

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**SRS Antikorrol M plus**

Revision date: 08.10.2024

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

SRS Antikorrol M plus

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

engine oil

**Uses advised against**

none

**1.3. Details of the supplier of the safety data sheet**

Company name: SRS Schmierstoff Vertrieb GmbH  
Street: Neuenkirchener Straße 8  
Place: D-48497 Salzbergen  
Telephone: 05976 - 945-0  
Responsible Department: Abt. Produktsicherheit: info.reach@srs-oil.de  
**1.4. Emergency telephone number:** Gift-Informationszentrum Nord (Göttingen) - Telefon 0551-19240

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****Regulation (EC) No 1272/2008****Hazard statements**

H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P273 Avoid release to the environment.  
P501 Dispose of contents/container to local/regional/national/international regulations.

**Special labelling of certain mixtures**

EUH208 Contains Alkyl- (C18-C28)  
Toluenesulfonic acid,  
Calcium salts, borated, Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts.  
May produce an allergic reaction.

**2.3. Other hazards**

This mixture contains no substances of very high concern (SVHC) (>0,1%) which are included in the Candidate List according to Article 59 of REACH.  
For information or further instructions, see also section 11 or 12.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures**

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**Relevant ingredients**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
68784-31-6	Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts			1 - < 3 %
	272-238-5		01-2119657973-23	
	Eye Dam. 1, Aquatic Chronic 2; H318 H411			
	Alkyl- (C18-C28) Toluenesulfonic acid, Calcium salts, borated			1 - < 3 %
	953-650-0			
	Repr. 2, Skin Sens. 1B; H361d H317			
722503-68-6	Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts			0.5 - < 1 %
	682-816-2			
	Skin Sens. 1B; H317			
1218787-32-6	2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol			0.2 - < 0.3 %
	620-540-6		01-2119510877-33	
	Acute Tox. 4, Skin Corr. 1C, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1; H302 H314 H318 H400 H410			
27859-58-1	(tetrapropenyl)succinic acid			0.2 - < 0.3 %
	248-698-8		01-2120752504-57	
	Repr. 2, Skin Irrit. 2, Eye Dam. 1, STOT RE 2; H361d H315 H318 H373			

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

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
68784-31-6	272-238-5	Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts	1 - < 3 %
	dermal: LD50 = >5000 mg/kg; oral: LD50 = >2000 mg/kg		
	953-650-0	Alkyl- (C18-C28) Toluenesulfonic acid, Calcium salts, borated	1 - < 3 %
	Repr. 2; H361d: >= 17,15 - 100 Skin Sens. 1B; H317: >= 2 - 100		
722503-68-6	682-816-2	Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts	0.5 - < 1 %
	Skin Sens. 1B; H317: >= 2 - 100		
1218787-32-6	620-540-6	2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	0.2 - < 0.3 %
	oral: LD50 = 1200 mg/kg Aquatic Acute 1; H400: M=10		
27859-58-1	248-698-8	(tetrapropenyl)succinic acid	0.2 - < 0.3 %
	oral: LD50 = 2100 mg/kg		

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

**After inhalation**

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In all cases of doubt, or when symptoms persist, seek medical advice.

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**After contact with skin**

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing. In case of skin irritation, seek medical treatment.

**After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water. In case of troubles or persistent symptoms, consult an ophthalmologist.

**After ingestion**

Do NOT induce vomiting. Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). Never give anything by mouth to an unconscious person or a person with cramps. When in doubt or if symptoms are observed, get medical advice.

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

If swallowed or in the event of vomiting, risk of entering the lungs.

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

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Sand. Foam. Carbon dioxide (CO<sub>2</sub>). Extinguishing powder. In case of major fire and large quantities: Water spray jet. Water mist.

**Unsuitable extinguishing media**

High power water jet.

**5.2. Special hazards arising from the substance or mixture**

Burning produces heavy smoke.

In case of fire may be liberated: Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>) Sulphur dioxide (SO<sub>2</sub>) Nitrogen oxides (NO<sub>x</sub>)

**5.3. Advice for firefighters**

In case of fire and/or explosion do not breathe fumes. In case of fire: Wear self-contained breathing apparatus.

**Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Co-ordinate fire-fighting measures to the fire surroundings.

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

Ventilate affected area.

Special danger of slipping by leaking/spilling product.

**For non-emergency personnel**

Wear personal protection equipment (refer to section 8).

**For emergency responders**

No special precautionary measures are necessary.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Do not allow to enter into soil/subsoil. If required, notify relevant authorities according to all applicable regulations.

**6.3. Methods and material for containment and cleaning up****For containment**

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Treat the recovered material as prescribed in the section on waste disposal.

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**For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

**6.4. Reference to other sections**

No information available.

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

Wear suitable protective clothing. ( See section 8. )

Avoid formation of oil dust.

**Advice on protection against fire and explosion**

Usual measures for fire prevention. Keep away from sources of ignition - No smoking.

Fire class B

**Advice on general occupational hygiene**

Clean skin thoroughly after working.

Do not put any product-impregnated cleaning rags into your trouser pockets.

**Further information on handling**

Do not breathe vapour/aerosol.

Avoid contact with eyes and skin.

General protection and hygiene measures: See section 8.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

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

**Hints on joint storage**

Do not store together with: Gas. Explosives. Oxidizing substances. Radioactive substances. Infectious substances

**Further information on storage conditions**

Temperature control required. Protect from light. Keep container tightly closed. Do not allow contact with air.

**7.3. Specific end use(s)**

See section 1.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters**

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**DNEL/DMEL values**

CAS No	Name of agent			
DNEL type		Exposure route	Effect	Value
68784-31-6	Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts			
Worker DNEL, long-term		inhalation	systemic	2.93 mg/m³
Worker DNEL, acute		inhalation	systemic	496.4 mg/m³
Worker DNEL, long-term		dermal	systemic	10.42 mg/kg bw/day
Worker DNEL, acute		dermal	systemic	100 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	11.75 mg/m³
Consumer DNEL, acute		inhalation	systemic	198.6 mg/m³
Consumer DNEL, long-term		dermal	systemic	2.1 mg/kg bw/day
Consumer DNEL, acute		dermal	systemic	50 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0.21 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	29 mg/kg bw/day
1218787-32-6	2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol			
Worker DNEL, long-term		dermal	systemic	0,42 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,522 mg/m³
Consumer DNEL, long-term		dermal	systemic	0,15 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,15 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	2,96 mg/m³
27859-58-1	(tetrapropenyl)succinic acid			
Worker DNEL, long-term		inhalation	systemic	1,2 mg/m³
Worker DNEL, long-term		dermal	systemic	0,7 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,3 mg/m³
Consumer DNEL, long-term		dermal	systemic	0,3 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,2 mg/kg bw/day

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#### PNEC values

CAS No	Name of agent	
Environmental compartment		Value
68784-31-6	Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts	
Freshwater		0,04 mg/l
Marine water		0,0046 mg/l
Freshwater sediment		0,07 mg/kg
Marine sediment		0,007 mg/kg
Secondary poisoning		8,33 mg/kg
Micro-organisms in sewage treatment plants (STP)		3,8 mg/l
Soil		0,055 mg/kg
1218787-32-6	2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	
Freshwater		0,000214 mg/l
Freshwater (intermittent releases)		0,00087 mg/l
Marine water		0,000021 mg/l
Freshwater sediment		1,692 mg/kg
Marine sediment		0,169 mg/kg
Secondary poisoning		2 mg/kg
Micro-organisms in sewage treatment plants (STP)		1,5 mg/l
Soil		5 mg/kg
27859-58-1	(tetrapropenyl)succinic acid	
Freshwater		0,1 mg/l
Freshwater (intermittent releases)		1 mg/l
Marine water		0,01 mg/l
Freshwater sediment		62,1 mg/kg
Marine sediment		6,21 mg/kg
Secondary poisoning		3,33 mg/kg
Micro-organisms in sewage treatment plants (STP)		100 mg/l
Soil		12,4 mg/kg

#### Additional advice on limit values

Air limit values:

Possibility of exposure to Aerosol (Mineral oil )

