

Product Name

LC402BK, LC402XLBK, LC406BK, LC406LBK, LC406XLBK, LC412BK, LC412XLBK, LC416BK, LC416LBK, LC416XLBK, LC417XLBK, LC418XLBK, LC422BK, LC422XLBK, LC426BK, LC426XLBK, LC427BK, LC427XLBK, LC428XLBK, LC432BK, LC432XLBK, LC436BK, LC436XLBK, LC456BK, LC456XLBK, LC462BK, LC462XLBK, LC472BK, LC472XLBK, LC492XLBK

First Issue: Feb. 19, 2020

Revised: Dec. 23, 2020

Version Number:3

SDS No.: BH249KCTE3

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name:	LC402BK	LC402XLBK	LC406BK	LC406LBK	LC406XLBK	LC412BK
	LC412XLBK	LC416BK	LC416XLBK	LC417XLBK	LC418XLBK	LC422BK
	LC422XLBK	LC426BK	LC426XLBK	LC427BK	LC427XLBK	LC428XLBK
	LC432BK	LC432XLBK	LC436BK	LC436XLBK	LC456BK	LC456XLBK
	LC462BK	LC462XLBK	LC472BK	LC472XLBK	LC492XLBK	

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

Identified use(s): Water based ink for inkjet printing machine

1.3 Details of the supplier of the safety data sheet

Manufacturer: BROTHER INDUSTRIES, LTD.
5-1, Hamada-cho, Minami-ku, Nagoya 457-0822, JAPAN
Telephone Number for Information : +81-52-824-3445
BROTHER INTERNATIONAL EUROPE LTD.
Brother House, 1 Tame Street, Audenshaw, Manchester M34 5JE, UK
Telephone Number for Information : +44-161-330-6531

Importer (Europe): BROTHER INTERNATIONAL CORPORATION (U.S.A.)
200 Crossing Blvd. Bridgewater, New Jersey 08807-0911, U.S.A.
Telephone Number for Information : +1-877-276-8437

Importer (USA): BROTHER INTERNATIONAL CORPORATION (Canada) LTD.
1 rue Hôtel de Ville, Dollard-des-Ormeaux, Québec, H9B 3H6, CANADA
Telephone Number for Information : +1-514-685-0600

Importer (Canada): BROTHER INTERNATIONAL (AUST.) PTY. LTD. ACN 001 393 835
Level 3, Building A, 11 Talavera Road Macquarie Park, NSW 2113, AUSTRALIA
Telephone Number for Information : +61-2-9887-4344

Importer (Australia): BROTHER TECHNOLOGY (SHENZHEN) LTD.
No.6 Gold Garden Ind. Nanling, Nanwan, Longgang, Shenzhen, China
TEL: +86-755-6188-5587

Importer (China): sds.ieink@brother.co.jp

E-Mail (competent person):

1.4 Emergency telephone number

Emergency Phone No. (24 hours) We do not provide 24 hours cover for information contact.
Please telephone to the above office during our business hours.

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification :

Physical hazards	
Flammable liquids:	Not classified
Health hazards	
Acute toxicity (oral):	Not classified
Skin corrosion/irritation:	Not classified
Serious eye damage/eye irritation:	Not classified
Skin sensitization:	Not classified

※Others are not applicable or not possible to classify.

Regulation (EC) No. 1272/2008 as amended Not classified

[CLP] :

2.2 Label elements

GHS Label elements None

Regulation (EC) No. 1272/2008 as amended

[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 None

Product Name

LC402BK, LC402XLBK, LC406BK, LC406LBK, LC406XLBK, LC412BK, LC412XLBK, LC416BK, LC416XLBK, LC417XLBK, LC418XLBK, LC422BK, LC422XLBK, LC426BK, LC426XLBK, LC427BK, LC427XLBK, LC428XLBK, LC432BK, LC432XLBK, LC436BK, LC436XLBK, LC456BK, LC456XLBK, LC462BK, LC462XLBK, LC472BK, LC472XLBK, LC492XLBK

First Issue: Feb. 19, 2020

Revised: Dec. 23, 2020

Version Number:3

SDS No.: BH249KCTE3

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

CHEMICAL NAME	CAS No.	EC No.	% by weight	Classification (Eu Reg. 1272/2008)
Carbon black	1333-86-4	215-609-9	5-9	Not classified
Glycerol	56-81-5	200-289-5	15-25	Not classified
Triethylene glycol monobutyl ether	143-22-6	205-592-6	1-5	Eye Dam. 1 (H318)
1,2-benzisothiazol-3(2H)- one	2634-33-5	220-120-9	< 0.05	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Aquatic Acute 1 (H400)
Water	7732-18-5	231-791-2	60-70	Not classified

For the full text of any statements see Section16

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation:

Skin Contact:

Eye Contact:

Ingestion:

Remove to fresh air area and obtain medical attention immediately.

