



according to Regulation (EC) No 1907/2006

SRS Motorenöl O-278 / QB-B-0431

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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

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	Gift-Informationszentrum Nord (Göttingen)
number:	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 Alkyl- (C18-C28) Toluenesulfonic acid, Calcium salts, borated, Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts. May produce an allergic reaction. EUH210 Safety data sheet available on request.

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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Hazardous components

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) e	sters, zinc salts	1 - < 3 %	
	272-238-5		01-2119657973-23		
	Eye Dam. 1, Aquatic Chronic 2; H3	18 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-, mor	0.5 - < 1 %			
	682-816-2				
	Skin Sens. 1B; H317				

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

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; H361	ld: >= 17,15 - 100	

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.

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.

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.



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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.

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.

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 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.



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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.

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 solids. Oxidizing liquids. 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
68784-31-6	Phosphorodithioic acid, mixed O,O-bis(sec-Bu and	d 1,3-dimethylbutyl) esters, zi	nc salts	
Worker DNEL	., long-term	inhalation	systemic	2.93 mg/m ³
Worker DNEL	., acute	inhalation	systemic	496.4 mg/m ³
Worker DNEL, long-term		dermal	systemic	10.42 mg/kg bw/day
Worker DNEL	., acute	dermal	systemic	100 mg/kg bw/day
Consumer DN	IEL, long-term	inhalation	systemic	11.75 mg/m ³
Consumer DN	IEL, acute	inhalation	systemic	198.6 mg/m ³
Consumer DN	IEL, long-term	dermal	systemic	2.1 mg/kg bw/day
Consumer DN	IEL, acute	dermal	systemic	50 mg/kg bw/day
Consumer DN	IEL, long-term	oral	systemic	0.21 mg/kg bw/day
Consumer DN	IEL, acute	oral	systemic	29 mg/kg bw/day



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PNEC values

CAS No	Name of agent			
Environmenta	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		0,0046 mg/l		
Freshwater se	diment	0,07 mg/kg		
Marine sediment 0,007 mg/k		0,007 mg/kg		
Secondary po	Secondary poisoning			
Micro-organis	Micro-organisms in sewage treatment plants (STP)			
Soil	Soil			

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.



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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.

Thermal hazards

Physical state:

Wear protective clothing for operations with hot material: heat resistant coveralls (with trousers legs over boots and sleeves over cuffs of gloves), heat resistant heavy duty antiskid boots (e. g. leather).

Environmental exposure controls

No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Colour:	clear		
Odour:	characteristic		
			Test method
Melting point/freezing point:		No information available.	
Boiling point or initial boiling point and		No information available.	
boiling range:			
Flammability:		No information available.	
Lower explosion limits:		No information available.	
Upper explosion limits:		No information available.	
Flash point:		270 °C	DIN ISO 2592
Auto-ignition temperature:		No information available.	
Decomposition temperature:		No information available.	
pH-Value:		No information available.	
Viscosity / kinematic:		128.3 mm ² /s	DIN EN ISO 3104
(at 40 °C)		,.	
Water solubility:		Immiscible	
Solubility in other solvents			
No information available.			
Partition coefficient n-octanol/water:		No information available.	
Vapour pressure:		<0,1 hPa	calculated.
(at 20 °C)			
Vapour pressure:		No information available.	
(at 50 °C)			
Density (at 15 °C):		0,893 g/cm³	DIN 51757
Bulk density:		No information available.	
Relative vapour density:		No information available.	
Particle characteristics:		No information available.	
0.2. Other information			
Information with regard to physical h	nazard 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.	



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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:	-27 °C ISO 3016
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 product 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

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
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

Irritation and corrosivity

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



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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.

Alkyl- (C18-C28)

Toluenesulfonic acid,

Calcium salts, borated:

A raw material containing this substance has been tested/evaluated for sensitisation up to a maximum treat rate for the raw material of 12.9% with negative results. Based on this, the product itself is not considered to be sensitising to the skin (H317). (Dilution principle).

May cause sensitisation especially in sensitive humans.

Carcinogenic/mutagenic/toxic effects for reproduction

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: ECHA 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. 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

Method: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents); Species: Rat; Exposure duration: 28 d; Results: NOAEL = 125mg/kg; Literature information: ECHA Dossier

Aspiration hazard

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

11.2. Information on other hazards

Endocrine disrupting properties

No information available.

Other information

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

SECTION 12: Ecological information

12.1. Toxicity

If this product contains phenol, dodecyl, branched (EC No. 310-154-3), this product is not to be classified as dangerous for the environment. Raw materials containing this substance have not been classified by our suppliers as hazardous to the environment on the basis of test data, expert judgement or analogy assessments.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method
68784-31-6	Phosphorodithioic acid, m	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	OECD Guideline 203
	Acute algae toxicity	ErC50 410 mg/l	EL50 =		Desmodesmus subspicatus	ECHA Dossier	OECD Guideline 201
	Acute crustacea toxicity	EC50 75 mg/l	EL50 =	48 h	Daphnia magna	ECHA Dossier	OECD Guideline 202
	Crustacea toxicity	NOEC	0,4 mg/l	21 d	Daphnia magna	ECHA Dossier	OECD Guideline 211



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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.

mecha	inical 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).				

12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

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:	No dangerous good in sense of this transport regulation.



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Relevant H and EUH statements (number and full text)

H317	May cause an allergic skin reaction.
H318	Causes serious eve damage.
H361d	Suspected of damaging the unborn child.
H411	Toxic 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.
EUH210	Safety data sheet available on request.
urther Informatio	n .

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



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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.)