

Product Name: LC3011M, LC3013M, LC3033M, LC3034M, LC3035M, LC3111M, LC3133M, LC3135M, LC3211M, LC3213M, LC3233M, LC3235XLM, LC3311M, LC3313M, LC3333M, LC3335XLM, LC3511M, LC3513M

Revision Date: 22-Jul-2020

Issuing Date: 31-Jan-2017

Revision Number: 7

Safety data sheet number: BHM151

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

1.1. Product identifier

Product Name LC3011M, LC3013M, LC3033M, LC3034M, LC3035M, LC3111M, LC3133M, LC3135M, LC3211M, LC3213M, LC3233M, LC3235XLM, LC3311M, LC3313M, LC3333M, LC3335XLM, LC3511M, LC3513M

Product Form Mixture

Safety data sheet number BHM151

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

Relevant identified uses These products are dark red 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

Revision Date: 22-Jul-2020

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Product Name: LC3011M, LC3013M, LC3033M, LC3034M, LC3035M, LC3111M, LC3133M, LC3135M, LC3211M, LC3213M, LC3233M, LC3235XLM, LC3311M, LC3313M, LC3333M, LC3335XLM, LC3511M, LC3513M

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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]

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	-	65-80	Not classified	Not applicable
Glycerol	56-81-5	200-289-5	-	10-20	Not classified	Not applicable
Magenta Dye	**	**	-	<2.5	Eye Irrit. 2 (H319) Aquatic Chronic 3 (H412)	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)	Not applicable

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

Product Name: LC3011M, LC3013M, LC3033M, LC3034M, LC3035M, LC3111M, LC3133M, LC3135M, LC3211M, LC3213M, LC3233M, LC3235XLM, LC3311M, LC3313M, LC3333M, LC3335XLM, LC3511M, LC3513M

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Safety data sheet number: BHM151

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	Get immediate medical advice/attention. In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes.
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 .
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4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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Section 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Dry chemical, CO ₂ , 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 (CO ₂) Nitrogen oxides (NOx) Oxides of sulfur
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5.3. Advice for firefighters

Special protective equipment for fire-fighters	Wear self contained breathing apparatus for fire fighting if necessary.
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Product Name: LC3011M, LC3013M, LC3033M, LC3034M, LC3035M, LC3111M, LC3133M, LC3135M, LC3211M, LC3213M, LC3233M, LC3235XLM, LC3311M, LC3313M, LC3333M, LC3335XLM, LC3511M, LC3513M

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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 entry into waterways, sewers, basements or confined areas.

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 .

Product Name: LC3011M, LC3013M, LC3033M, LC3034M, LC3035M, LC3111M, LC3133M, LC3135M, LC3211M, LC3213M, LC3233M, LC3235XLM, LC3311M, LC3313M, LC3333M, LC3335XLM, LC3511M, LC3513M

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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
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Glycerol 56-81-5	-	TWA: 10 mg/m ³	-	TWA: 20 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

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 Apron, Boots

Respiratory protection None under normal use conditions. 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

dark red

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

> 93.3 °C

Tag Closed Cup, Cleveland Open Cup,

Product Name: LC3011M, LC3013M, LC3033M, LC3034M, LC3035M, LC3111M,
LC3133M, LC3135M, LC3211M, LC3213M, LC3233M, LC3235XLM, LC3311M,
LC3313M, LC3333M, LC3335XLM, LC3511M, LC3513M

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

9.2. Other information

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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LC3133M, LC3135M, LC3211M, LC3213M, LC3233M, LC3235XLM, LC3311M,
LC3313M, LC3333M, LC3335XLM, LC3511M, LC3513M

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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	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

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity

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

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Product Name: LC3011M, LC3013M, LC3033M, LC3034M, LC3035M, LC3111M, LC3133M, LC3135M, LC3211M, LC3213M, LC3233M, LC3235XLM, LC3311M, LC3313M, LC3333M, LC3335XLM, LC3511M, LC3513M

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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

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
14.5 Marine pollutant	Not applicable
14.6 Special Provisions	None

Product Name: LC3011M, LC3013M, LC3033M, LC3034M, LC3035M, LC3111M,
LC3133M, LC3135M, LC3211M, LC3213M, LC3233M, LC3235XLM, LC3311M,
LC3313M, LC3333M, LC3335XLM, LC3511M, LC3513M

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14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

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.