Wash with water and soap. If irritation continues, obtain medical attention.

Flush immediately with gentle running water for 15 minutes at least. If irritation continues, obtain medical attention.

Rinse mouth with water, give one or two of glasses of water, and obtain medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation:No harmful effects are expected under normal use.Over exposure to vapor or mist, may cause symptoms such as respiratory irritation, cough, dizziness, headache and nausea.

4.3 Indication of any immediate medical attention and special treatment needed

None

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media:

Unsuitable Extinguishing Media:

Water, CO₂, Foam, Dry chemical.

None.

5.2 Special hazards arising from the substance or mixture

May produce toxic fumes of carbon monoxide, carbon dioxide, nitrogen oxides, sulfur oxides if burning.

5.3 Advice for fire-fighters

Use self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with eyes, skin and clothing.

6.2 Environmental precautions

Do not release to surface water or ground water.

6.3 Methods and material for containment and cleaning up

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

6.4 Reference to other sections

See Section: 8.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin, eyes and clothing.

7.2 Conditions for safe storage, including any incompatibilities

Keep out of reach of children. Store in a cool and dark place.

7.3 Specific end use(s)

Water based ink for inkjet printing machine

Cartridge contained water based ink for inkjet printing machine

Product Name

LC402BK, LC402XLBK, LC406BK, LC406LBK, LC406XLBK, LC412BK, LC412XLBK, LC416BK, LC416XLBK, LC417XLBK, LC418XLBK, LC422BK, LC422XLBK, LC426BK, LC426XLBK, LC427BK, LC427XLBK, LC428XLBK, LC432BK, LC432XLBK, LC436BK, LC436XLBK, LC456BK, LC456XLBK, LC462BK, LC462XLBK, LC472BK, LC472XLBK, LC492XLBK

First Issue: Feb. 19, 2020

Revised: Dec. 23, 2020

Version Number:3

SDS No.: BH249KCTE3

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits:

CHEMICAL NAME	OSHA PEL	ACGIH TLV	EU IOELV
Carbon Black	Limits for air contaminant TWA3.5mg/m ³	TWA 3mg/m ³ Not classifiable as a human carcinogen.	Not established
Glycerol	(as mist) Total dust TWA 15mg/m ³	Not established	Not established

8.2 Exposure controls

Appropriate engineering controls

Use in a ventilated area.

Personal Protection

Eye/face protection

Not required under normal use.

Skin protection

Not required under normal use.

Hand protection

Not required under normal use.

Respiratory protection

Not required under normal use.

Other:

Not applicable.

Environmental Exposure Controls

Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance (20 °C)

Black liquid

Odor

Slight odor

Odor threshold (ppm)

Not available

pH (Value)

7 – 9

Melting point (°C) / Freezing point (°C)

Melting point(°C) : <-5°C

Boiling point/boiling range (°C)

Boiling point(°C) : >100°C

Flash point (°C)

Does not flash at 93.3°C or lower
(Tag closed cup & Cleveland opened cup)

Evaporation rate

Not available

Flammability (solid, gas)

LEL : Not available UEL : Not available

Explosive limit ranges

Not available

Vapor pressure (Pa)

Not available

Vapor density (Air=1)

Not available

Density (g/cm³)

1.0 – 1.1 g/ml

Solubility (Water)

Soluble

Solubility (Other)

Not available

Partition coefficient (n-Octanol/water)

Not available

Auto ignition point (°C)

>400°C

Decomposition temperature (°C)

Not available

Viscosity (mPa. s)

2 – 5 mPa.s

Explosive properties

Not available

Oxidising properties

Not available

9.2 Other information

Not available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

None

10.2 Chemical stability

Stable

10.3 Possibility of hazardous reactions

Will not occur

10.4 Conditions to avoid

High-temperature or High-humidity

10.5 Incompatible materials

Acids, Bases, Oxidizing agents, Reducing agents

10.6 Hazardous Decomposition Product(s)

Carbon monoxide, Carbon dioxide, Nitrogen oxides, Sulfur oxides

Product Name

LC402BK, LC402XLBK, LC406BK, LC406LBK, LC406XLBK, LC412BK, LC412XLBK, LC416BK, LC416XLBK, LC417XLBK, LC418XLBK, LC422BK, LC422XLBK, LC426BK, LC426XLBK, LC427BK, LC427XLBK, LC428XLBK, LC432BK, LC432XLBK, LC436BK, LC436XLBK, LC456BK, LC456XLBK, LC462BK, LC462XLBK, LC472BK, LC472XLBK, LC492XLBK

First Issue: Feb. 19, 2020

Revised: Dec. 23, 2020

Version Number:3

SDS No.: BH249KCTE3

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity (oral):

LD₅₀ of ink is greater than 2000mg/kg.

