

SAFETY DATA SHEET

Product Name
LC11BK, LC16BK, LC38BK, LC39BK, LC60BK, LC61BK, LC67BK, LC975BK, LC980BK,
LC985BK, LC990BK, LC1100BK, LC65HY-BK, LC67HY-BK, LC990HY-BK, LC1100HY-BK Ink

Version Number: 8
SDS No.: BHK018-01-EUUSOTHER

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Name:	LC11BK	LC16BK	LC38BK	LC39BK
Product Code:	LK3636001, LK4689001	LK3518001, LK4709001	LK3660001, LK4195001	LK5404001
Product Name:	LC60BK	LC61BK	LC67BK	LC975BK
Product Code:	LK5728001	LK3365001, LK4296001, LK5794001	LK3668001, LK4221001	LK5669001
Product Name:	LC980BK	LC985BK	LC990BK	LC1100BK
Product Code:	LK3373001, LK4047001	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

Use: These products are black ink in a cartridge for Brother Industries, Ltd. inkjet multifunction devices and fax receivers.
The cartridge should be used as supplied by Brother and for use in the products stated. Information provided on this SDS is only consistent with the use specified by Brother.

Manufacturer: Brother Industries, Ltd.
15-1 Naeshiro-cho, Mizuho-ku,
Nagoya 467-8561,
Japan
Telephone (for information): +81-52-824-2735

Importer USA: Brother International Corporation
P.O. Box 6911, 100 Somerset Corporate Boulevard, Bridgewater, NJ 08807-0911, USA
Telephone (for information): +1-800-284-4329

Importer Canada: Brother International Corporation (Canada) Ltd.
1 Hotel de Ville, Dollard des Ormeaux, Quebec, H9B 3H6, Canada
Telephone (for information): +1-514-685-0600

Importer Europe: Brother International Europe Ltd.
Brother House, 1 Tame Street, Guide Bridge, Audenshaw, Manchester M34 5JE, UK
Telephone (for information): +44-161-330-6531

Importer Australia: Brother International (Aust.) Pty. Ltd. ACN 001 393 835
Level 3, Building A, 11 Talavera Road, Macquarie Park, NSW 2113, Australia
Telephone (for information): +61-2-9887-4344

Emergency Phone No.: CHEMTREC
+1-703-527-3887 (International)
+1-800-424-9300 (North America)

For France only:
Antipoison Center telephone number: ORFILA +33-1-45-425-959

E-mail address for information: sds.info@brother.co.jp

2. HAZARDS IDENTIFICATION

Potential health effects from overexposure:

Routes of exposure: skin contact, eye contact, ingestion.
Thermal decomposition will evolve toxic and irritant vapors.

Combustion products: See Section: 10.

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Potential Health Effects:

Routes of exposure:
skin contact, eye contact, and ingestion.

Skin Contact:
Repeated and/or prolonged skin contact may cause irritation.

Eye Contact:
May cause eye irritation.

Ingestion:
Ingestion may cause irritation of the gastrointestinal tract. Unlikely route of exposure.

Inhalation:
Unlikely route of exposure.

CHRONIC (CANCER) INFORMATION / CARCINOGENICITY:
No information 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.

EU Classification:

Not classified as hazardous according to EU Directive 1999/45/EC.

Australia Classification:

Not classified as hazardous according to the criteria of NOHSC.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name: Water based inkjet ink (Mixture).

Chemical Name	CAS No.	EC No.	%W/W	EU Hazard Symbols	EU Risk Phrases
Glycerol	56-81-5	200-289-5	10 - 30	Not classified.	Not classified.
Carbon Black	1333-86-4	215-609-9	1 - 5	Not classified.	Not classified.
Water	7732-18-5	231-791-2	50 - 70	Not classified.	Not classified.

4. FIRST AID MEASURES

General: If symptoms persist, obtain medical attention.

Inhalation: Obtain medical attention. In case of accident by inhalation remove casualty to fresh air and keep at rest.

Skin Contact: Remove contaminated clothing immediately and wash affected skin with plenty of water or soap and water.

Eye Contact: Obtain medical attention. If substance has got into the eyes, immediately wash out with plenty of water for at least 15 minutes.

Ingestion: Obtain immediate medical attention. Wash out mouth with water and give 200-300 ml (half a pint) of water to drink.

5. FIRE-FIGHTING MEASURES

General: Flammable properties:
Auto Ignition Temperature (°C): >400
Flammability: LEL: Not available. UEL: Not available.
Flash Point: Does not flash (> 93.3 °C)
(Tag Closed cup and Cleveland Open cup)

Extinguishing Media: Extinguish preferably with dry chemical, Carbon dioxide, Water, Foam.

Unsuitable Extinguishing Media: None.

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- Special firefighting procedures:** Use appropriate respirator for carbon monoxide and carbon dioxide. Wear positive pressure self-contained breathing apparatus (SCBA) during the attack phase of firefighting operations and during cleanup in enclosed or poorly ventilated areas immediately after a fire. Personnel not having suitable respiratory protection must leave the area to prevent significant exposure to toxic combustion gases from any source.
- Unusual fire and explosion hazards:** Thermal decomposition of organic components may result in occurrence of oxides of carbon. Toxic gasses may be formed upon combustion and represents a hazard to firefighters. Combustion products: See Section: 10.

6. ACCIDENTAL RELEASE MEASURES

- Personal Protection:** In case of ink vapor formation, use respirator.
- Environmental Precautions:** Prevent substance entering sewers. Washings must be prevented from entering surface water drains.
- Methods for Cleaning Up:** Wipe up with absorbent towel. Wash with water to remove remaining traces of ink. DISPOSAL CONSIDERATIONS - See Section: 13.

