

Revision Date: 31-Aug-2018

Issuing Date: 30-Jan-2017

Revision Number: 6

Product Name: LC3011BK, LC3013BK, LC3033BK, LC3034BK, LC3035BK,  
LC3111BK, LC3133BK, LC3135BK, LC3211BK, LC3213BK, LC3233BK, LC3235XLBK,  
LC3311BK, LC3313BK, LC3333BK, LC3335XLBK, LC3511BK, LC3513BK

Safety data sheet number: BHK151

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

### 1.1. Product identifier

**Product Name** LC3011BK, LC3013BK, LC3033BK, LC3034BK, LC3035BK, LC3111BK, LC3133BK, LC3135BK,  
LC3211BK, LC3213BK, LC3233BK, LC3235XLBK, LC3311BK, LC3313BK, LC3333BK, LC3335XLBK,  
LC3511BK, LC3513BK

**Product Form** Mixture

**Safety data sheet number** BHK151

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

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)  
CHEMTREC +61-290372994 (Australia)

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

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## 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]

#### Australia Classification

Not classified as hazardous according to the criteria of NOHSC

### 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

No information available

## Section 3: Composition/information on ingredients

### 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	-	60-70	Not classified	Not applicable
Glycerol	56-81-5	200-289-5	-	5-15	Not classified	Not applicable
Diethylene glycol	111-46-6	203-872-2	603-140-00-6	5-9	Acute Tox. 4 (H302)	Registered
Carbon Black	1333-86-4	215-609-9	-	5-9	Not classified	Not applicable
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)	Not applicable

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

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## Section 4: First aid measures

### 4.1. Description of first aid measures

<b>Inhalation</b>	Remove to fresh air.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact</b>	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water.

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

**Symptoms** No information available

### 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

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable extinguishing media</b>	No information available.

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

**Specific hazards arising from the chemical** No information available

### 5.3. Advice for firefighters

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

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## Section 6: Accidental release measures

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

**For non-emergency personnel** Ensure adequate ventilation.

**For emergency responders** Use personal protection recommended in Section 8.

### 6.2. Environmental precautions

**Environmental precautions** Prevent entry into waterways, sewers, basements or confined areas

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

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Take up mechanically, placing in appropriate containers for disposal.

**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** Ensure adequate ventilation.

**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 container tightly closed in a dry and well-ventilated place.

### 7.3. Specific end use(s)

**Specific use(s)** Water based ink for inkjet printing machine

The information required is contained in this Material Safety Data Sheet.

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**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 <sup>3</sup> STEL: 30 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	TWA: 200 mg/m <sup>3</sup>
Diethylene glycol 111-46-6	-	TWA: 23 ppm TWA: 101 mg/m <sup>3</sup> STEL: 69 ppm STEL: 303 mg/m <sup>3</sup>	-	-	TWA: 10 ppm TWA: 44 mg/m <sup>3</sup>
Carbon Black 1333-86-4	-	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup>	-
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Glycerol 56-81-5	-	TWA: 10 mg/m <sup>3</sup>	-	TWA: 20 mg/m <sup>3</sup>	-
Diethylene glycol 111-46-6	-	-	-	-	TWA: 2.5 ppm TWA: 11 mg/m <sup>3</sup>
Carbon Black 1333-86-4	-	TWA: 3.5 mg/m <sup>3</sup>	-	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup>
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
Glycerol 56-81-5	-	TWA: 50 mg/m <sup>3</sup> STEL: 100 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	-	TWA: 10 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup>
Diethylene glycol 111-46-6	TWA: 10 ppm TWA: 44 mg/m <sup>3</sup> STEL 40 ppm STEL 176 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 44 mg/m <sup>3</sup> STEL: 40 ppm STEL: 176 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	-	TWA: 23 ppm TWA: 100 mg/m <sup>3</sup> STEL: 69 ppm STEL: 300 mg/m <sup>3</sup>
Carbon Black 1333-86-4	-	-	TWA: 4.0 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>	TWA: 3 mg/m <sup>3</sup> STEL: 15 mg/m <sup>3</sup>

**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

**8.2. Exposure controls**

**Appropriate engineering controls** No information available.

**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** No special protective equipment required.

**Skin and body protection** No special protective equipment required.

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**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**Environmental exposure controls** No information available.

## 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

#### Property

#### Values

#### Remarks • Method

pH	7 - 9	
Melting point / freezing point	< -5 °C	
Boiling point / boiling range	> 100 °C	
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 <sub>2</sub> 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	2 - 5 mPa s	
Explosive properties	No information available	No information available.
Oxidizing properties	No information available	

### 9.2. Other information

No information available

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## 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

None under normal processing.

### 10.4. Conditions to avoid

None known based on information supplied

### 10.5. Incompatible materials

None known based on information supplied

### 10.6. Hazardous decomposition products

Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Oxides of sulfur

## 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	Not classified Acute LD <sub>50</sub> > 2000 mg/kg (OECD 420 method)

**Skin corrosion/irritation** Not classified  
Non-irritant (OECD 404 method)

**Serious eye damage/eye irritation** Not classified  
Minimal irritant to the eye (OECD 405 method)

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**Respiratory or skin sensitization** Not classified  
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

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

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
Diethylene glycol	-	75200: 96 h Pimephales promelas mg/L LC50 flow-through	EC50 = 29228 mg/L 15 min	84000: 48 h Daphnia magna mg/L EC50
Carbon Black	-	-	-	EC50: >5600mg/L (24h, Daphnia magna)

### 12.2. Persistence and degradability

No information available.



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**12.3. Bioaccumulative potential**

There is no data for this product.

**Component Information**

Chemical name	Partition coefficient
Glycerol	-1.76
Diethylene glycol	-1.98
1,2-Benzisothiazolin-3-one	1.3

**12.4. Mobility in soil**

No information available.

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

No information available.

**12.6. Other adverse effects**

No information available.

**Section 13: Disposal considerations**

**13.1. Waste treatment methods**

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**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
- 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 No information available

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## 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

No information available

#### National Regulations

### 15.2. Chemical safety assessment

No information available

## 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

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## Legend

SVHC: Substances of Very High Concern for Authorization:

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Ceiling Limit Value	**	Trade secret

## Key literature references and sources for data

No information available

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**Revision Note** Not applicable

**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).