SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878

DE / EN

PermaSilan

Version	Revision Date:	SDS Number:	Date of last issue: 12.03.2026
6.9	16.04.2026	6001579	Date of first issue: 13.09.2019

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

1.1 Product identifier

Trade name	:	PermaSilan
Unique Formula Identifier (UFI)	:	AMX8-9R3C-601V-GMUD

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

Use of the Substance/Mixture	:	Water-borne coatings
Recommended restrictions on use	:	within adequate application - none

1.3 Details of the supplier of the safety data sheet

Company	:	Caparol Farben Lacke GmbH Roßdörfer Straße 50 64372 Ober-Ramstadt
Telephone	:	+496154710
Telefax	:	+4961547170222
Website	:	
E-mail address Responsible/issuing person	:	msds@dr-rmi.com

1.4 Emergency telephone

Emergency telephone 1	:	+49613284463 GBK GmbH

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin sensitization, Category 1	H317: May cause an allergic skin reaction.
Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal Word : Warning

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

Precautionary Statements :

Prevention:

P261 Avoid breathing mist or vapors.
P273 Avoid release to the environment.
P280 Wear protective gloves.

Response:

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous ingredients which must be listed on the label:

1,2-benzisothiazol-3(2H)-one
octhilinone (ISO)
2-methylisothiazol-3(2H)-one
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Hotline for allergy inquiries: 0800/1895000 (free of charge from the German landline).
For professional/industrial applications.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Dispersion paint, aqueous, with film protection

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
2-butoxyethanol	111-76-2 203-905-0 603-014-00-0 01-2119475108-36	Acute Tox. 4; H302 Acute Tox. 3; H331 Skin Irrit. 2; H315 Eye Irrit. 2; H319 --- Acute toxicity estimate Acute oral toxicity: 1.200 mg/kg Acute inhalation toxicity (vapor): 3 mg/l	>= 0,1 - < 1
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9 613-088-00-6 01-2120761540-60	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1A; H317 Acute Tox. 2; H330 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 --- M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1 --- specific concentration limit Skin Sens. 1A; H317 >= 0,036 % --- Acute toxicity estimate Acute oral toxicity: 450 mg/kg Acute inhalation toxicity (dust/mist): 0,21 mg/l	>= 0,0025 - < 0,025
octhilinone (ISO)	26530-20-1 247-761-7 613-112-00-5	Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 3; H311	>= 0,0025 - < 0,025

	01-2120768921-45	Skin Corr. 1; H314 Eye Dam. 1; H318 Skin Sens. 1A; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH071 M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100 specific concentration limit Skin Sens. 1A; H317 >= 0,0015 % Acute toxicity estimate Acute oral toxicity: 125 mg/kg Acute inhalation toxicity (dust/mist): 0,27 mg/l Acute dermal toxicity: 311 mg/kg	
terbutryn	886-50-0 212-950-5	Acute Tox. 4; H302 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 Skin Sens. 1; H317 M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100 specific concentration limit Skin Sens. 1; H317 >= 3 %	>= 0,0025 - < 0,025
2-methylisothiazol-3(2H)-one	2682-20-4 220-239-6	Acute Tox. 2; H330 Acute Tox. 3; H311	>= 0,0025 - < 0,025

	613-326-00-9 01-2120764690-50	Acute Tox. 3; H301 Skin Corr. 1B; H314 Eye Dam. 1; H318 Skin Sens. 1A; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH071 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 1 specific concentration limit Skin Sens. 1A; H317 >= 0,0015 %	
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9 613-167-00-5 01-2120764691-48	Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 2; H310 Skin Corr. 1C; H314 Eye Dam. 1; H318 Skin Sens. 1A; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH071 M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100 specific concentration limit Skin Corr. 1C; H314 >= 0,6 % Skin Irrit. 2; H315 0,06 - < 0,6 % Eye Irrit. 2; H319 0,06 - < 0,6 % Skin Sens. 1A; H317 >= 0,0015 % Eye Dam. 1; H318	>= 0,0002 - < 0,0015

		>= 0,6 %	
Substances with a workplace exposure limit :			
titanium dioxide	13463-67-7 236-675-5 01-2119489379-17		>= 10 - < 20
barium sulfate	7727-43-7 231-784-4 01-2119491274-35		>= 1 - < 10
Talc (Mg3H2(SiO3)4)	14807-96-6 238-877-9 01-2120140278-58		>= 1 - < 10
Kieselguhr, soda ash flux-calcined	68855-54-9 272-489-0 21-2119488518-22		>= 1 - < 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice : Never give anything by mouth to an unconscious person.
If you feel unwell, seek medical advice (show the label where possible).
Move out of dangerous area.
First aider needs to protect himself.

