

# Safety Data Sheet

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

### 1.1. Identification of the substance or preparation

Product Name : SS21 ink Cyan

Product Code : SPC-0501C

### 1.2. Use of the substance/preparation

General Use : Ink for ink jet plotter

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.co.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 TELEPHONE NUMBER : +81-268-64-2413

## 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW :

Flammable liquid, acute toxic substance.

Stagnant vapor may cause organic solvent poisoning.

Do not inhale. Inhalation may cause any of the following symptoms: dizziness, headache, the stimulation of eyes, skin and respiratory tract.

This product is classified as 'Irritant (Xi)', 'Harmful (Xn)' and 'Dangerous for environment (N)'.

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## POTENTIAL HEALTH EFFECTS

- Inhalation : R20 Harmful by inhalation.  
R37 Irritating to respiratory system.
- Eye : R36 Irritating to eyes.
- Skin : R21 Harmful in contact with skin.  
R38 Irritating to skin.
- Ingestion : R65 Harmful: may cause lung damage if swallowed.
- Cancer-causing : EU Category 2 (Solvent naphtha (petroleum), light arom.)  
Substances which should be regarded as if they are carcinogenic to man.  
Note P in ASL applies to the product or one of its components.  
Benzene concentration is <0.1%(w/w).

## POTENTIAL ENVIRONMENTAL EFFECTS

- : R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

No	Chemical Name	Wt%	CAS No.	EINECS No.	Symbol letters	Risk Phrase	Chemical Formula
1	Diethylene glycol derivative	75-85	Trade Secret	Trade Secret	not classified	not classified	Trade Secret
2	Lactone compound	10-20	Trade Secret	Trade Secret	not classified	not classified	Trade Secret
3	Solvent naphtha (petroleum), light arom.	0.5-1.5	64745-95-6	265-199-0	Xn	45-65	—
4	Mesitylene	0.01-0.2	108-67-8	203-604-4	Xi, N	10-37-51/53	C <sub>9</sub> H <sub>12</sub>
5	1,2,4-Trimethylbenzene	0.1-1.0	95-63-6	202-436-9	Xn, Xi, N	10-20-36/37/38-51/53	C <sub>9</sub> H <sub>12</sub>
6	Cumene	0.01-0.1	98-82-8	202-704-5	Xn, Xi, N	10-37-51/53-65	C <sub>9</sub> H <sub>12</sub>

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7	Phthalocyanine blue	1.0-5.0	147-14-8	205-685-1	not classified	36/38	C <sub>32</sub> H <sub>16</sub> CuN <sub>8</sub>
8	Vinylchloride -Vinylacetate Copolymer	1.0-5.0	9003-22-9	Trade Secret	not classified	not classified	-(CH <sub>2</sub> CH Cl) <sub>n</sub> -(CH <sub>2</sub> CHOCO CH <sub>3</sub> ) <sub>m</sub> -
9	Diol type inhibitor	0.1-1.0	Trade Secret	Trade Secret	Xi	36/38	Trade Secret

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

## 4. FIRST AID MEASURES

- INHALATION** : If inhaled, immediately remove to fresh air and keep warm and calm.  
If breathing irregularly or not breathing, give artificial respiration.  
Keep from swallowing vomit.  
Consult a doctor immediately.  
If inhaled and feeling sick, remove to fresh air, keep warm and calm and consult a doctor.
- EYE** : Flush eyes with plenty of water for at least 15 minutes.  
Consult a doctor immediately.
- SKIN** : Immediately remove from skin with cloth.  
Flush thoroughly with plenty of water and soap or skin detergent.  
Do not use solvent or thinner.  
Consult a doctor in case of change of appearance or ache.
- INGESTION** : If swallowed, keep calm and consult a doctor immediately.  
Keep from swallowing vomit.
- PROTECTION TO FIRST-AIDERS** : Wear a tool for appropriate protection. Ventilate.
- NOTE TO PHYSICIAN** : Treatment may vary with condition of victim and specifics of incident.

