



Revision date: 31-Jul-2018 Version: 3 Print date: 09-Aug-2018

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

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

1.1. Product identifier

Trade name/designation:

RAVENOL Turbo plus SHPD SAE 15W-40

Article No.:

1123115

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

Use of the substance/mixture:

Lubricant

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Ravensberger Schmierstoffvertrieb GmbH

Jöllenbecker Str. 2

33824 Werther

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Telephone: +49 5203 9719 0

Telefax: +49 5203 9719 40

E-mail: kontakt@ravenol.de

Website: www.ravenol.de

E-mail (competent person): technik@ravenol.de

* **1.4. Emergency telephone number**

Abt. Technik (Produktsicherheit), 24h: +49 700 24 112 112 (Company ID: RAV) (outside USA/Canada)
011 49 700 24 112 112 (Company ID: RAV) (inside USA/Canada), +49 5203 9719 0 (Mo-Do 7.30 Uhr -
16.30 Uhr, Fr 7.30 Uhr - 13.15 Uhr) (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Serious eye damage/eye irritation (Eye Irrit. 2)	H319: Causes serious eye irritation.	Calculation method.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms:



GHS07

Exclamation mark

Signal word: Warning

Hazard components for labelling:

zinc dialkyldithiophosphate

hazard statements for health hazards

H319 Causes serious eye irritation.

Precautionary statements Prevention

P264.1 Wash hands thoroughly after handling.

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



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Precautionary statements Response

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.

Precautionary statements Disposal

P501.2	Dispose of contents/container to an appropriate recycling or disposal facility.
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* **2.3. Other hazards**

Other adverse effects:

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

SECTION 3: Composition / information on ingredients

* **3.2. Mixtures**

Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CL P]	Concentration
	Polymere Aquatic Chronic 4 H413	< 5 Wt %
CAS No.: 68649-42-3 EC No.: 272-028-3 REACH No.: 01-2120742271-64	zinc dialkyldithiophosphate Eye Dam. 1, Aquatic Chronic 2 H318-H411	0 - < 1 Wt %

Full text of H- and EUH-phrases: see section 16.

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). Remove victim out of the danger area. Remove contaminated, saturated clothing. If unconscious place in recovery position and seek medical advice. Do not leave affected person unattended.

Following inhalation:

Provide fresh air. Consult a doctor immediately.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap. Consult a doctor immediately.

After eye contact:

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Causes serious eye irritation.

After ingestion:

Rinse mouth thoroughly with water. Do NOT induce vomiting. Consult a doctor immediately.

Self-protection of the first aider:

Use personal protection equipment. No direct artificial respiration to be given by first aider.

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

May cause an allergic skin reaction. Causes eye irritation.

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

Treat symptomatically. Observe risk of aspiration if vomiting occurs. Causes serious eye irritation.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

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

Carbon dioxide (CO2)

Extinguishing powder

alcohol resistant foam

Use water spray jet to protect personnel and to cool endangered containers.



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Unsuitable extinguishing media:

Full water jet

5.2. Special hazards arising from the substance or mixture

During heating or in case of fire, toxic gases is possible.

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

When hot, product develops flammable vapours.

Hazardous combustion products:

Carbon monoxide, Carbon dioxide (CO₂), Nitrogen oxides (NO_x), Gases/vapours, toxic

During heating or in case of fire, toxic gases is possible.

5.3. Advice for firefighters

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

5.4. Additional information

Do not inhale explosion and combustion gases. Move undamaged containers from immediate hazard area if it can be done safely. 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**

6.1.1. For non-emergency personnel

Personal precautions:

Use personal protection equipment. Special danger of slipping by leaking/spilling product. Remove persons to safety.

Protective equipment:

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

Emergency procedures:

Remove all sources of ignition. Remove persons to safety. Provide adequate ventilation.

6.1.2. For emergency responders

Personal protection equipment:

Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

For containment:

Suitable material for taking up: Sand, Kieselguhr, Universal binder, Chemical binding agents, containing acids

Prevent spread over a wide area (e.g. by containment or oil barriers).

For cleaning up:

Remove from the water surface (e.g. skimming, sucking). Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Other information:

Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Disposal: see section 13

Personal protection equipment: see section 8

6.5. Additional information

Clear spills immediately. Use appropriate container to avoid environmental contamination.



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SECTION 7: Handling and storage

* 7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Wear personal protection equipment (refer to section 8).

When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Do not put any product-impregnated cleaning rags into your trouser pockets. Clear spills immediately. Use appropriate container to avoid environmental contamination.

Fire prevent measures:

No special fire protection measures are necessary.

Environmental precautions:

Shafts and sewers must be protected from entry of the product.

