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

1.1 Product identifier

Trade name/designation

XP88-10Z9-0AL — [Z] DecoTec® 5450
TopCoat COLOR 2in1
10Z9 Basis A

UFI: 80SN-Q054-D000-ND7W

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

paint and/or paint-related material

Relevant identified uses

Reserved for industrial and professional use.

1.3 Details of the supplier of the safety data sheet

Supplier

Berger-Zobel GmbH
Coating Systems
Maybachstr. 2
67269 Grünstadt
Germany

Telephone: +49 6359 8005-0
E-mail: info@berger-zobel.de
Website: www.berger-zobel.de

Department responsible for information

E-mail (competent person): Sicherheitsdaten@berger-zobel.de

1.4 Emergency telephone number

Emergency telephone number: +49 700 24112112
24 hr. emergency phone number

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Skin Sens. 1 — H317 May cause an allergic skin reaction.

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms

GHS07

Signal word

Warning

Hazard statements

H317 — May cause an allergic skin reaction.

Precautionary statements

P280 — Wear protective gloves and eye protection/face protection.

Hazard components for labelling

* 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one
2,4,7,9-tetramethyldec-5-yne-4,7-diol
2-methyl-2H-isothiazol-3-one
Adipohydrazide

* Reaction mass aus: 5-Chlor-2-methyl-2H-isothiazol-3-on [EG nr. 247-500-7] und 2-Methyl-2H-isothiazol-3-on [EG nr. 220-239-6] (3:1)

Supplemental hazard information

EUH211 — Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

2.3 Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

SECTION 3: Composition/information on ingredients.

3.2 Mixtures

Description

Wasserverd. Acrylat

Hazardous ingredients

	CAS No. EC No. Index No.	Substance name REACH No. Classification according to Regulation (EC) No 1272/2008 [CLP]	weight-%
*	112-34-5 203-961-6 603-096-00-8	**2-(2-butoxyethoxy)ethanol** 01-2119475104-44-XXXX Eye Irrit. 2 H319 Substance with a common (EC) occupational exposure limit value.	1,00 < 2,00
	126-86-3 204-809-1 -	**2,4,7,9-tetramethyldec-5-yne-4,7-diol** 01-2119954390-39-XXXX Skin Sens. 1 H317 / Eye Dam. 1 H318 / Aquatic Chronic 3 H412	0,100 < 0,150
	1071-93-8 213-999-5 -	**Adipohydrazide** 01-2119962900-36-XXXX Skin Sens. 1 H317 / Aquatic Chronic 2 H411	0,100 < 0,150
*	2634-33-5 220-120-9 613-088-00-6	**1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one** 01-2120761540-60-XXXX Acute Tox. 4 H302 / Skin Irrit. 2 H315 / Skin Sens. 1 H317 / Eye Dam. 1 H318 / Aquatic Acute 1 H400 Specific concentration limit (SCL) Skin Sens. 1 H317: >= 0,05 ATE (dermal): > 2,000 mg/kg ATE (oral): 454 mg/kg	0,01 < 0,025
	2682-20-4 220-239-6 613-326-00-9	**2-methyl-2H-isothiazol-3-one** 01-2120764690-50-XXXX Acute Tox. 3 H301 / Acute Tox. 3 H311 / Skin Corr. 1B H314 / Skin Sens. 1A H317 / Eye Dam. 1 H318 / Acute Tox. 2 H330 / Aquatic Acute 1 H400 (M = 10,00) / Aquatic Chronic 1 H410 (M = 1,00) / EUH071 Specific concentration limit (SCL) Skin Sens. 1A H317: >= 0,0015 ATE (oral): = 285 mg/kg ATE (dermal): > 2,000 mg/kg	0,001 < 0,01
*	55965-84-9 - 613-167-00-5	**Reaction mass aus: 5-Chlor-2-methyl-2H-isothiazol-3-on [EG nr. 247-500-7] und 2-Methyl-2H-isothiazol-3-on [EG nr. 220-239-6] (3:1)** 01-2120764691-48-XXXX Acute Tox. 3 H301 / Acute Tox. 2 H310 / Skin Corr. 1C H314 / Skin Sens. 1A H317 / Eye Dam. 1 H318 / Acute Tox. 2 H330 / Aquatic Acute 1 H400 (M = 100,00) / Aquatic Chronic 1 H410 (M = 100,00) / EUH071 Specific concentration limit (SCL) Eye Irrit. 2 H319: >= 0,06 / Skin Sens. 1A H317: >= 0,0015 / Eye Dam. 1 H318: >= 0,60 / Skin Irrit. 2 H315: >= 0,06 / Skin Corr. 1C H314: >= 0,60	0,0001 < 0,001