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### 5. FIRE-FIGHTING MEASURES

#### FLAMMABLE PROPERTIES

: The harmful gas such as carbon monoxide or the low molecule monomer occurs by combustion.

Flash point: 71.1 degree C

Ignition point: 169 degree C

Flammable point: 2.2% to 33.0%

#### EXTINGUISHING MEDIA

: CO<sub>2</sub>, foam, powder, dry sand.

Never splash water.

#### FIRE FIGHTING INSTRUCTIONS

: Use proper protection (heat-resisting clothes, etc.).

Promptly remove flammables.

### 6. ACCIDENTAL RELEASE MEASURES

#### LAND SPILL

: Use proper protection (gloves, masks, aprons, goggles, etc.)

If Collect spills in a sealing container and remove to safe place.

Dispose of waste according to legal instructions.

Promptly remove ignitable, hot, or flammable items.

Prepare proper fire extinguishers for accidental ignition.

Use plastic or other equipment to prevent sparks during recovery operation.

Use dry sand, dirt or other nonflammable absorber.

#### WATER SPILL

: Avoid discharge to rivers and environmental effects.

### 7. HANDLING AND STORAGE

#### HANDLING

: Use proper protection (gloves, masks, aprons, goggles, etc.)

Handle in well-ventilated area. Prohibit use of fire, sparks or heat source. Ground equipment against electrostatics and use explosion-proof electric equipment. Use spark-proof tools.

Keep used cloths, waste paints or spray dusts in water until disposal.

Use local exhaust system and proper protection if working in closed area.

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**STORAGE** : Keep from sunlight.  
 Store in well-ventilated area.  
 Keep from open fire or heat source.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Exposure limit values

No	Chemical Name		8hr TWA	STEL	Ceiling	Skin	SEN
1	Mesitylene	91/332/EEC 2000/39/EC 2006/15/EC	100 mg/m <sup>3</sup> 20 ppm	N.E.	N.E.	N.E.	N.E.
		ACGIH TLV	25 ppm	N.E.	N.E.	N.E.	N.E.
2	1,2,4- Trimethylbenzene	91/332/EEC 2000/39/EC 2006/15/EC	100 mg/m <sup>3</sup> 20 ppm	N.E.	N.E.	N.E.	N.E.
		ACGIH TLV	25 ppm	N.E.	N.E.	N.E.	N.E.
3	Cumene	91/332/EEC 2000/39/EC 2006/15/EC	100 mg/m <sup>3</sup> 20 ppm	250 mg/m <sup>3</sup> 50 ppm	N.E.	○	N.E.
		ACGIH TLV	50 ppm	N.E.	N.E.	N.E.	N.E.

### 8.2. Exposure controls

#### 8.2.1. Occupational exposure controls

**Engineering** : Use explosion-proof handling equipment.  
**Controls** : Use exhaust system to prevent vapor build-up  
 Ground transporting, scooping, agitating or other liquid handling equipment.  
 Keep heat or fire sources from handling area.  
 If working indoors, use automatic coating machine or other proper equipment to protect workers from direct exposure or use local exhaust system to protect workers from exposure.

#### Personal Protection

**Respiratory** : Wear gas masks for organic gases.  
**Protection** : Wear ventilation masks when working in closed area.  
**Hand Protection** : Wear gloves that resist organic solvents and chemicals.  
**Eye Protection** : Wear coverall, chemical goggles and face shield when handling.

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Skin Protection : To prevent ANY contact, wear impervious clothing such as gloves, apron, boots, or whole body suits made from neoprene, as appropriate.

