



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name LC03BC (Ink cartridge for MP-21C and MP-21CDX)
Product Code ZA0587001

This product consists of water based black and cyan inks in plastic container. Total ink volume in each cartridge is approximately 14cc ; 7cc of each color.

Manufacturer BROTHER INDUSTRIES, LTD.
1-1-1, Kawagishi-cho, Mizuho-ku, Nagoya 467-8562, JAPAN
Telephone Number for Information +81-52-824-2771

Supplier in Europe BROTHER INTERNATIONAL EUROPE LTD.
Brother house, 1 Tame Street, Guide Bridge, Audenshaw, Manchester M34 5JE, UK
Telephone Number for Information +44-161-330-6531
Emergency Telephone Number +44-161-330-6531

Supplier in Australia BROTHER INDUSTRIES (Aust.) PTY. LTD. ACN 001 393 835
7 Khartoum Road, North Ryde, N.S.W. 2113 08875-6714, AUSTRALIA
Telephone Number for Information 02-9887-4344
Emergency Telephone Number 02-9887-4344

Date of Preparation: August 20, 1998 MSDS #EMP11KC
Date of Revision: November 30, 1998

2. COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS

<u>INGREDIENT NAME</u> <u>CAS#</u>	<u>EEC#</u>	<u>% by weight</u>	<u>Symbol</u>	<u>R phrases</u>
1,2-Benzisothiazolin-3-one 2634-33-5 (in both inks)	220-120-9	< 0.1	C	R34, R43

Remaining ingredients in each ink are considered non-hazardous in accordance with EC-Directive 88/379 and Approved Criteria of Worksafe Australia.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Black ink in cartridge is black liquid with slight odor.
Cyan ink in cartridge is dark blue liquid with slight odor.
Keep out of reach of children.
Each Ink poses little or no immediate hazard if spilled them.

POTENTIAL HEALTH EFFECTS

	[Black ink]	[Cyan ink]
EYE CONTACT :	Ink may cause slight irritation.	Ink may cause slight irritation.
SKIN CONTACT :	Prolonged exposure to ink may cause irritation.	Prolonged exposure to ink may cause irritation.
INGESTION :	Ink may cause gastrointestinal or other adverse effects.	Ink may cause gastrointestinal or other adverse effects.
INHALATION :	Not expected to be a route of exposure.	Not expected to be a route of exposure.



CHRONIC EFFECTS / CARCINOGENICITY : Specific data are not available.

4. FIRST AID MEASURES

	[Black ink]	[Cyan ink]
EYE CONTACT :	Flush immediately with running water for at least 15 minutes.	Flush immediately with running water for at least 15 minutes.
SKIN CONTACT :	Wash with water and soap.	Wash with water and soap.
INGESTION :	Dilute with water and get medical attention.	Dilute with water and get medical attention.
INHALATION :	Not an expected route of entry.	Not an expected route of entry.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA : SUITABLE : Water, CO₂, Foam, Dry chemical.
NOT TO BE USED :

SPECIAL EXPOSURE HAZARDS : Emits toxic fumes under fire conditions.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS :
Use self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTION : In case of ink vapor formation use respirator.
ENVIRONMENTAL PRECAUTION : Take care to minimize ink that reaches to a sewer.
METHODES FOR CLEANING UP : Wipe up ink with absorbent towel. Wash with water to remove remaining traces of ink.

7. HANDLING AND STORAGE

HANDLING : Avoid skin contact with inks. Prevent eye contact with inks.
STORAGE : Keep out of reach of children. Store in a cool, dark, and dry place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS : Ventilation is not required under normal use.
RESPIRATORY PROTECTION : Not required under normal use.
HAND PROTECTION : Not required under normal use.
EYE PROTECTION : Not required under normal use.
SKIN PROTECTION : Not required under normal use.

9. PHYSICAL AND CHEMICAL PROPERTIES

	[Black ink]	[Cyan ink]
APPEARANCE :	Black liquid	Dark blue liquid
ODOR :	Slight odor	Slight odor
pH :	7-10	7-10
BOILING POINT :	>100° C	>100° C
MELTING POINT :	Not applicable	Not applicable
FLASH POINT :	Dose not flash (open cup, closed cup)	Dose not flash (Pensky-Martens closed cup)
FLAMMABLE LIMITS :	LEL : Not available UEL : Not available	LEL : Not available UEL : Not available
AUTOIGNITION : TEMPERATURE	>400° C	>450° C



	[Black ink]	[Cyan ink]
VAPOR PRESSURE :	Not available	<0.4mmHg at 20° C
SPECIFIC GRAVITY :	1.05-1.10	1.05-1.10
(H ₂ O=1)		
SOLUBILITY IN WATER :	Soluble	Soluble

10. STABILITY AND REACTIVITY

	[Black ink]	[Cyan ink]
CONDITIONS TO AVOID :	None.	None.
MATERIALS TO AVOID :	Strong oxidizing agents.	Strong oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS :	Carbon monoxide, Carbon dioxide.	Carbon monoxide, Carbon dioxide.

11. TOXICOLOGICAL INFORMATION

	[Black ink]	[Cyan ink]
EYE EFFECTS :	Ink is classified as a MINIMAL IRRITANT.	Ink is classified as a MINIMAL IRRITANT.
SKIN EFFECTS :	Ink is classified as a MILD IRRITANT.	Ink is classified as a MILD IRRITANT.
ACUTE ORAL EFFECTS :	LD ₅₀ of ink is greater than 2000 mg/kg.	LD ₅₀ of ink is greater than 2000 mg/kg.

12. ECOLOGICAL INFORMATION

Each Ink does not contain heavy metals nor halogenated compounds.

13. DISPOSAL CONSIDERATIONS

Dispose of ink cartridge in accordance with local regulations.

14. TRANSPORT INFORMATION

Special information about ink cartridge transportation is not known.

15. REGULATORY INFORMATION

Each Ink does not need to be labeled in accordance with EC-Directive 88/379.
Each Ink is not classified as hazardous according to criteria of Worksafe Australia.
All components in each ink are listed in EINECS or ELINCS inventory.

16. OTHER INFORMATION

The information relates only to this specific ink cartridge. It may not be valid for this ink cartridge, if used in combination with any other materials or in any other process. And it is based on our best knowledge as of the date of preparation (revision).