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

1.1. Product identifier

Safety data sheet number BHY336

Product Name LC501Y, LC504Y, LC511Y, LC514Y, LC521Y, LC522Y, LC531Y, LC551Y ink

Other means of identification

Pure substance/mixture Mixture

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

Recommended use 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

Supplier
(Europe)
Brother International (Nederland) B.V.
Zanderij 25, 1185 ZM Amstelveen, The Netherlands

Brother International Europe Ltd.
1 Tame Street, Audenshaw, Manchester M34 5JE, UK
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: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

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

2.2. Label elements

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

Hazard statements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]
EUH208 - Contains 1,2-benzisothiazol-3(2H)-one May produce an allergic reaction.

Unknown acute toxicity

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
29.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
29.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).
19.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

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

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).

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	CAS No.	EC No (EU Index No)	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)	REACH registration number
Water	7732-18-5	231-791-2	65-75	No data available	-	-	-	Not applicable
Polyethylene glycol	25322-68-3	500-038-2	10-20	No data	-	-	-	Not

				available				applicable
Glycerol	56-81-5	200-289-5	5-15	No data available	-	-	-	Not applicable
Triethylene glycol, monobutyl ether	143-22-6	205-592-6 (603-183-00-0)	1-5	Eye Dam. 1 (H318)	Eye Dam. 1 :: C>=30% Eye Irrit. 2 :: 20%<=C<30 %	-	-	01-2119475107-38-XXXX
Triethanolamine	102-71-6	203-049-8	<1	No data available	-	-	-	Not applicable
1,2,3-benzotriazole	95-14-7	202-394-1 (613-350-00-X)	<0.3	Aquatic Chronic 2 (H411)	-	-	-	Not applicable
1,2-benzisothiazol-3(2H)-one	2634-33-5	220-120-9 (613-088-00-6)	<0.05	Acute Tox. 2 (H330) Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1A (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	Skin Sens. 1A :: C>=0.036%	1	1	Not applicable

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

Acute Toxicity Estimate

If LD_{50} /LC_{50} data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapor - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Water 7732-18-5	89838.9	No data available	No data available	No data available	No data available
Polyethylene glycol 25322-68-3	22000	20000	No data available	No data available	No data available
Glycerol 56-81-5	27200	10000	5.85	No data available	No data available
Triethylene glycol, monobutyl ether 143-22-6	5300	3540	No data available	No data available	No data available
Triethanolamine 102-71-6	4190	20000	No data available	No data available	No data available

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapor - mg/L	Inhalation LC50 - 4 hour - gas - ppm
1,2,3-benzotriazole 95-14-7	560	10000	1.4325	No data available	No data available
1,2-benzisothiazol-3(2H)-one 2634-33-5	450	2000	0.21	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice If symptoms persist, call a physician.

Inhalation IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention.

Eye contact In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.

Skin contact: Wash skin with soap and 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.

Self-protection of the first aider No information available.

4.2. Most important symptoms and effects, both acute and delayed

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

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Dry chemical, CO_2, water spray or regular foam

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

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 eyes, skin and 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 eyes, skin and 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) 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.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Polyethylene glycol 25322-68-3	-	TWA: 1000 mg/m^3 STEL 4000 mg/m^3	-	-	-
Glycerol 56-81-5	-	-	TWA: 10 mg/m^3	-	TWA: 10 mg/m^3
Triethanolamine 102-71-6	-	TWA: 0.8 ppm TWA: 5 mg/m^3 STEL 1.6 ppm STEL 10 mg/m^3 S+	TWA: 5 mg/m^3	-	-
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Polyethylene glycol 25322-68-3	-	-	TWA: 1000 mg/m^3 STEL: 2000 mg/m^3 average molecular weight of 200-600	-	-
Glycerol 56-81-5	-	TWA: 10 mg/m^3 Ceiling: 15 mg/m^3	-	TWA: 10 mg/m^3	TWA: 20 mg/m^3
Triethanolamine 102-71-6	-	TWA: 5 mg/m^3 Ceiling: 10 mg/m^3 D*	TWA: 0.5 ppm TWA: 3.1 mg/m^3 STEL: 1 ppm STEL: 6.2 mg/m^3	S+ TWA: 5 mg/m^3 STEL: 10 mg/m^3	TWA: 5 mg/m^3
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
Polyethylene glycol 25322-68-3	-	TWA: 200 mg/m^3	TWA: 250 mg/m^3 Peak: 500 mg/m^3	-	-
Glycerol 56-81-5	TWA: 10 mg/m^3	TWA: 200 mg/m^3	TWA: 200 mg/m^3 Peak: 400 mg/m^3	TWA: 10 mg/m^3	-
Triethanolamine 102-71-6	-	TWA: 1 mg/m^3	TWA: 1 mg/m^3 Peak: 1 mg/m^3	-	-

