

Product name: LC11C, LC16C, LC38C, LC39C, LC60C, LC61C, LC67C, LC980C, LC985C, LC990C, LC1100C, LC65HY-C, LC67HY-C, LC990HY-C, LC1100HY-C

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name	LC11C	LC16C	LC38C	LC39C
Product Code	LK3637001, LC4690001	LK3526001, LK4710001	LK3661001, LK4196001	LK5405001
Product Name	LC60C	LC61C	LC67C	LC980C
Product Code	LK5729001	LK3366001, LK4297001	LK3669001, LK4222001	LK3374001, LK4048001
Product Name	LC985C	LC990C	LC1100C	
Product Code	LK4621001, LK5401001	LK4461001	LK3572001, LK3985001	
Product Name	LC65HY-C	LC67HY-C	LC990HY-C	LC1100HY-C
Product Code	LK3291001, LK4330001	LK3524001, LK4277001	LK3525001, LK4481001	LK3523001, LK4021001

General Use Inkjet printing
Product Description Water based ink cartridge for inkjet printing machine
MSDS No. BHC018

Manufacturer BROTHER INDUSTRIES, LTD.
5-1, Hamada-cho, Minami-ku, Nagoya 457-0822, JAPAN
Telephone Number for Information +81-52-824-3445

Importer
in USA BROTHER INTERNATIONAL CORPORATION
100 Somerset Corporate Boulevard, P.O.Box 6911, Bridgewater,
NJ 08807-0911, USA
Telephone Number for Information +1-800-284-4329

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

Importer
in Europe BROTHER INTERNATIONAL EUROPE LTD.
Brother house, 1 Tame Street, Guide Bridge, Audenshaw, Manchester
M34 5JE, UK
Telephone Number for Information +44-161-330-6531

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

We do not provide 24 hours cover for information contact.
Please telephone to the above office during our business hours.

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2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Ink in cartridge is dark blue liquid with slight odor.
Keep out of reach of children.
Ink poses little or no immediate hazard if spilled.

POTENTIAL HEALTH EFFECTS

Inhalation : Not expected to be a route of exposure under normal use.
Eye : Ink may cause slight irritation.
Skin : Prolonged exposure to ink may cause irritation.
Ingestion : Ink may cause gastrointestinal or other adverse effects.

CHRONIC EFFECTS / CARCINOGENICITY

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

EU HAZARD LABEL

Ink is not classified according to EU-Directive 1999/45/EC.

3. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS# / EC#	% by weight	USA OSHA PEL	ACGIH TLV	EU Symbol / Risk Phrases
Glycerol	56-81-5 / 200-289-5	10 - 30	(as mist) Total dust TWA 15mg/m ³ Respirable fraction TWA 5mg/m ³	(as mist) Total dust TWA 10mg/m ³	Not classified
Diethylene glycol	111-46-6 / 203-872-2	1 - 5	Not established	Not established	Xn / R22
Triethylene glycol monobutyl ether	143-22-6 / 205-592-6	1 - 4	Not established	Not established	Xi / R41
Copper Phthalocyanine derivative dye	Registered/ 445-470-1	1 - 4	Not established	Not established	Xi / R41 R52/53
Water	7732-18-5 / 231-791-2	50 - 70	Not established	Not established	Not established

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4. FIRST AID MEASURES

INHALATION : Remove to fresh air area and get medical attention.
EYE : Flush immediately with running water for at least 15 minutes and get medical attention.
SKIN : Wash with water and soap.
INGESTION : Dilute with water and get medical attention.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

Auto-ignition temperature : > 400°C
Flammability : LEL : Not available UEL : Not available
Flash point : Does not flash (>93.3°C)
(Tag closed cup & Cleveland opened cup)

EXTINGUISHING MEDIA

Suitable: Water, CO₂, Foam, Dry chemical.
Not to be used : None

FIRE FIGHTING INSTRUCTIONS

Special exposure hazards : Refer to section 10.
Special protect equipment for fire-fighters : Use self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTION : In case of ink vapor formation use respirator.
ENVIRONMENTAL PRECAUTION : Take care to minimize ink that reaches to a sewer.
METHODS FOR CLEANING UP : Wipe up ink with absorbent towel. Wash with water to remove remaining traces of ink.

7. HANDLING AND STORAGE

HANDLING : Avoid skin contact with ink. Prevent eye contact with ink.
STORAGE : Keep out of reach of children. Store in a cool, dark, and dry place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES : Refer to section 3.

EXPOSURE CONTROLS

Engineering controls : Ventilation is not required under normal use.
Personal protection
Respiratory protection : Not required under normal use.
Hand protection : Not required under normal use.
Eye protection : Not required under normal use.
Skin protection : Not required under normal use.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance :	Dark blue liquid
Auto-ignition temperature :	> 400°C
Boiling point :	> 100°C
Density :	Approximately 1.07 g/ml
Flammability :	LEL : Not available UEL : Not available
Flash point :	Does not flash (>93.3°C) (Tag closed cup & Cleveland opened cup)
Freezing point :	< 0°C
Odor :	Slight odor
Partition coefficient (n-octanol/water) :	Not available
pH :	7 – 9
Solubility in water :	Soluble
Vapor density (Air=1) :	Not available
Vapor pressure :	Not available
Viscosity :	2 - 5 mPa·s

10. STABILITY AND REACTIVITY

STABILITY :	Stable
CONDITIONS TO AVOID :	None
MATERIALS TO AVOID :	Strong oxidizing agents
HAZARDOUS DECOMPOSITION PRODUCTS :	Carbon monoxide, Carbon dioxide
HAZARDOUS POLYMERIZATION :	Does not occur

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity :	LD ₅₀ of ink is greater than 2000mg/kg.
Eye irritation :	Ink is classified as a MINIMAL IRRITANT.
Skin irritation :	Ink is classified as a NON IRRITANT.

12. ECOLOGICAL INFORMATION

PERSISTENCE AND DEGRADABILITY :	Not available
BIOACCUMULATIVE POTENTIAL :	Not available

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

US DEPARTMENT OF TRANSPORTATION (DOT) :	Not applicable
MARITIME TRANSPORT IMDG :	Not applicable
AIR TRANSPORT ICAO/IATA :	Not applicable

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15. REGULATORY INFORMATION

US REGULATIONS

TSCA STATUS : All components in ink are listed on TSCA inventory.

EUROPEAN REGULATIONS

EU NOTIFICATION : All components in ink are listed in EINECS, ELINCS or NLP Inventory.

EU HAZARD LABEL : Ink is not classified according to EU-Directive 1999/45/EC.

16. OTHER INFORMATION

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

EU Hazard Symbols : Xn : Harmful

Xi : Irritant

EU Risk (R) Phrase definitions : R22 : Harmful if swallowed.

R41 : Risk of serious damage to eyes.

R52/53 : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Key

ACGIH TLV TLV (Threshold Limit Value) under American Conference of Governmental Industrial Hygienists

DOT Department Of Transportation (USA)

EINECS European Inventory of Existing Commercial Chemical Substances (EU)

IARC International Agency for Research on Cancer

IATA International Air Transport Association

IMDG International Maritime Dangerous Goods

NLP No-Longer Polymers List (EU)

NTP National Toxicology Program (USA)

OSHA Occupational Safety and Health Administration (USA)

OSHA HCS Hazard Communication Standard issued by Occupational Safety and Health Administration (USA)

OSHA PEL PEL (Permissible Exposure Limit) under Occupational Safety and Health Administration (USA)

TSCA Toxic Substances Control Act (USA)