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MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name	LC01Y	LC02Y	LC04Y
Product Code	LK0121001	LK0099001	LK0209001
Product Name	LC50Y		
Product Code	LK0321001		
Other Designation	Ink cartridge for the ink-jet printing machine		

This product is water based ink in cartridge. Ink volume in each cartridge is approximately 12cc. All components in ink are listed on EPA TSCA inventory. All components in ink are listed on EINECS inventory or ELINCS inventory. All components in ink are listed on DSL inventory. All components in ink are listed on AICS inventory.

Ink manufacturer BROTHER INDUSTRIES, LTD.

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Importer
in USA BROTHER INTERNATIONAL CORPORATION
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Importer
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Importer
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Importer
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2. COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS in accordance with Hazard Communication Standard issued by Occupational Safety and Health Administration (OSHA HCS).

<u>INGREDIENT NAME</u> <u>CAS#</u>	<u>EXPOSURE LIMITS</u>	<u>% by weight</u>
Glycerol 56-81-5	OSHA PEL : (as mist) Total dust TWA 10mg/m ³ Respirable fraction TWA 5mg/m ³ ACGIH TLV : (as mist) Total dust TWA 10mg/m ³	<30

Remaining ingredients are considered non-hazardous in accordance with OSHA HCS.

HAZARDOUS INGREDIENTS in accordance with EU Directive 67/548/EEC and Approved Criteria of Worksafe Australia.

<u>INGREDIENT NAME</u> <u>CAS#</u>	<u>EEC#</u>	<u>% by weight</u>	<u>Symbol</u>	<u>R phrases</u>
Triethylene glycol monobutyl ether 143-22-6	205-592-6	< 10	Xi	R41
1,2-Benzisothiazolin-3-one 2634-33-5	220-120-9	< 0.05	Xn, N	R22, R38 R41, R43, R50

EU Hazard Symbols : Xn : Harmful
Xi : Irritant
N : Dangerous for the environment

EU Risk(R) Phrase definitions : R22 : Harmful if swallowed.
R38 : Irritant to skin.
R41 : Risk of serious damage to eyes.
R43 : May cause sensitization by skin contact.
R50 : Very toxic to aquatic organisms.

Remaining ingredients are considered non-hazardous in accordance with the latest EU Directive 67/548/EEC and Approved Criteria of Worksafe Australia.

3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

Ink in cartridge is yellow liquid with slight odor.
Keep out of reach of children.
Ink poses little or no immediate hazard if spilled.

POTENTIAL HEALTH EFFECTS

EYE CONTACT : Ink may cause slight irritation.
SKIN CONTACT : Prolonged exposure to ink may cause irritation.
INGESTION : Ink may cause gastrointestinal or other adverse effects.
INHALATION : Not expected to be a route of exposure under normal use.



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CHRONIC EFFECTS / CARCINOGENICITY :

Specific data are not available. All ingredients of ink have not been classified as carcinogens according to IARC monographs, NTP, and OSHA regulated.

4. FIRST AID MEASURES

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

5. FIRE FIGHTING MEASURES

AUTOIGNITION TEMPERATURE : 460°C
FLAMMABLE LIMITS : LEL : Not available UEL : Not available
FLASH POINT : Does not flash (Pensky-Martens closed cup)

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

SPECIAL EXPOSURE HAZARDS : Refer to section 10.

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 ink. Prevent eye contact with ink.
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

APPEARANCE :	Yellow liquid
BOILING POINT :	103.5°C
COLOR :	Yellow
DENSITY :	1.07 g/cc
FREEZING POINT :	-13°C
ODOR :	Slight odor
pH :	7 – 10
PHYSICAL STATE :	Liquid
SOLUBILITY IN WATER :	Soluble
VAPOR DENSITY (AIR=1) :	Not available
VAPOR PRESSURE :	<0.5kPa at 20°C

10. STABILITY AND REACTIVITY

STABILITY :	Stable.
CONDITIONS TO AVOID :	None.
MATERIALS TO AVOID :	Strong oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS :	Carbon monoxide, Carbon dioxide.
HAZARDOUS POLYMERIZATION :	Does not occur.

11. TOXICOLOGICAL INFORMATION

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

12. ECOLOGICAL INFORMATION

Ink does not contain heavy metals nor halogenated compounds.

13. DISPOSAL CONSIDERATIONS

Dispose of ink cartridge in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

Not regulated under United States DOT.

15. REGULATORY INFORMATION

Ink does not need to be labeled in accordance with EU Directive 1999/45/EC.
All components in ink are listed on EPA TSCA inventory.
All components in ink are listed on EINECS or ELINCS inventory.
All components in ink are listed on DSL inventory.
All components in ink are listed on AICS 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).