

Revision Date: 31-Aug-2018

Issuing Date: 31-Jan-2017

Revision Number: 6

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

1. IDENTIFICATION

Product identifier

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

Other means of identification

Product Code(s) BHY151

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use No information available

Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address Brother Industries, Ltd.
15-1 Naeshiro-cho, Mizuho-ku, Nagoya 467-8561, Japan
Telephone (for information): +81-52-824-2735

Supplier Address Brother International Corporation
200 Crossing Boulevard, Bridgewater, NJ 08807, USA
Telephone (for information): +1-877-276-8437

Emergency telephone number

Emergency Telephone CHEMTREC +1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

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LC3133Y, LC3135Y, LC3211Y, LC3213Y, LC3233Y, LC3235XLY, LC3311Y, LC3313Y,
LC3333Y, LC3335XLY, LC3511Y, LC3513Y

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The product contains no substances which at their given concentration, are considered to be hazardous to health.

Appearance

Physical state: Liquid **Odor:** Slight

Other Information

Unknown acute toxicity

25 % of the mixture consists of ingredient(s) of unknown toxicity

5 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

25 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

25 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

10 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical name	CAS No	Weight-%	Trade secret
Water	7732-18-5	65-75	*
Glycerol	56-81-5	5-15	*
Yellow Dye	**	1-5	*
Triethylene glycol, monobutyl ether	143-22-6	1-5	*
1,2-Benzisothiazolin-3-one	2634-33-5	<0.05	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

** Trade secret

4. FIRST AID MEASURES

Description of first aid measures

Inhalation Remove to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a

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LC3333Y, LC3335XLY, LC3511Y, LC3513Y

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physician.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms No information available

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical No information available

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas

Methods and material for containment and cleaning up

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

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

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

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7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

The information required is contained in this Material Safety Data Sheet

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Glycerol 56-81-5	No data available	TWA: 15 mg/m ³ mist, total particulate TWA: 5 mg/m ³ mist, respirable fraction (vacated) TWA: 10 mg/m ³ mist, total particulate (vacated) TWA: 5 mg/m ³ mist, respirable fraction	-

Appropriate engineering controls

Engineering controls Good general ventilation should be sufficient under normal use.

Individual protection measures, such as personal protective equipment

Eye/face protection No special protective equipment required.

Skin and body protection No special protective equipment required.

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

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

Physical state	Liquid
Color	dark yellow
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	> 94 °C	Tag Closed Cup Cleveland Open Cup
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	1.0 - 1.1	(H 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	No information available.
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied

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Incompatible materials None known based on information supplied

Hazardous decomposition products Carbon oxides. Nitrogen oxides (NOx). Oxides of sulfur.

11. TOXICOLOGICAL INFORMATION

Product Information

Inhalation No information available

Eye contact No information available.

Skin contact No information available.

Ingestion Not classified
Acute LD₅₀ > 2000 mg/kg (OECD 420 method)

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

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

Respiratory or skin sensitization Not classified
It is not a skin sensitizer (OECD 429 method)

Germ cell mutagenicity AMES test : Negative (OECD 471 method)

Carcinogenicity Ingredients of this product have not been classified as carcinogens according to IARC monographs, NTP and OSHA

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Glycerol 56-81-5	-	51 - 57: 96 h Oncorhynchus mykiss mL/L LC50 static	-	500: 24 h Daphnia magna mg/L EC50

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Triethylene glycol, monobutyl ether 143-22-6	500: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	2400: 96 h <i>Pimephales promelas</i> mg/L LC50 static 2400: 96 h <i>Pimephales promelas</i> mg/L LC50 2200 - 4600: 96 h <i>Leuciscus idus</i> mg/L LC50 static	-	500: 48 h <i>Daphnia magna</i> mg/L EC50
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Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
Glycerol 56-81-5	-1.76
Triethylene glycol, monobutyl ether 143-22-6	0.51
1,2-Benzisothiazolin-3-one 2634-33-5	1.3

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

MEX Not regulated

ICAO (air) Not regulated



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<u>IATA</u>	Not regulated
<u>IMDG</u>	Not regulated
<u>RID</u>	Not regulated
<u>ADR</u>	Not regulated
<u>ADN</u>	Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Exempt
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive



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Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Right-to-Know Regulations

US State Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Glycerol 56-81-5	X	X	X
Triethylene glycol, monobutyl ether 143-22-6	X	-	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

<u>NFPA</u>	Health hazards 0	Flammability 1	Instability 0	Section 9: Physical and chemical properties -
<u>HMIS</u>	Health hazards 0	Flammability 1	Physical hazards 0	Personal protection X

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Revision Note Not applicable.

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).

