

Product name: LC20EM, LC22EM, LC23EM, LC201M, LC203M,  
LC205M, LC211M, LC213M, LC215M, LC221M, LC223M,  
LC225XLM, LC231M, LC233M, LC235XLM, LC261M, LC263M,  
LC645M, LC663M, LC665XLM, LC673M, LC675XLM, LC695XLM Ink

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

### 1.1. Product identifier

Product Name (Product code) : LC20EM(LK9834001), LC22EM(LK9846001), LC23EM(LKB451001), LC201M(LK9290001), LC203M(LK7748001), LC205M(LK8310001), LC211M(LK9346001), LC213M(LK8548001), LC215M(LK8646001), LC221M(LK9318001), LC223M(LK8388001), LC225XLM(LK8420001), LC231M(LKB288001), LC233M(LK8898001), LC235XLM(LK8922001), LC261M(LKB324001), LC263M(LKB264001), LC645M, LC663M(LK8946001), LC665XLM(LK8970001), LC673M(LK9078001), LC675XLM(LK9048001), LC695XLM(LK9665001)

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

#### 1.2.1. Relevant identified uses

Use of the substance/mixture : These products are dark red 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

#### 1.2.2. Uses advised against

No additional information available

### 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 number : 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

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

#### Australia Classification

Not classified as hazardous according to the criteria of NOHSC

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**2.2. Label elements**

**Labeling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms : None.  
Signal Word : None.  
Hazard Statements : EUH208 - Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.  
Precautionary statements : None.

**2.3. Other hazards**

This substance/mixture does not meet the PBT criteria of REACH, annex XIII  
This substance/mixture does not meet the vPvB criteria of REACH, annex XIII

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

**3.2. Mixture**

Name	Product identifier	%	Classification according to Directive 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
glycerol	(CAS No) 56-81-5 (EC no) 200-289-5	10-20	Not classified	Not classified
Magenta Dye	(CAS No) * (EC no) *	< 2.5	N; R51/53	Aquatic Chronic 2, H411
Water	(CAS No) 7732-18-5 (EC no) 231-791-2	65-80	Not classified	Not classified
1,2-benzisothiazol-3(2H)-one	(CAS No) 2634-33-5 (EC no) 220-120-9 (EC index no) 613-088-00-6	< 0.05	Xn; R22 Xi; R41 Xi; R38 R43 N; R50	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400

\*Registered

Full text of R- and H- phrases: see section 16

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

First-aid measures general : If symptoms persist, obtain medical attention.  
First-aid measures after inhalation : Obtain medical attention. In case of accident by inhalation : remove casualty to fresh air and keep at rest.  
First-aid measures after skin contact : Remove contaminated clothing immediately and wash affected skin with plenty of water or soap and water.  
First-aid measures after eye contact : Obtain medical attention. If substance has got into the eyes, immediately wash out with plenty of water for at least 15 minutes.  
First-aid measures after 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**

Symptoms/injuries after inhalation : Unlikely route of exposure.  
Symptoms/injuries after skin contact : Repeated and/or prolonged skin contact may cause irritation.  
Symptoms/injuries after eye contact : May cause eye irritation.  
Symptoms/injuries after ingestion : Ingestion may cause irritation of the gastrointestinal tract. 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.

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

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

**5.3. Advice for firefighters**

Firefighting instructions : 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.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

**6.1.1. For non-emergency personnel**

Emergency procedures : Ensure adequate ventilation. Avoid contact with eyes.

**6.1.2. For emergency responders**

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 material for containment and cleaning up**

For containment : Wipe up ink with absorbent towel.  
Methods for cleaning up : Wash with water to remove remaining traces of ink.

**6.4. Reference to other sections**

SECTION 8: Exposure controls/personal protection. SECTION 13: Disposal considerations.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

Precautions for safe handling : Keep out of the reach of children. Avoid contact with skin, eyes and clothing.

**7.2. Conditions for safe storage, including any incompatibilities**

Storage conditions : Keep away from oxidizing agents.

**7.3. Specific end use(s)**

Cartridge containing water based ink for inkjet printing machine.

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

**8.1. Control parameters**

glycerol (56-81-5)		
Belgium	Local name	Glycérine (brouillard)
Belgium	Limit value (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Czech Republic	Local name	Glycerol, mlha
Czech Republic	Exposure limits (PEL) (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Czech Republic	Exposure limits (PEL) (ppm)	2.4 ppm
Czech Republic	Exposure limits (NPK-P) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Czech Republic	Exposure limits (NPK-P) (ppm)	3.7 ppm
Finland	Local name	Glyseroli
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
France	Local name	Glycérine (aérosols de)
France	VME (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Ireland	Local name	Glycerol, mist
Ireland	OEL (8 hours ref) (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>

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glycerol (56-81-5)		
Poland	Local name	Glicerol aerozole
Poland	NDS (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Portugal	Local name	Glicerina, névoas
Portugal	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
United Kingdom	Local name	Glycerol, mist
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
USA - ACGIH	Local name	Glycerin mist
USA - ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> mist
USA - ACGIH	Remark (ACGIH)	URT irr
USA - OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> Total dust 5 mg/m <sup>3</sup> Respirable Fraction

