

Product name: LC61M, LC65HY-M, LC980M, LC1100M, LC1100HY-M,  
LC38M, LC67M, LC990M

## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

|                          |   |           |           |           |
|--------------------------|---|-----------|-----------|-----------|
| Product Name             | LC61M   | LC65HY-M  | LC980M    | LC1100M   |
| Product Code             | LK3367001   | LK3292001 | LK3375001 | LK3573001 |
| Product Name             | LC1100HY-M  | LC38M     | LC67M     | LC990M    |
| Product Code             | LK3531001   | LK3662001 | LK3670001 | LK3650001 |
| General Use              | Inkjet printing   |           |           |           |
| Product Description      | Water based ink cartridge for inkjet printing machine   |           |           |           |
| MSDS No.                 | BHM018  |           |           |           |
| Manufacturer             | BROTHER INDUSTRIES, LTD.<br>5-1, Hamada-cho, Minami-ku, Nagoya 457-0822, JAPAN<br>Telephone Number for Information +81-52-824-3429  |           |           |           |
| Importer<br>in USA       | BROTHER INTERNATIONAL CORPORATION<br>100 Somerset Corporate Boulevard, P.O.Box 6911, Bridgewater,<br>NJ 08807-0911, USA<br>Telephone Number for Information +1-800-284-4329   |           |           |           |
| Importer<br>in Canada    | BROTHER INTERNATIONAL CORP. (Canada) LTD.<br>1 rue Hôtel de Ville, Dollard-des-Ormeaux, Québec, H9B 3H6, CANADA<br>Telephone Number for Information +1-514-685-0600           |           |           |           |
| Importer<br>in Australia | BROTHER INTERNATIONAL (AUST.) PTY. LTD. ACN 001 393 835<br>7 Khartoum Road, North Ryde, N.S.W. 2113 08875-6714, AUSTRALIA<br>Telephone Number for Information +61-2-9887-4344 |           |           |           |
| Importer<br>in Europe    | BROTHER INTERNATIONAL EUROPE LTD.<br>Brother house, 1 Tame Street, Guide Bridge, Audenshaw, Manchester<br>M34 5JE, UK<br>Telephone Number for Information +44-161-330-6531    |           |           |           |

Please telephone to the above office during our business hours.

### 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.

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#### 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)<br>Total dust<br>TWA 15mg/m <sup>3</sup><br>Respirable fraction<br>TWA 5mg/m <sup>3</sup> | (as mist)<br>Total dust<br>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       | Registered            | 1 - 4       | Not established   | Not established                                    | Xi / R36<br>Xi / R43<br>N / R51/53 |
| Water             | 7732-18-5 / 231-791-2 | 50 - 70     | Not established   | Not established                                    | Not classified                     |

### 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 : 444°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

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### 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.  
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

EXPOSURE LIMIT VALUES : Refer to section 2.  
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

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Dark red liquid  
Auto-ignition temperature : 444°C  
Boiling point : 103°C  
Density : 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 : -8°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

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### 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 |

### 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).

## MATERIAL SAFETY DATA SHEET

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)