

## Safety Data Sheets

### 1. Identification

Product Name : Dye Sublimation Ink Sb411 Yellow T  
Order No. : SB411-YT-2L  
General Use : Ink jet printing ink  
Product Description : Dye Sublimation Ink  
SDS Number : 037-W482353  
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).

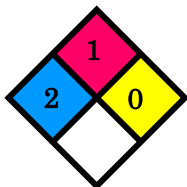
NFPA Rating (scale 0 – 4)

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	20-30	57-55-6
2	Glycerin	5-15	56-81-5
3	Dye	1-10	Trade Secret
4	Water	50-60	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.

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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.
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 Medical Attention and Special Treatment Needed, If Needed	: Treat symptomatically and supportively.

### 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, 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.

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### 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.

### 7. Handling and Storage

Precautions for Safe Handling	: Avoid breathing gas, mist 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.
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 <sup>3</sup> TWA (mist, total particulate); 5 mg/m <sup>3</sup> TWA (mist, respirable fraction) Mexico 10 mg/m <sup>3</sup> TWA LMPE-PPT (mist)
Component Biological Limit Values	: There are no biological limit values for the component(s) of this product.

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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		: 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

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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	: 4-6 mPa·s (25 °C)
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
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 <sup>3</sup> 1 h

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### 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, 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.

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### 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 -	: 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

	: 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.



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### 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 (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																		
	<table border="1"> <thead> <tr> <th>Component</th> <th>CA</th> <th>MA</th> <th>MN</th> <th>NJ</th> <th>PA</th> </tr> </thead> <tbody> <tr> <td>Propylene glycol (CAS No. 57-55-6)</td> <td>No</td> <td>No</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>Glycerin (CAS No. 56-81-5)</td> <td>No</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> <td>Yes</td> </tr> </tbody> </table>	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
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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 CLASSIFICATION	: D2B.																		

## Safety Data Sheets

Canadian WHMIS : Components of this material have been checked against the  
 Ingredient Disclosure List (IDL) 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.

Propylene glycol (57-55-6) 1 %

Chemical Inventory : Component Analysis - Inventory

### Listings

Component	US	CA	EU	AU	PHIL	JP	KR	CN	NZ
Propylene glycol (CAS No. 57-55-6)	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; 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

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.



Product Name: Dye Sublimation Ink Sb411  
Yellow T  
SDS No. 037-W482353  
First issue: 2017/06/07  
Revised:

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Mimaki Engineering Corporation assumes no legal responsibility for use or reliance upon this information.