

### SAE 20W-50 Turbo

Revision date: 11.11.2021

Page 1 of 11

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

##### 1.1. Product identifier

SAE 20W-50 Turbo

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

###### Use of the substance/mixture

Motor oil multigrade

###### Uses advised against

No information available.

##### 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	

##### 1.4. Emergency telephone number:

Giftinformationszentrum Nord (Göttingen)  
+49 (0)551/19240

#### 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 Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts, Alkyl-(C18-C28) toluenesulfonic acid, calcium salts, borated. May produce an allergic reaction.
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##### 2.3. Other hazards

No information available.

#### SECTION 3: Composition/information on ingredients

##### 3.2. Mixtures

###### Chemical characterization

Preparation of base oils and additives.

**SAE 20W-50 Turbo**

Revision date: 11.11.2021

Page 2 of 11

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
68784-31-6	Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts			1 - < 2,5 %
	272-238-5		01-2119657973-23	
	Eye Dam. 1, Aquatic Chronic 2; H318 H411			
722503-68-6	Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts			0,1 - < 1,0 %
	682-816-2			
	Skin Sens. 1, Aquatic Chronic 4; H317 H413			
	Alkyl-(C18-C28) toluenesulfonic acid, calcium salts, borated			0,1 - < 1,0 %
	953-650-0			
	Repr. 2, Skin Sens. 1B; H361d H317			

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

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

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
68784-31-6	272-238-5	Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts	1 - < 2,5 %
	dermal: LD50 = > 5000 mg/kg; oral: LD50 = 3400 mg/kg		
	953-650-0	Alkyl-(C18-C28) toluenesulfonic acid, calcium salts, borated	0,1 - < 1,0 %
	Repr. 2; H361d: >= 17,5 - 100		

**Further Information**

Test data verify that the zinc dialkyl dithiophosphate does not cause the classification of the product as "Eye irritant 2". All concentrations are units of weight percent for liquids, and unit of volume percent for gaseous products.

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

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**General information**

Remove affected person from the danger area and lay down.  
Do not leave affected person unattended.  
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

**After inhalation**

Provide fresh air. Call a doctor if you feel unwell.

**After contact with skin**

After contact with skin, wash immediately with plenty of water and soap.  
Take off contaminated clothing and wash it before reuse.  
In case of skin irritation, consult a physician.

**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**

Rinse mouth thoroughly with water.

### SAE 20W-50 Turbo

Revision date: 11.11.2021

Page 3 of 11

Let water be drunken in little sips (dilution effect).  
Do NOT induce vomiting.  
In all cases of doubt, or when symptoms persist, seek medical advice.

#### **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**

Use water spray jet to protect personnel and to cool endangered containers.  
Co-ordinate fire-fighting measures to the fire surroundings.

- Water spray jet
- Carbon dioxide (CO<sub>2</sub>).
- Extinguishing powder
- Foam

##### **Unsuitable extinguishing media**

Full water jet

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

Formation of toxic gases is possible during heating or in case of fire.

In case of fire may be liberated:

- Carbon monoxide (CO)
- Carbon dioxide (CO<sub>2</sub>).
- Nitrogen oxides (NO<sub>x</sub>)
- Hydrogen sulphide (H<sub>2</sub>S)
- Phosphorus oxides
- Pyrolysis products, toxic

#### **5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus. Use of protective clothing

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.

### **SECTION 6: Accidental release measures**

#### **6.1. Personal precautions, protective equipment and emergency procedures**

##### **General measures**

Keep people at a distance and stay on the windward side.  
Special danger of slipping by leaking/spilling product.

##### **For non-emergency personnel**

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

#### **6.2. Environmental precautions**

Do not allow to enter into surface water or drains.  
Do not allow to enter into soil/subsoil.  
Prevent spread over a wide area (e.g. by containment or oil barriers).

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

##### **For containment**

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.

### SAE 20W-50 Turbo

Revision date: 11.11.2021

Page 4 of 11

#### **For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.  
Remove from the water surface (e.g. skimming, sucking).

#### **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**

Avoid formation of oil dust.  
Use personal protection equipment.  
Do not put any product-impregnated cleaning rags into your trouser pockets.  
Clear spills immediately.

##### **Advice on protection against fire and explosion**

No special fire protection measures are necessary.  
Take precautionary measures against static discharges.  
Keep away from sources of ignition - No smoking.

#### **7.2. Conditions for safe storage, including any incompatibilities**

##### **Requirements for storage rooms and vessels**

Keep container tightly closed and in a well-ventilated place.  
Keep only in the original container. Store in a cool dry place. (Protect from moisture.)  
Floors should be impervious, resistant to liquids and easy to clean.

