

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Opticool 572(E)

Revision date: 30.01.2020

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

1.1. Product identifier

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

Use of the substance/mixture

Metal working fluids

Uses advised against

No information available.

1.3. Details of the supplier of the safety data sheet

Company name:	Chesterton International GmbH	
Street:	Am Lenzenfleck 23	
Place:	DE-85737 Ismaning GERMANY	
Telephone:	+49 89 99 65 46 - 0	Telefax: +49 89 99 65 46 - 50
e-mail:	eu-sds@chesterton.com	
e-mail (Contact person):	eu-sds@chesterton.com	
Internet:	www.chesterton.com	
Responsible Department:	eu-sds@chesterton.com	

1.4. Emergency telephone number:

+49(0) 551 - 1 92 40 (GIZ-Nord, 24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:

Respiratory or skin sensitisation: Skin Sens. 1A

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

May cause an allergic skin reaction.

Harmful to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

3-iodo-2-propynyl butylcarbamate; 3-iodoprop-2-yn-1-yl butylcarbamate

1,2-benzisothiazol-3(2H)-one, 1,2-benzisothiazolin-3-one

2-methylisothiazol-3(2H)-one

Signal word: Warning

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Pictograms:



Hazard statements

- H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
10043-35-3	Boric acid			< 5,5 %
	233-139-2	005-007-00-2	01-2119486683-25	
	Repr. 1B; H360FD			
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether			1 - < 5 %
	203-961-6	603-096-00-8	01-2119475104-44	
	Eye Irrit. 2; H319			
68920-66-1	Alcohols, C16-18 and C18-unsatd., ethoxylated			1 - < 2,5 %
	500-236-9		01-2119489407-26	
	Skin Irrit. 2, Aquatic Chronic 2; H315 H411			
55406-53-6	3-iodo-2-propynyl butylcarbamate; 3-iodoprop-2-yn-1-yl butylcarbamate			0,1 - < 0,25 %
	259-627-5	616-212-00-7		
	Acute Tox. 3, Acute Tox. 4, Eye Dam. 1, Skin Sens. 1, STOT RE 1, Aquatic Acute 1 (M-Factor = 10), Aquatic Chronic 1; H331 H302 H318 H317 H372 H400 H410			
2634-33-5	1,2-benzisothiazol-3(2H)-one, 1,2-benzisothiazolin-3-one			< 0.1 %
	220-120-9	613-088-00-6	01-2120761540-60	
	Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1, Aquatic Acute 1 (M-Factor = 1); H302 H315 H318 H317 H400			
2682-20-4	2-methylisothiazol-3(2H)-one			< 0.1 %
	220-239-6	613-326-00-9		
	Acute Tox. 2, Acute Tox. 3, Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1A, Aquatic Acute 1 (M-Factor = 10), Aquatic Chronic 1; H330 H311 H301 H314 H318 H317 H400 H410 EUH071			

Full text of H and EUH statements: see section 16.

Further Information

No information available.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove victim out of the danger area. If unconscious place in recovery position and seek medical advice. When in doubt or if symptoms are observed, get medical advice.

After inhalation

Remove casualty to fresh air and keep warm and at rest. Where appropriate artificial ventilation. In case of respiratory tract irritation, consult a physician.

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After contact with skin

Remove contaminated, saturated clothing immediately. After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, consult a physician.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. In case of eye irritation consult an ophthalmologist.

After ingestion

Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person or a person with cramps. Where appropriate artificial ventilation. Do NOT induce vomiting.

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

No information available.

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

First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Dry extinguishing powder. Carbon dioxide (CO₂). alcohol resistant foam. Water spray jet

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

Nitrogen oxides (NO_x), Carbon dioxide (CO₂), Carbon monoxide, Phosphorus oxides

5.3. Advice for firefighters

Special protective equipment for firefighters: Chemical protection clothing

In case of fire: Wear self-contained breathing apparatus.