Remark

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

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.

Following inhalation

In case of irregular breathing or respiratory arrest provide artificial respiration.Remove casualty to fresh air and keep warm and at rest.

Following skin contact

Remove contaminated, saturated clothing immediately. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners.

After eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

Following ingestion

If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

Self-protection of the first aider

First aider: Pay attention to self-protection!

4.2 Most important symptoms and effects, both acute and delayed

Symptoms

In all cases of doubt, or when symptoms persist, seek medical advice.

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

alcohol resistant foam, Carbon dioxide (CO2), Powder, spray mist, (water)

Unsuitable extinguishing media

Strong water jet

5.2 Special hazards arising from the substance or mixture

Dense black smoke occurs during fire. Inhaling hazardous decomposing products can cause serious health damage.

5.3 Advice for firefighters

Provide a conveniently located respiratory protective device. Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Ventilate affected area. Do not breathe vapours.

6.2 Environmental precautions

Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

6.3 Methods and material for containment and cleaning up

For containment

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13).

For cleaning up

Clean using cleansing agents. Do not use solvents.

6.4 Reference to other sections

Safe handling: see section 7
Personal protection equipment: refer to section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling

Avoid contact with skin, eyes and clothes. Personal protection equipment: see section 8. Do not empty containers with pressure - no pressure vessel! Always keep in containers that correspond to the material of the original container. Follow the legal protection and safety regulations.

Advices on general occupational hygiene

When using do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Do not empty containers with pressure - no pressure vessel! Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

Hints on joint storage

Keep away from strongly acidic and alkaline materials as well as oxidizers.

Storage class LGK12 - non-combustible liquids that cannot be assigned to any of the above storage classes

Further information on storage conditions

Keep container tightly closed. Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks. Store in a well-ventilated and dry room at temperatures between 5 °C and 25 °C.

7.3 Specific end use(s)

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

	CAS No.	Substance name	Source	Long-term /short-term (Spitzenbegrenzung)
*	112-34-5	2-(2-butoxyethoxy)ethanol	WEL	67.5 / 101.2 (-) mg/m³
*	7727-43-7	Barium sulfate	WEL	10 / - (-) mg/m³ (inhalable fraction)
*	7727-43-7	Barium sulfate	WEL	4 / - (-) mg/m³ (respirable fraction)
*	1317-65-3	Limestine)	WEL	10 / - (-) mg/m³ (inhalable fraction)
*	1317-65-3	Limestine)	WEL	4 / - (-) mg/m³ (respirable fraction)
*	14807-96-6	Talc	WEL	1 / - (-) mg/m³ (respirable fraction)
*	13463-67-7	Titanium dioxide	WEL	10 / - (-) mg/m³ (inhalable fraction)
*	13463-67-7	Titanium dioxide	WEL	4 / - (-) mg/m³ (respirable fraction)

Additional information

Long-term: Long-term occupational exposure limit value
short-term: short-term occupational exposure limit value

Biological limit values

No data available

DNEL worker

	CAS No.	Substance name	DNEL type	DNEL value
*	2634-33-5	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	Long-term – inhalation, systemic effects	6.81 mg/m³
*	2634-33-5	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	Long-term - dermal, systemic effects	0.966 mg/kg bw/day
	126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol	DNEL long-term dermal (systemic)	0.5 mg/kg
	126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol	DNEL acute dermal, short-term (systemic)	1.5 mg/kg
	126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol	DNEL acute inhalative (systemic)	5.28 mg/m³
	126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol	DNEL long-term inhalative	1.76 mg/m³