If inhaled : Move to fresh air.

In case of skin contact : Take off all contaminated clothing immediately.
Do NOT use solvents or thinners.
In case of contact, immediately flush skin with soap and plenty of water.

In case of eye contact : If eye irritation persists: Get medical advice/ attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If swallowed : Seek medical advice.
Clean mouth with water and drink afterwards plenty of water.
If swallowed, DO NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Risks : May cause an allergic skin reaction.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Do not use a solid water stream as it may scatter and spread fire.
Unsuitable extinguishing media	:	None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting	:	In case of fire hazardous decomposition products may be produced such as: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

5.3 Advice for firefighters

Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for firefighting if necessary.
Further information	:	Use water spray to cool unopened containers. Standard procedure for chemical fires. The product itself does not burn.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Use protective shoes or boots with rough rubber sole. Material can create slippery conditions. Do not get in eyes, on skin, or on clothing.

6.2 Environmental precautions

Environmental precautions	:	Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities. Do not flush into surface water or sanitary sewer system.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	:	Keep in suitable, closed containers for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

6.4 Reference to other sections

For further information see Section 7 of the safety data sheet.
, For personal protection see section 8., For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Use only with adequate ventilation.
For personal protection see section 8.
No special technical protective measures required.

No interior use.

Hygiene measures : Wash hands before eating, drinking, or smoking. Do not eat, drink or smoke when using this product. Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Perishable if frozen. To maintain product quality, do not store in heat or direct sunlight. Store at room temperature in the original container. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Advice on common storage : Keep away from oxidizing agents and strongly acid or alkaline materials.

Storage class (TRGS 510) : 12

7.3 Specific end use(s)

Specific use(s) : This information is not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
titanium dioxide	13463-67-7	MAK (measured as the alveolate fraction)	0,3 mg/m3	DE DFG MAK
	Peak-limit category: 8; II			
	Further information: Substances that cause cancer in humans or animals or that are considered to be carcinogenic for humans and for which a MAK value can be derived., Damage to the embryo or foetus is unlikely when the MAK value or the BAT value is observed			
		AGW (Inhalable	10 mg/m3	DE TRGS

		fraction)	(Titanium dioxide)	900
	Peak-limit category: 2;(II)			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
		AGW (Alveolate fraction)	1,25 mg/m3 (Titanium dioxide)	DE TRGS 900
	Peak-limit category: 2;(II)			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
		BM (Alveolar dust fraction)	0,5 mg/m3	DE TRGS 527
barium sulfate	7727-43-7	MAK (measured as the alveolate fraction)	0,3 mg/m3	DE DFG MAK
	Peak-limit category: 8; II			
	Further information: Substances that cause cancer in humans or animals or that are considered to be carcinogenic for humans and for which a MAK value can be derived., Damage to the embryo or foetus is unlikely when the MAK value or the BAT value is observed			
		MAK (inhalable fraction)	4 mg/m3	DE DFG MAK
	Peak-limit category: 8; II			
	Further information: Substances that cause cancer in humans or animals or that are considered to be carcinogenic for humans and for which a MAK value can be derived., Damage to the embryo or foetus is unlikely when the MAK value or the BAT value is observed			
		AGW (Inhalable fraction)	10 mg/m3	DE TRGS 900
	Peak-limit category: 2;(II)			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
		AGW (Alveolate fraction)	1,25 mg/m3	DE TRGS 900
	Peak-limit category: 2;(II)			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
		BM (Alveolar dust fraction)	0,5 mg/m3	DE TRGS 527
Talc (Mg3H2(SiO3)4)	14807-96-6	AGW (Inhalable fraction)	10 mg/m3	DE TRGS 900
	Peak-limit category: 2;(II)			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
		AGW (Alveolate fraction)	1,25 mg/m3	DE TRGS 900
	Peak-limit category: 2;(II)			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
Kieselguhr, soda ash flux-calcined	68855-54-9	AGW (Alveolate fraction)	0,3 mg/m3	DE TRGS 900

