

Revision date: 03-Feb-2026

Issuing Date: 09-Apr-2025

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Product Name: LC501BK, LC501XLBK, LC504BK, LC504XLBK, LC511BK, LC514BK,  
LC521BK, LC521XLBK, LC522BK, LC531BK, LC531XLBK, LC534BK, LC534XLBK,  
LC551BK, LC551XLBK ink

Safety data sheet number: BHK336

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

**1.1. Product identifier**

**Safety data sheet number** BHK336

**Product Name** LC501BK, LC501XLBK, LC504BK, LC504XLBK, LC511BK, LC514BK, LC521BK,  
LC521XLBK, LC522BK, LC531BK, LC531XLBK, LC534BK, LC534XLBK, LC551BK,  
LC551XLBK 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 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

**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

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## 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.

31.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).

31.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).

3.9 % 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	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)	REACH registration number

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				[CLP]				
Water	7732-18-5	231-791-2	65-75	No data available	-	-	-	Not applicable
Glycerol	56-81-5	200-289-5	5-15	No data available	-	-	-	Not applicable
Diethylene glycol	111-46-6	203-872-2 (603-140-00-6)	5-9	Acute Tox. 4 (H302)	-	-	-	Not applicable
Carbon Black	1333-86-4	215-609-9	5-9	No data available	-	-	-	Not applicable
[2-(2-methoxymethyl)ethoxy)methylethoxy]propanol	25498-49-1	247-045-4	1-5	Eye Irrit. 2 (H319)	-	-	-	Not applicable
2,2'-(ethylenedioxy)diethanol	112-27-6	203-953-2	1-5	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<sub>50</sub>/LC<sub>50</sub> 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
Glycerol 56-81-5	27200	10000	5.85	No data available	No data available
Diethylene glycol	12565	11890	4.6	No data available	No data available

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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
111-46-6					
Carbon Black 1333-86-4	10000	2000	0.0046	No data available	No data available
[2-(2-methoxymethylethoxy)methylethoxy]propanol 25498-49-1	3200	15440	No data available	No data available	No data available
2,2'-(ethylenedioxy)diethanol 112-27-6	17000	22600	5.2	No data available	No data available
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  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

<b>General advice</b>	If symptoms persist, call a physician.
<b>Inhalation</b>	Remove to fresh air. Get immediate medical advice/attention.
<b>Eye contact</b>	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.
<b>Skin contact:</b>	Wash with soap and water. If skin irritation persists, call a physician.
<b>Ingestion</b>	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

<b>Symptoms</b>	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

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**Note to physicians** Treat symptomatically.

## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

**Suitable Extinguishing Media** Dry chemical, CO<sub>2</sub>, 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<sub>2</sub>) Nitrogen oxides (NO<sub>x</sub>) 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** Do not flush into surface water or sanitary sewer system

### **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.

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## 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 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.

**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
Glycerol 56-81-5	-	-	TWA: 10 mg/m <sup>3</sup>	-	TWA: 10 mg/m <sup>3</sup>
Diethylene glycol 111-46-6	-	TWA: 10 ppm TWA: 44 mg/m <sup>3</sup> STEL 40 ppm STEL 176 mg/m <sup>3</sup>	-	TWA: 10 mg/m <sup>3</sup>	TWA: 23 ppm TWA: 101 mg/m <sup>3</sup>
Carbon Black 1333-86-4	-	-	TWA: 3 mg/m <sup>3</sup>	-	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>
2,2'-(ethylenedioxy)diethanol 112-27-6	-	-	-	TWA: 15.0 mg/m <sup>3</sup>	-
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Glycerol 56-81-5	-	TWA: 10 mg/m <sup>3</sup> Ceiling: 15 mg/m <sup>3</sup>	-	TWA: 10 mg/m <sup>3</sup>	TWA: 20 mg/m <sup>3</sup>
Diethylene glycol 111-46-6	-	-	TWA: 2.5 ppm TWA: 11 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 45 mg/m <sup>3</sup>	-

