

Material Safety Data Sheets

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CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

1. Product and Company Identification

Product Name : SU100 Yellow
Order No. : SU100-Y-60
Ver. : 1
General Use : Ink jet printing ink
Product Description : UV / solvent Inkjet Ink
MSDS Number : 031-37U03YC
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. Hazard Identification

WHMIS Statement : This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

CANADIAN WHMIS SYMBOLS



WHMIS Hazard Class : B3 Combustible liquid
: D2B Toxic materials
Emergency Overview : May be harmful if swallowed, inhaled, or absorbed through skin
: May produce an allergic reaction
: May cause skin irritation and/or dermatitis
Potential Health Effects
Inhalation : May be harmful if inhaled.
Eye Contact : May cause irritation.

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Skin Contact : May be harmful in contact with skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion : May be harmful if swallowed. May cause additional affects as listed under "Inhalation".

Chronic Effects

Chronic toxicity : Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure.

Aggravated Medical : Allergies. Skin disorders. Respiratory disorders.

Conditions

Interactions with Other : Irritants. Sensitizers. Epoxies.

Chemicals

Potential Environmental : See Section 12 for additional Ecological Information.

Effects

HMIS Rating (scale 0 – 4)

Health = 2*

Flammability= 2

Physical Hazard = 1

Personal protection = B

2*	Health
2	Flammability
1	Physical Hazard
B	Personal protection

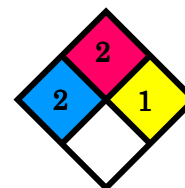
NFPA Rating (scale 0 – 4)

Health = 2

Flammability = 2

Stability = 1

Special =



*Indicates a chronic health hazard.

3. Composition / Information On Ingredients

No	Chemical Name	Wt%	CAS No.
1	Diethylene glycol diethyl ether	40-60%	112-36-7
2	Butyrolactone	10-20%	96-48-0
3	2-hydroxy-1-[4-(2-hydroxyethoxy)phenyl]-2-methyl-1-propanone	1-5%	106797-53-9
4	phenylbis(2,4,6-trimethylbenzoyl)-phosphine oxide	1-5%	162881-26-7
5	Pentaerythritol tetraacrylate	1-5%	4986-89-4

4. First Aid Measures

Inhalation : Move to fresh air. If symptoms persist, call a physician.

Eye Contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

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Skin Contact	: Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. Wash off immediately with soap and plenty of water.
Ingestion	: Do NOT induce vomiting. Drink plenty of water. Immediate medical attention is not required. Rinse mouth.
Note To Physician	: May cause sensitization of susceptible persons.

5. Fire Fighting Measures

Flammable Properties	: Not flammable.
Extinguishing Media	: Use CO2, dry chemical, or foam.
Fire Fighting Instructions	: Wear full fire-fighting turn-out gear (full bunker gear) and respiratory protection (self-contained breathing apparatus).
Hazardous Combustion Products	: Nitrogen oxides (NOx). Carbon oxides.
Explosion Data	
Sensitivity to Mechanical Impact	: none
Sensitivity to Static Discharge	: Yes
Specific hazards arising from the chemical	: Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact.
Protective Equipment and Precautions for Firefighters	: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

Personal Precautions	: Use personal protective equipment. Avoid contact with the skin and the eyes. Remove all sources of ignition.
Environmental precautions	: Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system.
Methods for Containment	: Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	: Soak up with inert absorbent material. Pick up and transfer to

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properly labeled containers. After cleaning, flush away traces with water. Prevent product from entering drains.

7. Handling And Storage

Handling	: Ensure adequate ventilation. Wear personal protective equipment.
Storage	: Keep out of the reach of children. Keep container tightly closed. Keep away from heat and sources of ignition. Keep containers tightly closed in a cool, well-ventilated place.

