

**Safety Data Sheet**

according to UK REACH Regulation

153 Gearbox treatment MP15300125A

Revision date: 28.07.2022

Product code: 1102290

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

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

Additive

1.3. Details of the supplier of the safety data sheet

Company name:	TUNAP GmbH & Co. KG	
Street:	Buergermeister-Seidl-Strasse 2	
Place:	D-82515 Wolfratshausen	
Telephone:	+49 (0) 8171/1600-0	Telefax: +49 (0) 8171/1600-40
e-mail:	sdb@tunap.com	
Internet:	www.tunap.com	

1.4. Emergency telephone number: 111 NHS (National Health Service)**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GB CLP Regulation**

Aerosol 3; H229
Eye Dam. 1; H318
Skin Sens. 1; H317
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

2.2. Label elements**GB CLP Regulation****Hazard components for labelling**

Polysulfides, di-tert-butyl
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)
Diisododecylphenyl phosphite
reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptylderivs.
Triisodecyl phosphite
Isodecyl diphenyl phosphite

Signal word: Danger**Pictograms:****Hazard statements**

H229	Pressurised container: May burst if heated.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.

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Precautionary statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P251 Do not pierce or burn, even after use.
- P280 eye protection
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER/doctor.
- P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Special labelling of certain mixtures

12 % by mass of the contents are flammable.

2.3. Other hazards

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop. 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 humans as no components meets the criteria.

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

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Hazardous components

CAS No	Chemical name	Quantity		
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
68937-96-2	Polysulfides, di-tert-butyl			5 - < 10 %
	273-103-3		01-2119540515-43	
	Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1; H317 H400 H410			
68411-46-1	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene			3 - < 5 %
	270-128-1		01-2119491299-23	
	Aquatic Chronic 3; H412			
68649-42-3	Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts			3 - < 5 %
	272-028-3			
	Skin Irrit. 2, Eye Dam. 1, Aquatic Chronic 2; H315 H318 H411			
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)			3 - < 5 %
	931-384-6		01-2119493620-38	
	Acute Tox. 4, Eye Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H302 H319 H317 H411			
64742-47-8	Distillates (petroleum), hydrotreated light, Kerosine - unspecified			1 - < 3 %
	265-149-8			
	Asp. Tox. 1; H304			
1213789-63-9	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines			0.1 - < 1 %
	627-034-4		01-2119473797-19	
	Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, STOT SE 3, STOT RE 2, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1; H302 H314 H318 H335 H373 H304 H400 H410			
25550-98-5	Diisododecylphenyl phosphite			0.1 - < 1 %
	247-098-3		01-2119962888-14	
	Skin Sens. 1; H317			
	reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptylderivs.			0.1 - < 1 %
	939-460-0		01-2119971727-23	
	Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 3; H315 H318 H317 H412			
80-62-6	methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate			0.1 - < 1 %
	201-297-1	607-035-00-6		
	Flam. Liq. 2, Skin Irrit. 2, Skin Sens. 1, STOT SE 3; H225 H315 H317 H335			
25448-25-3	Triisodecyl phosphite			0.1 - < 1 %
	246-998-3		01-2119964066-34	
	Skin Sens. 1; H317			
26544-23-0	Isodecyl diphenyl phosphite			0.1 - < 1 %
	247-777-4		01-2119968254-31	
	Skin Sens. 1; H317			