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			STEL: 5 ppm STEL: 22 mg/m <sup>3</sup>	STEL: 20 ppm STEL: 90 mg/m <sup>3</sup> A*	
Carbon Black 1333-86-4	-	TWA: 2.0 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>	TWA: 3 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>
<b>Chemical name</b>	<b>France</b>	<b>Germany TRGS</b>	<b>Germany DFG</b>	<b>Greece</b>	<b>Hungary</b>
Glycerol 56-81-5	TWA: 10 mg/m <sup>3</sup>	TWA: 200 mg/m <sup>3</sup>	TWA: 200 mg/m <sup>3</sup> Peak: 400 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	-
Diethylene glycol 111-46-6	-	TWA: 10 ppm TWA: 44 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 44 mg/m <sup>3</sup> Peak: 40 ppm Peak: 176 mg/m <sup>3</sup>	-	-
Carbon Black 1333-86-4	TWA: 3.5 mg/m <sup>3</sup>	-	-	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>	TWA: 3 mg/m <sup>3</sup>
2,2'-(ethylenedioxy)diethanol 112-27-6	-	TWA: 1000 mg/m <sup>3</sup>	TWA: 1000 mg/m <sup>3</sup> Peak: 2000 mg/m <sup>3</sup>	-	-
1,2,3-benzotriazole 95-14-7	-	-	*	-	-
1,2-benzisothiazol-3(2H)-one 2634-33-5	-	-	skin sensitizer	-	-
<b>Chemical name</b>	<b>Ireland</b>	<b>Italy MDLPS</b>	<b>Italy AIDII</b>	<b>Latvia</b>	<b>Lithuania</b>
Diethylene glycol 111-46-6	TWA: 23 ppm TWA: 100 mg/m <sup>3</sup> STEL: 69 ppm STEL: 300 mg/m <sup>3</sup>	-	-	TWA: 10 mg/m <sup>3</sup>	O* TWA: 10 ppm TWA: 45 mg/m <sup>3</sup> STEL: 20 ppm STEL: 90 mg/m <sup>3</sup>
Carbon Black 1333-86-4	TWA: 3 mg/m <sup>3</sup> STEL: 15 mg/m <sup>3</sup>	-	TWA: 3 mg/m <sup>3</sup>	-	-
1,2,3-benzotriazole 95-14-7	-	-	-	TWA: 5 mg/m <sup>3</sup>	-
<b>Chemical name</b>	<b>Luxembourg</b>	<b>Malta</b>	<b>Netherlands</b>	<b>Norway</b>	<b>Poland</b>
Glycerol 56-81-5	-	-	-	-	TWA: 10 mg/m <sup>3</sup>
Diethylene glycol 111-46-6	-	-	-	-	TWA: 10 mg/m <sup>3</sup>
Carbon Black 1333-86-4	-	-	-	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>	TWA: 4 mg/m <sup>3</sup>
<b>Chemical name</b>	<b>Portugal</b>	<b>Romania</b>	<b>Slovakia</b>	<b>Slovenia</b>	<b>Spain</b>
Glycerol 56-81-5	TWA: 10 mg/m <sup>3</sup>	-	TWA: 10 mg/m <sup>3</sup>	TWA: 200 mg/m <sup>3</sup> STEL: 400 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>
Diethylene glycol 111-46-6	-	TWA: 115 ppm TWA: 500 mg/m <sup>3</sup> STEL: 184 ppm STEL: 800 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 44 mg/m <sup>3</sup> Ceiling: 90 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 44 mg/m <sup>3</sup> STEL: 40 ppm STEL: 176 mg/m <sup>3</sup>	-
Carbon Black 1333-86-4	TWA: 3 mg/m <sup>3</sup>	-	TWA: 2 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup> Ceiling: 10 mg/m <sup>3</sup>	-	TWA: 3.5 mg/m <sup>3</sup>
2,2'-(ethylenedioxy)diethanol	-	TWA: 114 ppm	-	TWA: 1000 mg/m <sup>3</sup>	-

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nol 112-27-6		TWA: 700 mg/m <sup>3</sup> STEL: 163 ppm STEL: 1000 mg/m <sup>3</sup>		STEL: 2000 mg/m <sup>3</sup>	
Chemical name	Sweden	Switzerland	United Kingdom		
Glycerol 56-81-5	-	TWA: 50 mg/m <sup>3</sup> STEL: 100 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> STEL: 30 mg/m <sup>3</sup>		
Diethylene glycol 111-46-6	NGV: 10 ppm NGV: 45 mg/m <sup>3</sup> Vägledande KGV: 20 ppm Vägledande KGV: 90 mg/m <sup>3</sup> H*	TWA: 10 ppm TWA: 44 mg/m <sup>3</sup> STEL: 40 ppm STEL: 176 mg/m <sup>3</sup>	TWA: 23 ppm TWA: 101 mg/m <sup>3</sup> STEL: 69 ppm STEL: 303 mg/m <sup>3</sup>		
Carbon Black 1333-86-4	NGV: 3 mg/m <sup>3</sup>	-	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>		
2,2'-(ethylenedioxy)diethanol 112-27-6	-	TWA: 1000 mg/m <sup>3</sup> STEL: 2000 mg/m <sup>3</sup>	-		

