

Product name: LC101C, LC103C, LC105C, LC110C, LC111C,  
 LC113C, LC115C, LC121C, LC123C, LC125XLC, LC131C, LC133C,  
 LC135XLC, LC161C, LC163C, LC505C, LC525XLC, LC535XLC,  
 LC545XLC, LC563C, LC565XLC, LC583C, LC585XLC, LC595XLC Ink

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifier**

**Product name (code)** LC101C (LK7323001), LC103C (LK6538001), LC105C (LK6577001), LC110C (LK7508001),  
 LC111C (LK7476001), LC113C (LK6869001), LC115C (LK6901001), LC121C (LK7371001),  
 LC123C (LK6811001), LC125XLC (LK6925001), LC131C (LK7407001), LC133C (LK7243001),  
 LC135XLC (LK7210001), LC161C (LK7653001), LC163C (LK7657001), LC505C (LK7726001),  
 LC525XLC (LK7730001), LC535XLC (LK7734001), LC545XLC (LK7739001),  
 LC563C (LK6971001), LC565XLC (LK6975001), LC583C (LK7002001), LC585XLC (LK7006001),  
 LC595XLC (LK7018001)

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

**Relevant Identified Use(s)** These products are dark blue 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.

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

**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  
 200 Crossing Boulevard, Bridgewater, NJ 08807, USA  
 Telephone (for information): +1-877-276-8437

**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

**E-mail Address** sds.info@brother.co.jp

**1.4 Emergency telephone number**

**Emergency Telephone (24 hours)** 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

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**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**

Not classified as hazardous

**Classification according to Directive 1999/45/EC**

Not classified as hazardous

**Australia Classification**

Not classified as hazardous according to the criteria of NOHSC

**2.2 Label elements**

**Labelling according to Regulation (EC) No. 1272/2008**

**Hazard pictograms**

None

**Signal Word**

None

**Hazard Statements**

None

**Precautionary statements**

None

**2.3 Other hazards**

This product contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This product contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

**SECTION 3: Composition/information on ingredients**

**3.2 Mixtures**

**Description of the mixture:** Water based inkjet ink (Mixture).

Chemical Name	CAS-No	EC-No	w/w%	Classification (67/548/EEC)	Classification (EU Reg. 1272/2008)
Glycerol	56-81-5	200-289-5	10-20	Not classified	Not classified
Diethylene glycol	111-46-6	203-872-2	1-9	Xn; R22	Acute Tox. 4 (H302)
Triethylene glycol monobutyl ether	143-22-6	205-592-6	1-5	Xi; R41	Eye Dam. 1 (H318)
Cyan Dye	*	*	1-5	Not classified	Not classified
Water	7732-18-5	231-791-2	65-75	Not classified	Not classified

For the full text of R-phrases and H-Statements see Section 16

\* Registered

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**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

General advice	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 100-200 ml of water to drink.

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

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.

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

Treat symptomatically.

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

Suitable Extinguishing Media	Extinguish preferably with dry chemical, carbon dioxide, water spray, foam.
Unsuitable Extinguishing Media	None.

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

Thermal decomposition of organic components may result in occurrence of oxides of carbon. Toxic gases may be formed upon combustion and represents a hazard to firefighters. Combustion products: See Section: 10.

**5.3 Advice for firefighters**

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.

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**SECTION 6: Accidental release measures**

- 6.1 Personal precautions, protective equipment and emergency procedures**      Ensure adequate ventilation. Avoid contact with eyes.
- 6.2 Environmental precautions**      Prevent substance entering sewers. Washings must be prevented from entering surface water drains.
- 6.3 Methods and materials for containment and cleaning up**      Wipe up with absorbent towel. Wash with water to remove remaining traces of ink.
- 6.4 Reference to other sections**      For personal protection: See section 8.  
 For disposal considerations: See section 13.

