Safety Data Sheet

according to Regulation (EC) No 1907/2006

SRS Wiolin RSH

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

1.1. Product identifier

SRS Wiolin RSH

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

Use of the substance/mixture

gear 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

This mixture is not classified as hazardous in accordance with Regulation (EC) No 1272/2008.

2.2. Label elements

Regulation (EC) No 1272/2008

Special labelling of certain mixtures

EUH208	Contains Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched); Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs. May produce an allergic reaction.
EUH210	Safety data sheet available on request.

2.3. Other hazards

Endocrine disrupting properties: Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs.

This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH:

> 0,1%: Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs

< 0,1%: not relevant

For information or further instructions, see also section 11 or 12.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched)			1 - < 3 %
	931-384-6		01-2119493620-38	

	Acute Tox. 4, Eye Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H302 H319 H317 H411			
	Reaction Products of alcohols, C14-18, C18 unsat., esterified with phosphorus pentoxide and salted with amines, C12-14,-tert-alkyl			1 - < 3 %
	939-591-3		01-2119978530-33	
	Aquatic Chronic 3; H412			
1471311-26-8	Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs			0.1 - < 0.2 %
	939-460-0		01-2119971727-23	
	Flam. Liq. 3, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1B, Aquatic Chronic 3; H226 H315 H318 H317 H412			

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		
	931-384-6	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched)	1 - < 3 %
	oral: LD50 = > 2000 mg/kg Eye Irrit. 2; H319: >= 50 - 100 Skin Sens. 1; H317: >= 9,39 - 100		
	939-591-3	Reaction Products of alcohols, C14-18, C18 unsat., esterified with phosphorus pentoxide and salted with amines, C12-14,-tert-alkyl	1 - < 3 %
	dermal: LD50 = >2000 mg/kg; oral: LD50 = >2000 mg/kg		
1471311-26-8	939-460-0	Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs	0.1 - < 0.2 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 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 case of allergic symptoms, especially in the breathing area, seek medical advice immediately. Apply cortisone spray at early stage.

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 (CO2). 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 (CO2) Sulphur dioxide (SO2) Nitrogen oxides (NOx)

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

Avoid contact with skin, eyes and clothes.
Avoid formation of oil dust.
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.

For cleaning up

Clean contaminated objects and areas thoroughly observing environmental regulations.

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 contact with skin, eyes and clothes.
Avoid formation of oil dust.
Do not breathe aerosol.

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.
Contaminated work clothing should not be allowed out of the workplace.
Wash contaminated clothing before reuse.
When using do not eat, drink or smoke.

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

DNEL/DMEL values

CAS No	Name of agent		
DNEL type	Exposure route	Effect	Value
	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/m³
Worker DNEL, long-term	dermal	systemic	12,5 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	1,09 mg/m³
Consumer DNEL, long-term	dermal	systemic	6,25 mg/kg bw/day
Consumer DNEL, acute	dermal	local	0.024 mg/cm²
Consumer DNEL, long-term	oral	systemic	0,25 mg/kg bw/day
	Reaction Products of alcohols, C14-18, C18 unsat., esterified with phosphorus pentoxide and salted with amines, C12-14,-tert-alkyl		
Consumer DNEL, long-term	oral	systemic	0,25
Worker DNEL, long-term	dermal	systemic	2,5
Consumer DNEL, long-term	dermal	systemic	1,25
Worker DNEL, long-term	inhalation	systemic	1,76

Consumer DNEL, long-term	inhalation	systemic	0,434
1471311-26-8	Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs		
Worker DNEL, long-term	inhalation	systemic	2.35 mg/m³
Worker DNEL, long-term	dermal	systemic	66.7 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	0.58 mg/m³
Consumer DNEL, long-term	dermal	systemic	33.33 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	0.33 mg/kg bw/day

PNEC values

CAS No	Name of agent
Environmental compartment	Value
	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
	Reaction Products of alcohols, C14-18, C18 unsat., esterified with phosphorus pentoxide and salted with amines, C12-14,-tert-alkyl
Freshwater	0,0024 mg/l
Freshwater (intermittent releases)	0,000024 mg/l
Marine water	0,00024 mg/l
Freshwater sediment	1085,06 mg/kg
Marine sediment	108,51 mg/kg
Micro-organisms in sewage treatment plants (STP)	32 mg/l
Soil	880,82 mg/kg
1471311-26-8	Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs
Freshwater	0.026 mg/l
Marine water	0.003 mg/l
Freshwater sediment	1108.6 mg/kg
Marine sediment	110.86 mg/kg
Secondary poisoning	6.7 mg/kg
Micro-organisms in sewage treatment plants (STP)	45.5 mg/l
Soil	221.48 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-STEL) = 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




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:	205 °C	DIN ISO 2592
Auto-ignition temperature:	No information available.	
Decomposition temperature:	No information available.	
pH-Value:	No information available.	
Viscosity / kinematic: (at 40 °C)	215 mm²/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.	
Vapour pressure: (at 20 °C)	No information available.	
Vapour pressure: (at 50 °C)	No information available.	
Density (at 15 °C):	0,902 g/cm³	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

Sustained combustibility:	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:	-21 °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

Stable at ambient temperature.