End of Safety Data Sheet

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LC3313M, LC3333M, LC3335XLM, LC3511M, LC3513M

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1. IDENTIFICATION

Product identifier

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

Other means of identification

Product Code(s) BHM151

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use No information available

Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address Brother Industries, Ltd.
15-1 Naeshiro-cho, Mizuho-ku, Nagoya 467-8561, Japan
Telephone (for information): +81-52-824-2735

Supplier Address Brother International Corporation
200 Crossing Boulevard, Bridgewater, NJ 08807, USA
Telephone (for information): +1-877-276-8437

Emergency telephone number

Emergency Telephone CHEMTREC +1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

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

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The product contains no substances which at their given concentration, are considered to be hazardous to health.

Appearance

Physical state: Liquid **Odor:** Slight

Other Information

Unknown acute toxicity

17.4 % of the mixture consists of ingredient(s) of unknown toxicity

2.4 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

17.4 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

17.4 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

2.4 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical name	CAS No	Weight-%	Trade secret
Water	7732-18-5	65-80	*
Glycerol	56-81-5	10-20	*
Magenta Dye	**	<2.5	*
1,2-Benzisothiazolin-3-one	2634-33-5	<0.05	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

** Trade secret

4. FIRST AID MEASURES

Description of first aid measures

Inhalation Remove to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

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Ingestion Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms No information available

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical No information available

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas

Methods and material for containment and cleaning up

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

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

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

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Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

The information required is contained in this Material Safety Data Sheet

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Glycerol 56-81-5	No data available	TWA: 15 mg/m ³ mist, total particulate TWA: 5 mg/m ³ mist, respirable fraction (vacated) TWA: 10 mg/m ³ mist, total particulate (vacated) TWA: 5 mg/m ³ mist, respirable fraction	-

Appropriate engineering controls

Engineering controls Good general ventilation should be sufficient under normal use.

Individual protection measures, such as personal protective equipment

Eye/face protection No special protective equipment required.

Skin and body protection No special protective equipment required.

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

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

Physical state	Liquid
Color	dark red
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	> 94 °C	Tag Closed Cup Cleveland Open Cup
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	1.0 - 1.1	(H 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	No information available.
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied
Incompatible materials	None known based on information supplied

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Hazardous decomposition products Carbon oxides. Nitrogen oxides (NOx). Oxides of sulfur.

11. TOXICOLOGICAL INFORMATION

Product Information

Inhalation	No information available
Eye contact	No information available.
Skin contact	No information available.
Ingestion	Not classified Acute LD ₅₀ > 2000 mg/kg (OECD 420 method)

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

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

Respiratory or skin sensitization Not classified
It is not a skin sensitizer (OECD 429 method)

Germ cell mutagenicity AMES test : Negative (OECD 471 method)

Carcinogenicity Ingredients of this product have not been classified as carcinogens according to IARC monographs, NTP and OSHA

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Glycerol 56-81-5	-	51 - 57: 96 h Oncorhynchus mykiss mL/L LC50 static	-	500: 24 h Daphnia magna mg/L EC50

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Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
Glycerol 56-81-5	-1.76
1,2-Benzisothiazolin-3-one 2634-33-5	1.3

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

MEX Not regulated

ICAO (air) Not regulated

IATA Not regulated

IMDG Not regulated

RID Not regulated

ADR Not regulated

ADN Not regulated



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15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Exempt
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.



SAFETY DATA SHEET

Revision Date: 31-Aug-2018

Issuing Date: 31-Jan-2017

Revision Number: 6

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

Safety data sheet number: BHM151

U.S. State Right-to-Know Regulations

US State Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Glycerol 56-81-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

<u>NFPA</u>	Health hazards 0	Flammability 1	Instability 0	Section 9: Physical and chemical properties -
<u>HMIS</u>	Health hazards 0	Flammability 1	Physical hazards 0	Personal protection X

Issuing Date 31-Jan-2017

Revision Date 31-Aug-2018

Revision Note Not applicable.

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).

End of Safety Data Sheet

Revision Date: 31-Aug-2018

Issuing Date: 31-Jan-2017

Revision Number: 6

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

1. IDENTIFICATION

Product identifier

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

Other means of identification

Product Code(s) BHC151

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use No information available

Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address Brother Industries, Ltd.
15-1 Naeshiro-cho, Mizuho-ku, Nagoya 467-8561, Japan
Telephone (for information): +81-52-824-2735

Supplier Address Brother International Corporation
200 Crossing Boulevard, Bridgewater, NJ 08807, USA
Telephone (for information): +1-877-276-8437

Emergency telephone number

Emergency Telephone CHEMTREC +1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

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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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The product contains no substances which at their given concentration, are considered to be hazardous to health.

