

SAE 80W-90 GL5

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

Company name:	Vierol AG	
Street:	Karlstrasse 19	
Place:	D-26123 Oldenburg	
Telephone:	+49 (0) 441 – 210 20 – 0	Telefax: +49 (0) 441 – 210 20 –111
e-mail:	info@vierol.de	
Internet:	www.vierol.de	
Responsible Department:	Giftinformationszentrum Nord (Göttingen)	
	+49 (0)551/19240	

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

Hazard categories:

Serious eye damage/eye irritation: Eye Irrit. 2

Respiratory or skin sensitisation: Skin Sens. 1

Hazard Statements:

Causes serious eye irritation.

May cause an allergic skin reaction.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**

Reaction products of bis (2-methylpentan-2-yl) dithiophosphoric acid with phosphore, propylene oxide and amine, C 12-14 -alkyl (branched)

Reaction product of 1,3,4-thiadiazolidin-2,5-dithion, formaldehyde and phenol derivatives heptyl

Signal word: Warning**Pictograms:****Hazard statements**

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

Precautionary statements

P501 Dispose of contents/container to Dispose of waste according to applicable legislation..

P337+P313 If eye irritation persists: Get medical advice/attention.

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.

P363 Wash contaminated clothing before reuse.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

2.3. Other hazards

No information available.

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII. This

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mixture contains no substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH.

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

CAS No	Chemical name	Quantity
	EC No	
	Index No	
	REACH No	
	GHS Classification	
	Reaction products of bis (2-methylpentan-2-yl) dithiophosphoric acid with phosphore, propylene oxide and amine, C 12-14 -alkyl (branched)	1-<5 %
	931-384-6	
		01-2119493620-38
	Acute Tox. 4, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 2; H302 H318 H317 H411	
112-90-3	(Z)-octadec-9-enylamine	<1 %
	204-015-5	
	612-283-00-3	
	Acute Tox. 4, Asp. Tox. 1, STOT SE 3, STOT RE 2, Skin Corr. 1B, Aquatic Acute 1 (M-Factor = 10), Aquatic Chronic 1 (M-Factor = 10); H302 H304 H335 H373 H314 H400 H410	
	Reaction product of 1,3,4-thiadiazolidin-2,5-dithion, formaldehyde and phenol derivatives heptyl	<1 %
	939-460-0	
	Flam. Liq. 3, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 3; H226 H315 H318 H317 H412	

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

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

In all cases of doubt, or when symptoms persist, seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps.

After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. Medical treatment necessary.

After contact with skin

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

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink plenty of water.

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**

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Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings. Carbon dioxide (CO₂). Foam. Dry extinguishing powder. Use water spray jet to protect personnel and to cool endangered containers.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Non-flammable. The formation of combustible vapours is possible at temperatures above: Flash point In case of fire may be liberated:

Carbon dioxide (CO₂). Carbon monoxide Sulphur dioxide (SO₂) Nitrogen oxides (NO_x)

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit. Full protection suit Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

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**

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

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).

6.3. Methods and material for containment and cleaning up

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.

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**

Wash hands before breaks and after work. Keep away from sources of ignition - No smoking. Do not put any product-impregnated cleaning rags into your trouser pockets.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Further information on handling

Take precautionary measures against static discharges.

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

Keep container tightly closed. Keep only in the original container in a cool, well-ventilated place.

Hints on joint storage

No special measures are necessary.

Further information on storage conditions

Protect from moisture. Keep in a cool place. Keep only in the original container at temperature not exceeding 50 °C.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
	Reaction products of bis (2-methylpentan-2-yl) dithiophosphoric acid with phosphore, propylene oxide and amine, C 12-14 -alkyl (branched)		
Worker DNEL, long-term	inhalation	systemic	8,56 mg/m ³
Worker DNEL, long-term	dermal	systemic	12,5 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	2,2 mg/m ³
Consumer DNEL, long-term	dermal	systemic	6,25 mg/kg bw/day
Consumer DNEL, acute	dermal	local	0,024 mg/cm ²
Consumer DNEL, long-term	oral	systemic	0,25 mg/kg bw/day
	Reaction product of 1,3,4-thiadiazolidin-2,5-dithion, formaldehyde and phenol derivatives heptyl		
Worker DNEL, long-term	inhalation	systemic	2,35 mg/m ³
Worker DNEL, long-term	dermal	systemic	66,7 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	0,58 mg/m ³
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	Substance	
Environmental compartment	Value	
	Reaction products of bis (2-methylpentan-2-yl) dithiophosphoric acid with phosphore, propylene oxide and amine, C 12-14 -alkyl (branched)	
Freshwater	0,001 mg/l	
Freshwater (intermittent releases)	0,085 mg/l	
Marine water	0,0001 mg/l	
Freshwater sediment	14,4 mg/kg	
Marine sediment	1,44 mg/kg	
Micro-organisms in sewage treatment plants (STP)	24,33 mg/l	
Soil	10 mg/kg	
	Reaction product of 1,3,4-thiadiazolidin-2,5-dithion, formaldehyde and phenol derivatives heptyl	
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	

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8.2. Exposure controls**Protective and hygiene measures**

Remove contaminated, saturated clothing immediately. 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.