8.2.2. Environmental exposure controls  
: Not available

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1. General information

Appearance - Physical state : liquid  
- Colour : Cyan  
Odor : Slight solvent odor

#### 9.2. Important health, safety and environmental information

pH : Not applicable  
Boiling Point / Boiling Range : 176 degree C or higher  
Flash Point : 71.1 degree C  
Flammability(solid, gas) : Not Applicable  
Explosive Properties : Flammable point: 2.2% to 33.0%  
Vapour Pressure : Less than 133Pa(20 degree C)  
Relative density : Not available  
Solubility : Not available  
Water solubility : Not available  
Viscosity : 3.6±0.3 mPa.s (20 degree C)

#### 9.3. Other information

Melting Point / Melting Range : Not available  
Auto-Ignition Temperature : 169 degree C  
Specific Gravity : 0.966±0.01(20 degree C)  
VOC : 907.1g/L

### 10. STABILITY AND REACTIVITY

CONDITONS : Excessive heat and cold. Sparks. Ignition sources. Direct sunlight.  
TO AVOID : High humidity.  
STABILITY : Stable

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MATERIALS : Strong acid. Strong bases.  
 TO AVOID  
 HAZARDOUS : Will not occur.  
 DECOMPOSITION : To burn this product may be produce toxic gases such as CO and  
 PRODUCTS low-molecular-weight monomers.

## 11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY : Oral  
     Diethylene glycol derivative      LD50 rat 6500 mg/kg  
     Lactone compound                      LD50 rat 1540 mg/kg  
     1,2,4 – Trimethylbenzene            LD50 rat 5000 mg/kg  
     Cumene                                    LD50 rat 1400 mg/kg  
 : Dermal  
     Cumene                                    LD50 rabbit 12300mg/kg  
 : Inhalation  
     Mesitylene                              LD50 rat 24g/m<sup>3</sup>  
     1,2,4 – Trimethylbenzene            LD50 rat 18g/m<sup>3</sup>  
     Cumene                                    LD50 rat 8000 ppm  
     LC50 rabbit 24700 ppm  
 EYE IRRITATION : Lactone compound  
     Irritating to eyes. (rabbit eyes, OECD Guideline 405)  
 SKIN IRRITATION : Diethylene glycol derivative P.I.I 2.5 (Draiza)  
 SENSITIZATION : Not available  
 MUTAGENICITY : Not available

## 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 : Not Available  
 PERSISTENCE AND DEGRADABILITY  
 : Not Available

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### BIOACCUMULATIVE POTENTIAL

: Not Available

### 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 : No classification assigned.

### SEA TRANSPORT

IMDG Class : No classification assigned.

### AIR TRANSPORT

ICAO/IATA Class : No classification assigned.



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## 15. REGULATORY INFORMATION

This product is classified as follows and labeled accordingly.

	Symbol	: Xi Irritant, Xn Harmful, N Dangerous for environment
ICCA	Risk Phrase	: 22 Harmful if swallowed. 36/38 Irritating to eyes and skin. 41 Risk of serious damage to eyes. 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
	Safety Advise	: 25 Avoid contact with eyes. 26 In case of contact with eyes, rinse immediately with plenty of water medical advice. 39 Wear eye/face protection.
		Please refer to any other EU, national and local measures.
ICCA		: mesitylene
HPV chemicals		: 1,2,4-Trimethylbenzene

## 16. OTHER INFORMATION

References	1) "Raw material data base" Redacted by Japan Paint Manufacturers Association 2) "Solvent pocketbook" by Ohmsha, Ltd. 3) First-aid manual for disaster prevention of dangerous goods 4) International Chemical Safety Cards
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From clause 3

Symbol letters

Xi : irritant

Xn : Harmful

N : Dangerous for the environment

Risk phrase

10: Flammable.

20: Harmful by inhalation.

36/37/38: Irritating to eyes, respiratory system and skin.

45: May cause cancer.

51/53: Toxic to aquatic organisms, may cause long-term adverse effects  
in the aquatic environment.

65: Harmful: may cause lung damage if swallowed.

If swallowed, do not induce vomiting: seek medical advice  
immediately and show this container or label.

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 dose 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	2007/7/31	First issue