##### **Hints on joint storage**

Do not store together with:  
- Materials capable of ignition under almost all normal temperature conditions  
- Explosives

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

Motor oil multigrade

### **SECTION 8: Exposure controls/personal protection**

#### **8.1. Control parameters**

### SAE 20W-50 Turbo

Revision date: 11.11.2021

Page 5 of 11

#### DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
68784-31-6	Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts		
Worker DNEL, long-term	inhalation	local	5,58 mg/m <sup>3</sup>
Consumer DNEL, long-term	inhalation	local	1,19 mg/m <sup>3</sup>
Worker DNEL, long-term	inhalation	systemic	2,93 mg/m <sup>3</sup>
Worker DNEL, acute	inhalation	systemic	496,4 mg/m <sup>3</sup>
Worker DNEL, long-term	dermal	systemic	10,42 mg/kg bw/day
Worker DNEL, acute	dermal	systemic	100 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	11,75 mg/m <sup>3</sup>
Consumer DNEL, acute	inhalation	systemic	198,6 mg/m <sup>3</sup>
Consumer DNEL, long-term	dermal	systemic	2,1 mg/kg bw/day
Consumer DNEL, acute	dermal	systemic	50 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	0,21 mg/kg bw/day
Consumer DNEL, acute	oral	systemic	29 mg/kg bw/day

#### PNEC values

CAS No	Substance	
Environmental compartment	Value	
68784-31-6	Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts	
Freshwater	0,004 mg/l	
Freshwater (intermittent releases)	0,044 mg/l	
Marine water	0,0046 mg/l	
Freshwater sediment	0,07 mg/kg	
Marine sediment	0,007 mg/kg	
Secondary poisoning	8,33 mg/kg	
Micro-organisms in sewage treatment plants (STP)	3,8 mg/l	
Soil	0,055 mg/kg	

#### Additional advice on limit values

To date, no national critical limit values exist.

#### 8.2. Exposure controls



#### Appropriate engineering controls

Provide adequate ventilation as well as local exhaust at critical locations.

#### Protective and hygiene measures

Take off contaminated clothing and wash it before reuse.

Wash hands before breaks and after work.

When using do not eat, drink, smoke, sniff.

#### Eye/face protection

During filling, metering, mixing and sampling must be used:

### SAE 20W-50 Turbo

Revision date: 11.11.2021

Page 6 of 11

Wear eye/face protection. DIN EN 166

#### 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.

Recommended glove articles: EN ISO 374

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material: 0,4 mm

Breakthrough times and swelling properties of the material must be taken into consideration. Breakthrough time: > 8h

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:	brown
Odour:	characteristic
Odour threshold:	not determined

pH-Value:	not determined	<b>Test method</b>
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#### Changes in the physical state

Melting point:	not determined
Boiling point or initial boiling point and boiling range:	> 320 °C
Pour point:	-36 °C ISO 3016
Flash point:	> 210 °C DIN ISO 2592

#### Flammability

Solid/liquid:	not applicable
Gas:	not applicable

#### Explosive properties

Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

Lower explosion limits:	0,6 vol. %
Upper explosion limits:	6,5 vol. %

#### Self-ignition temperature

Solid:	not applicable
Gas:	not applicable

Decomposition temperature:	not determined
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#### Oxidizing properties

The product is not: oxidising.

Vapour pressure:	not determined
Density (at 15 °C):	0,877 g/cm <sup>3</sup>
Water solubility:	not determined

**SAE 20W-50 Turbo**

Revision date: 11.11.2021

Page 7 of 11

**Solubility in other solvents**

not determined

Partition coefficient n-octanol/water:

not determined

Viscosity / dynamic:

not determined

Viscosity / kinematic:  
(at 40 °C)

142 mm<sup>2</sup>/s

Relative 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**

The formation of combustible vapours is possible at temperatures above: Flash point

**10.4. Conditions to avoid**

Avoid: Thermal decomposition

**10.5. Incompatible materials**

Materials to avoid:

- Oxidising agent

**10.6. Hazardous decomposition products**

Hazardous combustion products:

- Carbon monoxide (CO)
- Carbon dioxide (CO<sub>2</sub>).
- Nitrogen oxides (NO<sub>x</sub>)
- Hydrogen sulphide (H<sub>2</sub>S)
- Phosphorus oxides
- Pyrolysis products, toxic

**SECTION 11: Toxicological information**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Acute toxicity**

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

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 mg/kg 3400	Rat	Study report (1981)	OECD Guideline 401
	dermal	LD50 mg/kg > 5000	Rabbit	Study report (1981)	OECD Guideline 402

**Irritation and corrosivity**

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

### SAE 20W-50 Turbo

Revision date: 11.11.2021

Page 8 of 11

#### Sensitising effects

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

#### Carcinogenic/mutagenic/toxic effects for reproduction

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

The product contains less than 3% DMSO extract (method IP346). A classification as a carcinogen with R45 is deleted. (Note L)

#### 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.

#### Additional information on tests

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

#### 11.2. Information on other hazards

##### Endocrine disrupting properties

No information available.

