

Product Name  
LC103BK, LC107BK, LC113BK, LC117BK, LC123BK, LC127XLBK, LC563BK, LC567BK, LC573BK,  
LC577XLBK, LC583BK, LC587BK, LC593BK, LC597XLBK

First Issue: Oct.26,2011  
Revised: Mar.12,2012  
Version Number: 2  
SDS No.: BHK023

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1 Product identifier**

Product Name:	LC103BK	LC107BK	LC113BK	LC117BK
Product Code:	LK6537001	LK6576001	LK6868001	LK6900001
Product Name:	LC123BK	LC127XLBK	LC563BK	LC567BK
Product Code:	LK6810001	LK6924001	LK6970001	LK6974001
Product Name:	LC573BK	LC577XLBK	LC583BK	LC587BK
Product Code:	LK6982001	LK6986001	LK7001001	LK7005001
Product Name:	LC593BK	LC597XLBK		
Product Code:	LK7013001	LK7017001		

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified use(s): Cartridge contained water based ink for inkjet printing machine

**1.3 Details of the supplier of the safety data sheet**

**Manufacturer:** BROTHER INDUSTRIES, LTD.  
5-1, Hamada-cho, Minami-ku, Nagoya 457-0822, JAPAN  
Telephone Number for Information : +81-52-824-3445

**Importer (Europe):** BROTHER INTERNATIONAL EUROPE LTD.  
Brother House, 1 Tame Street, Audenshaw, Manchester  
M34 5JE, UK  
Telephone Number for Information : +44-161-330-6531

**Importer (USA):** BROTHER INTERNATIONAL CORPORATION  
100 Somerset Corporate Boulevard, Bridgewater,  
NJ 08807-0911, USA  
Telephone Number for Information : +1-908-704-1700

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

**Importer (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

**E-Mail (competent person):** sds.ieink@brother.co.jp

**1.4 Emergency telephone number**

Emergency Phone No. (24 hours) We do not provide 24 hours cover for information contact.  
Please telephone to the above office during our business hours.

**SECTION 2: HAZARDS IDENTIFICATION**

**2.1 Classification of the substance or mixture**

**EU Classification:** Ink is not classified according to EU-Directive 1999/45/EC.

**2.2 Label elements**

Label elements according to EU Directive 1999/45/EC.: None

**2.3 Other hazards**

None

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### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.2 Mixtures

CHEMICAL NAME	CAS No.	EC No.	% by weight	EU Symbol	EU Risk Phrases
Carbon Black	1333-86-4	215-609-9	1 - 10	Not classified	Not classified
Glycerol	56-81-5	200-289-5	5 - 15	Not classified	Not classified
Diethylene glycol	111-46-6	203-872-2	1 - 9	Xn	R22
Water	7732-18-5	231-791-2	60 - 70	Not classified	Not classified

### SECTION 4: FIRST AID MEASURES

#### 4.1 Description of first aid measures

Inhalation: Remove to fresh air area and obtain medical attention immediately.

Skin Contact: Wash with water and soap. If irritation continues, obtain medical attention.

Eye Contact: Flush immediately with gentle running water for 15 minutes at least. If irritation continues, obtain medical attention.

Ingestion: Rinse mouth with water, give one or two of glasses of water, and obtain medical attention immediately.

#### 4.2 Most important symptoms and effects, both acute and delayed

Inhalation:  
No harmful effects are expected under normal use.  
Over exposure to vapor or mist, may cause symptoms such as respiratory irritation, cough, dizziness, headache and nausea.

#### 4.3 Indication of any immediate medical attention and special treatment needed

None

### SECTION 5: FIRE-FIGHTING MEASURES

#### 5.1 Extinguishing media

Suitable Extinguishing Media: Water, CO<sub>2</sub>, Foam, Dry chemical.

Unsuitable Extinguishing Media: None.

#### 5.2 Special hazards arising from the substance or mixture

May produce toxic fumes of carbon monoxide, carbon dioxide, nitrogen oxides, sulfur oxides if burning.

