

Safety Data Sheets

*****Section 1 - IDENTIFICATION*******Product Identifier: CS100 ink Black****Product Description**

CS100-K-BB

Product Use

Pigment ink for ink jet printer

Restrictions on Use

None known.

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

Telephone number: +81-268-64-2413

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Importer / Distributor InformationMIMAKI 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.

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- 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	γ-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

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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.

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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

*****Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION*****

Component Exposure Limits

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

ACGIH: 20 ppm TWA

Carbon black (1333-86-4)

Singapore: 3.5 mg/m³ PEL

ACGIH: 3 mg/m³ 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.

*****Section 9 - PHYSICAL AND CHEMICAL PROPERTIES*****

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

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Density:	Not available	Specific Gravity (water = 1):	0.995±0.01 (25 °C)
Water Solubility:	Not available	Log KOW:	Not available
Coeff. Water/Oil Dist:	Not available	Auto Ignition Temperature:	Not available
Viscosity:	4.0±0.3 mPa·s (25 °C)	Volatility:	Not available
Oxidizing Properties:	Not available	Explosive Properties:	Not available
Flammability (solid, gas):	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/m³ 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

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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

Section 12 - ECOLOGICAL INFORMATION

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

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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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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.