Additional information

In case of fire and/or explosion do not breathe fumes. Move undamaged containers from immediate hazard area if it can be done safely. Use water spray jet to protect personnel and to cool endangered containers.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protection equipment. Remove persons to safety. Avoid contact with skin, eyes and clothes.

Provide adequate ventilation. Wear breathing apparatus if exposed to vapours/dusts/aerosols. Ventilate affected area. Remove all sources of ignition.

6.2. Environmental precautions

Cover drains. Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Make sure spills can be contained, e.g. in sump pallets or kerbed areas.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

For containment:

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Cover drains. Stop and contain spill/release if it can be done safely. If this cannot be done, allow fire to burn under control. Prevent spread over a wide area (e.g. by containment or oil barriers).

For cleaning up:

Wipe up with absorbent material (eg. cloth, fleece). Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Take up mechanically, placing in appropriate containers for disposal. Ventilate affected area. Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

See protective measures under point 7 and 8.

SECTION 12: Ecological information

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Wear personal protection equipment (refer to section 8). Use only in well-ventilated areas. Handle and open container with care. Always close containers tightly after the removal of product. Avoid contact with skin, eyes and clothes. Do not breathe gas/fumes/vapour/spray. Special danger of slipping by leaking/spilling product. Keep away from sources of ignition - No smoking.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Further information on handling

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Do not put any product-impregnated cleaning rags into your trouser pockets.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place. Only use containers specifically approved for the substance/product. Protect containers against damage.

Hints on joint storage

Do not store together with: Food and feedingstuffs

Keep away from: Oxidising agent

Further information on storage conditions

Recommended storage temperature: 5 - 40°C

Protect against: Heat, UV-radiation/sunlight, Frost

storage stability: ~ 12 Mon

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
112-34-5	2-(2-Butoxyethoxy)ethanol	10	67.5		TWA (8 h)	WEL
		15	101.2		STEL (15 min)	WEL

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DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
10043-35-3	Boric acid			
Worker DNEL, long-term		inhalation	systemic	8,3 mg/m ³
Worker DNEL, long-term		dermal	systemic	392 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	4,15 mg/m ³
Consumer DNEL, long-term		dermal	systemic	196 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,98 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	0,98 mg/kg bw/day
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether			
Worker DNEL, long-term		inhalation	systemic	67,5 mg/m ³
Worker DNEL, long-term		inhalation	local	67,5 mg/m ³
Worker DNEL, acute		inhalation	local	101,2 mg/m ³
Worker DNEL, long-term		dermal	systemic	83 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	40,5 mg/m ³
Consumer DNEL, long-term		inhalation	local	40,5 mg/m ³
Consumer DNEL, acute		inhalation	local	60,7 mg/m ³
Consumer DNEL, long-term		dermal	systemic	50 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	5 mg/kg bw/day
68920-66-1	Alcohols, C16-18 and C18-unsatd., ethoxylated			
Worker DNEL, long-term		inhalation	systemic	294 mg/m ³
Worker DNEL, long-term		dermal	systemic	2080 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	87 mg/m ³
Consumer DNEL, long-term		dermal	systemic	1250 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	25 mg/kg bw/day
55406-53-6	3-iodo-2-propynyl butylcarbamate; 3-iodoprop-2-yn-1-yl butylcarbamate			
Worker DNEL, long-term		inhalation	systemic	0,023 mg/m ³
Worker DNEL, acute		inhalation	systemic	0,07 mg/m ³
Worker DNEL, long-term		inhalation	local	1,16 mg/m ³
Worker DNEL, acute		inhalation	local	1,16 mg/m ³
Worker DNEL, long-term		dermal	systemic	2 mg/kg bw/day
2634-33-5	1,2-benzisothiazol-3(2H)-one, 1,2-benzisothiazolin-3-one			