1,2,3-benzotriazole 95-14-7	-	-	*	-	-
1,2-benzisothiazol-3(2H)-one 2634-33-5	-	-	skin sensitizer	-	-
Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania
Triethanolamine 102-71-6	TWA: 5 mg/m^3 STEL: 15 mg/m^3	-	TWA: 5 mg/m^3	-	J+ TWA: 5 mg/m^3 STEL: 10 mg/m^3
1,2,3-benzotriazole 95-14-7	-	-	-	TWA: 5 mg/m^3	-
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
Glycerol 56-81-5	-	-	-	-	TWA: 10 mg/m^3
Triethanolamine 102-71-6	-	-	-	TWA: 5 mg/m^3 STEL: 10 mg/m^3	-
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
Polyethylene glycol 25322-68-3	-	-	TWA: 1000 mg/m^3	TWA: 1000 mg/m^3 STEL: 8000 mg/m^3	-
Glycerol 56-81-5	TWA: 10 mg/m^3	-	TWA: 10 mg/m^3	TWA: 200 mg/m^3 STEL: 400 mg/m^3	TWA: 10 mg/m^3
Triethanolamine 102-71-6	TWA: 5 mg/m^3	-	-	-	TWA: 5 mg/m^3

Chemical name	Sweden	Switzerland	United Kingdom
Polyethylene glycol 25322-68-3	-	TWA: 500 mg/m^3	-
Glycerol 56-81-5	-	TWA: 50 mg/m^3 STEL: 100 mg/m^3	TWA: 10 mg/m^3 STEL: 30 mg/m^3
Triethanolamine 102-71-6	NGV: 5 mg/m^3 NGV: 0.8 ppm Vägledande KGV: 10 mg/m^3 Vägledande KGV: 1.6 ppm H*	TWA: 5 mg/m^3 STEL: 5 mg/m^3	-

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers No information available

Derived No Effect Level (DNEL) - General Public 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, Rubber boots
Respiratory protection	In case of large spillages: Wear suitable respiratory protective equipment.
Thermal hazards	No information available.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.
Environmental exposure controls	Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

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

Property	**Values**	**Remarks • Method**
Melting point / freezing point	< -5 °C	
Initial boiling point and boiling range	> 100 °C	
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	> 93.3 °C	Tag Closed Cup Cleveland Open Cup
Autoignition temperature	> 400 °C	
Decomposition temperature	No data available	None known
pH	7 - 9	
pH (as aqueous solution)	No information available	None known
Kinematic viscosity		None known
Dynamic viscosity	1 - 5 mPa·s	
Water solubility	Soluble in water	
Solubility(ies)	No information available	None known
Partition coefficient	No data available	None known
Vapor pressure	No data available	None known
Relative density	1.0 - 1.1	(H_2O=1)
Bulk density	No data available	

Liquid Density	No data available	
Relative vapor density	No data available	None known
Particle characteristics		
Particle Size	No data available	
Particle Size Distribution	No data available	

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Explosives

Explosive properties	No information available
Oxidizing properties	No information available

9.2.2. Other safety characteristics
No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity None.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Keep away from heat. Keep away from water or moist air.

10.5. Incompatible materials

Incompatible materials Acids, Bases, Oxidizing agent, Reducing agent

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon monoxide, Carbon dioxide (CO_2), Nitrogen oxides (NOx), Oxides of sulfur

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Information on likely routes of exposure

Product Information

Inhalation No information available

Eye contact No information available

Skin contact No information available.

Ingestion Acute LD_{50} > 2000 mg/kg (OECD 423 method)

Symptoms related to the physical, chemical and toxicological characteristics
Symptoms No information available.