	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
		MAK (measured as the alveolate fraction)	0,3 mg/m3	DE DFG MAK
	Further information: Damage to the embryo or foetus is unlikely when the MAK value or the BAT value is observed			
		MAK (measured as the alveolate fraction)	0,02 mg/m3	DE DFG MAK
	Peak-limit category: 8; II			
	Further information: Damage to the embryo or foetus is unlikely when the MAK value or the BAT value is observed			
2-butoxyethanol	111-76-2	TWA	20 ppm 98 mg/m3	2000/39/EC
	Further information: Identifies the possibility of significant uptake through the skin, Indicative			
		STEL	50 ppm 246 mg/m3	2000/39/EC
	Further information: Identifies the possibility of significant uptake through the skin, Indicative			
		MAK	10 ppm 49 mg/m3	DE DFG MAK
	Peak-limit category: 2; I			
	Further information: Danger of absorption through the skin, Damage to the embryo or foetus is unlikely when the MAK value or the BAT value is observed			
		AGW	10 ppm 49 mg/m3	DE TRGS 900
	Peak-limit category: 2;(I)			
	Further information: Skin absorption, When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
octhilinone (ISO)	26530-20-1	MAK (inhalable fraction)	0,05 mg/m3	DE DFG MAK
	Peak-limit category: 2; I			
	Further information: Danger of sensitization of the skin, Danger of absorption through the skin, Damage to the embryo or foetus is unlikely when the MAK value or the BAT value is observed			
		AGW (Inhalable fraction)	0,05 mg/m3	DE TRGS 900
	Peak-limit category: 2;(I)			
	Further information: Skin absorption, When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9	MAK (inhalable fraction)	0,2 mg/m3	DE DFG MAK
	Peak-limit category: 2; I			
	Further information: Danger of sensitization of the skin, Damage to the em-			

	bryo or foetus is unlikely when the MAK value or the BAT value is observed

Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
2-butoxyethanol	111-76-2	butoxy acetic acid: 150 mg/g creatinine (Urine)	end of shift, for long-term exposures after several previous shifts, Immediately after exposition or after working hours	DE DFG BAT
		butoxy acetic acid: 150 mg/g creatinine (Urine)	In case of long-term exposure: after more than one shift, Immediately after exposure or after working hours	TRGS 903

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Routes of exposure	Potential health effects	Value
titanium dioxide	Consumers	Ingestion	Long-term systemic effects	700,00 mg/kg bw/day
	Workers	Inhalation	Long-term local effects	10,00 mg/m3
barium sulfate	Consumers	Inhalation	Long-term systemic effects	10,00 mg/m3
	Consumers	Ingestion	Long-term systemic effects	13000,00 mg/kg bw/day
	Workers	Inhalation	Long-term systemic effects	10,00 mg/m3
	Workers	Inhalation	Long-term local effects	10,00 mg/m3
Kieselguhr, soda ash flux-calcined	Consumers	Ingestion	Long-term systemic effects	18,70 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0,05 mg/m3
	Workers	Inhalation	Long-term systemic effects	0,05 mg/m3
2-butoxyethanol	Consumers	Inhalation	Long-term systemic effects	59,00 mg/m3
	Consumers	Ingestion	Acute systemic effects	26,70 mg/kg bw/day
	Consumers	Skin contact	Long-term systemic effects	75,00 mg/kg bw/day
	Consumers	Skin contact	Acute systemic effects	89,00 mg/kg bw/day
	Consumers	Inhalation	Acute local effects	147,00 mg/m3
	Consumers	Ingestion	Long-term systemic effects	6,30 mg/kg bw/day
	Consumers	Inhalation	Acute systemic ef-	426,00 mg/m3

