

Safety Data Sheet

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Identification of the substance or preparation

Product Name : SOLVENT INK Yellow
Product Code : SPC-0334Y-2

1.2. Use of the substance/preparation

General Use : For ink jet
Product Description : Solvent pigment ink

1.3. Company/undertaking identification

MANUFACTURER

Company Name : Mimaki Engineering Co., Ltd
Address : 2182-3 Otsu, Shigeno, Tomi-shi, Nagano 389-0512 Japan
Telephone No. : +81-268-64-2413
Charge post : Inks and Media Division
Person in charge : Isao Tabayashi
E-mail address : tabayashi@mimaki.jp

IMPORTER/DISTRIBUTOR ESTABLISHED IN EU

Company Name : MIMAKI EUROPE B.V.
Address : Joan Muyskenweg 42-44, 1099CK Amsterdam
Telephone No. : +31-20-4627-640
Person in charge : Sakae Sagane

1.4. Emergency telephone

EMERGENCY : Mimaki Engineering Co., Ltd +81-268-64-2413
TELEPHONE : National Vaccine Information Center (NVIC)
NUMBER : +31-30-274888

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW : Yellow. Flammable liquid with a solvent odor. Irritating to eyes, skin and respiratory tract. Acute toxic substance. May cause organic solvent poisoning.

This product is classified as 'Irritant' and 'Harmful'.

POTENTIAL HEALTH EFFECTS

Inhalation : R20 Harmful by inhalation.
Eye : R36 Irritating to eyes.

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Skin : R21 Harmful in contact with skin.

Ingestion : Harmful if swallowed.

POTENTIAL ENVIROMENTAL EFFECTS

: Harmful to aquatic organisms.

3. COMPOSITION/INFORMATION ON INGREDIENTS

No	Chemical Name	Wt%	CAS No.	EINECS No.	Symbol letters	Risk Phrase	Chemical Formula
1	Cyclohexanone	10-20	108-94-1	203-631-1	Xn	10-20	C ₆ H ₁₀ O
2	2-butoxyethyl acetate	70-80	112-07-2	203-933-3	Xn	20/21	C ₈ H ₁₆ O ₃
3	2-methoxy-1-methylethyl acetate	5-15	108-65-6	203-603-9	Xi	10-36	C ₆ H ₁₂ O ₃
4	Nickel compounds (Pigment Yellow)	2-8 Ni ≤0.02	Registered	Registered	not classified	not classified	Unspecified

*The wording of the symbol(s) and risk phrase(s) is specified in 16.OTHER INFORMATION.

4. FIRST AID MEASURES

INHALATION : Fresh air, rest. Refer for medical attention.

EYE : First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.

SKIN : Remove contaminated clothes. Rinse skin with plenty of water or shower. Rinse and then wash skin with water and soap. Refer for medical attention.

INGESTION : Rinse mouth. Give plenty of water to drink. Give slurry of activated charcoal in water to drink. Do NOT induce vomiting. Refer for medical attention.

PROTECTION TO FIRST-AIDERS

: Please wear a tool for appropriate protection.

5. FIRE-FIGHTING MEASURES

FLAMMABLE : Flash point 60.2 deg C

PROPERTIES Flammable point 0.8-10.7%

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- Carbon monoxide occurs with harmful gas when this product burns.
- EXTINGUISHING : Alcohol-resistant foam, carbon dioxide, powder.
- MEDIA : Do not use stick water.
- FIRE FIGHTING : Remove inflammables immediately.
- INSTRUCTIONS : Perform the fire fighting from windward.
- Wear full fire-fighting turn-out gear (full bunker gear) and respiratory protection (self-contained breathing apparatus).

6. ACCIDENTAL RELEASE MEASURES

- Personal protection : Filter respirator for organic gases and vapours. Chemical protection suit. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Ventilation.
- Method : Remove all ignition sources. Contain spilled liquid with sand or earth. DO NOT use combustible materials, such as sawdust. Absorb remaining liquid in sand or inert absorbent and remove to safe place. The material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water.

7. HANDLING AND STORAGE

- HANDLING : Handle in well-ventilated area. Avoid contact with skin, eyes, or clothing. Use proper protection (gloves, masks, aprons, goggles, etc.) Wash thoroughly after handling. To reduce potential for static discharge, bond and ground containers and equipment when transferring material.
- STORAGE : Fireproof. Separated from strong oxidants, and strong bases. Cool. Keep in the dark. Dry.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Exposure limit values

No	Chemical Name		TWA	STEL
1	Cyclohexanone	EU OEL (EU 2000)	10ppm	20ppm
		ACGIH 2007 TLVs and BEIs	20ppm	50ppm
2	2-Butoxyethyl acetate	ACGIH 2007 TLVs and BEIs	20ppm	-
		MAK: 20 ppm, 130 mg/m ³ , H; Peak limitation category: II(4); Pregnancy risk group: C; (DFG 2003).		
3	2-methoxy-1-methylethyl acetate	MAK: 50 ppm; 275 mg/m ³ ; (1996)		

8.2. Exposure controls

8.2.1. Occupational exposure controls

- Engineering Controls : Use exhaust ventilation to keep airborne concentration below exposure limits.
- Personal Protection
- Respiratory Protection : Wear gas masks for organic gases. Wear ventilation masks when working in closed area. An air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where air-borne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited.
- Eye Protection : Safety goggles, safety spectacles, face shield, or eye protection in combination with breathing protection. Wear coverall, chemical goggles and face shield when handling.
- Skin Protection : Protective gloves. Protective clothing. Wear gloves that resist organic solvents and chemicals.
- Ingestion : Do not eat, drink, or smoke during work.