Acute toxicity

Numerical measures of toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg (Rat)	-	-
Polyethylene glycol	= 22 g/kg (Rat)	> 20 g/kg (Rabbit)	-
Glycerol	= 27200 mg/kg (Rat)	> 10 g/kg (Rabbit)	> 5.85 mg/L (Rat) 4 h
Triethylene glycol, monobutyl ether	= 5300 mg/kg (Rat)	= 3540 mg/kg (Rabbit)	-
Triethanolamine	= 4190 mg/kg (Rat)	> 20000 mg/kg (Rabbit)	-
1,2,3-benzotriazole	= 560 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	= 1910 mg/m^3 (Rat) 3 h
1,2-benzisothiazol-3(2H)-one	= 450 mg/kg (Rat)	> 2000 mg/kg (Rat)	0.21 mg/L

Delayed and immediate effects as well as chronic effects from short and long-term exposure
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 442B 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

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity The environmental impact of this product has not been fully investigated.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Glycerol	-	LC50: 51 - 57mL/L (96h, Oncorhynchus mykiss)	-	-
Triethylene glycol, monobutyl ether	EC50: >500mg/L (72h, Desmodesmus subspicatus)	LC50: =2400mg/L (96h, Pimephales promelas)	-	EC50: >500mg/L (48h, Daphnia magna)
Triethanolamine	EC50: =216mg/L (72h, Desmodesmus subspicatus) EC50: =169mg/L (96h, Desmodesmus subspicatus)	LC50: 10600 - 13000mg/L (96h, Pimephales promelas) LC50: >1000mg/L (96h, Pimephales promelas) LC50: 450 - 1000mg/L (96h, Lepomis macrochirus)	-	-

1,2,3-benzotriazole	EC50: =15.4mg/L (96h, freshwater algae)	LC50: =39mg/L (96h, Oncorhynchus mykiss)	-	EC50: =141.6mg/L (48h, water flea)

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation No information available.

Component Information

Chemical name	Partition coefficient
Glycerol	-1.76
Triethylene glycol, monobutyl ether	0.51
Triethanolamine	-2.53
1,2-benzisothiazol-3(2H)-one	0.99

12.4. Mobility in soil

Mobility in soil No information available.

Mobility No information available.

12.5. Results of PBT and vPvB assessment

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).

Chemical name	PBT and vPvB assessment
Polyethylene glycol	The substance is not PBT / vPvB
Glycerol	The substance is not PBT / vPvB
Triethylene glycol, monobutyl ether	The substance is not PBT / vPvB
Triethanolamine	The substance is not PBT / vPvB
1,2,3-benzotriazole	The substance is not PBT / vPvB
1,2-benzisothiazol-3(2H)-one	The substance is not PBT / vPvB

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with federal, state and local regulations.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

IMDG

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
14.7 Maritime transport in bulk according to IMO instruments	Not applicable

RID

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

ADR

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National Regulations

France
Occupational Illnesses (R-463-3, France)

Chemical name	French RG number

Triethylene glycol, monobutyl ether - 143-22-6	RG 84
Triethanolamine - 102-71-6	RG 49
1,2-benzisothiazol-3(2H)-one - 2634-33-5	RG 65

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorizations and/or restrictions on use:

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorization per REACH Annex XIV
Triethylene glycol, monobutyl ether - 143-22-6	Use restricted. See entry 75.	-
1,2-benzisothiazol-3(2H)-one - 2634-33-5	Use restricted. See entry 75.	-

Persistent Organic Pollutants

Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

Chemical name	Biocidal Products Regulation (EU) No 528/2012 (BPR)
1,2-benzisothiazol-3(2H)-one - 2634-33-5	Product-type 2: Disinfectants and algaecides not intended for direct application to humans or animals Product-type 6: Preservatives for products during storage Product-type 9: Fiber, leather, rubber and polymerized materials preservatives Product-type 11: Preservatives for liquid-cooling and processing systems Product-type 12: Slimicides Product-type 13: Working or cutting fluid preservatives

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

NZIoC Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
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
NZIoC - New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report 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
H330 - Fatal if inhaled
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Legend
SVHC: Substances of Very High Concern for Authorization:
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
vPvB: Very Persistent and very Bioaccumulative (vPvB) Chemicals

Legend SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Ceiling Limit Value	*	Skin designation
+	Sensitizers		

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	On basis of test data
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapor	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	On basis of test data

Serious eye damage/eye irritation	On basis of test data
Respiratory sensitization	Calculation method
Skin sensitization	On basis of test data
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Chronic aquatic toxicity	Calculation method
Acute aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

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Revision date -

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)
Disclaimer
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End of Safety Data Sheet