



Solvent Ink Cartridge Black

Revised 9 August, 2004

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Solvent Ink Cartridge Black**
 Product Code: **SPC-0334K**
 Company Identification
 Manufacturer's Name/Supplier Address: **Mimaki Engineering Co., Ltd.**
5-9-41 Kita Shinagawa, Shinagawa-ku Tokyo 14-0001
 Phone Number/Fax: **81-3-5420-8671 / 81-3-5420-8687**
 Contact Person: **Masaaki Fujita**

2. COMPOSITION / INGREDIENT INFORMATION

This is a solvent ink formulation.

Components (% by weight)

<u>Material</u>	<u>CAS Number</u>	<u>Contents%</u>	<u>Note</u>
Organic pigment	Registered	2.0-8.0	
Vinyl resin	-----	1.0-5.0	
Ester resin	-----	NONE	----
Acrylic resin	-----	NONE	----
Ethylene glycol mono-butyl ester Acetate	112-07-2	60-70	
Propylene glycol mono-methyl ester acetate	108-65-6	10-20	
Ethylene glycol mono-propylene ester	-----	NONE	----
Cyclohexanone	108-94-1	10-20	Organic solvent
N-butyl acetate	----	NONE	----
Isophorone	----	NONE	----

3. HAZARDS IDENTIFICATION

3.1 Emergency overview:

Ink component is a Black liquid that causes eye, nose or throat irritation, and can cause central Nervous System Depression. Closed containers can expand by heat and fire and will build pressure and explode. Vapors can travel along the floors and ground until

reaching a source of ignition and flash back. Avoid contact with eyes and clothing. In case of skin contact, wash with soap and water. May cause target organ effects. Keep out of the reach of children.

3.2 Potential Health Effects:

Eye: Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. See Section 11 for Toxicology.

Skin: Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, and itching. May be absorbed through the skin and cause target organ effects. See Section 11 for Toxicology.

Inhalation: Upper Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. See Section 11 for Toxicology.

Ingestion: Gastrointestinal Irritation: Signs/Symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. See Section 11 for Toxicology.

Target Organ Effect: Central Nervous System (CNS) Depression: Signs/symptoms May include headache, dizziness, drowsiness, diminished coordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

4 FIRST AID MEASURES

Eyes: Immediately flush with large amounts of water for 15 minutes, hold eyelid apart to ensure irrigation. Get medical attention.

Skin: Wash skin thoroughly with soap and water. Remove contaminated clothing and wash thoroughly before reuse. Consult a physician if irritation continues.

Inhalation: Remove individual to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately.

Ingestion: Seek the attention of a physician if stomach continues to be upset.

5 FIRE FIGHTING MEASURES

Flammability: Combustible liquid. See Section 9 for Flash Point.

Extinguishing Media: Dry chemical, carbon dioxide, or alcohol foam.

Fire Fighting Instructions: Water should not be used; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective clothing, including helmet, self-contained positive pressure or pressure-demand breathing apparatus, bunker coat and

pants, bands around arms, waist and legs, face mask and protective covering for exposed areas of the head.

6 ACCIDENTAL RELEASE MEASURES

Wear gloves, mask, apron and goggles as protective measures. Evacuate unprotected and untrained personnel from hazard area. Ventilate the area with fresh air. For large spills, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain the spill. Use sponges to wipe up the ink, then rinse the area with a damp cloth. Place waste in a closed container for disposal. Do not dispose of waste to the sewer or ground. Wash hands with soap and water.

7 HANDLING AND STORAGE

7.1 Handling:
 Avoid eye contact with vapors, mists, or spray. Avoid breathing of vapors, mists or spray. Avoid prolonged or repeated skin contact. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. For industrial or professional use only. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. No smoking while handling this material. Avoid contact with oxidizing agents. Wear protection such as gloves, mask, apron, goggles, etc.

7.2 Storage:
 Store away from acids. Store away from heat. Store out of direct sunlight. Store away from oxidizing agents. Keep container in a well-ventilated area.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Proper ventilation
Exposure Control: Not established
Personal Protection: Not required under proper installation or removal of cartridge in or out of the Printer. Other handling use requires gloves, goggles, apron, mask, etc.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Black Liquid
Odor: Slight
pH: Not applicable
Boiling point: Over 146°C (294.8°F)
Steam pressure: No data available
Flash point: about 59.1°C (138.4°F)
Auto flammability: 340°C (644°F)

Explosion lower limit: 0.8%
Explosion upper limit: 10.7%
Oxidizing properties: None
Vapor density: 0.968±0.01
Relative density: No data available
Solubility in water: Soluble
Solubility in fat: No data available
Partition coefficient: No data available
Viscosity: No data available

10 STABILITY AND REACTIVITY

Stability: Stable under normal temperature
Hazardous Polymerization: No data available
Hazardous decomposition products: No data available
Incompatibility: Oxidizers and Explosives

11 TOXICOLOGICAL INFORMATION

Routes of Overexposure: Eye, skin, inhalation, and oral ingestion

Acute Health Hazards: Overexposure of the eye surface to ink may be mildly irritating. Overexposure of ink contact with the skin may cause irritation and in some people, swelling and redness. Intentional inhalation to ink vapors may result in respiratory tract irritation. Intentional or accidental oral ingestion may cause an upset stomach.

Chronic Health Hazards: None known

Carcinogenicity: With excessive exposure, carbon black has been listed as a possible human carcinogen. However, as engineered within this ink cartridge, emissions of air of carbon black during normal printing use have not been found. IARC, the International Agency for Research on Cancer, has found printing inks to be not classifiable as human carcinogens.

Toxicity: **Cyclohexanone:** Density –25ppm
 ACGIH (TLV) – 50ppm
 Others – (rat) LD50:11620µL/kg
 If improperly used, it may cause Liver and Kidney problems.

Eye Irritating: Mildly or serious irritating (exposure time and amount)

Skin Irritating: Minimally irritating

Skin sensitizing: No data available

12 ECOLOGICAL INFORMATION

No data available on the adverse effects of this material on the environment.

13 DISPOSAL CONSIDERATIONS

Used and unused cartridges are not a federal RCRA hazardous waste. Disposal should be in accordance with federal, state, and local requirements. Do not dispose of in the drainage system or on the ground.

14 TRANSPORTATION INFORMATION

Follow proper Handling and Storage. Follow proper transportation of a Flammable Substance laws.

15 REGULATORY INFORMATION

US information:	Flammable Material. Hazardous Material
UN Number 1210	4 th category, 2 nd Petroleum oil. (Non-aqueous)

16 OTHER INFORMATION

This "Material Safety Data Sheet" contains health, safety, and environmental information. It does not replace any precautionary language or use and disposal information which accompanies the product. The information contained herein is believed to be accurate at the time of preparation, but should only be used as a guide. It is subject to revision from time to time. Mimaki Engineering does not warrant the completeness or accuracy of the information contained herein.

End of MSDS