Skin corrosion/irritation:

Ink is classified as a NON IRRITANT

Serious eye damage/irritation:

Ink is classified as a NON IRRITANT.

Respiratory or skin sensitization:

Respiratory sensitization : Not available

Skin sensitization : Non-sensitizer

Mutagenicity:

Ames test : Negative

Carcinogenicity:

Specific data are not available.

Carbon black has been classified by the IARC as group 2B. However, IARC reported that no significant exposure to carbon black is thought to occur during the use of products in which carbon black is bound to other materials, such as printing ink.

Other ingredients of ink have not been classified as carcinogens according to IARC monographs, NTP, and OSHA regulated.

Reproductive toxicity:

Not available

STOT-single exposure:

Not available

STOT-repeated exposure:

Not available

Aspiration hazard:

Not available

Potential Health Effects:

Eye : Ink may cause slight irritation.

Skin : Prolonged exposure to ink may cause irritation.

Ingestion : Ink may cause gastrointestinal or other adverse effects.

Inhalation : Not expected to be a route of exposure under normal use.

Over exposure may cause respiratory irritation.

SECTION 12: ECOLOGICAL INFORMATION

12.1	Toxicity	Not available
12.2	Persistence and degradability	Not available
12.3	Bioaccumulative potential	Not available
12.4	Mobility in soil	Not available
12.5	Results of PBT and vPvB assessment	Not available
12.6	Other adverse effects	Not available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1	Waste treatment methods	Dispose in accordance with federal, state and local regulations.
------	-------------------------	--

SECTION 14: TRANSPORT INFORMATION

14.1	UN number	None
14.2	Proper Shipping Name	None
14.3	Transport hazard class(es)	None
14.4	Packing Group	None
	US Department of Transportation (DOT) :	Not regulated as dangerous goods.
	Maritime Transport IMDG :	Not regulated as dangerous goods.
	Air Transport ICAO/IATA :	Not regulated as dangerous goods.
14.5	Environmental hazards	Not available
14.6	Special precautions for user	None
14.7	Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable

SECTION 15: REGULATORY INFORMATION

15.1	Safety, health and environmental regulations/legislation specific for the substance or mixture	EU : All components in ink comply with REACH rules and regulations. Ink is not classified according to Regulation (EC) No 1272/2008 and Regulation (EU) No 286/2011. US : All components in ink comply with TSCA rules and regulations. Canada : WHMIS : Not applicable. (Manufactured article)
15.2	Chemical Safety Assessment	None

Product Name

LC402BK, LC402XLBK, LC406BK, LC406LBK, LC406XLBK, LC412BK, LC412XLBK, LC416BK, LC416XLBK, LC417XLBK, LC418XLBK, LC422BK, LC422XLBK, LC426BK, LC426XLBK, LC427BK, LC427XLBK, LC428XLBK, LC432BK, LC432XLBK, LC436BK, LC436XLBK, LC456BK, LC456XLBK, LC462BK, LC462XLBK, LC472BK, LC472XLBK, LC492XLBK

First Issue: Feb. 19, 2020

Revised: Dec. 23, 2020

Version Number:3

SDS No.: BH249KCTE3

SECTION 16: OTHER INFORMATION

Issue Date:

Dec. 23, 2020

The following sections contain revisions or new statements:

Section 1

Additional information:

The information only relates to this specific product. It may not be valid for this product, 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).

References:

World Health Organization International Agency for Research on Cancer, IARC Monographs on the Evaluation on the Carcinogenic Risks to Humans, Volume 93
U.S. Department of labor, 29CFR Part 1910.
ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices
EU Commission Directive 2009/161/EU

Abbreviations:

ACGIH
DOT
IARC
IATA
ICAO
IMDG
IOELV
NTP
OSHA
PEL
REACH

American Conference of Governmental Industrial Hygienists
Department Of Transportation (US)
International Agency for Research on Cancer
International Air Transport Association
International Civil Aviation Organization
International Maritime Dangerous Goods
Indicative Occupational Exposure Limit Value
National Toxicology Program (US)
Occupational Safety and Health Administration (US)
Permissible Exposure Limit
Registration, Evaluation, Authorization and Restriction of Chemicals (EU)
Threshold Limit Value(ACGIH)
Toxic Substances Control Act (US)
Workplace Hazardous Material Information System (Canada)

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

Acute Tox. 4
Eye Dam. 1
Skin Irrit. 2
Skin Sens. 1
Aquatic Acute 1
H302
H315
H317
H318
H400

Acute toxicity Category 4
Serious eye damage/eye irritation Category 1
Skin corrosion/irritation Category 2
Skin sensitization Category 1
Hazardous to the aquatic environment -Acute Category 1
Harmful if swallowed
Causes skin irritation
May cause an allergic skin reaction
Causes serious eye damage
Very toxic to aquatic life