

Product name: LC11M, LC16M, LC38M, LC39M, LC60M, LC61M, LC67M, LC980M, LC985M, LC990M, LC1100M, LC65HY-M, LC67HY-M, LC990HY-M, LC1100HY-M

**MATERIAL SAFETY DATA SHEET**

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Product Name	LC11M	LC16M	LC38M	LC39M
Product Code	LK3638001, LK4691001	LK3534001, LK4711001	LK3662001, LK4197001	LK5406001
Product Name	LC60M	LC61M	LC67M	LC980M
Product Code	LK5730001	LK3367001, LK4298001	LK3670001, LK4223001	LK3375001, LK4049001
Product Name	LC985M	LC990M	LC1100M	
Product Code	LK4622001, LK5402001	LK4462001	LK3573001, LK3986001	
Product Name	LC65HY-M	LC67HY-M	LC990HY-M	LC1100HY-M
Product Code	LK3292001, LK4331001	LK3532001, LK4278001	LK3533001, LK4482001	LK3531001, LK4022001

General Use                      Inkjet printing  
Product Description          Water based ink cartridge for inkjet printing machine  
MSDS No.                         BHM018

Manufacturer                    BROTHER INDUSTRIES, LTD.  
5-1, Hamada-cho, Minami-ku, Nagoya 457-0822, JAPAN  
Telephone Number for Information                    +81-52-824-3429

Importer  
in USA                              BROTHER INTERNATIONAL CORPORATION  
100 Somerset Corporate Boulevard, P.O.Box 6911, Bridgewater,  
NJ 08807-0911, USA  
Telephone Number for Information                    +1-800-284-4329

Importer  
in Canada                         BROTHER INTERNATIONAL CORP. (Canada) LTD.  
1 rue Hôtel de Ville, Dollard-des-Ormeaux, Québec, H9B 3H6, CANADA  
Telephone Number for Information                    +1-514-685-0600

Importer  
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

Importer  
in Australia                        BROTHER INTERNATIONAL (AUST.) PTY. LTD. ACN 001 393 835  
Level 3, Building A, 11 Talavera Road Macquarie Park, N.S.W. 2113,  
AUSTRALIA  
Telephone Number for Information                    +61-2-9887-4344

We do not provide 24 hours cover for information contact.  
Please telephone to the above office during our business hours.

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### 2. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

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

#### POTENTIAL HEALTH EFFECTS

Inhalation : Not expected to be a route of exposure under normal use  
Eye : Ink may cause slight irritation.  
Skin : Prolonged exposure to ink may cause irritation.  
Ingestion : Ink may cause gastrointestinal or other adverse effects.

#### CHRONIC EFFECTS / CARCINOGENICITY

Ingredients of ink have not been classified as carcinogens according to IARC monographs, NTP, and OSHA regulated.

#### EU HAZARD LABEL

Ink is not classified according to EU-Directive 1999/45/EC. But ink has to bear the inscription: "Contains water soluble heterocyclic magenta azo dye compounds. May produce an allergic reaction."

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS# / EC#	% by weight	USA OSHA PEL	ACGIH TLV	EU Symbol / Risk Phrases
Glycerol	56-81-5 / 200-289-5	10 - 30	(as mist) Total dust TWA 15mg/m <sup>3</sup> Respirable fraction TWA 5mg/m <sup>3</sup>	(as mist) Total dust TWA 10mg/m <sup>3</sup>	Not classified
Diethylene glycol	111-46-6 / 203-872-2	1 - 5	Not established	Not established	Xn / R22
Magenta dye (FJM-001B)	Registered	1 - 4	Not established	Not established	Xi / R36 Xi / R43 N / R51/53
Water	7732-18-5 / 231-791-2	50 - 70	Not established	Not established	Not classified

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### 4. FIRST AID MEASURES

INHALATION : Remove to fresh air area and get medical attention.  
EYE : Flush immediately with running water for at least 15 minutes and get medical attention.  
SKIN : Wash with water and soap.  
INGESTION : Dilute with water and get medical attention.

### 5. FIRE FIGHTING MEASURES

#### FLAMMABLE PROPERTIES

Auto-ignition temperature : >400°C  
Flammability : LEL : Not available UEL : Not available  
Flash point : Does not flash (>93.3°C)  
(Tag closed cup & Cleveland opened cup)

#### EXTINGUISHING MEDIA

Suitable: Water, CO<sub>2</sub>, Foam, Dry chemical.  
Not to be used : None

#### FIRE FIGHTING INSTRUCTIONS

Special exposure hazards : Refer to section 10.  
Special protect 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

EXPOSURE LIMIT VALUES : Refer to section 3.

#### EXPOSURE CONTROLS

Engineering controls : Ventilation is not required under normal use.  
Personal protection  
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

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance :	Dark red liquid
Auto-ignition temperature :	>400°C
Boiling point :	>100°C
Density :	Approximately 1.06g/ml
Flammability :	LEL : Not available UEL : Not available
Flash point :	Does not flash (>93.3°C) (Tag closed cup & Cleveland opened cup)
Freezing point :	<-5°C
Odor :	Slight odor
Partition coefficient (n-octanol/water) :	Not available
pH :	7 - 9
Solubility in water :	Soluble
Vapor density (Air=1) :	Not available
Vapor pressure :	Not available
Viscosity :	2 - 5 mPa·s

### 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

Acute oral toxicity :	LD <sub>50</sub> of ink is greater than 2000mg/kg.
Eye irritation :	Ink is classified as a MILD IRRITANT.
Skin irritation :	Ink is classified as a NON IRRITANT.

### 12. ECOLOGICAL INFORMATION

PERSISTENCE AND DEGRADABILITY :	Not available
BIOACCUMULATIVE POTENTIAL :	Not available

### 13. DISPOSAL CONSIDERATIONS

Dispose in accordance with federal, state and local regulations.

### 14. TRANSPORT INFORMATION

US DEPARTMENT OF TRANSPORTATION (DOT) :	Not applicable
MARITIME TRANSPORT IMDG :	Not applicable
AIR TRANSPORT ICAO/IATA :	Not applicable

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### 15. REGULATORY INFORMATION

#### US REGULATIONS

TSCA STATUS : All components in ink are listed on TSCA inventory.

#### EUROPEAN REGULATIONS

EU NOTIFICATION : All components in ink are listed on EINECS, ELINCS or NLP inventory.

EU HAZARD LABEL : Ink is not classified according to EU-Directive 1999/45/EC. But ink has to bear the inscription: "Contains water soluble heterocyclic magenta azo dye compounds. May produce an allergic reaction."

### 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).

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

EU Risk (R) Phrase definitions : R22 : Harmful if swallowed.  
R36 : Irritating to eyes.  
R43 : May cause sensitization by skin contact.  
R51/53 : Toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.

#### Key

ACGIH TLV TLV (Threshold Limit Value) under American Conference of Governmental Industrial Hygienists

DOT Department Of Transportation (USA)

EINECS European Inventory of Existing Commercial Chemical Substances (EU)

ELINCS European List of Notified Chemical Substances (EU)

IARC International Agency for Research on Cancer

IATA International Air Transport Association

IMDG International Maritime Dangerous Goods

NLP No-Longer Polymers List (EU)

NTP National Toxicology Program (USA)

OSHA Occupational Safety and Health Administration (USA)

OSHA HCS Hazard Communication Standard issued by Occupational Safety and Health Administration (USA)

OSHA PEL PEL (Permissible Exposure Limit) under Occupational Safety and Health Administration (USA)

TSCA Toxic Substances Control Act (USA)