Section 16: Other information

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

Product Name: LC3011M, LC3013M, LC3033M, LC3034M, LC3035M, LC3111M,
LC3133M, LC3135M, LC3211M, LC3213M, LC3233M, LC3235XLM, LC3311M,
LC3313M, LC3333M, LC3335XLM, LC3511M, LC3513M

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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
H319 - Causes serious eye irritation
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)
Ceiling	Ceiling Limit Value	**	Trade secret

Key literature references and sources for data

No information available

Revision Date 22-Jul-2020

Issuing Date 31-Jan-2017

Revision Note

Importer information has been changed.

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).

Product Name: LC3011C, LC3013C, LC3033C, LC3034C, LC3035C, LC3111C,
LC3133C, LC3135C, LC3211C, LC3213C, LC3233C, LC3235XLC, LC3311C,
LC3313C, LC3333C, LC3335XLC, LC3511C, LC3513C

Revision Date: 22-Jul-2020

Issuing Date: 31-Jan-2017

Revision Number: 7

Safety data sheet number: BHC151

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

1.1. Product identifier

Product Name LC3011C, LC3013C, LC3033C, LC3034C, LC3035C, LC3111C, LC3133C, LC3135C,
LC3211C, LC3213C, LC3233C, LC3235XLC, LC3311C, LC3313C, LC3333C, LC3335XLC,
LC3511C, LC3513C

Product Form Mixture

Safety data sheet number BHC151

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

Relevant identified uses These products are dark blue 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

Revision Date: 22-Jul-2020

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Revision Number: 7

Product Name: LC3011C, LC3013C, LC3033C, LC3034C, LC3035C, LC3111C,
LC3133C, LC3135C, LC3211C, LC3213C, LC3233C, LC3235XLC, LC3311C,
LC3313C, LC3333C, LC3335XLC, LC3511C, LC3513C

Safety data sheet number: BHC151

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]

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	Not applicable
Glycerol	56-81-5	200-289-5	-	10-20	Not classified	Not applicable
Triethylene glycol, monobutyl ether	143-22-6	205-592-6	603-183-00-0	1-5	Eye Dam. 1 (H318)	01-2119475107-38-XXXX
Diethylene glycol	111-46-6	203-872-2	603-140-00-6	5-9	Acute Tox. 4 (H302)	01-2119457857-21-XXXX
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

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

Product Name: LC3011C, LC3013C, LC3033C, LC3034C, LC3035C, LC3111C,
LC3133C, LC3135C, LC3211C, LC3213C, LC3233C, LC3235XLC, LC3311C,
LC3313C, LC3333C, LC3335XLC, LC3511C, LC3513C

Revision Date: 22-Jul-2020

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Revision Number: 7

Safety data sheet number: BHC151

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	Get immediate medical advice/attention. In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes.
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
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4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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Section 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Dry chemical, CO ₂ , 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 (CO ₂) Nitrogen oxides (NO _x) Oxides of sulfur
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5.3. Advice for firefighters

Special protective equipment for fire-fighters	Wear self contained breathing apparatus for fire fighting if necessary.
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Product Name: LC3011C, LC3013C, LC3033C, LC3034C, LC3035C, LC3111C,
LC3133C, LC3135C, LC3211C, LC3213C, LC3233C, LC3235XLC, LC3311C,
LC3313C, LC3333C, LC3335XLC, LC3511C, LC3513C

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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 entry into waterways, sewers, basements or confined areas.

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 .

