

# Safety Data Sheets

**\*\*\*Section 1 - IDENTIFICATION\*\*\*****Product Identifier: BS3 ink Black****Product Description**

SPC-0667K / SPC-0693K

**Product Use**

Pigment ink for ink jet printer

**Restrictions on Use**

None known.

**Manufacturer Information**Mimaki Engineering Co., Ltd  
2182-3 Shigeno-otsu, Tomi-shi, Nagano  
389-0512 Japan

Telephone number: +81-268-64-2413

Emergency telephone number: +81-268-64-2281

**Importer / Distributor Information**MIMAKI SINGAPORE PTE. LTD.  
31 Kaki Bukit Road 3 Singapore 417818 TechLink #02-03

Telephone number: +65-6508-2789

**\*\*\*Section 2 - HAZARDS IDENTIFICATION\*\*\*****SPRING/SS 586-2:2014**

Serious Eye Damage/Eye Irritation, Category 1

Carcinogenicity, Category 2

Toxic to reproduction, Category 1B

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

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

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

Specific Target Organ Toxicity - Repeated Exposure, Category 1 (lungs)

Specific Target Organ Toxicity - Repeated Exposure, Category 2 (blood and kidneys)

**LABEL ELEMENTS****Symbol(s)****Signal Word**

DANGER

**Hazard Statement(s)****H318** Causes serious eye damage.**H351** Suspected of causing cancer.**H360** May damage fertility or the unborn child.**H370** Causes damage to blood, central nervous system, and body**H371** May cause damage to kidneys and hematopoietic system.

# Safety Data Sheets

- H335** May cause respiratory irritation.
- H372** Causes damage to lungs through prolonged or repeated exposure.
- H373** May cause damage to blood and kidneys through prolonged or repeated exposure.

## Precautionary Statement(s)

### Prevention

- P201** Obtain special instructions before use.
- P202** Do not handle until all safety precautions have been read and understood.
- P260** Do not breathe dust/fume/gas/mist/vapours/spray.
- P271** Use only outdoors or in a well-ventilated area.
- P270** Do not eat, drink or smoke when using this product.
- P280** Wear protective gloves/protective clothing/eye protection/face protection.
- P264** Wash thoroughly after handling.

### Response

- P308+P313** IF exposed or concerned: Get medical advice/attention.
- P304+P340** IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P312** Call a POISON CENTER or doctor/physician if you feel unwell.
- P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310** Immediately call a POISON CENTER or doctor/physician.

### Storage

- P403+P233** Store in a well-ventilated place. Keep container tightly closed.
- P405** Store locked up.

### Disposal

- P501** Dispose of contents/container in accordance with local/regional/national/international regulations.

### Other Hazards Which Do Not Result in Classification

None known.

## \*\*\*Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS\*\*\*

CAS	Component	Percent
112-07-2	Ethylene glycol monobutyl ether acetate	50-60
96-48-0	$\gamma$ -Butyrolactone	15-25
108-65-6	Propylene glycol monomethyl ether acetate	15-25
1333-86-4	Carbon black	1-10
Trade Secret	Additives	0.1-5
Trade Secret	Vinyl chloride-Vinyl acetate copolymer	1-10

## \*\*\*Section 4 - FIRST AID MEASURES\*\*\*

### Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.

### Skin

Wash with plenty of soap and water. Take off contaminated clothing and wash before re-use. Get medical attention if irritation develops.

### Eyes

## Safety Data Sheets

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.

### Ingestion

If swallowed, get medical attention.

### Note to Physicians

Treat symptomatically and supportively.

### Symptoms: Immediate

eye damage, respiratory tract irritation, blood damage, central nervous system damage, systemic toxicity damage, kidney damage, hematopoietic effects

### Symptoms: Delayed

cancer, reproductive effects, lung damage, blood damage, kidney damage

## \*\*\*Section 5 - FIRE FIGHTING MEASURES\*\*\*

### Flammable Properties

Combustible liquid and vapor.