Limit value (TLV-TWA ) = 5 mg/ m3 - Source: ACGIH

Limit value (TLV-STEEL ) = 10 mg/ m3 - Source: ACGIH

STEL: short-term exposure limits

TLV: Threshold Limiting Value

TWA: time weighted average

ACGIH: American Conference of Governmental Industrial Hygienists

#### 8.2. Exposure controls



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**Appropriate engineering controls**

Provide adequate ventilation.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Safety goggles with side protection. In case of increased risk add protective face shield. EN 166

**Hand protection**

Use safety gloves of following materials: NBR (nitrile) / neopren / viton (permeationslevel 5 - 6), Cat. II according to norm EN 374/EN 388.

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

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.

Gloves must be periodically inspected and changed in case of wear, perforations or contaminations.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

**Skin protection**

Oil-resistant and hardly inflammable protective clothing.

**Respiratory protection**

With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at:

-aerosol or mist formation

-Exceeding exposure limit values

Suitable respiratory protection apparatus: Respiratory equipment in case of nebulosity or aerosol: Use a mask with a filter type A2, A2/P2 or ABEK.

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

**Environmental exposure controls**

No information available.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	clear
Odour:	characteristic

**Test method**

Melting point/freezing point:	No information available.
Boiling point or initial boiling point and boiling range:	No information available.
Flammability:	No information available.
Lower explosion limits:	No information available.
Upper explosion limits:	No information available.
Flash point:	244 °C
Auto-ignition temperature:	No information available.
Decomposition temperature:	No information available.
pH-Value:	No information available.
Viscosity / kinematic: (at 40 °C)	99,9 mm <sup>2</sup> /s DIN EN ISO 3104
Water solubility:	No information available.
Solubility in other solvents	
No information available.	
Partition coefficient n-octanol/water:	No information available.

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Vapour pressure: (at 20 °C)	No information available.
Vapour pressure: (at 50 °C)	No information available.
Density (at 15 °C):	0,892 g/cm <sup>3</sup> DIN 51757
Bulk density:	No information available.
Relative vapour density:	No information available.
Particle characteristics:	No information available.

**9.2. Other information****Information with regard to physical hazard classes**

Explosive properties

none

Sustaining combustion:

No data available

Self-ignition temperature

Solid:

No information available.

Gas:

No information available.

Oxidizing properties

none

**Other safety characteristics**

Evaporation rate:

No information available.

Solvent separation test:

No information available.

Solvent content:

No information available.

Solid content:

No information available.

Sublimation point:

No information available.

Softening point:

No information available.

Pour point:

-30 °C ASTM D 5985

Viscosity / dynamic:

No information available.

Flow time:

No information available.

**SECTION 10: Stability and reactivity****10.1. Reactivity**

No information available.

**10.2. Chemical stability**

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

**10.3. Possibility of hazardous reactions**

No hazardous reactions known.

Refer to chapter 10.5.

**10.4. Conditions to avoid**

No information available.

**10.5. Incompatible materials**

Oxidising agent, strong

**10.6. Hazardous decomposition products**

No known hazardous decomposition products.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, metabolism and distribution**

No information available.



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**Acute toxicity**

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

**ATEmix calculated**

ATE (oral) &gt; 2000 mg/kg; ATE (dermal) &gt; 2000 mg/kg; ATE (inhalation vapour) &gt; 20 mg/l; ATE (inhalation dust/mist) &gt; 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
68784-31-6	Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts				
	oral	LD50 >2000 mg/kg	Rat.	ECHA Dossier	OECD Guideline 401
	dermal	LD50 >5000 mg/kg	Rabbit	ECHA Dossier	OECD Guideline 402
1218787-32-6	2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol				
	oral	LD50 1200 mg/kg	Rat	ECHA Dossier	OECD Guideline 425
27859-58-1	(tetrapropenyl)succinic acid				
	oral	LD50 2100 mg/kg	Rat	ECHA Dossier	OECD Guideline 401

**Irritation and corrosivity**

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.

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts:

Irritant effect on the eye: non-irritant. By analogy. Raw material classification

**Sensitising effects**

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

Contains Alkyl- (C18-C28)

Toluenesulfonic acid,

Calcium salts, borated, Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts.