Product Name: LC3011C, LC3013C, LC3033C, LC3034C, LC3035C, LC3111C, LC3133C, LC3135C, LC3211C, LC3213C, LC3233C, LC3235XLC, LC3311C, LC3313C, LC3333C, LC3335XLC, LC3511C, LC3513C

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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
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Glycerol 56-81-5	-	TWA: 10 mg/m ³	-	TWA: 20 mg/m ³	-
Diethylene glycol 111-46-6	-	-	-	-	TWA: 2.5 ppm TWA: 11 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
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

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 Apron, Boots

Respiratory protection None under normal use conditions. 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

Product Name: LC3011C, LC3013C, LC3033C, LC3034C, LC3035C, LC3111C, LC3133C, LC3135C, LC3211C, LC3213C, LC3233C, LC3235XLC, LC3311C, LC3313C, LC3333C, LC3335XLC, LC3511C, LC3513C

Safety data sheet number: BHC151

Color dark blue
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	
Flash point	> 93.3 °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	2 - 5 mPa s	
Explosive properties	No information available	
Oxidizing properties	No information available	

9.2. Other information

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.

Product Name: LC3011C, LC3013C, LC3033C, LC3034C, LC3035C, LC3111C,
LC3133C, LC3135C, LC3211C, LC3213C, LC3233C, LC3235XLC, LC3311C,
LC3313C, LC3333C, LC3335XLC, LC3511C, LC3513C

Revision Date: 22-Jul-2020

Issuing Date: 31-Jan-2017

Revision Number: 7

Safety data sheet number: BHC151

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

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	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

Product Name: LC3011C, LC3013C, LC3033C, LC3034C, LC3035C, LC3111C, LC3133C, LC3135C, LC3211C, LC3213C, LC3233C, LC3235XLC, LC3311C, LC3313C, LC3333C, LC3335XLC, LC3511C, LC3513C

Safety data sheet number: BHC151

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	-	51 - 57: 96 h Oncorhynchus mykiss mL/L LC50 static	-	500: 24 h Daphnia magna mg/L EC50
Triethylene glycol, monobutyl ether	500: 72 h Desmodium subspicatum mg/L EC50	2400: 96 h Pimephales promelas mg/L LC50 static 2400: 96 h Pimephales promelas mg/L LC50 2200 - 4600: 96 h Leuciscus idus mg/L LC50 static	-	500: 48 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

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
Triethylene glycol, monobutyl ether	0.51
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

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.

Product Name: LC3011C, LC3013C, LC3033C, LC3034C, LC3035C, LC3111C,
LC3133C, LC3135C, LC3211C, LC3213C, LC3233C, LC3235XLC, LC3311C,
LC3313C, LC3333C, LC3335XLC, LC3511C, LC3513C

Revision Date: 22-Jul-2020

Issuing Date: 31-Jan-2017

Revision Number: 7

Safety data sheet number: BHC151

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
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

Revision Date: 22-Jul-2020

Issuing Date: 31-Jan-2017

Revision Number: 7

Product Name: LC3011C, LC3013C, LC3033C, LC3034C, LC3035C, LC3111C,
LC3133C, LC3135C, LC3211C, LC3213C, LC3233C, LC3235XLC, LC3311C,
LC3313C, LC3333C, LC3335XLC, LC3511C, LC3513C

Safety data sheet number: BHC151

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.

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)
Ceiling	Ceiling Limit Value	**	Trade secret

Key literature references and sources for data

No information available

Revision Date 22-Jul-2020

Issuing Date 31-Jan-2017

Revision Note

Importer information has been changed.

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).

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.
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

Revision Date: 22-Jul-2020

Issuing Date: 30-Jan-2017

Revision Number: 7

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

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]

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	-	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	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Aquatic Acute 1 (H400)	Not applicable

** CONFIDENTIAL

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

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

Revision Date: 22-Jul-2020

Issuing Date: 30-Jan-2017

Revision Number: 7

Safety data sheet number: BHK151

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.
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.
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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.