8.2.2. Environmental exposure controls

: Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General information

- Appearance - Physical state : Liquid
 - Colour : Yellow
 Odour : Solvent odour

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9.2. Important health, safety and environmental information

pH	: Not Applicable
Boiling Point / Boiling Range	: 146 degree C or higher
Flash Point	: 60.2 degree C
Flammable point	: 0.8- 10.7%
Vapour Pressure	: 453Pa (20 degree C)
Relative density	: 0.968±0.01 (20 degree C)
Solubility	: Not available
Water solubility	: Not available
Viscosity	: Not available

9.3. Other information

Melting Point / Melting Range	: Not available
Auto-Ignition Temperature	: 420°C
Specific Gravity	: Not available

10. STABILITY AND REACTIVITY

CONDITONS TO AVOID	: Fire. High temperature. High humidity. Sunlight.
STABILITY	: Stable.
MATERIALS TO AVOID	: Strong oxidants.
HAZARDOUS	: Carbon monoxide, low-molecular monomer gases
DECOMPOSITION PRODUCTS	occurs with harmful gas when this product burns.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY	Oral LD50	Dermal LD50	Inhalation LC50
Cyclohexanone	(mouse) 1,400-2,110 mg/kg	(rat) 948 mg/kg (rabbit) 948-1,000 mg/kg	(rat) 2,675-8,000 ppm(4h)
	(rat) 1,000-3,000 mg/kg		
2-butoxyethyl acetate	(mouse) 3200mg/kg (rat) 1600 mg/kg	(rabbit) 1480 mg/kg	(rat) 2400mg/kg
2-methoxy-1-methylethyl acetate	(rat) >2000 mg/kg	(rabbit) >2000 mg/kg	(rat) >20 mg/l / 6 hours

EYE IRRITATION	: Irritating to eyes.
SKIN IRRITATION	: Irritating to skin.

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SENSITIZATION : Not available

MUTAGENICITY : Not available

CARCINOGENICITY

	IARC	ACGIH 2007 TLVs and BEIs
Cyclohexanone	3 (Vol. 47, Vol. 71; 1999)	A3
2-Butoxyethyl acetate	-	A3

12. ECOLOGICAL INFORMATION

The substance is harmful to aquatic organisms. 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 : Cyclohexanone

(Daphnia magna) EC50 800mg/l(24-h)

(Oncorhynchus mykiss) LC50 303mg/l (48h)

(Pimephales promelas) LC50 527mg/l (96h)

: 2-methoxy-1-methylethyl acetate

(Selenastrum capricornutum) EC50 >1000mg/l (48h)

NOEC >1000mg/l (48h)

EC50 >1000mg/l (72h)

NOEC >1000mg/l (72h)

(Daphnia magna) EC50 370mg/l (48hr)

EC50 >100mg/l (21day)

NOEC >100mg/l (21day)

(Oryzias latipes) LC50 >100mg/l (96h)

LC50 64mg/l (14day)

NOEC 48mg/l (14day)

: 2-butoxyethyl acetate

(Daphnia magna) EC50 67.5mg/l (48h)

PERSISTENCE AND DEGRADABILITY

: Not available

BIOACCUMULATIVE POTENTIAL

: Octanol/water partition coefficient

Cyclohexanone log Pow: 0.81

2-butoxyethyl acetate log Pow: 1.51

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RESULTS OF PBT ASSESSMENT

: Not available

OTHER ADVERSE EFFECTS

: Not available

13. DISPOSAL CONSIDERATIONS


Have waste liquids, containers and other materials disposed of by licensed industrial waste contractors. Keep waste liquids from flushing containers, machines or other equipment from flowing directly to the ground or drainage. Dispose of wastes from drainage, combustion, etc, in compliance with laws and regulations on waste disposal or cleaning, or have them disposed of by contractors. To avoid harmful gases, do not use incinerators without flushing systems to burn wastes and other materials. Comply with all EU, national and local regulations. Do not dump this product into sewers, on the ground or into any body of water.

14. TRANSPORT INFORMATIONS


Check a thing without a leak in a container.

Perform prevention of collapse of cargo surely.


LAND TRANSPORT

ADR, RID	Class	: 3
	Packing Group(PG)	: 3
	UN Number	: 1210
	Proper Shipping Name	: Printing ink (flammable)

SEA TRANSPORT

IMDG	Class	: 3
	Packing Group(PG)	: 3
	UN Number	: 1210
	Proper Shipping Name	: Printing ink (flammable)
	Marine Pollutant	: No

AIR TRANSPORT

ICAO/IATA	Class	: 3
	Packing Group(PG)	: 3
	UN Number	: 1210
	Proper Shipping Name	: Printing ink (flammable)

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15. REGULATORY INFORMATION

This product is classified as follows and labeled accordingly.

Symbol : Xn (Harmful), Xi (Irritant)

Risk Phrase: 20/21 (Harmful by inhalation and in contact with skin.)
36 (Irritating to eyes.)

Safety Advise: 24/25 (Avoid contact with skin and eyes.)

Please refer to any other EU, national and local measures.

16. OTHER INFORMATION

From clause 3

Symbol letters : Xn Harmful
Xi Irritant

Risk phrase : 10 Flammable.
20 Harmful by inhalation.
21 Harmful in contact with skin.
36 Irritating to eyes.

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Revision history

Version	Date	Content
1.0	2008/01/30	First issue
2.0	2008/02/13	3. COMPOSITION/INFORMATION ON INGREDIENTS