

## Safety Data Sheets

### 1. Identification

Product Name : BS3 ink Black  
Order No. : SPC-0667K / SPC-0693K  
General Use : Ink for ink jet printer  
Product Description : Solvent pigment ink  
SDS Number : 037-S130526  
Manufacture  
Company Name : Mimaki Engineering Co., Ltd.  
Address : 2182-3 Shigeno-otsu, 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. : +81-268-64-2281

### 2. Hazards Identification

#### [GHS Classification]

##### Physical Hazards

Flammable Liquids : Category 4

##### Health Hazards

Eye Damage / Irritation : Category 1

Carcinogenicity : Category 2

Toxic to Reproduction : Category 1B

Specific Target Organ Toxicity : Category 1 (blood, central nervous system,  
(Single Exposure) systemic toxicity)

Specific Target Organ Toxicity : Category 2 (kidneys, hematopoietic system)  
(Single Exposure)

Specific Target Organ Toxicity : Category 3 (respiratory tract)  
(Single Exposure)

Specific Target Organ Toxicity : Category 1 (lungs)  
(Repeated Exposure)





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First issue: 2011/01/13

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Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P311 IF exposed or concerned: Call a POISON CENTER or doctor/physician.

P305+P310 IF IN EYES: Immediately call a POISON CENTER or doctor/physician.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P370+P378 In case of fire: Use appropriate media for extinction.

[Storage]

P403+P233+P235 Store in a well-ventilated place. Keep container tightly closed. Keep cool.

P405 Store locked up.

[Disposal]

P501 Dispose of contents

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Eye Contact	: Flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention.
Skin Contact	: Wash with plenty of soap and water. Take off contaminated clothing and wash before re-use. Get medical attention if irritation develops.
Ingestion	: If swallowed, get medical attention.
Most Important Symptoms/Effects	
Acute	: eye damage, respiratory tract irritation, blood damage, central nervous system damage, systemic toxicity damage, kidney damage
Delayed	: cancer, reproductive effects, lung damage, blood damage, kidney damage
Indication of Immediate Medical Attention and Special Treatment Needed, If Needed	: Treat symptomatically and supportively.

### 5. Fire Fighting Measures

Flammable Properties	: Flash point 65± 1 (TCC) Auto Ignition Temperature: Not available Flammable point : Not available
Extinguishing Media	: carbon dioxide, regular dry chemical, water spray, alcohol resistant foam
Unsuitable Extinguishing Media	: Do not scatter spilled material with high-pressure water streams.
Special Hazards Arising from the Chemical	: Combustible liquid and vapor.
Hazardous Combustion Products	: oxides of carbon
Fire Fighting Measures	: Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Avoid inhalation of material or combustion by-products. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor

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nozzles until well after fire is out. If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire.

Special Protective Equipment and Precautions for Firefighters : Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

### 6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures : Wear personal protective clothing and equipment, see Section 8. Avoid release to the environment.

Methods and Materials for Containment and Cleaning Up : Eliminate all ignition sources if safe to do so. Stop leak if possible without personal risk. Reduce vapors with water spray.  
**Small spills:** Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal.  
**Large spills:** Dike for later disposal. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.

### 7. Handling and Storage

Precautions for Safe Handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks, open flame, and hot surfaces - No smoking. Do not breathe vapor or mist. Use only outdoors or in a well-ventilated area. Avoid contact with eyes, skin and clothing. Do not eat, drink, or smoke when using this product. Wear protective gloves and eye/face protection. Wash thoroughly after handling. Avoid release to the environment.



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Hand Protection : Wear appropriate chemical resistant gloves.



**Gloves**

Eye Protection : Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.



**Safety Glasses**

Skin Protection : Wear appropriate chemical resistant clothing.



**Protective Apron**

OTHER : Overalls. P.V.C. apron. Barrier cream.  
 Skin cleansing cream. Eye wash unit.

### 9. Physical and Chemical Properties

Appearance	- Physical State	: Liquid
	- Color	: Black
Odor		: Solvent odor
pH		: Not available
Boiling Point / Boiling Range		: 145~209
Melting Point / Melting Range		: <-30
Decomposition Temperature		: Not available
Flash Point		: 65±1
Auto ignition temperature		: Not available
Flammability (Solid, Gas)		: Not applicable
Explosive Properties		: Not available
Oxidizing Properties		: Not available
Upper / Lower Flammability or Explosive Limits		: Not available
Vapor Pressure		: 0.493kPa (20 )
Specific Gravity		: 0.995±0.01 (25 )
Solubility		: Very small amount
Water Solubility		: Not available
Partition Coefficient (n-octanol / Water)		: Not available

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Viscosity	: 4.0† 0.3 mPa s (25 °C)
Vapor Density	: Not available
Evaporation Rate	: Not available

### 10. Stability and Reactivity

Reactivity	: No reactivity hazard is expected.
Chemical Stability	: Stable under normal conditions of use.
Possibility of Hazardous Reactions	: Will not polymerize.
Conditions to Avoid	: Avoid flames, sparks, and other sources of ignition. Containers may rupture or explode if exposed to heat. Avoid contact with incompatible materials.
Incompatible Materials	: acids, bases, oxidizing materials, halogens, amines
Hazardous Decomposition	: Combustion: oxides of carbon

### 11. Toxicological Information

Acute Toxicity	: The component(s) of this material have been reviewed in various sources and the following selected endpoints are published:
Component Analysis - LD50/LC50	