**SECTION 7: Handling and storage**

- 7.1 Precautions for safe handling**      Keep out of the reach of children. Avoid contact with skin and eyes.
- 7.2 Conditions for safe storage, including any incompatibilities**      Keep away from oxidizing agents.
- 7.3 Specific end use(s)**      These products are dark blue ink in a cartridge for Brother Industries, Ltd. inkjet multifunction devices and fax receivers. This cartridge should be used as supplied by Brother and for use in the products stated.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control Parameters**

**Occupational Exposure Limits**

Chemical Name	Glycerol 56-81-5
ACGIH TLV	TWA: 10 mg/m <sup>3</sup> mist
OSHA PEL	TWA: 15 mg/m <sup>3</sup> mist, total particulate TWA: 5 mg/m <sup>3</sup> mist, respirable fraction
European Union	-
The United Kingdom	STEL: 30 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>
France	TWA: 10 mg/m <sup>3</sup>
Spain	TWA: 10 mg/m <sup>3</sup>
Germany	TWA: 50 mg/m <sup>3</sup> Ceiling / Peak: 100 mg/m <sup>3</sup>
Portugal	TWA: 10 mg/m <sup>3</sup>
Finland	TWA: 20 mg/m <sup>3</sup>
Switzerland	STEL: 100 mg/m <sup>3</sup> TWA: 50 mg/m <sup>3</sup>
Poland	TWA: 10 mg/m <sup>3</sup>
Ireland	TWA: 10 mg/m <sup>3</sup>
Chemical Name	Diethylene glycol 111-46-6
ACGIH TLV	-
OSHA PEL	-
European Union	-

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<b>The United Kingdom</b>	STEL: 69 ppm STEL: 303 mg/m <sup>3</sup> TWA: 23 ppm TWA: 101 mg/m <sup>3</sup>
<b>Germany</b>	TWA: 10 ppm TWA: 44 mg/m <sup>3</sup> Ceiling / Peak: 40 ppm Ceiling / Peak: 176 mg/m <sup>3</sup>
<b>Denmark</b>	TWA: 2.5 ppm TWA: 11 mg/m <sup>3</sup>
<b>Austria</b>	STEL 40 ppm STEL 176 mg/m <sup>3</sup> TWA: 10 ppm TWA: 44 mg/m <sup>3</sup>
<b>Switzerland</b>	STEL: 40 ppm STEL: 176 mg/m <sup>3</sup> TWA: 10 ppm TWA: 44 mg/m <sup>3</sup>
<b>Poland</b>	TWA: 10 mg/m <sup>3</sup>
<b>Ireland</b>	TWA: 23 ppm TWA: 100 mg/m <sup>3</sup>

## 8.2 Exposure controls

**Appropriate engineering controls** Good general ventilation should be sufficient under normal use.

**Personal protective equipment** 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 Protection Safety goggles.
- Hand Protection Protective gloves.
- Skin and body protection Long sleeved clothing and long pants.
- Respiratory protection Large spillages: Wear suitable respiratory protective equipment.

**Environmental Exposure Controls** Avoid release to the environment.

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**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

Appearance	
Physical state	Liquid
Color	Dark blue
Odor	Slight
Odor Threshold	No information available
pH	7 - 9
Melting point/freezing point	- / < -5 °C
Initial boiling point and boiling range	> 100 °C
Flash Point	Not less than 93.3°C ( Tag closed cup; Cleveland open cup )
Evaporation rate	No information available
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	No information available
Vapor pressure	No information available
Vapor density	No information available
Relative density	1.0 - 1.1 (H <sub>2</sub> O=1)
Solubility(ies)	Soluble (water)
Partition coefficient: n-octanol/water	No information available
Auto-ignition temperature	>400 °C
Decomposition temperature	No information available
Viscosity	2 - 5 mPa·s
Explosive properties	Not explosive
Oxidizing properties	No information available

**9.2 Other information**

No information available.

