

Product name: LC11BK, LC16BK, LC38BK, LC39BK, LC60BK, LC61BK, LC67BK, LC980BK, LC985BK, LC990BK, LC1100BK, LC65HY-BK, LC67HY-BK, LC990HY-BK, LC1100HY-BK

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

| | | | | |
|--------------|----------------------|----------------------|----------------------|----------------------|
| Product Name | LC11BK | LC16BK | LC38BK | LC39BK |
| Product Code | LK3636001, LK4689001 | LK3518001, LK4709001 | LK3660001, LK4195001 | LK5404001 |
| Product Name | LC60BK | LC61BK | LC67BK | LC980BK |
| Product Code | LK5728001 | LK3365001, LK4296001 | LK3668001, LK4221001 | LK3373001, LK4047001 |
| Product Name | LC985BK | LC990BK | LC1100BK | |
| Product Code | LK4620001, LK5400001 | LK4460001 | LK3571001, LK3984001 | |
| Product Name | LC65HY-BK | LC67HY-BK | LC990HY-BK | LC1100HY-BK |
| Product Code | LK3261001, LK4329001 | LK3516001, LK4276001 | LK3517001, LK4480001 | LK3515001, LK4020001 |

General Use Inkjet printing
Product Description Water based ink cartridge for inkjet printing machine
MSDS No. BHK018

Manufacturer BROTHER INDUSTRIES, LTD.
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Importer
in USA BROTHER INTERNATIONAL CORPORATION
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Importer
in Canada BROTHER INTERNATIONAL CORP. (Canada) LTD.
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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
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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 black 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

Specific data are not available. Carbon black has been classified by the IARC as group 2B. Other 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.

3. COMPOSITION / INFORMATION ON INGREDIENTS

| CHEMICAL NAME | CAS# / EC# | % by weight | USA OSHA PEL | ACGIH TLV | EU Symbol / Risk Phrases |
|---------------|--------------------------|-------------|---|--|--------------------------|
| Carbon Black | 1333-86-4/ 215-609-9 | 1 - 5 | Limits for air contaminant TWA3.5mg/m ³ | TWA3.5mg/m ³ Not classifiable as a human carcinogen. | Not classified |
| Glycerol | 56-81-5 / 200-289-5 | 10 - 30 | (as mist) Total dust TWA 15mg/m ³ Respirable fraction TWA 5mg/m ³ | (as mist) Total dust TWA 10mg/m ³ | Not classified |
| 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.

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MATERIAL SAFETY DATA SHEET

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, CO₂, 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.
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. Avoid 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 : | Black liquid |
| Auto-ignition temperature : | >400°C |
| Boiling point : | >100°C |
| Density : | Approximately 1.08g/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 ₅₀ of ink is greater than 2000mg/kg. |
| Eye irritation : | Ink is classified as a MINIMAL 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 in EINECS, ELINCS or NLP Inventory.

EU HAZARD LABEL : Ink is not classified according to EU-Directive 1999/45/EC.

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).

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) |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| 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) |