10.3. Possibility of hazardous reactions

No hazardous reactions known.

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

Toxicocinetics, metabolism and distribution

No information available.

Acute toxicity

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

ATEmix calculated

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
	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	ECHA Dossier	OECD Guideline 401
	Reaction Products of alcohols, C14-18, C18 unsat., esterified with phosphorus pentoxide and salted with amines, C12-14,-tert-alkyl				
	oral	LD50 >2000 mg/kg	Rat	ECHA Dossier	OECD 420
	dermal	LD50 >2000 mg/kg	Rat	ECHA Dossier	OECD 402
1471311-26-8	Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs				
	oral	LD50 > 2000 mg/kg	Rat	ECHA Dossier	
	dermal	LD50 > 2000 mg/kg	Rat	ECHA Dossier	OECD Guideline 402

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.
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched):
Risk of serious damage to eyes. Specific concentration limit (SCL) Eye Dam. 1: > 50%
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 Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched); Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs. May produce an allergic reaction.
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched):
Skin sensitisation: negative
Specific concentration limit (SCL) Skin Sens. 1 = 10%
Method: human repeat insult patch tests (HRIPT).

Carcinogenic/mutagenic/toxic effects for reproduction

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.

Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched):
In vitro mutagenicity/genotoxicity: Method: OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test); Result: negative Literature information: REACH Dossier; Reproductive toxicity: Species: Rat (Wistar);Method: OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test); Result: NOAEL = 150 mg/kg Literature information: REACH Dossier; Developmental toxicity/teratogenicity: Species: Rat (Wistar);Method: other guideline: Reproduction/developmental screening test. Result: NOAEL = 150 mg/kg; Literature information: REACH Dossier

Reaction Products of alcohols, C14-18, C18 unsat., esterified with phosphorus pentoxide and salted with amines, C12-14,-tert-alkyl:
In-vitro mutagenicity: Method: OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test); Result: negative; Literature information: REACH Dossier; Reproductive toxicity: Species: Rat; Method: OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test); Results: NOAEL = 150 mg/kg. Literature information: REACH Dossier; Species: Rat; Method: OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test); Results: NOAEL = 150 mg/kg. Literature information: REACH Dossier

Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs:
Method:
- OECD Guideline 471 (Bacterial Reverse Mutation Assay)
- OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
- OECD Guideline 473 (In Vitro Mammalian Chromosome Aberration Test)
Result: negative
Literature information: REACH Dossier

Developmental toxicity/teratogenicity/Reproductive toxicity: :
Method: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Species: Rat
Results: NOAEL = 500 mg/kg(bw)/day (neonatal toxicity)
Literature information: REACH Dossier

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.
Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched):
Subacute oral toxicity: Method: -; Species: Rat;Results: NOAEL = 150 mg/kg; Literature information: REACH

Dossier

Reaction Products of alcohols, C14-18, C18 unsat., esterified with phosphorus pentoxide and salted with amines, C12-14,-tert-alkyl:
Subacute oral toxicity: Method: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents);
Species: Rat (Wistar); Results: NOAEL = 1000 mg/kg. Literature information: REACH Dossier

Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs:
Subacute oral toxicity:
Method: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Species: Rat
Results: NOAEL = 200 mg/kg(bw)/day
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

Frequent contact specially if dried out may cause skin and eye irritations.