**Ethylene glycol monobutyl ether acetate (112-07-2)**

Dermal LD50 Rabbit 1480 mg/kg; Oral LD50 Rat 1600 mg/kg

**Propylene glycol monomethyl ether acetate (108-65-6)**

Dermal LD50 Rabbit >5 g/kg; Oral LD50 Rat 8532 mg/kg

**-Butyrolactone (96-48-0)**

Inhalation LC50 Rat >5100 mg/m<sup>3</sup> 4 h; Oral LD50 Rat 1540 mg/kg

Information on Likely Routes of Exposure

Inhalation	: irritation, lack of sense of smell, chest pain, difficulty breathing, headache, hearing loss, nausea, drowsiness, dizziness, loss of coordination, unconsciousness, cough, lung damage, cancer, reproductive effects, kidney damage, liver damage, systemic toxicity damage
Ingestion	: irritation, nausea, headache, drowsiness, dizziness, loss of coordination, unconsciousness, coma, sore throat, vomiting, stomach

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pain

Skin Contact : irritation, nausea, headache, drowsiness, dizziness, unconsciousness, coma

Eye Contact : eye damage

Immediate Effects : eye damage, respiratory tract irritation, blood damage, central nervous system damage, systemic toxicity damage, kidney damage

Delayed Effects : cancer, reproductive effects, lung damage, blood damage, kidney damage

Medical Conditions : respiratory disorders

Aggravated by Exposure

Irritation/Corrosivity : eye damage, respiratory tract irritation

Data

Respiratory : No information available for the product.

Sensitization

Dermal Sensitization : No information available for the product.

Germ Cell Mutagenicity : No information available for the product.

Carcinogenicity : Component Carcinogenicity

### Ethylene glycol monobutyl ether acetate (112-07-2)

ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
DFG:	Category 4 (no significant contribution to human cancer)

### -Butyrolactone (96-48-0)

IARC:	Monograph 71 [1999]; Supplement 7 [1987]; Monograph 11 [1976] (Group 3 (not classifiable))
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### Carbon black (1333-86-4)

ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC:	Monograph 93 [2010]; Monograph 65 [1996] (Group 2B (possibly carcinogenic to humans))
DFG:	Category 3B (could be carcinogenic for man, inhalable fraction)
OSHA:	Present

### Vinyl chloride / Vinyl acetate copolymer resin(Proprietary)

IARC:	Supplement 7 [1987]; Monograph 19 [1979] (Group 3 (not classifiable))
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Reproductive Toxicity : Available data characterizes components of this product as reproductive hazards.

Specific Target Organ : blood, central nervous system, systemic toxicity, kidneys,  
 Toxicity - Single hematopoietic system, respiratory tract  
 Exposure

Specific Target Organ : lungs, blood, kidneys  
 Toxicity - Repeated  
 Exposure

Aspiration Hazard : No information available for the product.

### 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 : Harmful to aquatic life with long lasting effects

Component Analysis - : Ethylene glycol monobutyl ether acetate (112-07-2)

Aquatic Toxicity

Algae:	72 Hr EC50 Desmodesmus subspicatus: >500 mg/L
Invertebrate:	48 Hr EC50 Daphnia magna: 37 mg/L

Propylene glycol monomethyl ether acetate (108-65-6)

Fish:	96 Hr LC50 Pimephales promelas: 161 mg/L [static]
Invertebrate:	48 Hr EC50 Daphnia magna: >500 mg/L

-Butyrolactone (96-48-0)

Algae:	72 Hr EC50 Desmodesmus subspicatus: 360 mg/L; 96 Hr EC50 Desmodesmus subspicatus: 79 mg/L
Invertebrate:	48 Hr EC50 Daphnia magna Straus: >500 mg/L

Persistence and : Not available

Degradability

Bioaccumulation : Not available

Mobility : Not available

Other Toxicity : Not available

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### 13. Disposal Considerations

	: Comply with all USA, national and local regulations. <u>Do not dump this product into sewers, on the ground or into any body of water.</u>
Disposal Methods	: Dispose in accordance with all applicable regulations.
Component Waste Numbers	: The U.S. EPA has not published waste numbers for this product's components.
Disposal of Contaminated Packaging	: Empty containers may contain product residue. Dispose in accordance with all applicable regulations.

### 14. Transport Information

	Check a thing without a leak in a container. Perform prevention of collapse of cargo surely.
IATA Information	: Not regulated as dangerous goods for transport.
ICAO Information	: Not regulated as dangerous goods for transport.
IMDG Information	: Not regulated as dangerous goods for transport.
Marine Pollutant	: Ethylene glycol monobutyl ether acetate (112-07-2) IBC Code: Category Y Propylene glycol monomethyl ether acetate (108-65-6) IBC Code: Category Z -Butyrolactone (96-48-0) IBC Code: Category Y
TDG Information	: Not regulated as dangerous goods for transport.
US DOT Information	: Not regulated as dangerous goods for transport. *1

\*1 Class combustible liquid (NA1993), Packing group III for quantities of 450 liters (119 gallons) or more; not regulated for smaller quantities



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### 16. Other Information

#### Key/Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; CAS - Chemical Abstracts Service; CLP - Classification, Labelling and Packaging; EEC - European Economic Community; EIN (EINECS) - European Inventory of Existing Commercial Chemical Substances; ELN (ELINCS) - European List of Notified Chemical Substances; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IMDG - International Maritime Dangerous Goods; IBC Code - International Bulk Chemical Code; Kow - Octanol/water partition coefficient; LEL - Lower Explosive Limit; LOLI - @] g h ` C Z ` @ ChemAdvisor's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NTP = National Toxicology Program; REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - European Rail Transport; STEL - Short-term Exposure Limit; TWA - Time Weighted Average; UEL - Upper Explosive Limit

#### Other Information

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