

Product Name: LC404BK, LC414BK, LC424BK

Revision Date: -
Issuing Date: 08-Jan-2021
Revision Number: 1
Safety data sheet number: BHK253-01

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

1.1. Product identifier

Product Name LC404BK, LC414BK, LC424BK
Product Form Mixture
Safety data sheet number BHK253-01

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.
1 Tame Street, Audenshaw, Manchester M34 5JE, UK
Brother International (Nederland) B.V.
Zanderij 25, 1185 ZM Amstelveen, The Netherlands
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]

2.2. Label elements Regulation (EC) No 1272/2008

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

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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-%	Specific concentration limit (SCL)	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)	01-2119457857-21-XXXX
Carbon Black	1333-86-4	215-609-9	-	5-9	-	Not classified	01-2119384822-32-XXXX
1,2-Benzisothiazolin-3-one	2634-33-5	220-120-9	613-088-00-6	<0.05	Skin Sens. 1 :: C>=0.05%	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Aquatic Acute 1 (H400)	Not applicable

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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.

Inhalation Remove to fresh air. Get immediate medical advice/attention.

Eye contact In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. If eye irritation persists: Get medical advice/attention.

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Skin contact: Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists.

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 Inhalation (Vapor / Mist) : No specific effects and/or symptoms have been reported or known For large quantities: May cause irritation to the respiratory system. Increased difficulty in breathing. Sneezing. Coughing

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 and toxic gases and vapors Carbon monoxide Carbon dioxide (CO₂) Nitrogen oxides (NO_x) Oxides of sulfur

5.3. Advice for firefighters

Special protective equipment for fire-fighters Wear self contained breathing apparatus for fire fighting if necessary.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Avoid contact with skin, eyes or clothing

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.

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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 Avoid contact with skin, eyes or clothing.

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 out of the reach of children. Keep cool. Protect from sunlight.

7.3. Specific end use(s)

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

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
Diethylene glycol 111-46-6	-	TWA: 23 ppm TWA: 101 mg/m ³ STEL: 69 ppm STEL: 303 mg/m ³	-	-	TWA: 10 ppm TWA: 44 mg/m ³
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	-

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Diethylene glycol 111-46-6	-	-	-	-	TWA: 2.5 ppm TWA: 11 mg/m ³
Carbon Black 1333-86-4	-	TWA: 3 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	-	-
Diethylene glycol 111-46-6	TWA: 10 ppm TWA: 44 mg/m ³ STEL 40 ppm STEL 176 mg/m ³	TWA: 10 ppm TWA: 44 mg/m ³ STEL: 40 ppm STEL: 176 mg/m ³	TWA: 10 mg/m ³	-	TWA: 23 ppm TWA: 100 mg/m ³ STEL: 69 ppm STEL: 300 mg/m ³
Carbon Black 1333-86-4	-	-	TWA: 4 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 If there is a risk of contact, Apron, Boots

Respiratory protection Use appropriate respiratory protection.

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

Property

pH 7 - 9
Melting point / freezing point < -5 °C
Boiling point / boiling range > 100 °C
Flash point > 94 °C

Remarks • Method

Tag Closed Cup, Cleveland Open Cup,

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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	No data available
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	2 - 5 mPa s	
Explosive properties	No information available	
Oxidizing properties	No information available	

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No information available

9.2.2. Other safety characteristics

No information available

Section 10: Stability and reactivity

10.1. Reactivity

None.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Keep away from heat. Keep away from water or moist air.

10.5. Incompatible materials

Acids, Bases, Oxidizing agent, Reducing agent

10.6. Hazardous decomposition products

Carbon monoxide, Carbon dioxide (CO₂), Nitrogen oxides (NO_x), Oxides of sulfur

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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)
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	Respiratory sensitization : No information available 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
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available
Aspiration hazard	No information available.
Potential health effects	Eye : May cause slight irritation Skin : Prolonged exposure may cause skin irritation Ingestion : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea Inhalation : Not an expected route of exposure

11.2. Information on other hazards

No information available

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Section 12: Ecological information

12.1. Toxicity

Ecotoxicity

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

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Glycerol	-	LC50: 51 - 57mL/L (96h, <i>Oncorhynchus mykiss</i>)	-	-
Diethylene glycol	-	LC50: =75200mg/L (96h, <i>Pimephales promelas</i>)	EC50 = 29228 mg/L 15 min	EC50: =84000mg/L (48h, <i>Daphnia magna</i>)
Carbon Black	-	-	-	-

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
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. Endocrine disrupting properties

No information available.

12.7. 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

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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** 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)

Ceiling Ceiling Limit Value

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).