#### 5.3 Advice for fire-fighters

Use self-contained breathing apparatus.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with eyes, skin and clothing.

#### 6.2 Environmental precautions

Do not release to surface water or ground water.

#### 6.3 Methods and material for containment and cleaning up

Wipe up ink with absorbent towel. Wash with water to remove remaining traces of ink.

#### 6.4 Reference to other sections

See Section: 8.

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## SECTION 7: HANDLING AND STORAGE

- 7.1 Precautions for safe handling** Avoid contact with skin, eyes and clothing.
- 7.2 Conditions for safe storage, including any incompatibilities** Keep out of reach of children. Store in a cool and dark place.
- 7.3 Specific end use(s)** Cartridge contained water based ink for inkjet printing machine

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Occupational Exposure Limits:

CHEMICAL NAME	OSHA PEL	ACGIH TLV	EU IOELV
Carbon Black	Limits for air contaminant TWA 3.5mg/m <sup>3</sup>	TWA 3mg/m <sup>3</sup> Not classifiable as a human carcinogen.	Not established
Glycerol	(as mist) Total dust TWA 15mg/m <sup>3</sup>	(as mist) TWA 10mg/m <sup>3</sup>	Not established

### 8.2 Exposure controls

- Appropriate engineering controls** Use in a ventilated area.
- Personal Protection**
- Eye/face protection Not required under normal use.
- Skin protection Not required under normal use.
- Hand protection Not required under normal use.
- Respiratory protection Not required under normal use.
- Other: Not applicable.
- Environmental Exposure Controls** Avoid release to the environment.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- Appearance (20 °C) Black liquid
- Odor Slight odor
- Odor threshold (ppm) Not available
- pH (Value) 7 – 9
- Melting point (°C) / Freezing point (°C) Melting point(°C) : <-5°C
- Boiling point/boiling range (°C) Boiling point(°C) : >100°C
- Flash point (°C) Does not flash at 93.3°C or lower  
(Tag closed cup & Cleveland opened cup)
- Evaporation rate Not available
- Flammability (solid, gas) LEL : Not available UEL : Not available
- Explosive limit ranges Not available
- Vapor pressure (Pa) Not available
- Vapor density (Air=1) Not available
- Density (g/cm<sup>3</sup>) 1.0 – 1.1 g/ml
- Solubility (Water) Soluble
- Solubility (Other) Not available
- Partition coefficient (n-Octanol/water) Not available
- Auto ignition point (°C) >400°C

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	Decomposition temperature (°C)	Not available
	Viscosity (mPa. s)	1 – 5 mPa.s
	Explosive properties	Not available
	Oxidising properties	Not available
<b>9.2</b>	<b>Other information</b>	Not available

## SECTION 10: STABILITY AND REACTIVITY

<b>10.1</b>	<b>Reactivity</b>	None
<b>10.2</b>	<b>Chemical stability</b>	Stable
<b>10.3</b>	<b>Possibility of hazardous reactions</b>	Will not occur
<b>10.4</b>	<b>Conditions to avoid</b>	High-temperature or High-humidity
<b>10.5</b>	<b>Incompatible materials</b>	Acids, Bases, Oxidizing agents, Reducing agents
<b>10.6</b>	<b>Hazardous Decomposition Product(s)</b>	Carbon monoxide, Carbon dioxide, Nitrogen oxides, Sulfur oxides