### SECTION 12: Ecological information

#### 12.1. Toxicity

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
68784-31-6	Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts					
	Acute fish toxicity	LL50	4,4 mg/l	96 h	Oncorhynchus mykiss	Study report (2002) OECD Guideline 203
	Acute algae toxicity	ErC50	410 mg/l	72 h	Desmodesmus subspicatus	Study report (2004) OECD Guideline 201
	Acute crustacea toxicity	EL50	75 mg/l	48 h	Daphnia magna	Study report (2005) OECD Guideline 202
	Fish toxicity	NOEC	>= 1000 mg/l	14 d	Oncorhynchus mykiss	CONCAWE, Brussels, Belgium (2010) The aquatic toxicity was estimated by a
	Crustacea toxicity	NOEC	0,4 mg/l	21 d	Daphnia magna	Study report (2010) OECD Guideline 211

#### 12.2. Persistence and degradability

Not readily biodegradable (according to OECD criteria)

#### 12.3. Bioaccumulative potential

##### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
68784-31-6	Phosphorodithioic acid, mixed O,O-bis(sec-Bu and 1,3-dimethylbutyl) esters, zinc salts	ca. 4

#### 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 REACH, annex XIII.

#### 12.6. Endocrine disrupting properties

No information available.

### SAE 20W-50 Turbo

Revision date: 11.11.2021

Page 9 of 11

#### **12.7. Other adverse effects**

No information available.

### **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.

##### **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)**

- |   |  |
|---|--|
| <b><u>14.1. UN number:</u></b>                  | No dangerous good in sense of this transport regulation. |
| <b><u>14.2. UN proper shipping name:</u></b>    | No dangerous good in sense of this transport regulation. |
| <b><u>14.3. Transport hazard class(es):</u></b> | No dangerous good in sense of this transport regulation. |
| <b><u>14.4. Packing group:</u></b>              | No dangerous good in sense of this transport regulation. |

#### **Inland waterways transport (ADN)**

- |   |  |
|---|--|
| <b><u>14.1. UN number:</u></b>                  | No dangerous good in sense of this transport regulation. |
| <b><u>14.2. UN proper shipping name:</u></b>    | No dangerous good in sense of this transport regulation. |
| <b><u>14.3. Transport hazard class(es):</u></b> | No dangerous good in sense of this transport regulation. |
| <b><u>14.4. Packing group:</u></b>              | No dangerous good in sense of this transport regulation. |

#### **Marine transport (IMDG)**

- |   |  |
|---|--|
| <b><u>14.1. UN number:</u></b>                  | No dangerous good in sense of this transport regulation. |
| <b><u>14.2. UN proper shipping name:</u></b>    | No dangerous good in sense of this transport regulation. |
| <b><u>14.3. Transport hazard class(es):</u></b> | No dangerous good in sense of this transport regulation. |
| <b><u>14.4. Packing group:</u></b>              | No dangerous good in sense of this transport regulation. |

#### **Air transport (ICAO-TI/IATA-DGR)**

- |   |  |
|---|--|
| <b><u>14.1. UN number:</u></b>                  | No dangerous good in sense of this transport regulation. |
| <b><u>14.2. UN proper shipping name:</u></b>    | No dangerous good in sense of this transport regulation. |
| <b><u>14.3. Transport hazard class(es):</u></b> | No dangerous good in sense of this transport regulation. |
| <b><u>14.4. Packing group:</u></b>              | 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. Maritime transport in bulk according to IMO instruments**

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**

##### **EU regulatory information**

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

### SAE 20W-50 Turbo

Revision date: 11.11.2021

Page 10 of 11

#### National regulatory information

Water hazard class (D): 1 - slightly hazardous to water  
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

#### Changes

This data sheet contains changes from the previous version in section(s): 1,2,3,4,5,6,7,8,9,10,11,12,13,15,16.

#### 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%  
CLP: Classification, labelling and Packaging  
REACH: Registration, Evaluation and Authorization of Chemicals  
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals  
UN: United Nations  
DNEL: Derived No Effect Level  
DMEL: Derived Minimal Effect Level  
PNEC: Predicted No Effect Concentration  
ATE: Acute toxicity estimate  
LL50: Lethal loading, 50%  
EL50: Effect loading, 50%  
EC50: Effective Concentration 50%  
ErC50: Effective Concentration 50%, growth rate  
NOEC: No Observed Effect Concentration  
BCF: Bio-concentration factor  
PBT: persistent, bioaccumulative, toxic  
vPvB: very persistent, very bioaccumulative  
RID: Regulations concerning the international carriage of dangerous goods by rail  
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)  
EmS: Emergency Schedules  
MFAG: Medical First Aid Guide  
ICAO: International Civil Aviation Organization  
MARPOL: International Convention for the Prevention of Marine Pollution from Ships  
IBC: Intermediate Bulk Container  
SVHC: Substance of Very High Concern  
For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

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

H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H361d Suspected of damaging the unborn child.

### SAE 20W-50 Turbo

Revision date: 11.11.2021

Page 11 of 11

H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
EUH208	Contains Benzenesulfonic acid, methyl-, mono-C20-24-branched alkyl derivs., calcium salts, Alkyl-(C18-C28) toluenesulfonic acid, calcium salts, borated. May produce an allergic reaction.

#### Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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