			(systemic)	
	112-34-5	2-(2-butoxyethoxy)ethanol	Acute - inhalation, local effects	101.2 mg/m³
	112-34-5	2-(2-butoxyethoxy)ethanol	Long-term – inhalation, local effects	67.5 mg/m³
	2682-20-4	2-methyl-2H-isothiazol-3-one	DNEL long-term inhalative (local)	21 µg/m³
	2682-20-4	2-methyl-2H-isothiazol-3-one	DNEL acute inhalative (local)	43 µg/m³
	1071-93-8	Adipohydrazide	Long-term – inhalation, systemic effects	17.5 mg/m³
*	55965-84-9	Reaction mass aus: 5-Chlor-2-methyl-2H-isothiazol-3-on [EG nr. 247-500-7] und 2-Methyl-2H-isothiazol-3-on [EG nr. 220-239-6] (3:1)	Acute - inhalation, local effects	0.04 mg/m³
*	55965-84-9	Reaction mass aus: 5-Chlor-2-methyl-2H-isothiazol-3-on [EG nr. 247-500-7] und 2-Methyl-2H-isothiazol-3-on [EG nr. 220-239-6] (3:1)	Long-term – inhalation, local effects	0.02 mg/m³

DNEL Consumer

	CAS No.	Substance name	DNEL type	DNEL value
*	2634-33-5	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	Long-term – inhalation, systemic effects	1.2 mg/m³
*	2634-33-5	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	Long-term - dermal, systemic effects	0.345 mg/kg bw/day
	126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol	DNEL long-term dermal (systemic)	0.25 mg/kg
	126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol	DNEL acute dermal, short-term (systemic)	0.75 mg/kg
	126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol	DNEL acute inhalative (systemic)	1.29 mg/m³
	126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol	DNEL long-term inhalative (systemic)	0.43 mg/m³
	112-34-5	2-(2-butoxyethoxy)ethanol	Long-term - oral, systemic effects	6.25 mg/kg bw/day
	2682-20-4	2-methyl-2H-isothiazol-3-one	DNEL long-term inhalative (local)	21 µg/m³
	2682-20-4	2-methyl-2H-isothiazol-3-one	DNEL acute inhalative (local)	43 µg/m³
*	55965-84-9	Reaction mass aus: 5-Chlor-2-methyl-2H-isothiazol-3-on [EG nr. 247-500-7] und 2-Methyl-2H-isothiazol-3-on [EG nr. 220-239-6] (3:1)	Long-term – inhalation, local effects	0.02 mg/m³
*	55965-84-9	Reaction mass aus: 5-Chlor-2-methyl-2H-isothiazol-3-on [EG nr. 247-500-7] und 2-Methyl-2H-isothiazol-3-on [EG nr. 220-239-6] (3:1)	Acute - inhalation, local effects	0.04 mg/m³
*	55965-84-9	Reaction mass aus: 5-Chlor-2-methyl-2H-isothiazol-3-on [EG nr. 247-500-7] und 2-Methyl-2H-isothiazol-3-on [EG nr. 220-239-6] (3:1)	Long-term - oral, systemic effects	0.09 mg/kg bw/day

PNEC

	CAS No.	Substance name	PNEC type	PNEC Value
*	2634-33-5	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	aquatic, intermittent release	1.1 µg/L
*	2634-33-5	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	aquatic, marine water	0.403 µg/L
*	2634-33-5	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	sewage treatment plant	1.03 mg/L
*	2634-33-5	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	sediment, freshwater	49.9 µg/kg sediment dw