May produce an allergic reaction.

**Carcinogenic/mutagenic/toxic effects for reproduction**

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Germ cell mutagenicity: Based on available data, the classification criteria are not met.

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

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

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts:

Subacute oral toxicity: Method: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents);

Species: Rat; Exposure duration: 28 d; Results: NOAEL = 125mg/kg; Literature information: REACH Dossier

2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol:

In-vitro mutagenicity:

Method: OECD Guideline 471 (Bacterial Reverse Mutation Assay)

Method: OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)

Method: OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)

Result: negative (READ ACROSS)

Literature information: REACH Dossier

Reproductive toxicity/ Developmental toxicity/teratogenicity:

Method: - OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Species: Rat

Results: NOAEL (P0) = 75 mg/kg; NOAEL (F1) = 75 mg/kg

Reproductive toxicity:

Method: OECD Guideline 443 (Extended One-Generation Reproductive Toxicity Study)

Species: Rat

Result: NOAEL (P0) >= 150 mg/kg; NOAEL (F1) >= 150 mg/kg

Literature information: REACH Dossier

Developmental toxicity/teratogenicity:

Method: OECD Guideline 414 (Prenatal Developmental Toxicity Study)

Species: Rat

Results: NOEL (Maternal toxicity, fetus) > 150 mg/kg; Literature information: REACH Dossier

Method: OECD Guideline 414 (Prenatal Developmental Toxicity Study)

Species: Rabbit

Results: NOAEL (Maternal toxicity, fetus) > 150 mg/kg; Literature information: REACH Dossier

Method: OECD Guideline 414 (Prenatal Developmental Toxicity Study)

Species: Rabbit

Results: NOAEL (fetus) >= 60 mg/kg; Literature information: REACH Dossier

(tetrapropenyl)succinic acid:

In-vitro mutagenicity:

Method:

-OECD Guideline 471 (Bacterial Reverse Mutation Assay)

-OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)

-OECD Guideline 490 (In Vitro Mammalian Cell Gene Mutation Tests Using the Thymidine Kinase Gene)

Result: negative

Literature information: REACH Dossier

Developmental toxicity/teratogenicity/Reproductive toxicity:

Method: OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)

Species: Rat

Result: NOAEL (P0) > 100 mg/kg; Result: NOAEL (F1) >100 mg/kg

Literature information: REACH Dossier

**STOT-single exposure**

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

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**STOT-repeated exposure**

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

Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts:

In-vitro mutagenicity: Method: OECD Guideline 471 (Bacterial Reverse Mutation Assay); Result: negative ;

Literature information: REACH Dossier

2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol:

Subchronic oral toxicity

Exposure time: 90d

Species: Wistar Rat.

Method: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Result: NOEL = 50 mg/kg bw/day

Literature information: REACH Dossier

Method: -

Species: Rat.

Result: NOEL = 35 mg/kg.

Literature information: REACH Dossier

(tetrapropenyl)succinic acid:

Subacute oral toxicity:

Method: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)

Species: Rat ; Exposure duration: 28 d

Results: NOAEL >= 100 mg/kg

Literature information: REACH Dossier

**Aspiration hazard**

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

**11.2. Information on other hazards****Endocrine disrupting properties**

This product does not contain a substance (> 0,1 %) that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**Other information**

Frequently or prolonged contact with skin may cause dermal irritation.