			fects	
	Workers	Inhalation	Acute systemic effects	1091,00 mg/m3
	Workers	Inhalation	Acute local effects	246,00 mg/m3
	Workers	Inhalation	Long-term systemic effects	98,00 mg/m3
	Workers	Skin contact	Acute systemic effects	89,00 mg/kg bw/day
	Workers	Skin contact	Long-term systemic effects	125,00 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
titanium dioxide	Sewage treatment plant	100 mg/l
	Fresh water	0,184 mg/l
	Soil	100 mg/kg dry weight (d.w.)
	Sea water	0,0184 mg/l
	Fresh water sediment	1000 mg/kg dry weight (d.w.)
	Sea sediment	100 mg/kg dry weight (d.w.)
	Intermittent use/release	0,193 mg/l
barium sulfate	Fresh water	115 µg/l
	Fresh water sediment	600,4 mg/kg dry weight (d.w.)
	Soil	207,7 mg/kg dry weight (d.w.)
	Sewage treatment plant	62,2 mg/l
Kieselguhr, soda ash flux-calcined	Sewage treatment plant	100 mg/l
2-butoxyethanol	Sea sediment	3,46 mg/kg dry weight (d.w.)
	Intermittent use/release	9,1 mg/l
	Secondary Poisoning	0,02 g/kg food
	Sewage treatment plant	463 mg/l
	Sea water	0,88 mg/l
	Fresh water sediment	34,6 mg/kg dry weight (d.w.)
	Soil	2,33 mg/kg dry weight (d.w.)
	Fresh water	8,8 mg/l

8.2 Exposure controls

Personal protective equipment

Eye/face protection : DGUV Regulation 112-192 - Use of eye and face protection

Goggles

Hand protection
Material : Nitrile rubber

Glove thickness	:	0,2 mm
Protective index	:	Class 3
Remarks	:	Before removing gloves clean them with soap and water. Wear suitable gloves tested to EN374. DGUV Regulation 112-195 - Use of protective gloves
Skin and body protection	:	Safety shoes Long sleeved clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place. Skin should be washed after contact. Remove and wash contaminated clothing before re-use. During spray application: impervious clothing
Respiratory protection	:	No personal respiratory protective equipment normally required. During spray application: Do not breathe spray dust. Use A2/P2 combination filter for paint spraying. DGUV Regulation 112-190 - Use of breathing equipment

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Color	:	white
Odor	:	characteristic
Melting point/freezing point	:	ca. 0 °C
Boiling point/boiling range	:	ca. 100 °C
Upper explosion limit / Upper flammability limit	:	not determined
Lower explosion limit / Lower flammability limit	:	not determined

Flash point	:	Not applicable
Autoignition temperature	:	not determined
Decomposition temperature	:	Not applicable
pH	:	8,2 - 8,8 (20 °C) Concentration: 100 % Method: DIN EN ISO 19396-1:2020-05
Viscosity		
Viscosity, dynamic	:	800 - 900 mPa.s (20 °C)
Viscosity, kinematic	:	Not applicable
Flow time	:	Not applicable
Solubility(ies)		
Water solubility	:	completely miscible
Partition coefficient: n-octanol/water	:	not determined
Vapor pressure	:	ca. 23,4 hPa (20 °C)
Density	:	1,39 - 1,42 g/cm3 (20 °C) Method: DIN EN ISO 2811-1
Bulk density	:	Not applicable
Relative vapor density	:	not determined

9.2 Other information

Explosives	:	Not applicable
Oxidizing properties	:	Not applicable

Flammability (liquids)	:	The product is not flammable.
Evaporation rate	:	Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity
No decomposition if stored and applied as directed.

10.2 Chemical stability
No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions
Hazardous reactions : No decomposition if stored and applied as directed.

10.4 Conditions to avoid
Conditions to avoid : Protect from frost, heat and sunlight.

10.5 Incompatible materials
Materials to avoid : Incompatible with acids and bases.
Incompatible with oxidizing agents.

10.6 Hazardous decomposition products
No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

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

Acute toxicity

Not classified based on available information.