**Biological occupational exposure limits**

Chemical name	European Union	Austria	Bulgaria	Croatia	Czech Republic
Carbon Black 1333-86-4	-	( - )	-	-	-

**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.

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**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	black
Odor	Slight
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
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	
Kinematic viscosity	No data available	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 <sub>2</sub> O=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

<b>Explosives</b>	
Explosive properties	No information available
<b>Oxidizing properties</b>	No information available

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**9.2.2. Other safety characteristics**

No information available

**Sensitivity to mechanical impact** 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** No information available

**Sensitivity to static discharge** No information available

**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<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>), 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.

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**Skin contact** No information available.

**Ingestion** Acute LD<sub>50</sub> > 2000 mg/kg (OECD 420 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 )	-	-
Glycerol	= 27200 mg/kg ( Rat )	> 10 g/kg ( Rabbit )	> 5.85 mg/L ( Rat ) 4 h
Diethylene glycol	= 12565 mg/kg ( Rat )	= 11890 mg/kg ( Rabbit )	> 4600 mg/m <sup>3</sup> ( Rat ) 4 h
Carbon Black	> 10000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 4.6 mg/m <sup>3</sup> ( Rat ) 4 h
[2-(2-methoxymethylethoxy)methylethoxy]propanol	= 3200 mg/kg ( Rat )	= 15440 mg/kg ( Rabbit )	-
2,2'-(ethylenedioxy)diethanol	= 17 g/kg ( Rat )	> 20 mL/kg ( Rabbit )	> 5.2 mg/L ( Rat ) 4 h
1,2,3-benzotriazole	= 560 mg/kg ( Rat )	> 10000 mg/kg ( Rabbit )	= 1910 mg/m <sup>3</sup> ( 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 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

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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

**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)	-	-
Diethylene glycol	-	LC50: =75200mg/L (96h, Pimephales promelas)	EC50 = 29228 mg/L 15 min	EC50: =84000mg/L (48h, Daphnia magna)
Carbon Black	-	-	-	-
[2-(2-methoxymethylethoxy)methylethoxy]propanol	-	LC50: =11619mg/L (96h, Pimephales promelas)	-	EC50: >10,000mg/L (48h, Daphnia magna)
2,2'-(ethylenedioxy)diethanol	-	LC50: 56200 - 63700mg/L (96h, Pimephales promelas) LC50: =10000mg/L (96h, Lepomis macrochirus)	-	EC50: =42426mg/L (48h, Daphnia magna)

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		LC50: =61000mg/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
Diethylene glycol	-1.98
2,2'-(ethylenedioxy)diethanol	-1.98
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
Glycerol	The substance is not PBT / vPvB.
Diethylene glycol	The substance is not PBT / vPvB.
Carbon Black	The substance is not PBT / vPvB.
[2-(2-methoxymethylethoxy)methylethoxy]propanol	The substance is not PBT / vPvB.
2,2'-(ethylenedioxy)diethanol	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** Dispose of in accordance with federal, state and local regulations.

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products

**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

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**National Regulations**

**France**

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

Chemical name	French RG number
Diethylene glycol - 111-46-6	RG 84
Carbon Black - 1333-86-4	RG 16, RG 16bis
[2-(2-methoxymethylethoxy)methylethoxy]propanol - 25498-49-1	RG 84
2,2'-(ethylenedioxy)diethanol - 112-27-6	RG 84
1,2-benzisothiazol-3(2H)-one - 2634-33-5	RG 65, RG 66

**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
Diethylene glycol - 111-46-6	Use restricted. See entry 75.	-
Carbon Black - 1333-86-4	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

**EU - Plant Protection Products (1107/2009/EC)**

Chemical name	EU - Plant Protection Products (1107/2009/EC)
Carbon Black - 1333-86-4	Plant protection agent

Chemical name	Biocidal Products Regulation (EU) No 528/2012 (BPR)
1,2-benzisothiazol-3(2H)-one - 2634-33-5	Product-type 2: Disinfectants and algicides 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: Slimecides Product-type 13: Working or cutting fluid preservatives

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**International Inventories**

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Complies
<b>AICS</b>	Complies
<b>NZIoC</b>	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
- H319 - Causes serious eye irritation
- 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

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**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	Expert judgment and weight of evidence determination
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

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World Health Organization

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**Disclaimer**

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**End of Safety Data Sheet**