

Product Name: LC11BK, LC16BK, LC38BK, LC39BK, LC60BK, LC61BK, LC67BK, LC975BK, LC980BK, LC985BK, LC990BK, LC1100BK, LC65HYBK, LC67HYBK, LC990HYBK, LC1100HYBK Ink

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Revision Number: 12

Safety data sheet number: BHK018-01

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Name LC11BK, LC16BK, LC38BK, LC39BK, LC60BK, LC61BK, LC67BK, LC975BK, LC980BK, LC985BK, LC990BK, LC1100BK, LC65HYBK, LC67HYBK, LC990HYBK, LC1100HYBK Ink

Product Form Mixture

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

Relevant identified uses 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.

Uses advised against No 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 Brother International Europe Ltd.
Brother House, 1 Tame Street, Audenshaw, Manchester M34 5JE, UK
Telephone (for information): +44-161-330-6531

For further information, please contact

E-mail address sds.info@brother.co.jp

1.4. Emergency telephone number

Emergency Telephone CHEMTREC +1-703-527-3887 (International)

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

Section 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

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2.2. Label elements

Regulation (EC) No 1272/2008

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

EUH208 - Contains 1,2-Benzisothiazolin-3-one May produce an allergic reaction.

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

3.1 Substances

Not applicable

3.2 Mixtures

| Chemical name | CAS No | EC No | EC Index No | Weight-% | Classification according to Regulation (EC) No. 1272/2008 [CLP] | REACH Registration Number |
|----------------------------|-----------|------------------------|--------------|----------|---|---------------------------|
| Water | 7732-18-5 | 231-791-2 | - | 65-75 | Not classified | No data available |
| Glycerol | 56-81-5 | 200-289-5 | - | 20-30 | Not classified | No data available |
| Carbon Black | 1333-86-4 | 215-609-9 435-640-3 | - | 1-5 | Not classified | Registered |
| 1,2-Benzisothiazolin-3-one | 2634-33-5 | 220-120-9 | 613-088-00-6 | <0.05 | Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Aquatic Acute 1 (H400) | No data available |

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

Section 4: First aid measures

4.1. Description of first aid measures

General advice

If symptoms persist, call a physician.

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|----------------------|--|
| Inhalation | IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician. |
| Eye contact | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. |
| Skin contact: | Take off contaminated clothing. Wash off immediately with soap and plenty of water. |
| 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 | Skin contact: Repeated and/or prolonged skin contact may cause irritation Eye contact: May cause eye irritation Ingestion: May cause stomach ache. Unlikely route of exposure Inhalation : Unlikely route of exposure |
|-----------------|--|

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

| | |
|---------------------------|------------------------|
| Note to physicians | Treat symptomatically. |
|---------------------------|------------------------|

Section 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Dry chemical, CO₂, water spray or regular foam.

Unsuitable extinguishing media None.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Thermal decomposition can lead to release of irritating gases and vapors

5.3. Advice for firefighters

Special protective equipment for fire-fighters 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

For non-emergency personnel Ensure adequate ventilation. Avoid contact with eyes.

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For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

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

Methods for containment Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

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

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

Section 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Keep out of reach of children. Avoid contact with skin and eyes.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep away from oxidizing agents.

7.3. Specific end use(s)

Specific use(s) 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.

Section 8: Exposure controls and personal protection

8.1. Control parameters

Exposure Limits

| Chemical name | European Union | United Kingdom | France | Spain | Germany |
|---------------------|----------------|---|---------------------------|---------------------------|----------------------------|
| Glycerol 56-81-5 | - | TWA: 10 mg/m ³ STEL: 30 mg/m ³ | TWA: 10 mg/m ³ | TWA: 10 mg/m ³ | TWA: 200 mg/m ³ |

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| | | | | | |
|---------------------------|---------|--|----------------------------|---|---|
| Carbon Black 1333-86-4 | - | TWA: 3.5 mg/m ³ STEL: 7 mg/m ³ | TWA: 3.5 mg/m ³ | TWA: 3.5 mg/m ³ | - |
| Chemical name | Italy | Portugal | Netherlands | Finland | Denmark |
| Glycerol 56-81-5 | - | TWA: 10 mg/m ³ | - | TWA: 20 mg/m ³ | - |
| Carbon Black 1333-86-4 | - | TWA: 3.5 mg/m ³ | - | TWA: 3.5 mg/m ³ STEL: 7 mg/m ³ | TWA: 3.5 mg/m ³ |
| Chemical name | Austria | Switzerland | Poland | Norway | Ireland |
| Glycerol 56-81-5 | - | TWA: 50 mg/m ³ STEL: 100 mg/m ³ | TWA: 10 mg/m ³ | - | TWA: 10 mg/m ³ STEL: 30 mg/m ³ |
| Carbon Black 1333-86-4 | - | - | TWA: 4.0 mg/m ³ | TWA: 3.5 mg/m ³ STEL: 7 mg/m ³ | TWA: 3 mg/m ³ STEL: 15 mg/m ³ |

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

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/face protection Safety goggles.