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	No information available.
<b>10.2 Chemical stability</b>	Stable.
<b>10.3 Possibility of hazardous reactions</b>	No information available.
<b>10.4 Conditions to avoid</b>	No information available.
<b>10.5 Incompatible materials</b>	Strong oxidizing agents.
<b>10.6 Hazardous decomposition products</b>	Contains: Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ).

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**SECTION 11: Toxicological information**

**11.1 Information on toxicological effects**

**Acute toxicity**

Inhalation	No information available.
Eye contact	No information available.
Skin contact	No information available.
Ingestion	LD <sub>50</sub> > 2000 mg/kg (Method: OECD#420)

**Skin corrosion/irritation** Non-irritant. (Method: OECD#404)

**Serious eye damage/irritation** Minimal irritant to the eye. (Method: OECD#405)

**Respiratory or skin sensitisation** It is not a skin sensitizer. (Method: OECD#429)

**Mutagenicity** Negative. (Method: OECD#471)

**Carcinogenicity** **Ingredients of this product have not been classified as carcinogens according to IARC monographs, NTP and OSHA**

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## SECTION 12: Ecological information

### 12.1 Toxicity

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Glycerol 56-81-5		LC <sub>50</sub> : 51 - 57 mL/L 96 h static (Oncorhynchus mykiss)	EC <sub>50</sub> : >500 mg/L 24 h (Daphnia magna)
Diethylene glycol 111-46-6		LC <sub>50</sub> : 75200 mg/L 96 h flow-through (Pimephales promelas)	EC <sub>50</sub> : 84000 mg/L 48 h (Daphnia magna)
Triethylene glycol monobutyl ether 143-22-6	EC <sub>50</sub> : >500 mg/L 72 h (Desmodesmus subspicatus)	LC <sub>50</sub> : 2200 - 4600 mg/L 96 h static (Leuciscus idus) LC <sub>50</sub> : 2400 mg/L 96 h static (Pimephales promelas) LC <sub>50</sub> : 2400 mg/L 96 h (Pimephales promelas)	EC <sub>50</sub> : >500 mg/L 48 h (Daphnia magna)

12.2 Persistence and degradability No information available.

### 12.3 Bioaccumulative potential

Chemical Name	log Pow
Glycerol	-1.76
Diethylene glycol	-1.98
Triethylene glycol monobutyl ether	0.51

12.4 Mobility in soil No information available.

12.5 Results of PBT and vPvB assessment This product contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This product contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

12.6 Other adverse effects No information available.

## SECTION 13: Disposal considerations

13.1 Waste treatment methods Dispose of in accordance with Federal, State, and local regulations.





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**SECTION 16: Other information**

<b>Full text of R-phrases referred to under sections 2 and 3</b>	R22 - Harmful if swallowed R41 - Risk of serious damage to eyes
<b>Full text of H-Statements referred to under sections 2 and 3</b>	H302 - Harmful if swallowed H318 - Causes serious eye damage
<b>Additional information</b>	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).
<b>Revision Note</b>	SECTION 1
<b>References:</b>	U.S. 29CFR Part 1910 ACGIH Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices IARC Monographs on the Evaluation Carcinogenic Risks to Humans World Health Organization EU Directive 91/322/EEC and 2000/39/EC NTP 11th Report on Carcinogens
<b>Abbreviations:</b>	ACGIH: American Conference of Governmental Industrial Hygienists DOT: Department Of Transportation (US) IARC: International Agency for Research on Cancer IATA: International Air Transport Association IMDG: International Maritime Dangerous Goods NOHSC: National Occupational Health and Safety Commission (Australia) NTP: National Toxicology Program (US) OSHA: Occupational Safety and Health Administration (US) PEL: Permissible Exposure Limit STEL: Short Term Exposure Limit TLV: Threshold Limit Value (ACGIH) TSCA: Toxic Substances Control Act (US) TWA: Time Weighted Average WHMIS: Workplace Hazardous Material Information System (Canada)