*	2634-33-5	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	sediment, marine water	4.99 µg/kg sediment dw
	126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol	PNEC sewage treatment plant (STP)	7 mg/L
	126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol	PNEC soil, freshwater	28 µg/kg
	126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol	PNEC sediment, marine water	32 µg/kg
	126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol	PNEC sediment, freshwater	320 µg/kg
	126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol	PNEC aquatic, freshwater	40 µg/L
	126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol	PNEC aquatic, intermittent release	400 µg/L
	126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol	PNEC aquatic, marine water	4 µg/L
	112-34-5	2-(2-butoxyethoxy)ethanol	aquatic, intermittent release	11 mg/L
	112-34-5	2-(2-butoxyethoxy)ethanol	aquatic, marine water	0.11 mg/L
	112-34-5	2-(2-butoxyethoxy)ethanol	sediment, freshwater	4.4 mg/kg sediment dw
	112-34-5	2-(2-butoxyethoxy)ethanol	sediment, marine water	0.44 mg/kg sediment dw
	2682-20-4	2-methyl-2H-isothiazol-3-one	PNEC aquatic, freshwater	3.39 µg/L
	2682-20-4	2-methyl-2H-isothiazol-3-one	PNEC aquatic, intermittent release	3.39 µg/L
	2682-20-4	2-methyl-2H-isothiazol-3-one	PNEC aquatic, marine water	3.39 µg/L
	2682-20-4	2-methyl-2H-isothiazol-3-one	PNEC sewage treatment plant (STP)	230 µg/L
	2682-20-4	2-methyl-2H-isothiazol-3-one	PNEC soil	47.1 µg/kg dry weight
	1071-93-8	Adipohydrazide	aquatic, intermittent release	92 µg/L
	1071-93-8	Adipohydrazide	aquatic, marine water	6.2 µg/L
	1071-93-8	Adipohydrazide	sewage treatment plant	1,000 mg/L
	1071-93-8	Adipohydrazide	sediment, freshwater	0.241 mg/kg sediment dw
	1071-93-8	Adipohydrazide	sediment, marine water	0.024 mg/kg sediment dw
*	55965-84-9	Reaction mass aus: 5-Chlor-2-methyl-2H-isothiazol-3-on [EG nr. 247-500-7] und 2-Methyl-2H-isothiazol-3-on [EG nr. 220-239-6] (3:1)	aquatic, intermittent release	3.39 µg/L
*	55965-84-9	Reaction mass aus: 5-Chlor-2-methyl-2H-isothiazol-3-on [EG nr. 247-500-7] und 2-Methyl-2H-isothiazol-3-on [EG nr. 220-239-6] (3:1)	aquatic, marine water	3.39 µg/L
*	55965-84-9	Reaction mass aus: 5-Chlor-2-methyl-2H-isothiazol-3-on [EG nr. 247-500-7] und 2-Methyl-2H-isothiazol-3-on [EG nr. 220-239-6] (3:1)	sewage treatment plant	0.23 mg/L
*	55965-84-9	Reaction mass aus: 5-Chlor-2-methyl-2H-isothiazol-3-on [EG nr. 247-500-7] und 2-Methyl-2H-isothiazol-3-on [EG nr. 220-239-6] (3:1)	sediment, freshwater	0.027 mg/kg sediment dw
*	55965-84-9	Reaction mass aus: 5-Chlor-2-methyl-2H-isothiazol-3-on [EG nr. 247-500-7] und 2-Methyl-2H-isothiazol-3-on [EG nr. 220-239-6] (3:1)	sediment, marine water	0.027 mg/kg sediment dw

8.2 Exposure controls

Provide good ventilation.This can be achieved with local or room suction.

Personal protection equipment

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Hand protection

Suitable material: NBR (Nitrile rubber)
Thickness of the glove material >= 0.4 mm
Breakthrough time >= 480 min

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. Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin.
Recommended glove articles: EN ISO 374

Skin protection

Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

Eye/face protection

Eye glasses with side protection: EN 166

Body protection

When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn. Anti-static clothing including shoes are recommended.