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Worker DNEL, long-term	inhalation	systemic	6,81 mg/m ³
Worker DNEL, long-term	dermal	systemic	0,966 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	1,2 mg/m ³
Consumer DNEL, long-term	dermal	systemic	0,345 mg/kg bw/day
2682-20-4	2-methylisothiazol-3(2H)-one		
Worker DNEL, long-term	inhalation	local	0,021 mg/m ³
Worker DNEL, acute	inhalation	local	0,043 mg/m ³
Consumer DNEL, long-term	inhalation	local	0,021 mg/m ³
Consumer DNEL, acute	inhalation	local	0,043 mg/m ³
Consumer DNEL, long-term	oral	systemic	0,027 mg/kg bw/day
Consumer DNEL, acute	oral	systemic	0,053 mg/kg bw/day

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PNEC values

CAS No	Substance	Value
10043-35-3	Boric acid	
	Freshwater	2,9 mg/l
	Freshwater (intermittent releases)	13,7 mg/l
	Marine water	2,9 mg/l
	Micro-organisms in sewage treatment plants (STP)	10 mg/l
	Soil	5,7 mg/kg
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether	
	Freshwater	1,1 mg/l
	Freshwater (intermittent releases)	11 mg/l
	Marine water	0,11 mg/l
	Freshwater sediment	4,4 mg/kg
	Marine sediment	0,44 mg/kg
	Secondary poisoning	56 mg/kg
	Micro-organisms in sewage treatment plants (STP)	200 mg/l
	Soil	0,32 mg/kg
68920-66-1	Alcohols, C16-18 and C18-unsatd., ethoxylated	
	Freshwater	0,007 mg/l
	Freshwater (intermittent releases)	0,1 mg/l
	Marine water	0,001 mg/l
	Freshwater sediment	22,79 mg/kg
	Marine sediment	2,28 mg/kg
	Micro-organisms in sewage treatment plants (STP)	10000 mg/l
	Soil	1 mg/kg
55406-53-6	3-iodo-2-propynyl butylcarbamate; 3-iodoprop-2-yn-1-yl butylcarbamate	
	Freshwater	0,001 mg/l
	Freshwater (intermittent releases)	0,001 mg/l
	Marine water	0 mg/l
	Freshwater sediment	0,017 mg/kg
	Marine sediment	0,002 mg/kg
	Micro-organisms in sewage treatment plants (STP)	0,44 mg/l
	Soil	0,005 mg/kg
2634-33-5	1,2-benzisothiazol-3(2H)-one, 1,2-benzisothiazolin-3-one	
	Freshwater	0,00403 mg/l

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Freshwater (intermittent releases)	0,0011 mg/l
Marine water	0,000403 mg/l
Freshwater sediment	0,0499 mg/kg
Marine sediment	0,00499 mg/kg
Micro-organisms in sewage treatment plants (STP)	1,03 mg/l
Soil	3 mg/kg
2682-20-4	2-methylisothiazol-3(2H)-one
Freshwater	0,00339 mg/l
Freshwater (intermittent releases)	0,00339 mg/l
Marine water	0,00339 mg/l
Micro-organisms in sewage treatment plants (STP)	0,23 mg/l
Soil	0,047 mg/kg

8.2. Exposure controls

Appropriate engineering controls

If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means. Technical measures and the application of suitable work processes have priority over personal protection equipment.

Protective and hygiene measures

When using do not eat, drink, smoke, sniff.

Wash hands before breaks and after work. Do not put any product-impregnated cleaning rags into your trouser pockets. Wash contaminated clothing prior to re-use. Apply skin care products after work.

Eye/face protection

Suitable eye protection:

Eye glasses with side protection
goggles

Hand protection

Tested protective gloves must be worn: EN ISO 374

NBR (Nitrile rubber), Butyl caoutchouc (butyl rubber)

Thickness of the glove material $\geq 0,7$ mm

Breakthrough times and swelling properties of the material must be taken into consideration.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Wearing time with occasional contact (splashes): max. 480 min. (NBR (Nitrile rubber))

Wearing time with permanent contact 240 - 480 min (NBR (Nitrile rubber))

Observe the wear time limits as specified by the manufacturer.

Skin protection

Wear suitable protective clothing.