## SECTION 11: TOXICOLOGICAL INFORMATION

<b>11.1</b>	<b>Information on toxicological effects</b>	
	<b>Acute toxicity (oral):</b>	LD <sub>50</sub> of ink is greater than 2000mg/kg.
	<b>Skin corrosion/irritation:</b>	Ink is classified as a NON IRRITANT
	<b>Serious eye damage/irritation:</b>	Ink is classified as a MINIMAL IRRITANT
	<b>Respiratory or skin sensitization:</b>	Respiratory sensitization : Not available Skin sensitization : Non-sensitizer
	<b>Mutagenicity:</b>	Ames test : Negative
	<b>Carcinogenicity:</b>	Specific data are not available. Carbon black has been classified by the IARC as group 2B. However, IARC reported that no significant exposure to carbon black is thought to occur during the use of products in which carbon black is bound to other materials, such as printing ink. Other ingredients of ink have not been classified as carcinogens according to IARC monographs, NTP, and OSHA regulated.
	<b>Reproductive toxicity:</b>	Not available
	<b>STOT-single exposure:</b>	Not available
	<b>STOT-repeated exposure:</b>	Not available
	<b>Aspiration hazard:</b>	Not available
	<b>Potential Health Effects:</b>	Eye : Ink may cause slight irritation. Skin : 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 under normal use. Over exposure may cause respiratory irritation.

## SECTION 12: ECOLOGICAL INFORMATION

<b>12.1</b>	<b>Toxicity</b>	Not available
<b>12.2</b>	<b>Persistence and degradability</b>	Not available
<b>12.3</b>	<b>Bioaccumulative potential</b>	Not available
<b>12.4</b>	<b>Mobility in soil</b>	Not available
<b>12.5</b>	<b>Results of PBT and vPvB assessment</b>	Not available
<b>12.6</b>	<b>Other adverse effects</b>	Not available

## SECTION 13: DISPOSAL CONSIDERATIONS

<b>13.1</b>	<b>Waste treatment methods</b>	Dispose in accordance with federal, state and local regulations.
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**SECTION 14: TRANSPORT INFORMATION**

<b>14.1 UN number</b>	None
<b>14.2 Proper Shipping Name</b>	None
<b>14.3 Transport hazard class(es)</b>	None
<b>14.4 Packing Group</b>	None
	US Department of Transportation (DOT) : Not regulated as dangerous goods.
	Maritime Transport IMDG : Not regulated as dangerous goods.
	Air Transport ICAO/IATA : Not regulated as dangerous goods.
<b>14.5 Environmental hazards</b>	Not available
<b>14.6 Special precautions for user</b>	None
<b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable

**SECTION 15: REGULATORY INFORMATION**

<b>15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture</b>	<b>EUROPEAN REGULATIONS</b>
	EU Information: All components in ink comply with REACH rules and regulations.
	EU Hazard Label : Ink is not classified according to EU-Directive 1999/45/EC.
	<b>US REGULATIONS</b>
	US Information: All components in ink comply with TSCA rules and regulations.
	<b>Canada REGULATIONS</b>
	Canada Information: WHMIS : Not applicable. (Manufactured article)
<b>15.2 Chemical Safety Assessment</b>	None

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**SECTION 16: OTHER INFORMATION**

**Hazard Symbol:**

Xn: Harmful

**Risk Phrases:**

R22 : Harmful if swallowed.

**Issue Date:**

Mar. 12, 2012

**The following sections contain revisions or new statements:**

Format, All sections

**Additional information:**

The information only relates 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).

**References:**

World Health Organization International Agency for Research on Cancer, IARC Monographs on the Evaluation on the Carcinogenic Risks to Humans, Volume 93  
EU Directive 1999/45/EC  
U.S. Department of labor, 29CFR Part 1910.  
ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices  
EU Commission Directive 2009/161/EU

**Abbreviations:**

ACGIH: American Conference of Governmental Industrial Hygienists  
DOT: Department Of Transportation (US)  
IARC: International Agency for Research on Cancer  
IATA: International Air Transport Association  
ICAO: International Civil Aviation Organization  
IMDG: International Maritime Dangerous Goods  
IOELV: Indicative Occupational Exposure Limit Value  
NTP: National Toxicology Program (US)  
OSHA: Occupational Safety and Health Administration (US)  
PEL: Permissible Exposure Limit  
REACH: Registration, Evaluation, Authorization and Restriction of Chemicals (EU)  
TLV: Threshold Limit Value (ACGIH)  
TSCA: Toxic Substances Control Act (US)  
WHMIS: Workplace Hazardous Material Information System (Canada)