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

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Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
68937-96-2	273-103-3	Polysulfides, di-tert-butyl	5 - < 10 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg	
68411-46-1	270-128-1	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	3 - < 5 %
		inhalation: LC50 = >5 mg/l (dusts or mists); dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg	
68649-42-3	272-028-3	Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	3 - < 5 %
		dermal: LD50 = 5000 mg/kg; oral: LD50 = 3100 mg/kg	
	931-384-6	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)	3 - < 5 %
		oral: LD50 = > 2000 mg/kg Eye Irrit. 2; H319: >= 50,01 - 100	
64742-47-8	265-149-8	Distillates (petroleum), hydrotreated light, Kerosine - unspecified	1 - < 3 %
		inhalation: LC50 = > 20 mg/l (vapours); dermal: LD50 = >2000 mg/kg; oral: LD50 = >2000 mg/kg	
1213789-63-9	627-034-4	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated) -alkylamines	0.1 - < 1 %
		inhalation: LC50 = >20 mg/l (vapours); dermal: LD50 = > 2000 mg/kg; oral: LD50 = 1689 mg/kg M acute; H400: M=10 M chron.; H410: M=10	
25550-98-5	247-098-3	Diisododecylphenyl phosphite	0.1 - < 1 %
		dermal: LD50 = >2000 mg/kg; oral: LD50 = >2000 mg/kg	
	939-460-0	reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptylderivs.	0.1 - < 1 %
		dermal: LD50 = >2000 mg/kg; oral: LD50 = >2000 mg/kg	
25448-25-3	246-998-3	Triisodecyl phosphite	0.1 - < 1 %
		inhalation: LC50 = >12 mg/l (dusts or mists); dermal: LD50 = > 5000 mg/kg; oral: LD50 = 13800 mg/kg Skin Sens. 1; H317: >= 20 - 100	
26544-23-0	247-777-4	Isodecyl diphenyl phosphite	0.1 - < 1 %
		inhalation: LC50 = >8,4 mg/l (dusts or mists); dermal: LD50 = >5000 mg/kg; oral: LD50 = 6730 mg/kg	

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

First aider: Pay attention to self-protection! Remove persons to safety. Never give anything by mouth to an unconscious person or a person with cramps.

After inhalation

Remove person to fresh air and keep comfortable for breathing. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.

After ingestion

Rinse mouth immediately and drink plenty of water.



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

No information available.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Non-flammable.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

No special measures are necessary.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed.

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Hints on joint storage

No special measures are necessary.

Further information on storage conditions

Protect from frost. Protect from direct sunlight. Store in a cool dry place. Observe legal regulations and provisions.

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
80-62-6	Methyl methacrylate	50	208		TWA (8 h)	WEL
		100	416		STEL (15 min)	WEL



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DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
68937-96-2	Polysulfides, di-tert-butyl			
Worker DNEL, long-term		inhalation	systemic	3,29 mg/m ³
Worker DNEL, long-term		dermal	systemic	4,67 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,58 mg/m ³
Consumer DNEL, long-term		dermal	systemic	1,67 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,167 mg/kg bw/day
68411-46-1	Benzenamine, N-phenyl-,reaction products with 2,4,4-trimethylpentene			
Worker DNEL, long-term		inhalation	systemic	0,6 mg/m ³
Worker DNEL, long-term		dermal	systemic	0,08 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,14 mg/m ³
Consumer DNEL, long-term		dermal	systemic	0,04 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,04 mg/kg bw/day
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)			
Worker DNEL, long-term		inhalation	systemic	4,28 mg/m ³
Worker DNEL, long-term		dermal	systemic	12,5 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	1,09 mg/m ³
Consumer DNEL, long-term		dermal	systemic	6,25 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,25 mg/kg bw/day
1213789-63-9	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines			
Worker DNEL, long-term		inhalation	systemic	0,38 mg/m ³
Worker DNEL, long-term		inhalation	local	1 mg/m ³
Worker DNEL, acute		inhalation	local	1 mg/m ³
Consumer DNEL, long-term		inhalation	systemic	0,035 mg/m ³
Consumer DNEL, long-term		oral	systemic	0,04 mg/kg bw/day
25448-25-3	Triisodecyl phosphite			
Worker DNEL, long-term		inhalation	systemic	70,5 mg/m ³
Worker DNEL, long-term		dermal	systemic	50 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	35,3 mg/m ³
Consumer DNEL, long-term		dermal	systemic	25 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	5 mg/kg bw/day