Respiratory protection

No special measures are necessary. If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Respiratory protection necessary at: insufficient ventilation, aerosol or mist formation

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Environmental exposure controls

No special measures are necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	yellow
Odour:	characteristic
pH-Value (at 20 °C):	9,2

Changes in the physical state

Melting point:	No data available
Initial boiling point and boiling range:	>100 °C
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
Flash point:	>100 °C

Flammability

Solid:	No data available
Gas:	No data available

Explosive properties

not explosive according to EU A.14

Lower explosion limits:	0,6 vol. %
Upper explosion limits:	6,5 vol. %
Ignition temperature:	No data available

Auto-ignition temperature

Solid:	No data available
Gas:	No data available

Decomposition temperature:	No data available
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Oxidizing properties

No information available.

Vapour pressure:	No data available
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Density (at 20 °C):	1,037 g/cm ³
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Water solubility: (at 20 °C)	miscible
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Solubility in other solvents

No information available.

Partition coefficient:	No data available
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Viscosity / dynamic:	No data available
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Viscosity / kinematic:
(at 20 °C)

180 mm²/s

9.2. Other information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is stable under storage at normal ambient temperatures.

10.2. Chemical stability

The substance is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

No information available.

10.5. Incompatible materials

Oxidising agent, strong

10.6. Hazardous decomposition products

Does not decompose when used for intended uses.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Based on available data, the classification criteria are not met.

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
10043-35-3	Boric acid				
	oral	LD50 mg/kg 3450	Rat	Toxicology and Applied Pharmacology 23:	other: No data
	dermal	LD50 mg/kg > 2000	Rabbit	Study report (1982)	other: FIFRA
	inhalation (4 h) aerosol	LC50 mg/l > 2,12	Rat	Study report (1997)	OECD Guideline 403
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether				
	oral	LD50 mg/kg 2410	Mouse	Study report (1981)	OECD Guideline 401
	dermal	LD50 mg/kg 2764	Rabbit	Study report (1981)	OECD Guideline 402
68920-66-1	Alcohols, C16-18 and C18-unsatd., ethoxylated				
	oral	LD50 mg/kg > 2000	Rat	Study report (1982)	OECD Guideline 401
	dermal	LD50 mg/kg > 2000	Rabbit	Study report (1982)	OECD Guideline 402
55406-53-6	3-iodo-2-propynyl butylcarbamate; 3-iodoprop-2-yn-1-yl butylcarbamate				
	oral	LD50 mg/kg 1795	Rat	Study report (1984)	OECD Guideline 401
	dermal	LD50 mg/kg > 2000	Rabbit	Study report (1991)	EPA OPP 81-2
	inhalation vapour	ATE 3 mg/l			
	inhalation (4 h) aerosol	LC50 mg/l > 6,89	Rat	Study report (1985)	OECD Guideline 403
2634-33-5	1,2-benzisothiazol-3(2H)-one, 1,2-benzisothiazolin-3-one				
	oral	LD50 mg/kg 670	Rat	Study report (1988)	OECD Guideline 401
	dermal	LD50 mg/kg > 2000	Rat	Study report (1994)	OECD Guideline 402
2682-20-4	2-methylisothiazol-3(2H)-one				
	oral	LD50 mg/kg 120	Rat	Study report (2002)	EPA OPPTS 870.1100
	dermal	LD50 mg/kg 242	Rat	Study report (1999)	OECD Guideline 402
	inhalation vapour	ATE 0,5 mg/l			
	inhalation aerosol	ATE 0,05 mg/l			

Irritation and corrosivity

Based on available data, the classification criteria are not met.

