

Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

1.1. Product identifier

Product name **ANTIRUGGINE ECOLOGICO**

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

Intended use **Water primer suitable for all ferrous surfaces, protects against corrosion and rust formation. Professional and domestic use.**Uses advised against **Uses other than those indicated**

1.3. Details of the supplier of the safety data sheet

Name **OIKOS S.P.A. a socio unico**
Full address **Via Cherubini 2**
District and Country **47043 Gatteo Mare (FC)**
Italia
Tel. **0547 681412**
Fax **0547 681430**

e-mail address of the competent person responsible for the Safety Data Sheet **certificazioniprodoti@oikos-group.it**

1.4. Emergency telephone number

For urgent inquiries refer to **NHS National Health Service 111****OIKOS S.P.A. a socio unico Company emergency number: 0547 681412**
Technical support - Monday to Friday from 8.00-13.00; 13:30 to 16:30

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Hazardous to the aquatic environment, chronic toxicity, category 3 **H412** Harmful to aquatic life with long lasting effects.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms: --

Signal words: --

Hazard statements:

H412 Harmful to aquatic life with long lasting effects.
EUH208 Contains: 2-methyl-2H-isothiazol-3-one
1,2-benzisothiazol-3(2H)-one
May produce an allergic reaction.

Precautionary statements:

P501 Dispose of contents / container in accordance with local regulation.
P273 Avoid release to the environment.VOC (Directive 2004/42/EC):

One - pack performance coatings.

SECTION 2. Hazards identification ... / >>

VOC given in g/litre of product in a ready-to-use condition : 95,00
 Limit value: 140,00

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage \geq than 0,1%.

SECTION 3. Composition/information on ingredients
3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
2-butoxyethanol		
CAS	111-76-2 1,5 \leq x < 2	Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Eye Irrit. 2 H319, Skin Irrit. 2 H315
EC	203-905-0	
INDEX	603-014-00-0	
Reg. no.	01-2119475108-36	
Trizinc bis(orthophosphate)		
CAS	7779-90-0 1,5 \leq x < 2	Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1
EC	231-944-3	
INDEX	030-011-00-6	
Reg. no.	01-2119485044-40-0000	
Zinc oxide		
CAS	1314-13-2 0,47 \leq x < 0,49	Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1
EC	215-222-5	
INDEX	030-013-00-7	
Reg. no.	01-2119463881-32	
2-(2-butoxyethoxy)ethanol		
CAS	112-34-5 0,31 \leq x < 0,33	Eye Irrit. 2 H319
EC	203-961-6	
INDEX	603-096-00-8	
Reg. no.	01-2119475104-44	
1,2-benzisothiazol-3(2H)-one		
CAS	2634-33-5 0,01 \leq x < 0,03	Acute Tox. 2 H330, Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315, Skin Sens. 1 H317, Aquatic Acute 1 H400 M=1, Aquatic Chronic 2 H411
EC	220-120-9	
INDEX	613-088-00-6	
Reg. no.	01-2120761540-60	
Pyrithione zinc		
CAS	13463-41-7 0,0073 \leq x < 0,0084	Acute Tox. 2 H330, Acute Tox. 3 H301, Eye Dam. 1 H318, Aquatic Acute 1 H400 M=100, Aquatic Chronic 1 H410 M=10
EC	236-671-3	
INDEX		
2-methyl-2H-isothiazol-3-one		
CAS	2682-20-4 0,00074 \leq x < 0,00074	Acute Tox. 2 H330, Acute Tox. 3 H301, Acute Tox. 3 H311, Skin Corr. 1 H314, Eye Dam. 1 H318, Skin Sens. 1 H317, Aquatic Acute 1 H400 M=10, Aquatic Chronic 1 H410 M=1, EUH071
EC	220-239-6	
INDEX		
Reg. no.	01-2120764690-50	

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures
4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

SECTION 4. First aid measures ... / >>**4.2. Most important symptoms and effects, both acute and delayed**

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

SECTION 5. Firefighting measures**5.1. Extinguishing media****SUITABLE EXTINGUISHING EQUIPMENT**

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

5.2. Special hazards arising from the substance or mixture**HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

Do not breathe combustion products.