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PNEC values

CAS No	Substance	Value
Environmental compartment		
68937-96-2	Polysulfides, di-tert-butyl	
Freshwater		0,00024 mg/l
Freshwater (intermittent releases)		0,002 mg/l
Marine water		0,000024 mg/l
Freshwater sediment		0,94 mg/kg
Marine sediment		0,094 mg/kg
Secondary poisoning		6,66 mg/kg
Micro-organisms in sewage treatment plants (STP)		4,51 mg/l
Soil		0,0181 mg/kg
68411-46-1	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	
Freshwater		0,034 mg/l
Freshwater (intermittent releases)		0,51 mg/l
Marine water		0,003 mg/l
Freshwater sediment		0,446 mg/kg
Marine sediment		0,045 mg/kg
Micro-organisms in sewage treatment plants (STP)		10 mg/l
Soil		1,76 mg/kg
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)		
Freshwater		0,0024 mg/l
Freshwater (intermittent releases)		0,15 mg/l
Marine water		0,00024 mg/l
Freshwater sediment		0,0129 mg/kg
Marine sediment		0,00129 mg/kg
Secondary poisoning		10 mg/kg
Micro-organisms in sewage treatment plants (STP)		24,33 mg/l
Soil		0,00117 mg/kg
1213789-63-9	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	
Freshwater		0,00026 mg/l
Freshwater (intermittent releases)		0,0016 mg/l
Marine water		0,000026 mg/l
Freshwater sediment		3,76 mg/kg
Marine sediment		0,376 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,55 mg/l
Soil		10 mg/kg

Additional advice on limit values

- a no restriction
- b End of exposure or end of shift
- c at long-term exposure:
- d before next shift

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blood (B)
Urine (U)

8.2. Exposure controls**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used.

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

Wear eye/face protection.

Hand protection

Protect skin by using skin protective cream. When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. 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.

Suitable material: NBR (Nitrile rubber) Breakthrough time: 480min

Thickness of the glove material 0,45 mm

EN ISO 374

Skin protection

Wear suitable protective clothing.

Respiratory protection

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

Environmental exposure controls

Observe legal regulations and provisions.

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

Physical state:	Aerosol
Colour:	red
Odour:	mild

Test method**Changes in the physical state**

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	>100 °C
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	not determined
Flash point:	> 150 °C

Flammability

Solid/liquid:	not applicable
Gas:	not applicable
Lower explosion limits:	not applicable DIN 51649
Upper explosion limits:	not applicable DIN 51649
Auto-ignition temperature:	>300 °C

Self-ignition temperature

Solid:	not applicable
Gas:	not applicable
Decomposition temperature:	not determined

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pH-Value (at 20 °C): not applicable DIN 19268

Viscosity / kinematic: 1100 mm²/s

Water solubility: The study does not need to be conducted because the substance is known to be insoluble in water.

Solubility in other solvents

not determined

Partition coefficient n-octanol/water: not determined

Vapour pressure: not determined

Density: 0,91 g/cm³ DIN 51757

Relative vapour density: not determined

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

Sustaining combustion: No data available

Oxidizing properties

Not oxidising.

Other safety characteristics

Solid content: not determined

Evaporation rate: not determined

Further Information

Data apply to technical substance: Relative density, Colour, Odour, Viscosity, pH.

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

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Protect from frost.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

Further information

Do not mix with other chemicals.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in GB CLP Regulation****Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

Acute toxicity

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



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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
68937-96-2	Polysulfides, di-tert-butyl				
	oral	LD50 > 2000 mg/kg	Rat		
	dermal	LD50 > 2000 mg/kg	Rat		
68411-46-1	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1982)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1988)	OECD Guideline 402
	inhalation (4 h) dust/mist	LC50 >5 mg/l	Rat		
68649-42-3	Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts				
	oral	LD50 3100 mg/kg	Rat		
	dermal	LD50 5000 mg/kg	Rabbit		
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)				
	oral	LD50 > 2000 mg/kg	Rat	Study report (1995)	OECD Guideline 401
64742-47-8	Distillates (petroleum), hydrotreated light, Kerosine - unspecified				
	oral	LD50 >2000 mg/kg	Rat		
	dermal	LD50 >2000 mg/kg	Rat		
	inhalation (4 h) vapour	LC50 > 20 mg/l	Rat		
1213789-63-9	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines				
	oral	LD50 1689 mg/kg	Rat	Study report (1993)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1985)	OECD Guideline 402
	inhalation (4 h) vapour	LC50 >20 mg/l	Rat		
25550-98-5	Diisododecylphenyl phosphite				
	oral	LD50 >2000 mg/kg	Rat		
	dermal	LD50 >2000 mg/kg	Rat		
	reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptylderivs.				
	oral	LD50 >2000 mg/kg	Rat		
	dermal	LD50 >2000 mg/kg	Rat		
25448-25-3	Triisodecyl phosphite				