Appearance

Physical state: Liquid **Odor:** Slight

Other Information

Unknown acute toxicity

30 % of the mixture consists of ingredient(s) of unknown toxicity

5 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

30 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

30 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

15 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical name	CAS No	Weight-%	Trade secret
Water	7732-18-5	65-75	*
Glycerol	56-81-5	10-20	*
Triethylene glycol, monobutyl ether	143-22-6	1-5	*
Diethylene glycol	111-46-6	1-9	*
Cyan Dye	**	1-8	*
1,2-Benzisothiazolin-3-one	2634-33-5	<0.05	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

** Trade secret

4. FIRST AID MEASURES

Description of first aid measures

Inhalation Remove to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

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Issuing Date: 31-Jan-2017

Revision Number: 6

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

Skin contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms No information available

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical No information available

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas

Methods and material for containment and cleaning up

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

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

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

Revision Date: 31-Aug-2018

Issuing Date: 31-Jan-2017

Revision Number: 6

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

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

The information required is contained in this Material Safety Data Sheet

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Glycerol 56-81-5	No data available	TWA: 15 mg/m ³ mist, total particulate TWA: 5 mg/m ³ mist, respirable fraction (vacated) TWA: 10 mg/m ³ mist, total particulate (vacated) TWA: 5 mg/m ³ mist, respirable fraction	-

Appropriate engineering controls

Engineering controls Good general ventilation should be sufficient under normal use.

Individual protection measures, such as personal protective equipment

Eye/face protection No special protective equipment required.

Skin and body protection No special protective equipment required.

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

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

Physical state	Liquid
Color	dark blue
Odor	Slight
Odor threshold	No information available

Property

<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	> 94 °C	Tag Closed Cup Cleveland Open Cup
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	1.0 - 1.1	(H 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	No information available.
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied

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

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Incompatible materials None known based on information supplied

Hazardous decomposition products Carbon oxides. Nitrogen oxides (NOx). Oxides of sulfur.

11. TOXICOLOGICAL INFORMATION

Product Information

Inhalation No information available

Eye contact No information available.

Skin contact No information available.

Ingestion Not classified
Acute LD₅₀ > 2000 mg/kg (OECD 420 method)

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

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

Respiratory or skin sensitization Not classified
It is not a skin sensitizer (OECD 429 method)

Germ cell mutagenicity AMES test : Negative (OECD 471 method)

Carcinogenicity Ingredients of this product have not been classified as carcinogens according to IARC monographs, NTP and OSHA

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Glycerol 56-81-5	-	51 - 57: 96 h Oncorhynchus mykiss	-	500: 24 h Daphnia magna mg/L EC50

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LC3133C, LC3135C, LC3211C, LC3213C, LC3233C, LC3235XLC, LC3311C,
LC3313C, LC3333C, LC3335XLC, LC3511C, LC3513C

Safety data sheet number: BHC151

Triethylene glycol, monobutyl ether 143-22-6	500: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	mL/L LC50 static 2400: 96 h <i>Pimephales promelas</i> mg/L LC50 static 2400: 96 h <i>Pimephales promelas</i> mg/L LC50 2200 - 4600: 96 h <i>Leuciscus idus</i> mg/L LC50 static	-	500: 48 h <i>Daphnia magna</i> mg/L EC50
Diethylene glycol 111-46-6	-	75200: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through	EC50 = 29228 mg/L 15 min	84000: 48 h <i>Daphnia magna</i> mg/L EC50

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
Glycerol 56-81-5	-1.76
Triethylene glycol, monobutyl ether 143-22-6	0.51
Diethylene glycol 111-46-6	-1.98
1,2-Benzisothiazolin-3-one 2634-33-5	1.3

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

Revision Date: 31-Aug-2018

Issuing Date: 31-Jan-2017

Revision Number: 6

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

<u>MEX</u>	Not regulated
<u>ICAO (air)</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG</u>	Not regulated
<u>RID</u>	Not regulated
<u>ADR</u>	Not regulated
<u>ADN</u>	Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Exempt
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- ENCS** - Japan Existing and New Chemical Substances
- IECSC** - China Inventory of Existing Chemical Substances
- KECL** - Korean Existing and Evaluated Chemical Substances
- PICCS** - Philippines Inventory of Chemicals and Chemical Substances
- AICS** - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40



SAFETY DATA SHEET

Revision Date: 31-Aug-2018

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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

CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Right-to-Know Regulations

US State Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Glycerol 56-81-5	X	X	X
Diethylene glycol 111-46-6	-	-	X
Triethylene glycol, monobutyl ether 143-22-6	X	-	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

<u>NFPA</u>	Health hazards 0	Flammability 1	Instability 0	Section 9: Physical and chemical properties -
<u>HMIS</u>	Health hazards 0	Flammability 1	Physical hazards 0	Personal protection X

Issuing Date 31-Jan-2017

Revision Date 31-Aug-2018

Revision Note Not applicable.

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).

End of Safety Data Sheet