Product:

Acute inhalation toxicity : Acute toxicity estimate: > 20 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: Calculation method

Components:

2-butoxyethanol:

Acute oral toxicity : Acute toxicity estimate: 1.200 mg/kg
Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008

Acute inhalation toxicity	:	Acute toxicity estimate: 3 mg/l Test atmosphere: vapor Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008

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

Acute oral toxicity	:	Acute toxicity estimate: 450 mg/kg Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008
Acute inhalation toxicity	:	Acute toxicity estimate: 0,21 mg/l Test atmosphere: dust/mist Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008
Acute dermal toxicity	:	LD50 (Rat): > 2.000 mg/kg

octhilinone (ISO):

Acute oral toxicity	:	Acute toxicity estimate: 125 mg/kg Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008
Acute inhalation toxicity	:	Acute toxicity estimate: 0,27 mg/l Test atmosphere: dust/mist Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008
Acute dermal toxicity	:	Acute toxicity estimate: 311 mg/kg Method: Acute toxicity estimate according to Regulation (EC) No. 1272/2008

terbutryn:

Acute oral toxicity	:	LD50: 1.000 mg/kg
Acute dermal toxicity	:	LD50 Dermal (Rat): > 2.000 mg/kg

2-methylisothiazol-3(2H)-one:

Acute oral toxicity	:	LD50 (Rat): 120 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 0,145 mg/l Exposure time: 4 h Test atmosphere: dust/mist

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Acute oral toxicity	:	LD50 (Rat): 66 mg/kg Method: OECD Test Guideline 401

Acute inhalation toxicity	:	LC50 (Rat): 0,17 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403
Acute dermal toxicity	:	LD50 (Rat): > 141 mg/kg Method: OECD Test Guideline 402

Skin corrosion/irritation
Not classified based on available information.

Serious eye damage/eye irritation
Not classified based on available information.

Respiratory or skin sensitization

Skin sensitization
May cause an allergic skin reaction.

Respiratory sensitization
Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.

Reproductive toxicity
Not classified based on available information.

STOT-single exposure
Not classified based on available information.

STOT-repeated exposure
Not classified based on available information.

Aspiration toxicity
Not classified based on available information.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna Straus (Water flea)): > 10 mg/l End point: Immobilization Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 GLP: no
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 10 mg/l End point: Growth inhibition Exposure time: 72 h Test Type: Cell multiplication inhibition test Method: OECD Test Guideline 201 GLP: no

Ecotoxicology Assessment

Chronic aquatic toxicity	:	Harmful to aquatic life with long lasting effects.

Components:

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

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 2,2 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia): 3,27 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Selenastrum capricornutum (green algae)): 0,11 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity)	:	1
M-Factor (Chronic aquatic toxicity)	:	1

octhilinone (ISO):

M-Factor (Acute aquatic toxicity)	:	100
M-Factor (Chronic aquatic	:	100

toxicity)

terbutryn:

M-Factor (Acute aquatic toxicity) : 100

M-Factor (Chronic aquatic toxicity) : 100

2-methylisothiazol-3(2H)-one:

M-Factor (Acute aquatic toxicity) : 10

M-Factor (Chronic aquatic toxicity) : 1

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

M-Factor (Acute aquatic toxicity) : 100

M-Factor (Chronic aquatic toxicity) : 100

barium sulfate:

Toxicity to fish : Remarks: No toxicity at the limit of solubility.

Toxicity to daphnia and other aquatic invertebrates : Remarks: No toxicity at the limit of solubility.

Toxicity to algae/aquatic plants : Remarks: No toxicity at the limit of solubility.

Toxicity to fish (Chronic toxicity) : Remarks: No toxicity at the limit of solubility.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Remarks: No toxicity at the limit of solubility.

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

Components:

2-butoxyethanol:

Partition coefficient: n- : log Pow: 0,81 (25 °C)

octanol/water pH: 7

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

Partition coefficient: n-octanol/water : log Pow: 0,63 - 0,76
pH: 7

octhilinone (ISO):

Partition coefficient: n-octanol/water : log Pow: 2,61 (25 °C)
pH: 7

terbutryn:

Partition coefficient: n-octanol/water : log Pow: 3,66

2-methylisothiazol-3(2H)-one:

Partition coefficient: n-octanol/water : log Pow: -0,486 (25 °C)
pH: 7

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Partition coefficient: n-octanol/water : log Pow: <= 0,75
Method: OECD Test Guideline 117

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological infor- : Harmful to aquatic organisms, may cause long-term adverse

mation effects in the aquatic environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	:	Materials and all related packaging must be disposed of in a safe way in accordance with the full requirements of the local, regional, national and international authorities. Washing water must not be discharged into the sewage system or the environment.
Contaminated packaging	:	Only completely emptied containers should be given for recycling.
Waste Code	:	used product 080112, waste paint and varnish other than those mentioned in 08 01 11*