**SECTION 12: Ecological information****12.1. Toxicity**

Harmful to aquatic life with long lasting effects.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
68784-31-6	Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts					
	Acute fish toxicity	LC50 4,4 mg/l	LL50 =	96 h	Oncorhynchus mykiss	ECHA Dossier
	Acute algae toxicity	ErC50 410 mg/l	EL50 =	72 h	Desmodesmus subspicatus	ECHA Dossier
	Acute crustacea toxicity	EC50 75 mg/l	EL50 =	48 h	Daphnia magna	ECHA Dossier
	Crustacea toxicity	NOEC	0,4 mg/l	21 d	Daphnia magna	ECHA Dossier
1218787-32-6	2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol					
	Acute fish toxicity	LC50	0,6 mg/l	96 h	Danio rerio	ECHA Dossier
	Acute algae toxicity	ErC50 mg/l	0,0867	72 h	Pseudokirchneriella subcapitata	ECHA Dossier
	Crustacea toxicity	NOEC mg/l	0,32	21 d	Daphnia magna	ECHA Dossier
	Acute bacteria toxicity	EC50 ( )	167 mg/l	3 h	activated sludge of a predominantly domestic sewage	ECHA Dossier
27859-58-1	(tetrapropenyl)succinic acid					
	Acute fish toxicity	LC50 mg/l	> 100	96 h	Oncorhynchus mykiss	ECHA Dossier
	Acute algae toxicity	ErC50	100 mg/l	96 h	Pseudokirchneriella subcapitata	ECHA Dossier
	Acute crustacea toxicity	EC50 mg/l	> 100	48 h	Daphnia magna	ECHA Dossier

#### 12.2. Persistence and degradability

The product is slightly soluble in water. It can be largely eliminated from the water by abiotic processes, e.g. mechanical separation.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
68784-31-6	Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts			
	EU Method C.6	< 5%	27	ECHA Dossier
	Readily biodegradable (according to OECD criteria).			
1218787-32-6	2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol			
	OECD Guideline 301 D	52%	28	ECHA Dossier
	Not easily bio-degradable (according to OECD-criteria).			
27859-58-1	(tetrapropenyl)succinic acid			
	OECD 301 F / ISO 9408 / EEC 92/69 annex V, C.4-D	18,3 %	28	ECHA Dossier
	Not easily bio-degradable (according to OECD-criteria).			

#### 12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

#### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
1218787-32-6	2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	3,6
27859-58-1	(tetrapropenyl)succinic acid	>= 3,286

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**BCF**

CAS No	Chemical name	BCF	Species	Source
1218787-32-6	2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	110,2		QSAR result (2010)

**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.

The aforementioned statement applies to substances contained in the product with a minimum content of 0.1%.

**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.

The aforementioned statement applies to substances contained in the product with a minimum content of 0.1%.

**12.7. Other adverse effects**

No information available.

**Further information**

Ozone depletion potential (ODP): No information available.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Dispose of waste according to applicable legislation. Consult the appropriate local waste disposal expert about waste disposal. Non-contaminated packages may be recycled. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

**List of Wastes Code - contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

**Contaminated packaging**

Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information****Land transport (ADR/RID)****14.1. UN number or ID number:**

No dangerous good in sense of this transport regulation.

**14.2. UN proper shipping name:**

No dangerous good in sense of this transport regulation.

**14.3. Transport hazard class(es):**

No dangerous good in sense of this transport regulation.

**14.4. Packing group:**

No dangerous good in sense of this transport regulation.

**Inland waterways transport (ADN)****14.1. UN number or ID number:**

UN 9006

**14.2. UN proper shipping name:**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

**14.3. Transport hazard class(es):**

9

**14.4. Packing group:**

-

Hazard label:

-

Classification code:

M12

**Marine transport (IMDG)****14.1. UN number or ID number:**

No dangerous good in sense of this transport regulation.

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**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.**14.4. Packing group:** No dangerous good in sense of this transport regulation.**Air transport (ICAO-TI/IATA-DGR)****14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.**14.4. Packing group:** No dangerous good in sense of this transport regulation.**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

Information for safe handling see chapter 7.

Information for personal protective equipment see chapter 8.

**14.7. Maritime transport in bulk according to IMO instruments**

not relevant

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Directive 2010/75/EU on industrial emissions: No information available.

Directive 2004/42/EC on VOC in paints and varnishes: No information available.

Information according to Directive 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**Additional information**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (amended by Regulation (EU) No 2020/878)

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

REACH 1907/2006 Appendix XVII, No (mixture): 3

Observe in addition any national regulations!

