

Safety Data Sheets

1. Identification

Product Name : Dye Sublimation Ink Sb53 Yellow
Order No. : SB53-Y-44-1/ SB53-Y-2L-1
General Use : Ink jet printing ink
Product Description : Dye Sublimation Ink
SDS Number : 037-W220588
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

[GHS Classification]

Physical Hazards

Flammable Liquids : Not classified

Health Hazards

Sensitization – Skin : Category 1

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

[GHS Label Elements]

Symbol



Signal Word

Warning

Hazard Statements

H317 May cause an allergic skin reaction

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Precautionary Statements

[Prevention]

P261 Avoid breathing gas/mist/vapors.

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.

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

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

[Disposal]

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

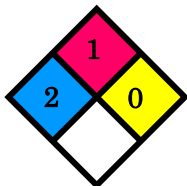
NFPA Rating (scale 0 – 4)

Health = 2

Flammability = 1

Instability = 0

Special =



CANADIAN WHMIS SYMBOLS

D2B



3. Composition / Information on Ingredients

| No | Chemical Name | Wt% | CAS No. |
|----|------------------|-------|--------------|
| 1 | Propylene glycol | 10-30 | 57-55-6 |
| 2 | Glycerol | 1-20 | 56-81-5 |
| 3 | Disperse dye | 1-10 | Trade Secret |
| 4 | Water | 20-50 | 7732-18-5 |
| 5 | Additives | <5 | 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 immediate medical attention.

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| | |
|---------------------------------|---|
| 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, mild skin irritation |
| Delayed | : allergic skin reaction |
| Indication of Immediate | : Treat symptomatically and supportively. |
| Medical Attention and | |
| Special Treatment | |
| Needed, If Needed | |

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 scatter spilled material with high-pressure water streams. |
| Special Hazards Arising from the Chemical | : Negligible fire hazard. |
| Hazardous Combustion Products | : oxides of carbon, oxides of nitrogen, acrolein |
| 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. |

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6. Accidental Release Measures

| | |
|--|--|
| <p>Personal Precautions, Protective Equipment and Emergency Procedures</p> | <p>: Wear personal protective clothing and equipment, see Section 8. Avoid release to the environment.</p> |
| <p>Methods and Materials for Containment and Cleaning Up</p> | <p>: 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.</p> |

7. Handling and Storage

| | |
|---|---|
| <p>Precautions for Safe Handling</p> | <p>: Avoid breathing dust, mist, fumes or vapors. Avoid contact with eyes, skin and clothing. Do not eat, drink, or smoke when using this product. Wear protective gloves and eye/face protection. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.</p> |
| <p>Conditions for Safe Storage, including any Incompatibilities</p> | <p>: 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.</p> |

8. Exposure Controls / Personal Protection

| | |
|--|--|
| <p>Exposure Limit Values</p> | <p>: Glycerin (56-81-5) OSHA: 15 mg/m³ TWA (mist, total particulate); 5 mg/m³ TWA (mist, respirable fraction) Mexico 10 mg/m³ TWA LMPE-PPT (mist)</p> |
| <p>Component Biological Limit Values</p> | <p>: There are no biological limit values for the component(s) of this product.</p> |

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Exposure Controls

Occupational Exposure Controls

Appropriate : Provide local exhaust or process enclosure ventilation system. Ensure
Engineering Controls compliance with applicable exposure limits.

Personal Protection

Respiratory : Consult with a health and safety professional for specific respirators
Protection appropriate for your use.



Vapor
Respirator

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 | | : characteristic odor |
| pH | | : 6-8 |
| 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 |

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|---|-------------------------|
| 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 | : 3.0-6.0 mPa·s (25 °C) |
| Vapor Density | : Not available |
| Evaporation Rate | : Not available |
| VOC Content (%) | : 20-40 |

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, combustible materials, halocarbons, metals, metal salts, oxidizing materials, reducing agents, metal oxides |
| Hazardous Decomposition | : oxides of carbon, oxides of nitrogen, acrolein |

11. Toxicological Information

| | |
|-----------------------------------|---|
| Acute Toxicity | : The component(s) of this material have been reviewed in various |
| Component Analysis - LD50/LC50 | sources and the following selected endpoints are published: Propylene glycol (57-55-6) Oral LD50 Rat 20 g/kg; Dermal LD50 Rabbit 20800 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 |

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Information on Likely Routes of Exposure

| | |
|--|---|
| Inhalation | : irritation, difficulty breathing, headache, nausea |
| Ingestion | : skin disorders, vomiting, stomach pain, headache, drowsiness, dizziness, loss of coordination, unconsciousness |
| Skin Contact | : allergic reactions, irritation, nausea, headache, drowsiness, dizziness, loss of coordination |
| Eye Contact | : irritation |
| Immediate Effects | : allergic skin reaction, mild skin irritation |
| Delayed Effects | : allergic skin reaction |
| Medical Conditions | : No information available for the product. |
| Aggravated by Exposure | |
| Irritation/Corrosivity | : mild skin 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 | : No information available for the product. |
| Specific Target Organ Toxicity - Single Exposure | : No target organs identified. |
| Specific Target Organ Toxicity - Repeated Exposure | : No target organs identified. |
| 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.

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|-------------------------------|---|
| Component Analysis - | : Propylene glycol (57-55-6) |
| 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 Degradability | : No information available for the product. |
| Bioaccumulation | : No information available for the product. |
| Mobility | : No information available for the product. |
| Other Toxicity | : No additional information is available. |

13. Disposal Considerations

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|------------------------------------|---|
| | : 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. |
| 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. |

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UN Number : Not regulated

Marine Pollutants (IMDG) : Not regulated as dangerous goods for transport.

International Bulk Chemical Code : This material does not contain any chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

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: No
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 |
|---------------------------------------|----|-----|-----|-----|-----|
| Propylene glycol (CAS No. 57-55-6) | No | No | Yes | Yes | Yes |
| Glycerin (CAS No. 56-81-5) | No | Yes | Yes | Yes | Yes |

: Not regulated under California Proposition 65

Canada WHMIS : D2B.

CLASSIFICATION

Canadian WHMIS Ingredient Disclosure List (IDL) : Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which fall under WHMIS criteria specified in the Controlled Products Regulations and present above the threshold limits listed on the IDL.

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Propylene glycol (57-55-6) 1 %

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; 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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