### 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.

### Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

### 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 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.

### Hazardous Combustion Products

**Combustion:** oxides of carbon

## \*\*\*Section 6 - ACCIDENTAL RELEASE MEASURES\*\*\*

### Personal Precautions

Wear personal protective clothing and equipment, see Section 8.

### Environmental Precautions

Avoid release to the environment.

### Methods for Containment

Eliminate all ignition sources if safe to do so. Stop leak if possible without personal risk. Reduce vapors with water spray.

### Cleanup Methods

**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.

## \*\*\*Section 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.

# Safety Data Sheets

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.

### Conditions for Safe Storage

Store and handle in accordance with all current regulations and standards. Store in a well-ventilated place. Keep container tightly closed. Keep cool. Grounding and bonding required. Store locked up. Keep separated from incompatible substances.

**Incompatibilities:** acids, bases, oxidizing materials, halogens, amines

<b>***Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION***</b>
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### Component Exposure Limits

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

**ACGIH:** 20 ppm TWA

**Carbon black (1333-86-4)**

**Singapore:** 3.5 mg/m<sup>3</sup> PEL

**ACGIH:** 3 mg/m<sup>3</sup> TWA (inhalable fraction)

### Biological exposure limits

There are no biological limit values for any of this product's components.

### Engineering Controls

Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

### PERSONAL PROTECTIVE EQUIPMENT

#### Eyes/Face

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

#### Protective Clothing

Wear appropriate chemical resistant clothing.

#### Glove Recommendations

Wear appropriate chemical resistant gloves.

#### Respiratory Protection

Consult with a health and safety professional for specific respirators appropriate for your use.

<b>***Section 9 - PHYSICAL AND CHEMICAL PROPERTIES***</b>
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<b>Physical State:</b>	Liquid	<b>Appearance:</b>	black liquid
<b>Color:</b>	black	<b>Physical Form:</b>	liquid
<b>Odor:</b>	solvent odor	<b>Odor Threshold:</b>	Not available
<b>pH:</b>	Not available	<b>Melting Point:</b>	<-30°C
<b>Boiling Point:</b>	145~209 °C	<b>Flash Point:</b>	65±1 °C
<b>Decomposition Temperature:</b>	Not available	<b>Evaporation Rate:</b>	Not available
<b>LEL:</b>	Not available	<b>UEL:</b>	Not available
<b>Vapor Pressure:</b>	0.493kPa (20 °C)	<b>Vapor Density (air = 1):</b>	Not available

## Safety Data Sheets

<b>Density:</b>	Not available	<b>Specific Gravity (water = 1):</b>	0.995±0.01 (25 °C)
<b>Water Solubility:</b>	Not available	<b>Log KOW:</b>	Not available
<b>Coeff. Water/Oil Dist:</b>	Not available	<b>Auto Ignition Temperature:</b>	Not available
<b>Viscosity:</b>	4.0±0.3 mPa·s (25 °C)	<b>Volatility:</b>	Not available
<b>Oxidizing Properties:</b>	Not available	<b>Explosive Properties:</b>	Not available
<b>Flammability (solid, gas):</b>	Not applicable		

### Other Property Information

No additional information is available.

### \*\*\*Section 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.

#### Materials to Avoid (Incompatibilities)

acids, bases, oxidizing materials, halogens, amines

#### Hazardous Decomposition:

**Combustion:** oxides of carbon

### \*\*\*Section 11 - TOXICOLOGICAL INFORMATION\*\*\*

#### Acute and Chronic Toxicity

##### Component Analysis - LD50/LC50

The component(s) of this material have been reviewed in various sources and the following selected endpoints are published:

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

Oral LD50 Rat 2400 mg/kg; Dermal LD50 Rabbit 1480 mg/kg

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

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

##### **γ-Butyrolactone (96-48-0)**

Oral LD50 Rat 1540 mg/kg; Inhalation LC50 Rat >5100 mg/m<sup>3</sup> 4 h (no deaths occurred)

##### **Carbon black (1333-86-4)**

Oral LD50 Rat >15400 mg/kg

#### Immediate Effects

eye damage, respiratory tract irritation, blood damage, central nervous system damage, systemic toxicity damage, kidney damage, hematopoietic effects

#### Delayed Effects

cancer, reproductive effects, lung damage, blood damage, kidney damage

#### Irritation/Corrosivity Data

## Safety Data Sheets

eye damage, respiratory tract irritation

### Respiratory Sensitizer

No information available for the product.