Hand protection Protective gloves.

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

Appearance

Physical state Liquid

Color black

Odor Slight.

Odor threshold No information available

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--------------------------------|---------------|-------------------------|
| pH | 7 - 9 | |
| Melting point / freezing point | < -5 °C | |
| Boiling point / boiling range | > 100 °C | |

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| | | |
|----------------------------------|--------------------------|-------------------------------------|
| Flash point | > 94 °C | Tag Closed Cup, Cleveland Open Cup, |
| Evaporation rate | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Flammability Limit in Air | | None known |
| Upper flammability limit: | No data available | |
| Lower flammability limit: | No data available | |
| Vapor pressure | No data available | None known |
| Vapor density | No data available | None known |
| Relative density | 1.0 - 1.1 | (H ₂ O=1) |
| Water solubility | Soluble in water | |
| Solubility(ies) | No data available | None known |
| Partition coefficient | No data available | None known |
| Autoignition temperature | > 400 °C | |
| Decomposition temperature | No data available | None known |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | 1 - 5 mPa s | |
| Explosive properties | No information available | No information available. |
| Oxidizing properties | No information available | |

9.2. Other information

No information available

Section 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

Stable under normal conditions.

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 (CO₂)

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Section 11: Toxicological information

11.1. Information on toxicological effects

Product Information

| | |
|----------------------|---|
| Inhalation | No information available |
| Eye contact | No information available |
| Skin contact: | No information available |
| Ingestion | Acute LD ₅₀ > 2000 mg/kg (OECD 420 method) |

The following values are calculated based on chapter 3.1 of the GHS document

| | |
|------------------------|-----------------|
| ATEmix (oral) | 52,271.10 mg/kg |
| ATEmix (dermal) | 27,474.80 mg/kg |

| | |
|--|---|
| Skin corrosion/irritation | Non-irritant (OECD 404 method) |
| Serious eye damage/eye irritation | Minimal irritant to the eye (OECD 405 method) |
| Respiratory or skin sensitization | It is not a skin sensitizer (OECD 429 method) |
| Germ cell mutagenicity | AMES test : Negative (OECD 471 method) |

Carcinogenicity
Carbon Black: In 1996, the IARC re-evaluated 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

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity

Contains 0 % of components with unknown hazards to the aquatic environment.

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| Chemical name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---------------|----------------------|--|----------------------------|---------------------------------------|
| Glycerol | - | 51 - 57: 96 h Oncorhynchus mykiss mL/L LC50 static | - | 500: 24 h Daphnia magna mg/L EC50 |
| Carbon Black | - | 1000:96 h Brachydanio rerio mg/L LC50 | - | 5600: 24 h Daphnia magna mg/L EC50 |

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

There is no data for this product.

Component Information

| Chemical name | Partition coefficient |
|----------------------------|-----------------------|
| Glycerol | -1.76 |
| 1,2-Benzisothiazolin-3-one | 1.3 |

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 in accordance with federal, state and local regulations.

Section 14: Transport information

IMDG

| | |
|---------------------------|---------------|
| 14.1 UN/ID no | Not regulated |
| 14.2 Proper shipping name | Not regulated |
| 14.3 Hazard Class | Not regulated |
| 14.4 Packing group | Not regulated |

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14.5 Marine pollutant Not applicable
14.6 Special Provisions None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

RID

14.1 UN/ID no Not regulated
14.2 Proper shipping name Not regulated
14.3 Hazard Class Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazard Not applicable
14.6 Special Provisions None

ADR

14.1 UN/ID no Not regulated
14.2 Proper shipping name Not regulated
14.3 Hazard Class Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazard Not applicable
14.6 Special Provisions None

IATA

14.1 UN/ID no Not regulated
14.2 Proper shipping name Not regulated
14.3 Hazard Class Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazard Not applicable
14.6 Special Provisions None

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU-Regulations

* Contains no substances listed in REACH Regulation (EC) No.1907/2006 ANNEX XVII.

* Contains no substance listed in REACH Regulation (EC) No.1907/2006 Candidate List for Authorization.

* Contains no substances listed in REACH Regulation (EC) No.1907/2006 ANNEX XIV.

National Regulations

No information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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Section 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

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

Legend

SVHC: Substances of Very High Concern for Authorization:

TWA

TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

**

Trade secret

Key literature references and sources for data

No information available

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Revision Note No information available

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

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).