Eye/face protection

Suitable eye protection: goggles.

Hand protection

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. 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.

Skin protection

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

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

Physical state:	Liquid
Colour:	yellow brown
Odour:	characteristic

Test method

pH-Value:	not determined
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Changes in the physical state

Melting point:	not determined
Initial boiling point and boiling range:	320 °C
Pour point:	-33 °C ASTM D 5985
Flash point:	> 212 °C

Flammability

Solid:	not applicable
Gas:	not applicable

Lower explosion limits:	not determined
Upper explosion limits:	not determined

Auto-ignition temperature

Solid:	not applicable
Gas:	not applicable

Decomposition temperature:	not determined
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Oxidizing properties

Not oxidising.

Vapour pressure:	not determined
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Density (at 15 °C):	0,891 g/cm ³ DIN 51757
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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: not determined

Viscosity / kinematic: 140 mm²/s DIN EN ISO 3104
(at 40 °C)

Vapour density: not determined

Evaporation rate: not determined

9.2. Other information

Solid content: not determined

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

none

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 toxicological effects**Acute toxicity**

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
	Reaction products of bis (2-methylpentan-2-yl) dithiophosphoric acid with phosphore, propylene oxide and amine, C 12-14 -alkyl (branched)				
	oral	LD50 mg/kg	2000	Rat	OECD 401
112-90-3	(Z)-octadec-9-enylamine				
	oral	LD50 mg/kg	1689	Rat	
	Reaction product of 1,3,4-thiadiazolidin-2,5-dithion, formaldehyde and phenol derivatives heptyl				
	oral	LD50 mg/kg	>2000	Rat	ECHA Dossier
	dermal	LD50 mg/kg	>2000	Rat	ECHA Dossier

Additional information on tests

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

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

The product is not: Ecotoxic.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
	Reaction products of bis (2-methylpentan-2-yl) dithiophosphoric acid with phosphore, propylene oxide and amine, C 12-14 -alkyl (branched)					
	Acute fish toxicity	LC50	8,5 mg/l	96 h	Pimephales promelas (fathead minnow)	ECHA Dossier
	Acute algae toxicity	ErC50	6,4 mg/l	96 h	Pseudokirchneriella subcapitata	ECHA Dossier
112-90-3	(Z)-octadec-9-enylamine					
	Acute fish toxicity	LC50	0,11 mg/l	96 h	Pimephales promelas (fathead minnow)	
	Reaction product of 1,3,4-thiadiazolidin-2,5-dithion, formaldehyde and phenol derivatives heptyl					
	Acute algae toxicity	ErC50	25 mg/l	72 h	Pseudokirchneriella subcapitata	ECHA Dossier

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
	Reaction products of bis (2-methylpentan-2-yl) dithiophosphoric acid with phosphore, propylene oxide and amine, C 12-14 -alkyl (branched)			
	ASTM D-5864-95	3,6%	28	
	ECHA Dossier			
112-90-3	(Z)-octadec-9-enylamine			
	OECD 301D/ EEC 92/69/V, C.4-E	66%	28	
	Readily biodegradable (according to OECD criteria).			
	Reaction product of 1,3,4-thiadiazolidin-2,5-dithion, formaldehyde and phenol derivatives heptyl			
	OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C	17,4%	28	

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
112-90-3	(Z)-octadec-9-enylamine	>3,11
	Reaction product of 1,3,4-thiadiazolidin-2,5-dithion, formaldehyde and phenol derivatives heptyl	>=5,31

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. 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.

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SECTION 13: Disposal considerations**13.1. Waste treatment methods****Advice on disposal**

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.

Waste disposal number of 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.

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

- 14.1. UN 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:** 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:** 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:** 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

No dangerous good in sense of this transport regulation.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No dangerous good in sense of this transport regulation.

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

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National regulatory information

Employment restrictions:	Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).
Water contaminating class (D):	2 - clearly water contaminating
Skin resorption/Sensitization:	Causes allergic hypersensitivity reactions.

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**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%

Relevant H and EUH statements (number and full text)

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
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.)