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

Revision Date: 22-Jul-2020

Issuing Date: 30-Jan-2017

Revision Number: 7

Safety data sheet number: BHK151

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 entry into waterways, sewers, basements or confined areas.

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 .

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

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	-
Diethylene glycol 111-46-6	-	-	-	-	TWA: 2.5 ppm TWA: 11 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
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: 4.0 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 Apron, Boots

Respiratory protection None under normal use conditions. In case of large spillages: Wear suitable respiratory protective equipment.

Environmental exposure controls Avoid release to the environment.

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 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	
Flash point	> 93.3 °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	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

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.

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

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

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.

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

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

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	-	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.

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

This product contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

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

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
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

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

Revision Date: 22-Jul-2020

Issuing Date: 30-Jan-2017

Revision Number: 7

Safety data sheet number: BHK151

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.

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

Revision Date 22-Jul-2020

Issuing Date 30-Jan-2017

Revision Note

Importer information has been changed.

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



SAFETY DATA SHEET

Revision Date: 22-Jul-2020

Issuing Date: 30-Jan-2017

Revision Number: 7

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

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).

Product Name: LC3011Y, LC3013Y, LC3033Y, LC3034Y, LC3035Y, LC3111Y,
LC3133Y, LC3135Y, LC3211Y, LC3213Y, LC3233Y, LC3235XLY, LC3311Y, LC3313Y,
LC3333Y, LC3335XLY, LC3511Y, LC3513Y

Safety data sheet number: BHY151

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

1.1. Product identifier

Product Name LC3011Y, LC3013Y, LC3033Y, LC3034Y, LC3035Y, LC3111Y, LC3133Y, LC3135Y,
LC3211Y, LC3213Y, LC3233Y, LC3235XLY, LC3311Y, LC3313Y, LC3333Y, LC3335XLY,
LC3511Y, LC3513Y

Product Form Mixture

Safety data sheet number BHY151

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

Relevant identified uses These products are dark yellow 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

Revision Date: 22-Jul-2020

Issuing Date: 31-Jan-2017

Revision Number: 7

Product Name: LC3011Y, LC3013Y, LC3033Y, LC3034Y, LC3035Y, LC3111Y, LC3133Y, LC3135Y, LC3211Y, LC3213Y, LC3233Y, LC3235XLY, LC3311Y, LC3313Y, LC3333Y, LC3335XLY, LC3511Y, LC3513Y

Safety data sheet number: BHY151

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]

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	-	65-80	Not classified	Not applicable
Glycerol	56-81-5	200-289-5	-	5-15	Not classified	Not applicable
Triethylene glycol, monobutyl ether	143-22-6	205-592-6	603-183-00-0	1-5	Eye Dam. 1 (H318)	01-2119475107-38-XXXX
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

** CONFIDENTIAL

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

Section 4: First aid measures

4.1. Description of first aid measures

Product Name: LC3011Y, LC3013Y, LC3033Y, LC3034Y, LC3035Y, LC3111Y,
LC3133Y, LC3135Y, LC3211Y, LC3213Y, LC3233Y, LC3235XLY, LC3311Y, LC3313Y,
LC3333Y, LC3335XLY, LC3511Y, LC3513Y

Safety data sheet number: BHY151

General advice	If symptoms persist, call a physician.
Inhalation	Remove to fresh air. Get immediate medical advice/attention.
Eye contact	Get immediate medical advice/attention. In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes.
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
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4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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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

Product Name: LC3011Y, LC3013Y, LC3033Y, LC3034Y, LC3035Y, LC3111Y, LC3133Y, LC3135Y, LC3211Y, LC3213Y, LC3233Y, LC3235XLY, LC3311Y, LC3313Y, LC3333Y, LC3335XLY, LC3511Y, LC3513Y