7. HANDLING AND STORAGE

- Handling:** Keep out of the reach of children. Avoid contact with skin. Avoid contact with eyes.
- Storage:** Keep out of the reach of children. Keep away from oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:

SUBSTANCE	CAS No.	OSHA PEL	ACGIH TLV	EU IOELV
Carbon Black	1333-86-4	3.5 mg/m ³ TWA (as mist)	3.5 mg/m ³ TWA (as mist)	None.
Glycerol	56-81-5	Total Dust TWA 15mg/m ³ Respirable Fraction TWA 5mg/m ³	TWA 10mg/m ³	None.

- Environmental Exposure Controls:** Not normally required.
- Ventilation:** Good general ventilation should be sufficient under normal use.
- Personal Protection:** Not normally required. For use other than in normal operating procedures (such as in the event of large spill), the following should be applied:
Eye/face: Goggles.
Skin: Protective gloves.
Large spillages: Wear suitable respiratory protective equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

- pH (Value):** 7 - 9
- Form:** Liquid.
- Color:** Black.
- Odor:** Slight.
- Boiling Point (°C):** >100
- Melting Point (°C):** Not applicable.
- Freezing Point (°C):** < -5
- Vapor Pressure (Pascal):** No data.
- Viscosity (mPa.s):** 2 - 5
- Flash Point (°C):** Does not flash (> 93.3 °C)
(Tag Closed cup Cleveland Open cup)

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Flammable Limits (Upper) (%v/v):	Not available.
Flammable Limits (Lower) (%v/v):	Not available.
Explosive Properties:	Not applicable.
Auto Ignition Temperature (°C):	> 400
Density (g/ml):	ca. 1.08
Vapor Density (Air=1):	No data.
Partition Coefficient (n-Octanol/water):	No data.
Relative Evaporation Rate (Ether=1):	No data.
Oxidizing Properties:	No data.
Solubility (Water):	Soluble.

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable.
Conditions to avoid:	None.
Materials to avoid:	Strong oxidizing agents.
Hazardous Decomposition Product(s):	Contains: Carbon monoxide and Carbon dioxide.
Hazardous polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

Ingestion:	Acute LD ₅₀ > 2000mg/kg (Method: OECD#420)
Skin Contact:	Non-irritant. (Method: OECD#404)
Eye Contact:	Minimal irritant to the eye. (Method: OECD#405)
Mutagenicity:	Negative. (Method: OECD#471)
Skin sensitization:	It is not a skin sensitizer. (Method: OECD#429)
Carbon Black:	Carcinogenicity Information. In 1996, the IARC reevaluated carbon black as a Group 2B carcinogen (possible human carcinogen). This classification is given to chemicals, for which there is inadequate human evidence, but sufficient animal evidence on which to base an opinion of carcinogenicity. The classification is based upon the development of lung tumors in rats receiving chronic inhalation exposures to free carbon black at levels that induce particle overload of the lung. Studies performed in animal models other than rats did not show any association between carbon black and lung tumors.

Other ingredients of this product have not been classified as carcinogens according to IARC monographs, NTP and OSHA.

12. ECOLOGICAL INFORMATION

No data available on the adverse effects of this product on the environment.

Toxicity:	No data.
Environmental Fate and Distribution:	No data.
Persistence and Degradation:	No data.

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13. DISPOSAL CONSIDERATIONS

Dispose of in compliance with Federal, State and local regulations.

14. TRANSPORT INFORMATION

Not classified according to the United Nations 'Recommendations on the Transport of Dangerous Goods'.

UN No.: None.
Class: None.

Not regulated under DOT, IMDG, IATA.

15. REGULATORY INFORMATION

USA: All chemicals in this product comply with TSCA rules and regulations including TSCA Section 5 (Inventory Rules).

EU: Not classified as dangerous for supply/use. (1999/45/EC, 67/548/EEC)
Hazard Symbol, Risk Phrases, Safety Phrases: None assigned.

Canada: WHMIS: Not applicable. (Manufactured article)

16. OTHER INFORMATION

The following sections contain revisions or new statements: All sections (Version Number 6).

The following sections contain revisions or new statements: Section 1 (Version Number 7 and Version Number 8).

Additional Information: The information relates only to this product. It may not be valid, 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).

Reference:

- U.S. 29CFR Part 1910
- ACGIH Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices
- EU Directive 91/322/EEC and 2000/39/EC
- IARC Monographs on the Evaluation Carcinogenic Risks to Humans World Health Organization
- NTP 11th Report on Carcinogens

Abbreviations:

- ACGIH: American Conference of Governmental Industrial Hygienists
- ADR: European Agreement concerning the International carriage of Dangerous goods by Road (EU)
- DOT: Department Of Transportation (US)
- EINECS: European Inventory of Existing Commercial Chemical Substances
- HCS: Hazard Communication Standard (US)
- IARC: International Agency for Research on Cancer
- IATA: International Air Transport Association
- IMDG: International Maritime Dangerous Goods
- IOELV: Indicative Occupational Exposure Limit Value
- NOHSC: National Occupational Health and Safety Commission (Australia)
- NTP: National Toxicology Program (US)
- OSHA: Occupational Safety and Health Administration (US)
- PEL: Permissible Exposure Limit
- RID: Regulations concerning the International carriage of goods by Rail (EU)
- TLV: Threshold Limit Value (ACGIH)
- TSCA: Toxic Substances Control Act (US)
- WHMIS: Workplace Hazardous Material Information System (Canada)