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Sensitising effects

May cause an allergic skin reaction. (3-iodo-2-propynyl butylcarbamate; 3-iodoprop-2-yn-1-yl butylcarbamate; 1,2-benzisothiazol-3(2H)-one, 1,2-benzisothiazolin-3-one; 2-methylisothiazol-3(2H)-one)

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
10043-35-3	Boric acid					
	Acute fish toxicity	LC50 79,7 mg/l	96 h	Pimephales promelas	Study report (2010)	other: ASTM E729-95 Standard Guide for C
	Acute algae toxicity	ErC50 66 mg/l	72 h	Phaeodactylum tricornutum	Study report (2011)	ISO 10253
	Acute crustacea toxicity	EC50 104 mg/l	48 h	Ceriodaphnia dubia	Study report (2010)	other: ASTM E729-95 Standard Guide for C
	Fish toxicity	NOEC 11,2 mg/l	32 d	Pimephales promelas	Study report (2010)	other: ASTM E1241-05 Standard Guide for
	Algae toxicity	NOEC 17,5 mg/l	3 d	Pseudokirchneriella subcapitata	Study report (2000)	OECD Guideline 201
	Crustacea toxicity	NOEC 25,9 mg/l	42 d	other aquatic crustacea: Hyalella azteca	Study report (2010)	other: US EPA 2000 Methods for assessing
	Acute bacteria toxicity	(> 10000 mg/l)	3 h	activated sludge of a predominantly domestic sewage	Study report (2001)	OECD Guideline 209
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether					
	Acute fish toxicity	LC50 1300 mg/l	96 h	Lepomis macrochirus	J Haz Mat, 1, p303-18 (1977)	OECD Guideline 203
	Acute algae toxicity	ErC50 > 100 mg/l	96 h	Desmodesmus subspicatus	Study report (1992)	OECD Guideline 201
	Acute crustacea toxicity	EC50 > 100 mg/l	48 h	Daphnia magna	Study report (1992)	EU Method C.2
68920-66-1	Alcohols, C16-18 and C18-unsatd., ethoxylated					
	Acute fish toxicity	LC50 108 mg/l	96 h	Danio rerio	Study report (2008)	OECD Guideline 203
	Acute algae toxicity	ErC50 > 100 mg/l	72 h	Desmodesmus subspicatus	Study report (1997)	other: EU-Guideline 92/69/EWG
	Acute crustacea toxicity	EC50 51 mg/l	48 h	Daphnia magna	Study report (2000)	OECD Guideline 202
	Fish toxicity	NOEC 0,16 mg/l	10 d	Pimephales promelas	Study report (1995)	The effect of the test substance on surv
	Crustacea toxicity	NOEC 0,77 mg/l	21 d	Daphnia magna	Publication (1999)	other: USEPA-TSCA
55406-53-6	3-iodo-2-propynyl butylcarbamate; 3-iodoprop-2-yn-1-yl butylcarbamate					

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	Acute algae toxicity	ErC50 mg/l	0,022	72 h	Desmodosmus subspicatus	REACH Registration Dossier	OECD Guideline 201
	Fish toxicity	NOEC mg/l	0,0084	35 d	Pimephales promelas	REACH Registration Dossier	EPA OPP 72-4
	Crustacea toxicity	NOEC mg/l	0,0499	21 d	Daphnia magna	REACH Registration Dossier	EPA OPP 72-4
	Acute bacteria toxicity	(44 mg/l)		3 h	activated sludge, domestic	REACH Registration Dossier	EU Method C.11
2634-33-5	1,2-benzisothiazol-3(2H)-one, 1,2-benzisothiazolin-3-one						
	Acute fish toxicity	LC50 mg/l	ca. 16,7	96 h	Cyprinodon variegatus	REACH Registration Dossier	other:
	Acute algae toxicity	ErC50 mg/l	0,15	72 h	Pseudokirchneriella subcapitata	Study report (1994)	OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	2,94	48 h	Daphnia magna	Study report (1995)	OECD Guideline 202
	Algae toxicity	NOEC mg/l	0,0403	72 d			
	Acute bacteria toxicity	(13 mg/l)		3 h	activated sludge of a predominantly domestic sewage	REACH Registration Dossier	OECD Guideline 209
2682-20-4	2-methylisothiazol-3(2H)-one						
	Acute fish toxicity	LC50 mg/l	4,77	96 h	Oncorhynchus mykiss	REACH Registration Dossier	EPA OPP 72-1
	Acute algae toxicity	ErC50 mg/l	0,069	96 h	Skeletonema costatum	Study report (2004)	EPA OPPTS 850.5400
	Acute crustacea toxicity	EC50 mg/l	0,934	48 h	Daphnia magna	REACH Registration Dossier	EPA OPP 72-2
	Fish toxicity	NOEC mg/l	4,93	98 d	Oncorhynchus mykiss	REACH Registration Dossier	EPA OPPTS 850.1400
	Crustacea toxicity	NOEC mg/l	0,044	21 d	Daphnia magna	REACH Registration Dossier	EPA OPPTS 850.1300
	Acute bacteria toxicity	(41 mg/l)		3 h	activated sludge of a predominantly domestic sewage	REACH Registration Dossier	OECD Guideline 209