5.3. Advice for firefighters**GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage**7.1. Precautions for safe handling**

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

SECTION 7. Handling and storage ... / >>

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

DEU	Deutschland	TRGS 900 - Seite 1 von 69 (Fassung 29.03.2019)- Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte
ESP	España	LÍMITES DE EXPOSICIÓN PROFESIONAL PARA AGENTES QUÍMICOS EN ESPAÑA 2019 (INSST)
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Third edition,published 2018)
ITA	Italia	DIRETTIVA (UE) 2017/164 DELLA COMMISSIONE del 31 gennaio 2017
POL	Polska	ROZPORZĄDZENIE MINISTRA RODZINY, PRACY I POLITYKI SPOŁECZNEJ z dnia 12 czerwca 2018 r
EU	OEL EU	Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2019

2-butoxyethanol

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	49	10	98	20	
MAK	DEU	49	10	98	20	
VLA	ESP	98	20	245	50	
VLEP	FRA	49	10	246	50	
WEL	GBR	123	25	246	50	
VLEP	ITA	98	20	246	50	
NDS/NDSch	POL	98		200		
OEL	EU	98	20	246	50	

Predicted no-effect concentration - PNEC

Normal value in fresh water	8,8	mg/l
Normal value in marine water	26,4	mg/l
Normal value for fresh water sediment	34,6	mg/kg
Normal value for marine water sediment	3,46	mg/kg
Normal value for water, intermittent release	0,88	mg/l
Normal value of STP microorganisms	463	mg/l
Normal value for the terrestrial compartment	2,33	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		26,7 mg/kg bw/d		6,3 mg/kg bw/d				
Inhalation	147 mg/m3	426 mg/m3	NPI	59 mg/m3	246 mg/m3	1091 mg/m3	NPI	98 mg/m3
Skin		89 mg/kg bw/d	NPI	75 mg/kg bw/d		89 mg/kg bw/d	NPI	125 mg/kg bw/d

SECTION 8. Exposure controls/personal protection ... / >>

Trizinc bis(orthophosphate)

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
MAK	DEU	2		4		INHAL
MAK	DEU	0,1		0,4		RESP

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,0206	mg/l
Normal value in marine water	0,0061	mg/l
Normal value for fresh water sediment	117,8	mg/kg
Normal value for marine water sediment	56,5	mg/kg
Normal value of STP microorganisms	0,1	mg/l
Normal value for the terrestrial compartment	35,6	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral							VND	0,83 mg/kg/d
Inhalation			VND	2,5 mg/m3			VND	5 mg/m3
Skin			VND	83 mg/kg/d			VND	83 mg/kg/d

Zinc oxide

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,0206	mg/l
Normal value in marine water	0,0061	mg/l
Normal value for fresh water sediment	117,8	mg/kg
Normal value for marine water sediment	56,5	mg/kg
Normal value of STP microorganisms	0,1	mg/l
Normal value for the terrestrial compartment	35,6	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		NPI	VND	0,83 mg/kg/d				
Inhalation	NPI	NPI	NPI	2,5 mg/m3	NPI	NPI	0,5 mg/m3	5 mg/m3
Skin	NPI	NPI	NPI	83 mg/kg/d	NPI	NPI	NPI	83 mg/kg/d

SECTION 8. Exposure controls/personal protection ... / >>

2-(2-butoxyethoxy)ethanol

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	67	10	100,5 (C)	15 (C)	Hinweis
MAK	DEU	67	10	100,5	15	Hinweis
VLA	ESP	67,5	10	101,2	15	
WEL	GBR	67,5	10	101,2	15	
VLEP	ITA	67,5	10	101,2	15	
NDS/NDSCh	POL	67		100		
OEL	EU	67,5	10	101,2	15	
TLV-ACGIH		66	10			

Predicted no-effect concentration - PNEC

Normal value in fresh water	1,1	mg/l
Normal value in marine water	0,11	mg/l
Normal value for fresh water sediment	4,4	mg/kg
Normal value for marine water sediment	0,44	mg/kg
Normal value of STP microorganisms	200	mg/l
Normal value for the terrestrial compartment	0,32	mg/kg

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		NPI	NPI	5 mg/kg bw/d				
Inhalation	60,7 mg/m3	NPI	40,5 mg/m3	40,5 mg/m3	101,2 mg/m3	NPI	67,5 mg/m3	67,5 mg/m3
Skin		NPI	NPI	50 mg/kg bw/d	NPI	NPI	NPI	83 mg/kg bw/d