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid	
Colour	white	
Odour	characteristic	
pH at 20.0 °C (100%)	8.5 - 9	DIN EN ISO 19396-1
Melting point/freezing point	not determined	
Initial boiling point and boiling range	100 °C	
	Source: Water	
Flash point	not applicable	
flammability	not applicable	
Lower explosion limit at 20°C	0.69 Vol-%	
	Source: 2-(2-butoxyethoxy)ethanol	
Upper explosion limit at 20°C	12.6 Vol-%	
	Source: Propane-1,2-diol	
Vapour pressure at 20°C	25.943 mbar	
Relative vapour density	not applicable	
Density at 20 °C	1.32 kg/l	
Water solubility at 20°C	partially soluble	
Partition coefficient: n-octanol/water	see section 12	
Ignition temperature in °C	> 210 °C	
	Source: 2-(2-butoxyethoxy)ethanol	
Decomposition temperature	not determined	
Viscosity at 20 °C	10,660.98 mm²/s	
particle characteristics	not applicable	

9.2 Other information

Solid content	57.1 %
solvent content	3.0 %
Water content	40 %

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

10.3 Possibility of hazardous reactions

Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.

10.4 Conditions to avoid

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7. Hazardous decomposition byproducts may form with exposure to high temperatures.

10.5 Incompatible materials

No further relevant information available.

10.6 Hazardous decomposition products

Decomposition products in case of fire: see section 5.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

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

* **1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one**
LD50: dermal (Rat): > 2,000 mg/kg

LD50: oral (Rat): 454 mg/kg

2-methyl-2H-isothiazol-3-one
LD50: oral (Rat): = 285 mg/kg

LD50: dermal (Rat): > 2,000 mg/kg

Skin corrosion/irritation

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

Serious eye damage/eye irritation

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

Respiratory or skin sensitisation

May cause an allergic skin reaction.

Overall assessment on CMR properties

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.

Practical experience/human evidence

Inhaling of solvent components above the MWC-value can lead to health damage, e.g. irritation of the mucous membrane and respiratory organs, as well as damage to the liver, kidneys and the central nerve system. Indications for this are: Headache, Dizziness, fatigue, amyosthenia, Dizziness, in serious cases: unconsciousness. Solvents may cause some of the aforementioned effects through skin resorption. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and/or absorption through skin. Splashing may cause eye irritation and reversible damage.

11.2 Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

SECTION 12: Ecological information

12.1 Toxicity

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

2-methyl-2H-isothiazol-3-one
EC50 = 34.6 mg/L (3 h)

EC20 = 2.8 mg/L (3 h)

Acute (short-term) fish toxicity

* **1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one**
LC50: (Oncorhynchus mykiss (Rainbow trout)): 1.6 mg/L (96 h)

* ***Acute (short-term) toxicity to aquatic invertebrates***
EC50 (Americamysis bahia): 989.3 µg/L (96 h)

Algae toxicity
2,4,7,9-tetramethyldec-5-yne-4,7-diol
EC50 (Selenastrum capricornutum): = 82 mg/L (72 h)

2-methyl-2H-isothiazol-3-one
EC50 (Pseudokirchneriella subcapitata): = 0.157 mg/L (72 h)

Chronic (long-term) toxicity to aquatic invertebrate

* **Reaction mass aus: 5-Chlor-2-methyl-2H-isothiazol-3-on [EG nr. 247-500-7] und 2-Methyl-2H-isothiazol-3-on [EG nr. 220-239-6] (3:1)**
NOEC (Daphnia magna (Big water flea)): 0.004 mg/L (21 d)

Daphnia toxicity
2,4,7,9-tetramethyldec-5-yne-4,7-diol
EC50 (Daphnia magna (Big water flea)): = 91 mg/L (48 h)

2-methyl-2H-isothiazol-3-one
EC50 = 1.68 mg/L (48 h)

Fish toxicity
2,4,7,9-tetramethyldec-5-yne-4,7-diol
LC50: (Cyprinus carpio (Common Carp)): = 42 mg/L (96 h)

LC50: (Pimephales promelas (fathead minnow)): = 36 mg/L (96 h)

2-methyl-2H-isothiazol-3-one
LC50: (Oncorhynchus mykiss (Rainbow trout)): = 6 mg/L (96 h)

12.2 Persistence and degradability

* **1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one**
Biodegradation = 90 %

2-methyl-2H-isothiazol-3-one
Biodegradation = 50 % (4 d)

Biodegradation = 90 % (14 d)