12.2. Persistence and degradability

Moderately/partially biodegradable.

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CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
2634-33-5	1,2-benzisothiazol-3(2H)-one, 1,2-benzisothiazolin-3-one			
	OECD 303A Activated sludge S 978	>70%		
	OECD 302B Activated sludge S 3509	90%		

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
10043-35-3	Boric acid	-1,09
112-34-5	2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether	1
68920-66-1	Alcohols, C16-18 and C18-unsatd., ethoxylated	ca. 7,19
55406-53-6	3-iodo-2-propynyl butylcarbamate; 3-iodoprop-2-yn-1-yl butylcarbamate	2,81
2634-33-5	1,2-benzisothiazol-3(2H)-one, 1,2-benzisothiazolin-3-one	0,63
2682-20-4	2-methylisothiazol-3(2H)-one	-0,486

BCF

CAS No	Chemical name	BCF	Species	Source
10043-35-3	Boric acid	0,558	Oncorhynchus nerka	Water Research Vol.
68920-66-1	Alcohols, C16-18 and C18-unsatd., ethoxylated	387,5	Pimephales promelas	Publication (2000)
2634-33-5	1,2-benzisothiazol-3(2H)-one, 1,2-benzisothiazolin-3-one	ca. 6,62	Lepomis macrochirus	REACH Registration D
2682-20-4	2-methylisothiazol-3(2H)-one	5,75	Lepomis macrochirus	REACH Registration D

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No information available.

Further information

Do not allow uncontrolled discharge of product into the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Dispose of waste according to applicable legislation.

Contaminated packaging

Dispose of waste according to applicable legislation.

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SECTION 14: Transport information

Land transport (ADR/RID)

- 14.1. UN number:** No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

- 14.1. UN number:** No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

- 14.1. UN number:** No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

- 14.1. UN number:** No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

No information available.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No information available.

SECTION 15: Regulatory information

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

EU regulatory information

Authorisations (REACH, annex XIV):

Substances of very high concern, SVHC (REACH, article 59):

Boric acid

Restrictions on use (REACH, annex XVII):

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Entry 30: Boric acid

Entry 55: 2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether

National regulatory information

Water hazard class (D): 2 - obviously hazardous to water

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

Boric acid

2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether

1,2-benzisothiazol-3(2H)-one, 1,2-benzisothiazolin-3-one

2-methylisothiazol-3(2H)-one

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 15.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route

(European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer

(Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

CAS: Chemical Abstracts Service (division of the American Chemical Society)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

CLP: Regulation on Classification, Labelling and Packaging of Substances and Mixtures,

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

EC50: Effect concentration, 50 percent

DNEL: Derived No Effect Level

PNEC: Predicted No Effect Concentration

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Skin Sens. 1A; H317	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.

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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.
H331	Toxic if inhaled.
H360FD	May damage fertility. May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

Further Information

This information is based solely on data provided by suppliers of the materials used, not on the mixture itself.
No warranty is expressed or implied regarding the suitability of the product for the user's particular purpose.
The user must make their own determination as to suitability.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)