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

Predicted no-effect concentration - PNEC

Normal value in fresh water	4,03	µg/l
Normal value in marine water	403	ng/l
Normal value for fresh water sediment	49,9	µg/kg
Normal value for marine water sediment	4,99	µg/kg
Normal value of STP microorganisms	1,03	mg/l

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation				1,2 mg/m3				6,81 mg/m3
Skin				345 µg/kg bw/d				966 µg/kg bw/d

Pyrithione zinc

Predicted no-effect concentration - PNEC

Normal value in fresh water	90	ng/l
Normal value in marine water	90	ng/l
Normal value for fresh water sediment	0,0095	mg/kg/d
Normal value for marine water sediment	0,0095	mg/kg/d
Normal value of STP microorganisms	0,01	mg/l
Normal value for the terrestrial compartment	1,02	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Skin								0,010 mg/kg bw/d

SECTION 8. Exposure controls/personal protection ... / >>

2-methyl-2H-isothiazol-3-one

Predicted no-effect concentration - PNEC

Normal value in fresh water	3,39	µg/l
Normal value in marine water	3,39	µg/l
Normal value of STP microorganisms	230	µg/l

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		53 µg/kg bw/d		27 µg/kg bw/d				
Inhalation	43 µg/m3	NPI	21 µg/m3	NPI	43 µg/m3	NPI	21 µg/m3	NPI
Skin	NPI	NPI	NPI	NPI		NPI	NPI	NPI

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.
 VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Information
Appearance	pasty liquid	
Colour	White and the colour chart shades	
Odour	Feeble	
Odour threshold	Not available	
pH	8,5-9	
Melting point / freezing point	Not available	
Initial boiling point	> 100 °C	
Boiling range	Not available	
Flash point	Not applicable	
Evaporation Rate	Not available	
Flammability of solids and gases	not flammable	
Lower inflammability limit	Not applicable	

SECTION 9. Physical and chemical properties ... / >>

Upper inflammability limit	Not applicable
Lower explosive limit	Not applicable
Upper explosive limit	Not applicable
Vapour pressure	Not available
Vapour density	Not available
Relative density	1,25
Solubility	Mixable in water
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
Viscosity	4000 cps
Explosive properties	not applicable
Oxidising properties	not applicable

9.2. Other information

Information not available

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

2-butoxyethanol

Decomposes under the effect of heat.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

2-butoxyethanol

May react dangerously with: aluminium, oxidising agents. Forms peroxides with: air.

2-(2-butoxyethoxy)ethanol

May react with: oxidising substances. May form peroxides with: oxygen. Develops hydrogen on contact with: aluminium. May form explosive mixtures with: air.

10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

2-butoxyethanol

Avoid exposure to: sources of heat, naked flames.

2-(2-butoxyethoxy)ethanol

Avoid exposure to: air.

10.5. Incompatible materials

2-(2-butoxyethoxy)ethanol

Incompatible with: oxidising substances, strong acids, alkaline metals.

10.6. Hazardous decomposition products

2-butoxyethanol

May develop: hydrogen.

2-(2-butoxyethoxy)ethanol

May develop: hydrogen.

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information

SECTION 11. Toxicological information ... / >>

Information not available

Information on likely routes of exposure

2-(2-butoxyethoxy)ethanol

WORKERS: inhalation; contact with the skin.

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

2-(2-butoxyethoxy)ethanol

May be absorbed by inhalation, ingestion and skin contact; is irritating for the skin and especially for the eyes. May cause damage to the spleen. At room temperature the danger of inhalation is unlikely, due to the low vapour pressure of the substance.

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:	> 5 mg/l
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	>2000 mg/kg

2-(2-butoxyethoxy)ethanol

LD50 (Oral)	5530 mg/kg Mouse
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LD50 (Dermal)	2764 mg/kg Rabbit
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2-butoxyethanol

LD50 (Oral)	1414 mg/kg guinea pig
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LD50 (Dermal)	435 mg/kg Rabbit
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LC50 (Inhalation)	400 ppm/7h guinea pig
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Trizinc bis(orthophosphate)

LD50 (Oral)	5000 mg/kg Rat - Wistar
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Zinc oxide

LD50 (Oral)	> 5000 mg/kg
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LD50 (Dermal)	> 2000 mg/l
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LC50 (Inhalation)	> 5,7 mg/l
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1,2-benzisothiazol-3(2H)-one

LD50 (Oral)	> 490 mg/kg bw 490-670 (rat)
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LD50 (Dermal)	2000 mg/kg bw (rat)
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Pyriithione zinc

LD50 (Oral)	302 mg/kg
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LD50 (Dermal)	2000 mg/kg
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SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITISATION

May produce an allergic reaction.

