



# Material Safety Data Sheets

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

## 1. Product and Company Identification

Product Name : Reactive Dye 2 Ink Black  
Product Code : SPC-0357K-A, 0393K-A  
General Use : Ink jet printing ink  
Product Description : Reactive Dye ink  
MSDS Number :031-34W04KC  
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 unlikely to cause harmful under normal conditions of handling and use. 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 may cause respiratory irritation.  
Eye Contact : Ink contact with eye may be irritating.  
Skin Contact : Ink contact with skin may cause irritation, swelling, or redness.  
Ingestion : May cause upset stomach.  
Carcinogens : None known.  
Potential Environmental Effects : Not available.

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### 3. Composition / Information On Ingredients

| No | Chemical Name                   | Wt%  | CAS No.      | Chemical Formula                              |
|----|---------------------------------|------|--------------|---|
| 1  | Diethylene glycol               | 5-15 | 111-46-6     | C <sub>4</sub> H <sub>10</sub> O <sub>3</sub> |
| 2  | Polyxythylene alkyl ether       | <5   | Trade Secret | Trade Secret                                  |
| 3  | Monochlorotriazine reactive Dye | 5-15 | Trade Secret | Trade Secret                                  |

### 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 : Wash out mouth with water and give 200~300 ml(half a point) of water to drink. Do not induce vomiting. Obtain medical attention if ill effects occur.
- Protection To First-Aiders : Not available.

### 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, and then rinse with damp cloth. Place waste in closed container for disposal.
- Water Spill : Do not dispose of waste to the sewer.

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### 7. Handling And Storage

- Handling : Keep out of reach of children and do not drink ink. Do not store the cartridge in high or freezing temperatures. Keep cartridge out of direct sunlight.
- Storage : Do not dismantle cartridge. Do not store cartridges with oxidizing agents or explosives. Make sure cartridge is dry before insertion into printer housing.

### 8. Exposure Controls / Personal Protection

- Exposure Limit Values : Diethylene glycol TWA:23ppm, 101mg/m<sup>3</sup>
- Exposure Controls : Where suitable engineering controls are not fitted or are inadequate, wear suitable protective equipment.

#### Personal Protection

- 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.



Gloves

- Eye Protection : Not required under suitable use as setting the cartridge on the printer; however, wearing safety goggles is sufficient.



Safety Glasses

- Skin Protection : Not required under suitable use as setting the cartridge on the printer; however, wearing gloves is sufficient.



Protective Apron

- Environmental Exposure Controls : Not established.

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### 9. Physical And Chemical Properties

|                               |                  |  |
|-------------------------------|------------------|--|
| Appearance                    | - Physical state | : liquid   |
|                               | - Colour         | : Black  |
| Odour                         |                  | : None   |
| pH                            |                  | : about 8.0 (20 degree C)                                    |
| Boiling Point / Boiling Range |                  | : Not available.   |
| Melting Point / Mering Range  |                  | : Not available.   |
| Flash Point                   |                  | : Not detected until 95 degree C<br>(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                     |                  | : less then 5mPa · s (20 degree C)                           |
| VOC                           |                  | : 100 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/<br>Decomposition Products | : If involved in a fire, it may emit noxious and toxic fumes. |

### 11. Toxicological Information

| Acute Toxicity  | Oral LD <sub>50</sub>  | Dermal LD <sub>50</sub> | Inhalant LC <sub>50</sub> |
|-----------------|--|-------------------------|---------------------------|
|                 | No data available.   | No data available.      | No data available.        |
|                 | : High concentrations of mist may be irritant to the upper respiratory tract.<br>Reactive dyes, of which this one type, have been associated with respiratory sensitization. |                         |                           |
| Eye Irritation  | : Unlikely to cause eye irritation.  |                         |                           |
| Skin Irritation | : Unlikely to cause skin irritation.   |                         |                           |
| Sensitization   | : It is not a skin sensitizer in animal tests.   |                         |                           |



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Unlikely to cause skin sensitization.  
Mutagenicity : Not available.  
Carcinogenicity : Not available.

### 12. Ecological Information

Ecotoxicity : Expected to be of low toxicity to fish, based on a consideration of the components.  
Persistence And Degradability : No data available on the adverse effects of this ink on the environment.  
Bioaccumulative Potential : No data available on the adverse effects of this ink on the 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

Not regulated as a Hazardous Material.

### 15. Regulatory Information

U.S. DOT Hazard Class Regulated: No  
U.S. OSHA Inhalation Hazard: No

### 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



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### Revision history

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