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

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

**Additional information**

Regulation (EU) No. 649/2012 of the European parliament and of the council concerning the export and import of dangerous chemicals: not relevant

15.2 Chemical Safety Assessment  
not applicable.**SECTION 16: Other information****Changes**

This data sheet contains changes from the previous version in section(s): 11,12,15,16.

fRev. : 1,0 - 04.05.2015

Rev. : 1,1 - 06.05.2016

Rev.: 2,0 - 15.06.2017

Rev. : 3,0 - 29.06.2018

Rev.: 4,0 - 28.06.2019

Rev. : 5,0 - 29.06.2020; Changes in chapter: 16



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Rev.: 6.0 - 17.06.2021; Changes in chapter: 3.2, 6.1, 6.3, 11.2, 12.6, 12.7, 15.1, 16

Rev.: 6.1 - 06.09.2021; Changes in chapter: 2.2, 3.2, 11.1, 12.1, 16

Rev.: 6.2 - 29.07.2022, Changes in chapter: 2.2, 2.3, 3.2, 8.2, 12.5, 12.6, 15.1, 16

Rev.: 7.0 - 01.07.2023, Changes in chapter: 2.2, 9.1, 12.5, 12.7, 16

Rev.: 7.1 - 17.10.2023, Changes in chapter: 3.2, 8.1, 9.1, 11.1, 11.2, 12.1, 12.2, 12.3, 15.1, 16

Rev.: 8.0 - 08.10.2024, Changes in chapter: 11.1, 12.1, 16

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**Abbreviations and acronyms**

Acute Tox: Acute toxicity  
Skin Corr: Skin corrosion  
Skin Irrit: Skin irritation  
Eye Dam: Eye damage  
Skin Sens: Skin sensitisation  
Repr: Reproductive toxicity  
STOT RE: Specific target organ toxicity - repeated exposure  
Aquatic Acute: Acute aquatic hazard  
Aquatic Chronic: Chronic aquatic hazard  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
CAS: Chemical Abstracts Service  
CLP: Classification, Labelling and Packaging of substances and mixtures  
d: day(s)  
DNEL: Derived No Effect Level  
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER  
EINECS: European Inventory of Existing Commercial chemical Substances  
ELINCS: European List of Notified Chemical Substances  
ECHA: European Chemicals Agency  
EWC: European Waste Catalogue  
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)  
h: hour  
LOAEL: Lowest observed adverse effect level  
LOAEC: Lowest observed adverse effect concentration  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
NOAEL: No observed adverse effect level  
NOAEC: No observed adverse effect concentration  
NLP: No-Longer Polymers  
NTP: National Toxicology Program  
N/A: not applicable  
OECD: Organisation for Economic Co-operation and Development  
PNEC: predicted no effect concentration  
PBT: Persistent bioaccumulative toxic  
PMT: Persistent, mobile and toxic  
REACH: Registration, Evaluation, Authorisation of Chemicals  
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail )  
SVHC: substance of very high concern  
TRGS: Technische Regeln für Gefahrstoffe  
UN: United Nations  
TSCA: Toxic Substances Control Act  
vPvM: very persistent and very mobile  
vPvB: very persistent and very bioaccumulative  
VOC: Volatile Organic Compounds  
WGK: Water Hazard Class (Germany)



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**Key literature references and sources for data**

<https://echa.europa.eu/>  
<https://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index.jsp>  
<https://cfpub.epa.gov/ecotox/search.cfm>  
<http://www.inchem.org/#/search>  
<https://pubchem.ncbi.nlm.nih.gov/>  
<http://ccinfoweb.ccohs.ca/rtecs/search.html>  
<https://webigoletto.uba.de/rigoletto/>

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

Classification	Classification procedure
Aquatic Chronic 3; H412	Calculation method

**Relevant H and EUH statements (number and full text)**

H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H361d Suspected of damaging the unborn child.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H411 Toxic to aquatic life with long lasting effects.  
H412 Harmful to aquatic life with long lasting effects.  
EUH208 Contains Alkyl- (C18-C28)  
Toluenesulfonic acid,  
Calcium salts, borated, Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts.  
May produce an allergic reaction.

**Further Information**

Classification according to Regulation (EC) No 1272/2008 [CLP] - Classification procedure:  
Health hazards: Calculation method.  
Environmental hazards: Calculation method.  
Physical hazards: On basis of test data

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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