### Dermal Sensitizer

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)

##### γ-Butyrolactone (96-48-0)

**IARC:** Monograph 71 [1999]; Supplement 7 [1987]; Monograph 11 [1976] (Group 3 (not classifiable))

##### 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 (Trade Secret)

**IARC:** Supplement 7 [1987]; Monograph 19 [1979] (Group 3 (not classifiable))

### Mutagenic Data

No information available for the product.

### Reproductive Effects Data

Available data characterizes components of this product as reproductive hazards.

### Specific Target Organ Toxicity - Single Exposure

blood, central nervous system, systemic toxicity, kidneys, hematopoietic system, respiratory tract

### Specific Target Organ Toxicity - Repeated Exposure

lungs, blood, kidneys

### Aspiration Hazard

No information available for the product.

### Medical Conditions Aggravated by Exposure

respiratory disorders

<b>***Section 12 - ECOLOGICAL INFORMATION***</b>
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### Ecotoxicity

Harmful to aquatic life with long lasting effects.

### Component Analysis - Aquatic Toxicity

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

**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

#### γ-Butyrolactone (96-48-0)

**Algae:** 72 Hr EC50 *Desmodesmus subspicatus*: 360 mg/L; 96 Hr EC50 *Desmodesmus subspicatus*: 79 mg/L

# Safety Data Sheets

**Invertebrate:** 48 Hr EC50 Daphnia magna Straus: >500 mg/L

**Bioaccumulation**

No information available for the product.

**Bioconcentration**

No information available for the product.

**Biodegradation**

No information available for the product.

**Persistence**

No information available for the product.

**Mobility**

No information available for the product.

**Other Information**

No additional information is available.

**\*\*\*Section 13 - DISPOSAL CONSIDERATIONS\*\*\***

**Disposal Methods**

Dispose in accordance with all applicable regulations.

**Component Waste Information**

There is no applicable waste information for this product's components.

**\*\*\*Section 14 - TRANSPORT INFORMATION\*\*\***

**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

**γ-Butyrolactone (96-48-0)**

IBC Code: Category Y

**\*\*\*Section 15 - REGULATORY INFORMATION\*\*\***

**Singapore Regulations**

**Component Analysis**

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

**Petroleum and Flammable** 3 (regulated under Propylene glycol monomethyl ether acetate); 3

**Materials - Hazard Classes:**

**Petroleum and Flammable** SCDPEA3272L1 (regulated under Propylene glycol monomethyl ether

**Materials - Regulated** acetate); SCDMPA1993L2

**Products:**

**Component Analysis - Inventory**

Component	CAS	US	CA	EU	AU	PHIL	JP	KR	CN	NZ
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## Safety Data Sheets

Ethylene glycol monobutyl ether acetate	112-07-2	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Propylene glycol monomethyl ether acetate	108-65-6	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
γ-Butyrolactone	96-48-0	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Carbon black	1333-86-4	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Vinyl chloride-Vinyl acetate copolymer	Trade Secret	Yes	DSL	No	Yes	Yes	Yes	Yes	Yes	Yes

**\*\*\*Section 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; LC50 - Lethal Concentration, 50%; LD50 - Lethal Dose, 50%; LEL - Lower Explosive Limit; LOLI - List Of Lists™ - 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

### Disclaimer

The information set forth in this Safety Data Sheet does not purport to be all-inclusive and should be used only as a guide. While the information and recommendations set forth herein are believed to be accurate, the company makes no warranty regarding such information and recommendations and disclaims all liability from reliance thereon.

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