SECTION 12: Ecological information

12.1. Toxicity

Based on available data, the classification criteria are not met.
Environmental properties: none (Analogous to a product of similar composition)
Method: OECD 211
Species: Daphnia magna
Test duration: 21d
Result: EL 50 (Reproductive toxicity, Immobilisation) > 100 mg/l ; NOELR (Immobilisation) = 100 mg/l

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched)						
	Acute fish toxicity	LC50 mg/l	ca. 8,5	96 h	Oncorhynchus mykiss	ECHA Dossier	OECD Guideline 203
	Acute algae toxicity	ErC50	6,4 mg/l	96 h	Raphidocelis subcapitata	ECHA Dossier	OECD Guideline 201
	Acute crustacea toxicity	EL50 mg/l	ca. 91,4	48 h	Daphnia magna	ECHA Dossier	OECD Guideline 202
	Acute bacteria toxicity	EC50 mg/l ( )	ca. 2433	3 h	activated sludge, domestic	ECHA Dossier	OECD Guideline 209
1471311-26-8	Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs						
	Acute algae toxicity	ErC50	25 mg/l	72 h	Pseudokirchneriella subcapitata	ECHA Dossier	OECD Guideline 201
	Acute bacteria toxicity	EC50 mg/l ( )	4550	3 h	activated sludge of a predominantly domestic sewag	ECHA Dossier	OECD Guideline 209

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			
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched)			
	ASTM D-5864-95	3,6%	28	ECHA Dossier
	not readily degradable			
	Reaction Products of alcohols, C14-18, C18 unsat., esterified with phosphorus pentoxide and salted with amines, C12-14,-tert-alkyl			
	OECD 301B / ISO 9439 / EEC 92/69 annex V, C.4-C	0 %	28	ECHA Dossier
	Not readily biodegradable (according to OECD criteria)			
1471311-26-8	Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs			
	OECD Guideline 301 B	17,4%	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
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched)	< 0,3
	Reaction Products of alcohols, C14-18, C18 unsat., esterified with phosphorus pentoxide and salted with amines, C12-14,-tert-alkyl	>5,66
1471311-26-8	Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs	>= 5,31

BCF

CAS No	Chemical name	BCF	Species	Source
	Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched)	436	Onchorhynchus mykiss	ECHA Dossier

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

Endocrine disrupting properties: Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs.
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 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:	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.

Marine transport (IMDG)

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.

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

Informations for safe handling see chapter 7.

Informations 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

Authorisations (REACH, annex XIV):

Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs

Restrictions on use (REACH, annex XVII):

Entry 75

Directive 2010/75/EU on industrial emissions:	No information available.
Directive 2004/42/EC on VOC in paints and varnishes:	No information available.

Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (amended by Regulation (EU) No 2020/878)
This mixture is classified as not hazardous according to Regulation (EC) 1272/2008 [CLP].
REACH 1907/2006 Appendix XVII, No (mixture): 75
Observe in addition any national regulations!

National regulatory information

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

Additional information

*To follow: SECTION 12: Ecological 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): 15,16.

Rev. : 1,0 - 09.05.2015
Rev. : 1,1 - 26.05.2016
Rev.: 2,0 - 15.06.2017
Rev. : 3,0 - 29.06.2018
Rev.: 4,0 - 25.06.2019
Rev.: 4,1 - 23.10.2019
Rev.: 5,0 - 09.10.2020; Changes in chapter: 3.2, 16
Rev.: 6,0 - 14.10.2021, Changes in chapter: 2.3, 3.2, 6.1, 6.3, 11.2, 12.5, 12.6, 12.7, 15.1, 16
Rev.: 6,1 - 04.04.2022, Changes in chapter: 2.3, 3.2, 8.1, 11.1, 12.1, 12.2, 12.3, 12.5, 12.6, 15.1, 16
Rev.: 6.2 - 29.07.2022, Changes in chapter: 2.3, 3.2, 8.1, 8.2, 12.1, 12.3, 12.5, 12.6, 16
Rev.: 7.0 - 01.07.2023, Changes in chapter: 2.3 , 3.2, 8.1, 9.1, 11.1, 12.1, 12.2, 12.3, 12.5, 12.7, 16
Rev.: 8.0 - 10.07.2024, Changes in chapter: 9.1, 11.1, 11.7, 12.1,16
Rev.: 9.0 - 02.07.2025, Changes in chapter: 15.1,16

Abbreviations and acronyms

Flam. Liq. 3: Flammable liquids, hazard category 3
Acute Tox. 4: Acute toxicity, hazard category 4
Skin Irrit. 2: Skin irritation, hazard category 2
Eye Dam. 1: Serious eye damage, hazard category 1
Eye Irrit. 2: Eye irritation, hazard category 2
Skin Sens. 1: Skin sensitisation, hazard category 1
Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard category: Chronic 2
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)

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://webrigoletto.uba.de/rigoletto/

Relevant H and EUH statements (number and full text)

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched); Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs. May produce an allergic reaction.
EUH210	Safety data sheet available on request.

Further Information

Classification according to Regulation (EC) No 1272/2008 [CLP] - Classification procedure:
Health hazards: Calculation method.
Environmental hazards: By analogy.
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.)