriella subcapitata: 19000 mg/L Invertebrate: 48 Hr EC50 Daphnia magna: >1000 mg/L [Static] Glycerin (56-81-5) Fish: 96 Hr LC50 Oncorhynchus mykiss: 51 - 57 mL/L [static]
Persistence and	: No information available for the product.

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Degradability	
Bioaccumulation	: No information available for the product.
Mobility	: No information available for the product.
Other Toxicity	: No additional information is available.

13. Disposal Considerations

	: Comply with all USA, national and local regulations. <u>Do not dump this product into sewers, on the ground or into any body of water.</u>
Disposal Methods	: Dispose in accordance with all applicable regulations.
Component Waste Numbers	: The U.S. EPA has not published waste numbers for this product's components.
Disposal of Contaminated Packaging	: Empty containers may contain product residue. Dispose in accordance with all applicable regulations.

14. Transport Information

	Check a thing without a leak in a container. Perform prevention of collapse of cargo surely.
US DOT Information	: Not regulated as a hazardous material for transport.
TDG Information	: Not regulated as dangerous goods for transport.
UN Number	: Not regulated
Marine Pollutant	: No component(s) of this material is specifically listed in the IMDG Code as an identified marine pollutant.

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 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.
SARA Title III Section 311/312	: Acute Health: Yes Chronic Health: Yes

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Fire: No
 Pressure: No
 Reactive: No

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

Component	CA	MA	MN	NJ	PA
Diethylene glycol (CAS No. 111-46-6)	No	No	Yes	No	Yes
Glycerin (CAS No. 56-81-5)	No	Yes	Yes	Yes	Yes

: Not regulated under California Proposition 65

Canada WHMIS : D2A, D2B

CLASSIFICATION

Canadian WHMIS : None of the product component(s) are listed on the Ingredients
 Ingredient Disclosure Disclosure List (IDL).
 List (IDL)

Chemical Inventory : Component Analysis - Inventory

Listings

Component	US	CA	EU	AU	PHIL	JP	KR	CN	NZ
Diethylene glycol (CAS No. 111-46-6)	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Glycerin (CAS No. 56-81-5)	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes

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



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Fluorescent Yellow T
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First issue: 2015/12/21
Revised:

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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

Other Information

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