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	oral	LD50 mg/kg	13800	Rat	Study report (1964)	OECD Guideline 401
	dermal	LD50 mg/kg	> 5000	Rabbit	Study report (1980)	OECD Guideline 402
	inhalation (4 h) dust/mist	LC50	>12 mg/l	Rat		
26544-23-0	Isodecyl diphenyl phosphite					
	oral	LD50 mg/kg	6730	Rat		
	dermal	LD50 mg/kg	>5000	Rabbit		
	inhalation (4 h) dust/mist	LC50	>8,4 mg/l	Rat		

Irritation and corrosivity

Causes serious eye damage.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

May cause an allergic skin reaction. (Polysulfides, di-tert-butyl; Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched); Diisododecylphenyl phosphite; reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptylderivs.; methyl methacrylate; methyl 2-methylprop-2-enoate; methyl 2-methylpropenoate; Triisodecyl phosphite; Isodecyl diphenyl phosphite)

Carcinogenic/mutagenic/toxic effects for reproduction

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

No indications of human carcinogenicity exist.

No indications of human germ cell mutagenicity exist.

No indications of human reproductive toxicity exist.

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.

Specific effects in experiment on an animal

No information available.

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

Toxic to aquatic life with long lasting effects.



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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
68937-96-2	Polysulfides, di-tert-butyl					
	Acute fish toxicity	LC50 > 0,088 mg/l	96 h	Danio rerio (zebrafish)		
	Acute algae toxicity	ErC50 0,838 mg/l	72 h	Pseudokirchneriella subcapitata	REACH Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EC50 63 mg/l	48 h	Daphnia magna	Study report (2013)	OECD Guideline 202
68411-46-1	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene					
	Acute fish toxicity	LC50 > 100 mg/l	96 h	Danio rerio	Study report (1988)	OECD Guideline 203
	Acute algae toxicity	ErC50 > 100 mg/l	72 h	Desmodesmus subspicatus	Study report (2006)	OECD Guideline 201
	Acute crustacea toxicity	EC50 51 mg/l	48 h	Daphnia magna	Study report (2004)	OECD Guideline 202
68649-42-3	Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts					
	Acute fish toxicity	LC50 >1 mg/l	96 h	Danio rerio (zebrafish)		
	Acute algae toxicity	ErC50 >1 mg/l	96 h	Selenastrum capricornutum		
	Acute crustacea toxicity	EC50 >1 mg/l	48 h	Daphnia magna		
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)					
	Acute fish toxicity	LL50 ca. 24 mg/l	96 h	Oncorhynchus mykiss	REACH Registration Dossier	OECD Guideline 203
	Acute algae toxicity	ErC50 6,4 mg/l	96 h	Pseudokirchneriella subcapitata	REACH Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EL50 ca. 91,4 mg/l	48 h	Daphnia magna	REACH Registration Dossier	OECD Guideline 202
	Acute bacteria toxicity	(EC50 ca. 2433 mg/l)	3 h	activated sludge, domestic	REACH Registration Dossier	OECD Guideline 209
64742-47-8	Distillates (petroleum), hydrotreated light, Kerosine - unspecified					
	Acute fish toxicity	LC50 >1000 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)		
	Acute algae toxicity	ErC50 >1000 mg/l	72 h	Pseudokirchneriella subcapitata		
	Acute crustacea toxicity	EC50 >1000 mg/l	48 h	Daphnia magna		
1213789-63-9	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines					
	Acute fish toxicity	LC50 0,84 mg/l	96 h	Danio rerio	Study report (2006)	OECD Guideline 203
	Acute algae toxicity	ErC50 0,39 mg/l	72 h	Desmodesmus subspicatus	Study report (2002)	OECD Guideline 201