## 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:
Hand protection	: protective gloves.
Eye protection	: Safety goggles.
Skin and body protection	: Long sleeved clothing and long pants.
Respiratory protection	: In case of large spillages: Wear suitable respiratory protective equipment.
Environmental exposure controls	: Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Dark red
Color	: Dark red
Odor	: Slight odor
Odor threshold	: No information available
pH	: 7 - 9
Relative evaporation rate (butyl acetate=1)	: No information available
Relative evaporation rate (ether=1)	: Not available
Melting point	: < 5 °C
Freezing point	: No data available
Boiling point	: > 100 °C
Flash point	: Does not flash at 93.3°C or lower (Tag closed cup & Cleveland opened cup)
Auto-ignition temperature	: > 400 °C
Decomposition temperature	: Not available
Flammability (solid, gas)	: Not applicable
Vapor pressure	: Not available
Relative vapor density at 20 °C	: Not available
Relative density	: No data available
Specific gravity / density	: 1 - 1.1 g/ml
Solubility	: Soluble in water
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: 2 - 5 mPa·s
Viscosity, dynamic	: No data available
Explosive properties	: Not explosive
Oxidizing properties	: Not available
Explosion limits	: Not available

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**9.2. Other information**

No additional information available

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No information available.

**10.2. Chemical stability**

Stable.

**10.3. Possibility of hazardous reactions**

No information available.

**10.4. Conditions to avoid**

No information available.

**10.5. Incompatible materials**

Strong oxidizing agents.

**10.6. Hazardous decomposition products**

Carbon monoxide. Carbon dioxide.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

Acute toxicity	: Not classified
LD <sub>50</sub> oral rat	> 2000 mg/kg (OECD 420 method)
Skin corrosion/irritation	: Non-irritant. (OECD 404 method) pH: 7 - 9
Serious eye damage/irritation	: Minimal irritant to the eye. (OECD 405 method) pH: 7 - 9
Respiratory or skin sensitization	: It is not a skin sensitizer. (OECD 429 method)
Germ cell mutagenicity	: Negative. (OECD 471 method)
Carcinogenicity	: Ingredients of this product have not been classified as carcinogens according to IARC monographs, NTP and OSHA
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

**SECTION 12: Ecological information**

**12.1. Toxicity**

glycerol (56-81-5)	
LC <sub>50</sub> fish	51 - 57 ml/l 96 h - Oncorhynchus mykiss
EC <sub>50</sub> Daphnia	> 500 mg/l 24 h - Daphnia magna

**12.2. Persistence and degradability**

Persistence and degradability No information available.

**12.3. Bioaccumulative potential**

glycerol (56-81-5)	
Log Pow	-1.76

**12.4. Mobility in soil**

Ecology - soil No information available.

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**12.5. Results of PBT and vPvB assessment**

This substance/mixture does not meet the PBT criteria of REACH, annex XIII  
This substance/mixture does not meet the vPvB criteria of REACH, annex XIII  
Results of PBT assessment : Not available

**12.6. Other adverse effects**

Other adverse effects : No information available.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

Waste disposal recommendations : Dispose in accordance with federal, state and local regulations.

**SECTION 14: Transport information**

In accordance with ADR / IMDG / IATA / DOT / UN

**14.1. UN number**

Not regulated for transport

**14.2. UN proper shipping name**

Proper Shipping Name (ADR/RID) : None  
Proper Shipping Name (IATA) : None  
Proper Shipping Name (IMDG) : None

**14.3. Transport hazard class(es)**

Not applicable

**14.4. Packing group**

Not applicable

**14.5. Environmental hazards**

Other information : None

**14.6. Special precautions for user**

Special transport precautions : None

**14.6.1. Overland transport**

No additional information available

**14.6.2. Transport by sea**

No additional information available

**14.6.3. Air transport**

No additional information available

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

IBC code : Not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1. EU-Regulations**

No REACH Annex XVII restrictions  
Contains no REACH candidate substance

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**15.1.2. National regulations**

Regional legislation

: EU: Not classified as dangerous for supply/use. (1999/45/EC)

USA: All chemical substances contained in this product are and had been listed on the TSCA Chemical Substances Inventory, and none is subject to any of the following TSCA requirements: section 4 test rules; proposed or final section 5(a)(2) significant new use rules; section 5(e) consent orders; section 8(a) preliminary assessment information rules; and section 8(d) health and safety data reporting rules.

Canada: WHMIS: Not applicable. (Manufactured article).

**15.2. Chemical safety assessment**

No chemical safety assessment has been carried out

**SECTION 16: Other information**

Indication of changes:  
SECTION 1, 2, 3.

Data sources

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

Abbreviations and acronyms

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

Other information

: The information only relates to this specific 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).

Full text of R-, H- and EUH-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H400	Very toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects
R22	Harmful if swallowed
R41	Risk of serious damage to eyes

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R38	Irritating to skin
R43	May cause sensitization by skin contact
R50	Very toxic to aquatic organisms
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
N	Dangerous for the environment
Xi	Irritant
Xn	Harmful