Contains:

2-methyl-2H-isothiazol-3-one

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

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

SECTION 11. Toxicological information ... / >>

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

SECTION 12. Ecological information

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity

2-(2-butoxyethoxy)ethanol	
LC50 - for Fish	1300 mg/l
EC50 - for Crustacea	100 mg/l/48h
EC50 - for Algae / Aquatic Plants	100 mg/l/96h
2-butoxyethanol	
LC50 - for Fish	1464 mg/l/96h
EC50 - for Crustacea	1800 mg/l/48h
EC50 - for Algae / Aquatic Plants	1840 mg/l/72h
EC10 for Algae / Aquatic Plants	679 mg/l/72h
Chronic NOEC for Fish	100 mg/l 21 days
Chronic NOEC for Crustacea	100 mg/l 21 days
Chronic NOEC for Algae / Aquatic Plants	286 mg/l 72 h
Trizinc bis(orthophosphate)	
LC50 - for Fish	2,92 mg/l/96h
EC50 - for Crustacea	2,909 mg/l/48h
Zinc oxide	
LC50 - for Fish	8,062 mg/l/96h
EC50 - for Crustacea	100 mg/l/48h
Chronic NOEC for Algae / Aquatic Plants	1,071 mg/l 16 days
1,2-benzisothiazol-3(2H)-one	
LC50 - for Fish	> 2,15 mg/l 2,15-22
EC50 - for Crustacea	> 2,9 mg/l 2,9-2,94
EC50 - for Algae / Aquatic Plants	> 70 µg/l 70-150
Chronic NOEC for Algae / Aquatic Plants	> 40,3 µg/l 40-55
2-methyl-2H-isothiazol-3-one	
LC50 - for Fish	> 4,77 mg/l 4,77-6
EC50 - for Crustacea	1,6 mg/l
Chronic NOEC for Crustacea	> 44,2 µg/l 44,2-550 (21 days)
Pyrrithione zinc	
LC50 - for Fish	0,4 mg/l/96h
EC50 - for Crustacea	0,0082 mg/l/48h
EC50 - for Algae / Aquatic Plants	0,051 mg/l/72h
Chronic NOEC for Crustacea	0,0022 mg/l/28d

12.2. Persistence and degradability

SECTION 12. Ecological information ... / >>

2-(2-butoxyethoxy)ethanol	
Solubility in water	955 g/l
Rapidly degradable	
2-butoxyethanol	
Solubility in water	1000 - 10000 mg/l
Rapidly degradable	
Trizinc bis(orthophosphate)	
Solubility in water	2,7 mg/l
Degradability: information not available	
Zinc oxide	
Rapidly degradable	
1,2-benzisothiazol-3(2H)-one	
Rapidly degradable	
2-methyl-2H-isothiazol-3-one	
Rapidly degradable	

12.3. Bioaccumulative potential

2-(2-butoxyethoxy)ethanol	
Partition coefficient: n-octanol/water	1
BCF	< 100
2-butoxyethanol	
Partition coefficient: n-octanol/water	0,81
Pyrrithione zinc	
BCF	1,4

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage \geq than 0,1%.

12.6. Other adverse effects

Information not available

SECTION 13. Disposal considerations
13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

SECTION 14. Transport information ... / >>

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Not applicable

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

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product
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Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage \geq than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Information not available

VOC (Directive 2004/42/EC) :

One - pack performance coatings.

German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017)

WGK 2: Hazard to waters

15.2. Chemical safety assessment

A chemical safety assessment has been performed for the following contained substances

Trizinc bis(orthophosphate)

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Acute Tox. 2	Acute toxicity, category 2
Acute Tox. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
Skin Corr. 1	Skin corrosion, category 1
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
Skin Sens. 1	Skin sensitization, category 1
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1

SECTION 16. Other information ... / >>

Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H330	Fatal if inhaled.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
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.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2018/1480 (XIII Atp. CLP)
16. Regulation (EU) 2019/521 (XII Atp. CLP)

SECTION 16. Other information ... / >>

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

CALCULATION METHODS FOR CLASSIFICATION

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:

The following sections were modified:

08.

Changed TLVs in section 8.1 for following countries:

DEU, ESP, FRA, GBR, ITA, POL,