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	Acute crustacea toxicity	EC50 mg/l	0,32	48 h	Daphnia magna	Study report (2006)	OECD Guideline 202
	Crustacea toxicity	NOEC mg/l	0,013	21 d	Daphnia magna	Study report (2002)	OECD Guideline 211
	Acute bacteria toxicity	(EC50	32 mg/l)	3 h	activated sludge of a predominantly domestic sewage	Study report (1989)	OECD Guideline 209
25550-98-5	Diisododecylphenyl phosphite						
	Acute fish toxicity	LC50 mg/l	>100	96 h	Leuciscus idus (golden orfe)		
	Acute algae toxicity	ErC50	45 mg/l	72 h	Scenedesmus subspicatus		
	Acute crustacea toxicity	EC50	> 2 mg/l	48 h	Daphnia magna		
	reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptylderivs.						
	Acute fish toxicity	LC50	26 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)		
	Acute algae toxicity	ErC50	9,2 mg/l	72 h	Selenastrum capricornutum		
	Acute crustacea toxicity	EC50	75 mg/l	48 h	Daphnia magna (Big water flea)		

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name	Method	Value	d	Source
		Evaluation			
1213789-63-9	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines				
			44	28	

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
68937-96-2	Polysulfides, di-tert-butyl	5,6
68411-46-1	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	> 6
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)	< 0,3
1213789-63-9	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	5,16
25448-25-3	Triisodecyl phosphite	12,31

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BCF

CAS No	Chemical name	BCF	Species	Source
68937-96-2	Polysulfides, di-tert-butyl	0,006	Lepomis macrochirus	Study report (2015)
68411-46-1	Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	411	Cyprinus carpio	Study report (2000)
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)	436	Onchorhynchus mykiss	REACH Registration D
1213789-63-9	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	173		Environmental Toxicology

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

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

The product has not been tested.

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 meet the criteria.

12.7. Other adverse effects

No information available.

Further information

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

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

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors; hazardous waste

List of Wastes Code - used product

070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors; hazardous waste

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

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

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SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.2
Classification code:	5A
Special Provisions:	190 327 344 625
Limited quantity:	1 L
Excepted quantity:	E0
Transport category:	3
Tunnel restriction code:	E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.2
Classification code:	5A
Special Provisions:	190 327 344 625
Limited quantity:	1 L
Excepted quantity:	E0

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS ((Z)-octadec-9-enylamine)
14.3. Transport hazard class(es):	2.2
14.4. Packing group:	-
Hazard label:	2.2
Marine pollutant:	yes
Special Provisions:	63, 190, 277, 327, 344, 959
Limited quantity:	1000 mL
Excepted quantity:	E0
EmS:	F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS, non-flammable
14.3. Transport hazard class(es):	2.2
14.4. Packing group:	-
Hazard label:	2.2
Special Provisions:	A98 A145 A167 A802
Limited quantity Passenger:	30 kg G
Passenger LQ:	Y203
Excepted quantity:	E0
IATA-packing instructions - Passenger:	203
IATA-max. quantity - Passenger:	75 kg
IATA-packing instructions - Cargo:	203
IATA-max. quantity - Cargo:	150 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS:	Yes
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Danger releasing substance: (Z)-octadec-9-enylamine

14.6. Special precautions for user

No information available.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

2010/75/EU (VOC): No information available.

2004/42/EC (VOC): No information available.

Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)
Aerosol Directive (75/324/)

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

Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 14.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Aerosol 3; H229	On basis of test data
Eye Dam. 1; H318	Bridging principle "Aerosols"
Skin Sens. 1; H317	Bridging principle "Aerosols"
Aquatic Chronic 2; H411	Calculation method

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H229	Pressurised container: May burst if heated.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.

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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.
H335	May cause respiratory irritation.
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.

Further Information

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