

**MATERIAL SAFETY DATA SHEET****1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Product Name	LC25Y	LC700Y
Product Code	LK0850001	LK0858001
Other Designation	Ink cartridge for the ink-jet printing machine named "MFC4020C" , "MFC4420C" , "MFC4820C"	

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

**Manufacturer** BROTHER INDUSTRIES, LTD.

5-1, Hamada-cho, Minami-ku, Nagoya 457-0822, JAPAN  
Telephone Number for Information +81-52-824-3622

**Importer** BROTHER INTERNATIONAL CORPORATION

**In USA** 100 Somerset Corporate Boulevard, P.O.Box 6911, Bridgewater,  
NJ 08807-0911, USA  
Telephone Number for Information 800-284-4329  
Emergency Telephone Number 800-284-4329

**Importer** BROTHER INTERNATIONAL EUROPE LTD.

**In Europe** 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

**Importer** BROTHER INTERNATIONAL CORP. (Canada) LTD.

**In Canada** 1 rue Hôtel de Ville, Dollard-des-Ormeaux, Québec, H9B 3H6, CANADA  
Telephone Number for Information 514-685-0600  
Emergency Telephone Number 514-685-0600

**Importer** BROTHER INTERNATIONAL (AUST.) PTY. LTD. ACN 001 393 835

**In Australia** 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: October 18, 2002 MSDS #BHY003

Date of Revision:

**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 <sup>3</sup> Respirable fraction TWA 5mg/m <sup>3</sup> ACGIH TLV : (as mist) Total dust TWA 10mg/m <sup>3</sup>	<20
Ethoxylated-2,4,7,9-Tetramethyl -5-Decyne-4,7-Diol ( Ethoxylated Acetylenic Diol ) 9014-85-1	OSHA HCS Hazard class : Irritant	<2

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

**HAZARDOUS INGREDIENTS** in accordance with EC-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>
Diethylene glycol 111-46-6	203-872-2	< 10	Xn	R22
Ethoxylated-2,4,7,9-Tetramethyl -5-Decyne-4,7-Diol ( Ethoxylated Acetylenic Diol ) 9014-85-1	NLP No. 500-022-5	< 2	Xi	R36
1,2-Benzisothiazolin-3-one 2634-33-5	220-120-9	< 0.1	C	R34, R43

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

**3. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

- Ink in cartridge is dark 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.

**CHRONIC EFFECTS / CARCINOGENICITY :**

Specific data are not available. All ingredients of ink are not listed by IARC monographs, NTP, and OSHA regulated.

**4. FIRST AID MEASURES**

- EYE CONTACT : Flush immediately with running water for at least 15 minutes and get medical attention.
- 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**

- EXTINGUISHING MEDIA :  
SUITABLE: Water, CO<sub>2</sub>, 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.
- METHODS 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 : Dark yellow liquid
- ODOR : Slight odor
- pH : 8 – 10
- BOILING POINT : 103°C
- FREEZING POINT : -14°C
- FLASH POINT : Does not flash (Tag closed cup & Cleveland opened cup)
- FLAMMABLE LIMITS : LEL : Not available UEL : Not available
- AUTOIGNITION TEMPERATURE : 410°C
- VAPOR PRESSURE : Not available
- VAPOR DENSITY (AIR=1) : Not available
- DENSITY : 1.07 g/cc
- SOLUBILITY IN WATER : Soluble

**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 NON IRRITANT.
ACUTE ORAL EFFECTS :	LD <sub>50</sub> of ink is greater than 2500mg/kg.

**12. ECOLOGICAL INFORMATION**

Ink does not contain 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**

- All components in ink are listed in EPA TSCA inventory.
- All components in ink are listed in EINECS inventory and NLP inventory.
- All components in ink are listed in DSL inventory.
- All components in ink are listed in 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).