Safety data sheet number: BHY151

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 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
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
Glycerol 56-81-5	-	TWA: 10 mg/m ³	-	TWA: 20 mg/m ³	-

Product Name: LC3011Y, LC3013Y, LC3033Y, LC3034Y, LC3035Y, LC3111Y, LC3133Y, LC3135Y, LC3211Y, LC3213Y, LC3233Y, LC3235XLY, LC3311Y, LC3313Y, LC3333Y, LC3335XLY, LC3511Y, LC3513Y

Safety data sheet number: BHY151

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

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 Apron, Boots

Respiratory protection None under normal use conditions. 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 dark yellow
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 > 93.3 °C
Evaporation rate No data available
Flammability (solid, gas) No data available
Flammability Limit in Air
Upper flammability limit: No data available
Lower flammability limit: No data available
Vapor pressure No data available
Vapor density No data available

Remarks • Method

Tag Closed Cup, Cleveland Open Cup,
None known
None known,
None known
None known
None known

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Revision Number: 7

Product Name: LC3011Y, LC3013Y, LC3033Y, LC3034Y, LC3035Y, LC3111Y,
LC3133Y, LC3135Y, LC3211Y, LC3213Y, LC3233Y, LC3235XLY, LC3311Y, LC3313Y,
LC3333Y, LC3335XLY, LC3511Y, LC3513Y

Safety data sheet number: BHY151

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

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

Section 11: Toxicological information

11.1. Information on toxicological effects

Product Information

Inhalation No information available

Product Name: LC3011Y, LC3013Y, LC3033Y, LC3034Y, LC3035Y, LC3111Y, LC3133Y, LC3135Y, LC3211Y, LC3213Y, LC3233Y, LC3235XLY, LC3311Y, LC3313Y, LC3333Y, LC3335XLY, LC3511Y, LC3513Y

Safety data sheet number: BHY151

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	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

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	-	51 - 57: 96 h Oncorhynchus mykiss mL/L LC50 static	-	500: 24 h Daphnia magna mg/L EC50
Triethylene glycol, monobutyl ether	500: 72 h Desmodesmus subspicatus mg/L EC50	2400: 96 h Pimephales promelas mg/L LC50 static 2400: 96 h Pimephales promelas mg/L LC50 2200 - 4600:	-	500: 48 h Daphnia magna mg/L EC50

Revision Date: 22-Jul-2020

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Revision Number: 7

Product Name: LC3011Y, LC3013Y, LC3033Y, LC3034Y, LC3035Y, LC3111Y,
LC3133Y, LC3135Y, LC3211Y, LC3213Y, LC3233Y, LC3235XLY, LC3311Y, LC3313Y,
LC3333Y, LC3335XLY, LC3511Y, LC3513Y

Safety data sheet number: BHY151

		96 h Leuciscus idus mg/L LC50 static		
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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
Triethylene glycol, monobutyl ether	0.51
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
14.5 Marine pollutant	Not applicable
14.6 Special Provisions	None

Product Name: LC3011Y, LC3013Y, LC3033Y, LC3034Y, LC3035Y, LC3111Y,
LC3133Y, LC3135Y, LC3211Y, LC3213Y, LC3233Y, LC3235XLY, LC3311Y, LC3313Y,
LC3333Y, LC3335XLY, LC3511Y, LC3513Y

Safety data sheet number: BHY151

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

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.

Section 16: Other information

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

Revision Date: 22-Jul-2020

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Revision Number: 7

Product Name: LC3011Y, LC3013Y, LC3033Y, LC3034Y, LC3035Y, LC3111Y,
LC3133Y, LC3135Y, LC3211Y, LC3213Y, LC3233Y, LC3235XLY, LC3311Y, LC3313Y,
LC3333Y, LC3335XLY, LC3511Y, LC3513Y

Safety data sheet number: BHY151

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

Revision Date 22-Jul-2020

Issuing Date 31-Jan-2017

Revision Note

Importer information has been changed.

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

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