8. Exposure Controls / Personal Protection

Exposure Controls

Occupational Exposure Controls

Engineering Controls	: Showers Eyewash stations Ventilation systems
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Personal Protection

Respiratory Protection	: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
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Hand Protection	: Wear protective gloves.
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Gloves

Eye Protection	: Tightly fitting safety goggles.
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Safety Glasses

Skin Protection	: Wear protective clothing.
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Hygiene measures	: When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use.
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9. Physical And Chemical Properties

Appearance	- Physical state	: liquid
	- Color	: Yellow
Odor		: Slight glycol ether
pH		: No data available
Boiling Point / Boiling Range		: > 212 °F
Melting Point / Melting Range		: No data available
Flash Point		: > 194 °F
Auto ignition temperature		: No data available
Explosive Properties		: No data available
Oxidizing Properties		: No data available
Vapor Pressure		: 0.48 mm/Hg @ 20 C
Weight per Gallon (lbs)		: 8.57
Water solubility		: Partially insoluble
Viscosity		: No data available
Vapor density		: Heavier than air
Evaporation Rate		: No data available
Density		: No data available
EPA VOC (g/l)		: No data available
VOC Content of Material		: 711 grams per liter
VOC Content of Coating less Water and Exempt Solvents		: 711 grams per liter

10. Stability And Reactivity

Conditions To Avoid	: Extremes of temperature and direct sunlight.
Stability	: Stable under recommended storage conditions.
Materials To Avoid	: Strong oxidizing agents, strong acids, and strong bases.
Hazardous Reactions/	: Carbon oxides. Nitrogen oxides (NO _x).
Decomposition Products	
Hazardous	: No information available.
Polymerization	

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11. Toxicological Information

Acute Toxicity : There is no data available for this product

Chronic Toxicity : Repeated contact may cause allergic reactions in very susceptible persons. Avoid repeated exposure.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Diethylene glycol diethyl ether	4970 mg/kg (Rat)	6700 µL/kg (Rabbit)	
Butyrolactone	1540 mg/kg (Rat)		2.68 mg/L (Rat) 4 h
2-hydroxy-1-[4-(2-hydroxyethoxy)p henyl]-2-methyl-1-propanone	4082 mg/kg (Rat)		

Carcinogenicity : The table below indicates whether each agency has listed any ingredient as a carcinogen

Chemical Name	ACGIH	IARC	NTP	OSHA
Butyrolactone		Group 3		

ACGIH: (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

A4 - Not Classifiable as a Human Carcinogen

IARC: (International Agency for Research on Cancer)

Group 3 - Not Classifiable as to Carcinogenicity in Humans

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

NTP: (National Toxicity Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA: (Occupational Safety & Health Administration)

X - Present

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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.

Ecotoxicity : The environmental impact of this product has not been fully investigated.

Chemical Name	Octonol Water Partition Coefficient (log pow)
Butyrolactone	-0.566

13. Disposal Considerations

Waste Disposal Methods : Dispose of in accordance with federal, state, and local regulations.

Contaminated packaging : Do not re-use empty containers.

US EPA Waste Number : U220

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

14. Transport Information

Check a thing without a leak in a container.

Perform prevention of collapse of cargo surely.

Us Department of Transportation (DOT)

: Not regulated

Sea Transport (IMDG)

: Not regulated

Air Transport (ICAO/IATA)

: Not regulated

TDG

: Not regulated

MEX

: Not regulated

ADR/RID

: Not regulated



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ADN

: Not regulated

15. Regulatory Information

OSHA Status : This product is NOT considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

TSCA Status : The ingredients below are listed.

Diethylene glycol diethyl ether
Butyrolactone
2-hydroxy-1-[4-(2-hydroxyethoxy)phenyl]-2-methyl-1-propanone
Phenylbis(2,4,6-trimethylbenzoyl)-phosphine oxide
Pentaerythritol tetraacrylate

CERCLA : Not Applicable

Reportable Quantity
(40 CFR 117, 302)

SARA Title III

Section 302 : Not Applicable
(40 CFR 355)

Section 311/312 (40 CFR 370)

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	Yes
Sudden Release of Pressure Hazard	no
Reactive Hazard	Yes

Section 313 (40 CFR 372)

Chemical Name	SARA 313 - Threshold Values %
Diethylene glycol diethyl ether	1.0

California : This product contains the following Proposition 65 chemicals
Proposition 65

Chemical Name	California Prop. 65
toluene	Developmental Female Reproductive



Product Name: SU100 Yellow

MSDS No.031-37U03YC

First issue: 2012/06/14

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U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Diethylene glycol diethylether		×	×	×	
toluene	×	×	×	×	×

Others : Please refer to any other federal, state and local regulations.

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.

Revision history

Version	Date	Content
1.0	2012/06/14	First issue