12.3 Bioaccumulative potential

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one
* = 0.7
Partition coefficient: n-octanol/water = 0.56 (2-(2-butoxyethoxy)ethanol)

2-(2-butoxyethoxy)ethanol
* Bioconcentration factor (BCF) = 0.46
Partition coefficient: n-octanol/water = 0.81 (Reaction mass aus: 5-Chlor-2-methyl-2H-isothiazol-3-on [EG nr. 247-500-7] und 2-Methyl-2H-isothiazol-3-on [EG nr. 220-239-6] (3:1))

2-methyl-2H-isothiazol-3-one
= 0.32

* Partition coefficient: n-octanol/water = 0.64 (1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one)

* Partition coefficient: n-octanol/water = -2.4 (Adipohydrazide)

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 Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product/Packaging disposal

Do not empty into drains; dispose of this material and its container in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Waste codes/waste designations according to EWC/AVV

080111* - Waste paint and varnish containing organic solvents or other dangerous substances
* Hazardous waste according to Directive 2008/98/EC (waste framework directive).

Other disposal recommendations

Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

SECTION 14: Transport information

14.1 UN number or ID number

not applicable

14.2 UN proper shipping name

Land transport (ADR/RID)

No dangerous good in sense of these transport regulations.

Sea transport (IMDG)

No dangerous good in sense of these transport regulations.

Air transport (ICAO-TI / IATA-DGR)

No dangerous good in sense of these transport regulations.

14.3 Transport hazard class(es)

not applicable

14.4 Packing group

not applicable

14.5 Environmental hazards

Land transport (ADR/RID)	not applicable
Sea transport (IMDG)	not applicable

14.6 Special precautions for user

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.
Advices on safe handling: see parts 6 - 8

14.7 Maritime transport in bulk according to IMO instruments

No transport as bulk according to IBC Code.

14.8 Additional information

Land transport (ADR/RID)

not applicable

Sea transport (IMDG)

not applicable

Air transport (ICAO-TI / IATA-DGR)

not applicable

SECTION 15: Regulatory information

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

EU legislation

Authorisations and/or restrictions on use

Regulation (EC) No. 1907/2006 (REACH), Annex XVII (restrictions)

Use restriction according to REACH annex XVII, no.: 03, 55

Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive 92/85/EEC or stricter national regulations, if applicable. Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC) or stricter national regulations, if applicable.

Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive]

VOC value: 40 g/l

Directive 2004/42/EC on the limitation of emissions of volatile organic compounds

VOC limit value: 2004/42/IIA(d): 130 g/l (2010)
Maximum VOC content of the product in a ready to use condition: 40 g/L. This product meets the requirements of Regulation (EC) No. 1935/2004 on the limitation of VOC content.

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]
Hazard categories / Named dangerous substances

This product is not classified according to Directive 2012/18/EU.

National regulations

Observe in addition any national regulations!

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

List of relevant hazard statements and/or precautionary statements from sections 2 to 15

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
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.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

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

Skin Sens. 1	Calculation method.

Key literature references and sources for data

Data arise from reference works and literature.

Abbreviations and acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
OEL: Occupational Exposure Limit Value
BLV: Biological limit values
CAS: Chemical Abstracts Service
CLP: Classification, Labelling and Packaging
CMR: Carcinogenic, Mutagenic and Reprotoxic
DIN: German Institute for Standardization / German industrial standard
DNEL: Derived No-Effect Level
EAKV: European Waste Catalogue Directive
EC: Effective Concentration
EC: European Community
EN: European Standard
EU/EEA: European Economic Area
IATA-DGR: International Air Transport Association – Dangerous Goods Regulations
IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO-TI: International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG Code: International Maritime Code for Dangerous Goods

ISO: International Organization for Standardization
LC: Lethal Concentration
LD: Lethal Dose
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MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
OECD: Organisation for Economic Cooperation and Development
PBT: persistent, bioaccumulative, toxic
PNEC: Predicted No Effect Concentration
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
UN: United Nations
VOC: Volatile Organic Compounds
vPvB: very persistent and very bioaccumulative

Indication of changes

* Data changed compared with the previous version.