

Safety Data Sheet

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

1.1. Identification of the substance or preparation

Product Name : Reactive Dye 2 Ink Yellow
Product Code : SPC-0357Y-A, 0393Y-A

1.2. Use of the substance/preparation

General Use : Ink jet printing ink
Product Description : Reactive Dye 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 :

Ink component is a yellow liquid that may cause eye irritation. Avoid contact with eyes or clothing. In the case of skin contact, wash with soap and water. Keep out of reach of children.

This product is classified as 'Irritant'.



Xi : Irritant

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POTENTIAL HEALTH EFFECTS

- Inhalation : Intentional exposure to ink vapors may cause respiratory irritation.
- Eye : Ink contact with eye may be irritating.
- Skin : Ink contact with skin will cause sensitization.
- Ingestion : May cause upset stomach.

POTENTIAL ENVIROMENTAL EFFECTS

: Not available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

No	Chemical Name	Wt%	CAS No.	EINECS No.	Symbol letters	Risk Phrase	Chemical Formula
1	Proprietary dyes and pigments	10-15	Trade Secret	Trade Secret	Xi	R43	Trade Secret
2	Proprietary organic materials	15-20	Trade Secret	Trade Secret	not classified	not classified	Trade Secret
3	2,2'-oxydiethanol	About 5	111-46-6	203-872-2	Xn	R22	C ₄ H ₁₀ O ₃
4	Water	balance	7732-18-5	231-791-2	not classified	not classified	H ₂ O

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

4. FIRST AID MEASURES

- INHALATION : Remove subject to ventilated fresh air. Consult physician if necessary.
- EYE : Immediately flush with room temperature, low pressure, and clean water for at least 15 minutes. Seek medical attention if eye irritation continues.
- SKIN : Wash surface areas with soap and water. Wash soiled clothing before rewearing. Consult a physician if irritation continues.
- INGESTION : Seek medical advice; and attention if stomach continues to be upset.
- PROTECTION TO FIRST-AIDERS : Not available

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5. FIRE-FIGHTING MEASURES

FLAMMABLE PROPERTIES

: Not flammable

EXTINGUISHING MEDIA

: Dry chemical or carbon dioxide

FIRE FIGHTING INSTRUCTIONS

: No special fire fighting procedures are required other than breathing apparatus. No special explosion hazards are known.

6. ACCIDENTAL RELEASE MEASURES

LAND SPILL : If a spill occurs, use sponges to wipe-up ink, then rinse area with damp cloth. Place waste in closed container for disposal.

WATER SPILL : Do not dispose of waste to use the sewer.

7. HANDLING AND STORAGE

HANDLING : Keep out of reach of children and do not drink ink. Do not dismantle cartridge. Make sure cartridge is dry before insertion into printer housing.

STORAGE : Do not store the cartridge in high or freezing temperatures. Keep cartridge out of direct sunlight. Do not store cartridges with oxidizing agents or explosives.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Exposure limit values

2,2'-oxydiethanol : MAK: 10 ppm, 44 mg/m³; Peak limitation category: II(4); Pregnancy risk group: C; (DFG 2004).

8.2. Exposure controls

8.2.1. Occupational exposure controls

Engineering : Not special measures required.

Controls

Personal Protection

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Respiratory Protection	: Not required under suitable use as setting the cartridge on the printer; however self-contained breathing apparatus or organic canister mask is sufficient when used for work.
Hand Protection	: Not required under suitable use as setting the cartridge on the printer; however, wearing gloves is sufficient.
Eye Protection	: Not required under suitable use as setting the cartridge on the printer; however, wearing safety goggles is sufficient.
Skin Protection	: Not required under suitable use as setting the cartridge on the printer; however, wearing gloves is sufficient.

8.2.2. Environmental exposure controls

: Not established.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General information

Appearance - Physical state	: liquid
- Color	: Yellow
Odor	: None

9.2. Important health, safety and environmental information

pH	: 7.5~9.5 (20 degree C)
Boiling Point / Boiling Range	: Not available
Flash Point	: Not detected until 95 degree C (closed cup, ASTM D3278)
Flammability(solid, gas)	: Not available
Relative density	: Not available
Solubility	: Not available
Water solubility	: Complete
Viscosity	: less than 5 mPa · s (20 degree C)

9.3. Other information

Melting Point / Merging Range	: Not applicable
Auto-Ignition Temperature	: Not available
Specific Gravity	: 1.00~1.10

10. STABILITY AND REACTIVITY

CONDITONS TO AVOID	: High and freezing temperatures.
STABILITY	: Stable under normal temperature

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MATERIALS TO AVOID : Oxidizers and explosives
HAZARDOUS DECOMPOSITION PRODUCTS : None

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY : 2,2'-oxydiethanol
Oral LD50 13,300-23,700 mg/kg (mouse)
Oral LD50 12,565-15,600 mg/kg (rat)
Oral LD50 4,400-26,900 mg/kg (rabbit)
Dermal LD50 11,890 mg/kg (rabbit)

EYE IRRITATION : The ink does not meet the criteria for classification according to EU Directive 1999/45/EC.

SKIN IRRITATION : The ink does not meet the criteria for classification according to EU Directive 1999/45/EC.

SENSITIZATION : Sensitizing (LLNA, OECD 429)

MUTAGENICITY : Not available

CARCINOGENICITY : Not contain any substances listed in IARC Monographs(1,2A and 2B)

12. ECOLOGICAL INFORMATION

ECOTOXICITY : 2,2'-oxydiethanol
EC50 2,700 (mg/l) (7-d)(Scenedesmus quadricauda)
EC50 >10,000 (mg/l) (24-h)(Daphnia magna)
LC50 >5,000 (mg/l) (24-h)(Carassius auratus)
LC50 >32,000 (mg/l) (96-h)(Gambusia affinis)
LC50 75,200 (mg/l) (96-h)(Pimephales promelas)

PERSISTENCE AND DEGRADABILITY : Not available

BIOACCUMULATIVE POTENTIAL : Octanol/water partition coefficient
(2,2'-oxydiethanol) log Pow: -1.98

RESULTS OF PBT ASSESSMENT : Not available

OTHER ADVERSE SFFECTS : Not available

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13. DISPOSAL CONSIDERATIONS

Disposal should be in accordance with national and local requirements.

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

14. TRANSPORT INFORMATIONS

UN Class/UN Number : Not applicable

Check a thing without a leak in a container.

Perform prevention of collapse of cargo surely.

15. REGULATORY INFORMATION

Symbols and indication according to 1999/45/EC: Xi



Irritant

Wording of Risk and Safety Phrase:

R43: May cause sensitization by skin contact.

S2: Keep out of the reach of children.

S24: Avoid contact with skin.

S37: Wear suitable gloves.

16. OTHER INFORMATION

From clause 3

Symbol letters : Xi Irritant
Xn Harmful

Risk phrase : 22 Harmful if swallowed.
43 May cause sensitization by skin contact.

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MSDS No.032-33W04YC
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Revision history

Version	Date	Content
1.0	Oct 2, 2007	First issue
2.0	Dec 10, 2007	No.1 Product name, code No.15 Addition of symbol
3.0	Feb 5, 2008	No. 1.4 EMERGENCY TELEPHONE NUMBER No. 11 TOXICOLOGICAL INFORMATION No. 12 ECOLOGICAL INFORMATION