SECTION 14: Transport information

14.1 UN number or ID number

ADN	:	Not regulated as a dangerous good
ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA	:	Not regulated as a dangerous good

14.2 UN proper shipping name

ADN	:	Not regulated as a dangerous good
ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA	:	Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADN	:	Not regulated as a dangerous good
ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA	:	Not regulated as a dangerous good

14.4 Packing group

ADN	:	Not regulated as a dangerous good
ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA (Cargo)	:	Not regulated as a dangerous good
IATA (Passenger)	:	Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 75, 3 If you intend to use this product as tattoo ink, please contact your vendor.
REACH - Candidate List of Substances of Very High Concern for Authorization (Article 59) (SVHC).	:	None
Regulation (EU) No 2024/590 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	None
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.		Not applicable

Water hazard class (Germany)	:	WGK 1 slightly water endangering Classification according to AwSV, Annex 1 (5.2)
.	:	BSW50: Coating materials, water-based, containing solvents, film-protected
Labeling according to Regulation (EU) 528/2012	:	Treated article, contains a biocidal product. Film preservative: terbutryn, OIT. preservatives: BIT, MIT, CIT/MIT (3:1).
Volatile organic compounds	:	Directive 2010/75/EU of 24 November 2010 on industrial and livestock rearing emissions (integrated pollution prevention and control) Volatile organic compounds (VOC) content: 0,11 %
Volatile organic compounds	:	Directive 2004/42/EC < 1 % < 10 g/l

Other regulations:

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

Take note of Law on the protection of mothers at work, in education and in studies (Maternity Protection Act - MuSchG).

15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this mixture.

SECTION 16: Other information

Full text of H-Statements

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.
H331	:	Toxic if inhaled.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
EUH071	:	Corrosive to the respiratory tract.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Skin Corr.	:	Skin corrosion
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitization
2000/39/EC	:	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
DE DFG BAT	:	Germany. MAK BAT Annex XIII
DE DFG MAK	:	Germany. MAK BAT Annex IIa
DE TRGS 527	:	Germany. TRGS 527 - Activities with nanomaterials
DE TRGS 900	:	Germany. TRGS 900 - Occupational exposure limit values.
TRGS 903	:	TRGS 903 - Biological limit values
2000/39/EC / TWA	:	Limit Value - eight hours
2000/39/EC / STEL	:	Short term exposure limit
DE DFG MAK / MAK	:	MAK value
DE TRGS 527 / BM	:	Assessment scale
DE TRGS 900 / AGW	:	Time Weighted Average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Other information	:	No exposure scenario communication is required for this product according to REACH Regulation No. 1907/2006 EC. Communication of Uses is not required in accordance with REACH Article 31(1)(a) - registered substances / mixtures do not meet the criteria for classification as hazardous in accordance with Regulations 1272/2008 EC or 1999/45/EC.
Sources of key data used to compile the Material Safety Data Sheet	:	ECHA WebSite ACGIH (American Conference of Government Industrial Hygienists). 2014 TLVs and BEIs. Threshold Limit Values (TLVs) for chemical substances and physical agents and Biological Exposure Indices (BEIs) with Seventh Edition documentation. 2014 ACGIH, Cincinnati OH NIOSH - Registry of toxic effects of chemical substances ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European

Communities
SAX'S - Dangerous properties of industrial materials
GESTIS - Database on hazardous substances - Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung (IFA, Institute for Occupational Safety and Health of the German Social Accident Insurance)
Toxnet - Toxicology Data Network

Classification of the mixture:		**Classification procedure:**
Skin Sens. 1	H317	Calculation method
Aquatic Chronic 3	H412	Based on product data or assessment

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

REACH Information

According to our legal obligation we implement the Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). We will adjust and update our safety data sheets on a regular base in accordance with the information of our upstream-suppliers. As usual we will inform you about the adjustments.
Regarding to the REACH regulation we would like to point out that DAW as a downstream user will not register on behalf of our company. We will rely on information from our suppliers. As soon as new information is available our safety data sheets will be amended accordingly.

DE / EN