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Material Safety Data Sheets

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

1. Product and Company Identification

Product Name : Dye Ink Black
Product Code : SPC-0258K

General Use : Ink jet printing ink

Product Description : Dye ink

MSDS Number :031-34W02KC

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. Hazards Identification

Emergency Overview : Ink component is a Black liquid that cause eye, nose or throat

irritation, and that effects anesthesia, if inhales. Ink may flash, when under high temperature.

Avoid contact with eyes or clothing.

In the case of skin contact, wash with soap and water.

Keep out of reach of children.

Potential Health Effects

Inhalation : Intentional exposure to ink vapors (mist) will cause respiratory

irritation and anesthesia.

Eye Contact : Ink contact with eye will be irritating.

Skin Contact : Ink contact with skin may cause minimally irritation.

Ingestion : May cause upset stomach.

Carcinogens : None known.

Potential Environmental : Not available.

Effects



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3. Composition / Information On Ingredients

| No | Chemical Name | Wt% | CAS No. | Chemical |
|----|-------------------------------|----------|--------------|-------------------------|
| | | | | Formula |
| 1 | Proprietary dyes and pigment | 5-10 | Trade Secret | Trade Secret |
| 2 | Proprietary organic materials | 10-15 | Trade Secret | Trade Secret |
| 3 | Glycerols | About 10 | Trade Secret | Trade Secret |
| 4 | Diethylene glycol | <10 | 111-46-6 | $\mathrm{C_4H_{10}O_3}$ |
| 5 | Water | balance | 7732-18-5 | $ m H_2O$ |

4. First Aid Measures

Inhalation : Remove subject to ventilated fresh air. Consult physician if

necessary.

Eye Contact : Immediately flush with room temperature, low pressure, and clean

water for at least 15 minutes. Seek medical attention if eye

irritation continues.

Skin Contact : 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.

5. Fire Fighting Measures

Flammable Properties : Not flammable.

Extinguishing Media : Dry chemical or carbon dioxide.

Fire Fighting : No special fire fighting procedures are required other than

Instructions breathing apparatus. No special explosion hazards are known.

6. Accidental Release Measures

Personal Precautions : No eye or skin protection required during clean-up. Use proper

ventilation.

Land Spill : If a spill occurs, use sponges to wipe-up ink, and then rinse with

damp cloth. Place waste in closed container for disposal.



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Water Spill : Do not dispose of waste to the sewer.

Handling And Storage

: Keep out of reach of children and do not drink ink. Handling

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.

Exposure Controls / Personal Protection

Exposure Limit Values : Not available.

Exposure Controls

Occupational Exposure Controls

Engineering Controls : Not special measures required.

Personal Protection

Respiratory : Not required under suitable use as setting the cartridge on the

Protection 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.



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Environmental Exposure Controls

: Not established.

9. Physical And Chemical Properties

Appearance - Physical state : liquid

- Colour : Black

Odour : None

pH : 8.0-9.0 (20 degree C)

Boiling Point / Boiling Range : Not available.

Melting Point / Merting Range : Not available.

Flash Point : Not detected until 100 degree C

(closed cup, ASTM D3278)

Flammability(solid, gas) : Not available.

Relative density : 1.00-1.10 (20 degree C)

Solubility : Not available.

Water solubility : Complete

Viscosity : 3.0-4.0 (20 degree C)

VOC : 156.0 g/l

10. Stability And Reactivity

Conditions To Avoid : High and freezing temperatures.

Stability : Stable under temperature.

Materials To Avoid : Oxidizers and explosives

Hazardous Reactions/ : None

Decomposition Products

11. Toxicologocal Information

Acute Toxicity Oral LD₅₀ Dermal LD₅₀ Inhalant LC₅₀

>2000mg/kg(Rat)* >2000mg/kg(Rat)* No data available.



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Eye Irritation : Minimal irritanting (Rabbit, OECD405)
Skin Irritation : Mild irritanting (Rabbit OECD 404)

Sensitization : Non sensitizing (Guinea pig OECD 406)

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

Carcinogenicity : Negative(Ames assay)

12. Ecological Information

Ecotoxicity : No data available on the adverse effects of this ink on the

environment.

Persistence And : No data available on the adverse effects of this ink on the

Degradability environment.

Bioaccumulative : No data available on the adverse effects of this ink on the

Potential environment.

Other Adverse Effects : No data available.

13. Disposal Considerations

Disposal should be in accordance with federal, state, and local requirements.

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

14. Transport Information

UN Class/UN Number: Not applocable.

DOT, IMO, or IATA: Not hazardous classification

15. Regulatory Information

TSCA Section 4(a) Final : Not regulated.

Test Rules Regulated

TSCA Section 8(a) : Not regulated.

Preliminary Assessment

Information Rule(PAIR)

TSCA Section 12(b) : Not regulated.

One-Time Export



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Notification Regulated

California Proposition 65 : Not regulated.

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 dose not relate to use in combination with any other material or process.

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Revision history

| Version | Date | Content |
|---------|--------------|--------------|
| 1.0 | Apr 11, 2008 | First issue. |