

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).

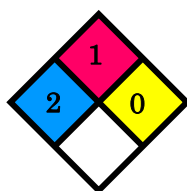
NFPA Rating (scale 0 – 4)

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 Needed, If Needed | : Treat symptomatically and supportively. |

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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. |



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Hand Protection : Wear appropriate chemical resistant gloves.



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) |

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Vapor Density : Not available
Evaporation Rate : Not available

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/m³ 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

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| | |
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| Delayed Effects | : liver damage, kidney damage, allergic skin reaction, reproductive effects |
| 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 Toxicity - Single Exposure | : No target organs identified. |
| Specific Target Organ Toxicity - Repeated Exposure | : liver, kidneys |
| 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 - Aquatic Toxicity | : Diethylene glycol (111-46-6) Fish: 96 Hr LC50 Pimephales promelas: 75200 mg/L [flow-through]; Invertebrate: 48 Hr EC50 Daphnia magna: 84000 mg/L Glycerin (56-81-5) Fish: 96 Hr LC50 Oncorhynchus mykiss: 51 - 57 mL/L [static] |
| Persistence and Degradability | : No information available for the product. |
| Bioaccumulation | : No information available for the product. |

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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.
Do not dump this product into sewers, on the ground or into any body of water.

Disposal Methods : Dispose in accordance with all applicable regulations.
 Component Waste : The U.S. EPA has not published waste numbers for this product's
 Numbers components.
 Disposal of : Empty containers may contain product residue. Dispose in
 Contaminated accordance with all applicable regulations.
 Packaging

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.
 IATA Information : Not regulated as dangerous goods for transport.
 ICAO Information : Not regulated as dangerous goods for transport.
 IMDG Information : Not regulated as dangerous goods for transport.
 Marine Pollutants : Not regulated as dangerous goods for transport.
 (IMDG)
 International Bulk : This material does not contain any chemicals required by the IBC
 Chemical Code Code to be identified as dangerous chemicals in bulk.

15. Regulatory Information

U.S. Federal : None of this products components are listed under SARA Sections
 Regulations 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.

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SARA Title III : Acute Health: Yes
 Section 311/312 : Chronic Health: Yes
 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 -



Product Name: Dye Sublimation Ink Sb410
Fluorescent Yellow T
SDS No. 037-W381084
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International Bulk Chemical Code; Kow - Octanol/water partition coefficient; LC50 - Lethal Concentration, 50%; LD50 - Lethal Dose, 50%; LEL - Lower Explosive Limit; LOLI - List Of 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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