Advices on general occupational hygiene

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

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

Requirements for storage rooms and vessels:

Suitable container/equipment material: Floors should be impervious, resistant to liquids and easy to clean. Shafts and sewers must be protected from entry of the product.

Keep/Store only in original container.

Hints on storage assembly:

not required

Storage class: 10 - Combustible liquids that cannot be assigned to any of the above storage classes

Further information on storage conditions:

Store in a cool dry place. Keep away from heat.

7.3. Specific end use(s)

Recommendation:

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No data available

* 8.2. Exposure controls

8.2.1. Appropriate engineering controls

See section 7. No additional measures necessary.

8.2.2. Personal protection equipment

Eye/face protection:

During transfer: Eye glasses with side protection

Wear eye/face protection. DIN EN 166

Skin protection:

Hand protection

Suitable material: NBR (Nitrile rubber), PVC (polyvinyl chloride), CR (polychloroprene, chloroprene rubber)

Thickness of the glove material: $\geq 0,4$ mm

Breakthrough time (maximum wearing time) 480 min

Breakthrough times and swelling properties of the material must be taken into consideration.

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.

Tested protective gloves must be worn: EN ISO 374

Suitable protective clothing: Protective clothing

Respiratory protection:

Usually no personal respiratory protection necessary.



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8.2.3. Environmental exposure controls

See section 7. No additional measures necessary.

8.3. Additional information

Mineral oil mist limits:

OSHA PEL - value 5 mg / m³, ACGIH STEL - value of 10 mg / m³

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid

Colour: brown

Odour: characteristic

Safety relevant basis data

parameter		at °C	Method	Remark
pH	<i>not applicable</i>			
Melting point	<i>not determined</i>			
Freezing point	<i>No data available</i>			
Initial boiling point and boiling range	<i>No data available</i>			
Decomposition temperature (°C):	<i>No data available</i>			
Flash point	236 °C			
Evaporation rate	<i>No data available</i>			
Ignition temperature in °C	<i>No data available</i>			
Upper/lower flammability or explosive limits	<i>not determined</i>			
Vapour pressure	<i>No data available</i>			
Vapour density	<i>No data available</i>			
Relative density	871 kg/m ³	20 °C		
Bulk density	<i>not applicable</i>			
Water solubility	The study does not need to be conducted because the substance is known to be insoluble in water.			
Partition coefficient: n-octanol/water	<i>No data available</i>			
Dynamic viscosity	<i>not applicable</i>			
Kinematic viscosity	100.1 mm ² /s	40 °C		

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No known hazardous reactions. Risk of explosion if heated under confinement.

10.2. Chemical stability

The mixture is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

To avoid thermal decomposition do not overheat.



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* **10.5. Incompatible materials**
 Materials to avoid: Acid, Reducing agent

10.6. Hazardous decomposition products
 Hazardous combustion products: Carbon dioxide Carbon monoxide Nitrogen oxides (NOx)

SECTION 11: Toxicological information

* **11.1. Information on toxicological effects**

- Acute oral toxicity:**
The product has not been tested.
- Acute dermal toxicity:**
No information available for acute dermal and inhalative toxicity.
- Acute inhalation toxicity:**
No information available for acute dermal and inhalative toxicity.
- Skin corrosion/irritation:**
Based on available data, the classification criteria are not met.
- Serious eye damage/irritation:**
Causes serious eye irritation.
- Respiratory or skin sensitisation:**
Based on available data, the classification criteria are not met.
- Germ cell mutagenicity:**
No indications of human germ cell mutagenicity exist.
- Carcinogenicity:**
No indication of human carcinogenicity.
- Reproductive toxicity:**
No indications of human reproductive toxicity exist.
- STOT-single exposure:**
Based on available data, the classification criteria are not met.
- STOT-repeated exposure:**
Based on available data, the classification criteria are not met.
- Aspiration hazard:**
For viscosity data, see section 9.

SECTION 12: Ecological information

- 12.1. Toxicity**
Assessment/classification:
The product has not been tested.
- 12.2. Persistence and degradability**
Additional information:
The product has not been tested.
- 12.3. Bioaccumulative potential**
Partition coefficient: n-octanol/water:
No data available
- Accumulation / Evaluation:**
The product has not been tested.
- 12.4. Mobility in soil**
The product has not been tested.

* **12.5. Results of PBT and vPvB assessment**

CAS No.	Substance name	Results of PBT and vPvB assessment
	Polymere	The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.
68649-42-3	zinc dialkyldithiophosphate	The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.

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

12.6. Other adverse effects
 No information available.



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SECTION 13: Disposal considerations

- * **13.1. Waste treatment methods**
Dispose of waste according to applicable legislation.
- 13.1.1. Product/Packaging disposal**
Waste codes/waste designations according to EWC/AVV
- Waste code packaging:**
- Remark:**
Dispose of waste according to applicable legislation.
- Waste treatment options**
- Appropriate disposal / Product:**
Dispose of waste according to applicable legislation. Consult the appropriate local waste disposal expert about waste disposal.
- Appropriate disposal / Package:**
Non-contaminated packages may be recycled.
- * **13.2. Additional information**
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.


SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

14.1. UN-No.
not relevant
14.2. UN proper shipping name
not relevant
14.3. Transport hazard class(es)
not relevant
14.4. Packing group
not relevant
14.5. Environmental hazards
not relevant
14.6. Special precautions for user
not relevant

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not applicable

SECTION 15: Regulatory information

- * **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
- 15.1.1. EU legislation**
No data available
- 15.1.2. National regulations**
-  **[DE] National regulations**
- Restrictions of occupation**
Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
- Störfallverordnung**
for substances contained in the product:
E2 Hazardous to the aquatic environment in Category Chronic 2



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Technische Anleitung Luft (TA-Luft)

Remark:

To follow: 5.2.5.

Water hazard class (WGK)

WGK:

2 - deutlich wassergefährdend

Source:

Self-classification (mixture; calculation rule).
Identification number 436

Technische Regeln für Gefahrstoffe

TRGS 510
TRGS 500

Berufsgenossenschaftliche Vorschriften (BGV)

Berufsgenossenschaftliche Informationen (BGI) 868
Berufsgenossenschaftliche Regeln (BGR) 189, 190, 192, 195

Other regulations, restrictions and prohibition regulations

Altöl-Verordnung (AltöIV)

15.2. Chemical Safety Assessment

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

15.3. Additional information

No data available

SECTION 16: Other information

* 16.1. Indication of changes

1.4.	Emergency telephone number
2.3.	Other hazards
3.2.	Mixtures
4.2.	Most important symptoms and effects, both acute and delayed
6.1.	Personal precautions, protective equipment and emergency procedures
7.1.	Precautions for safe handling
8.2.	Exposure controls
10.5.	Incompatible materials
11.1.	Information on toxicological effects
12.5.	Results of PBT and vPvB assessment
13.1.	Waste treatment methods
13.2.	Additional information
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture
16.1.	Indication of changes

16.2. Abbreviations and acronyms

See overview table at www.euphrac.eu

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

16.3. Key literature references and sources for data

67/548/EEC - Dangerous Substances Directive

1999/45/EEC - Dangerous Preparations Directive

EC 1907/2006 - REACH Regulation

1272/2008 EC - Regulation on classification, labeling and packaging of substances and mixtures, and amending Directives 67/548/EEC and 1999/45/EC and Regulation (EC) No 1907/2006

Regulation (EC) No 1907/2006 (REACH), Annex II

European Chemicals Agency (ECHA), C & L classification and labeling inventory

European Chemicals Agency (ECHA), ECHA CHEM Registered substances

OECD The Global Portal to Information on Chemical Substances (ChemPortal)

Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA): GESTIS substance database and International limit values for chemical substances

Federal Environment Agency, Section IV 2.4: Documentation and Information Centre substances

hazardous to water Rigoletto (catalog substances hazardous to water)



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16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Serious eye damage/eye irritation (Eye Irrit. 2)	H319: Causes serious eye irritation.	Calculation method.

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

16.6. Training advice

No data available

16.7. Additional 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.

* Data changed compared with the previous version



RAVENOL Turbo-Plus SHPD SAE 15W-40



ART.-NR. 1123115

1 L | 1123115-001
4 L | 1123115-004
5 L | 1123115-005
7 L | 1123115-007
10 L | 1123115-010
20 L | 1123115-020
20 L | 1123115-B20
60 L | 1123115-060
60 L | 1123115-D60
208 L | 1123115-208
208 L | 1123115-D28
1000 L | 1123115-700

VISKOSITÄT 15W-40

SPEZIFIKATIONEN ACEA B4 IACEA A3 IACEA E7 IAPI CI-4+ IAPI CI-4 IAPI SL IACEA E7 IACEA A3 IACEA B4 IAPI SL

HERSTELLUNGSART MINERALISCH

FREIGABE LIZENSIERT: API CH-4, CI-4/SL | MB-FREIGABE 228.3 | MB-FREIGABE 229.1 | VOLVO VDS-3 | MTU TYP 2 | STEYR MOTOR GAZ 560 | CUMMINS CES 20076 | CUMMINS CES 20077 | CUMMINS CES 20078 | RENAULT RLD/RLD-2 | ZF TE-ML 07C | TEDOM 258-3 (61-0-0258) | DEUTZ DQC III-10 | LIZENSIERT: API CI-4

EMPFEHLUNGEN SCANIA LDF | ALLISON C4 | CATERPILLAR TO-2 | GLOBAL DHD-1 | IVECO | JASO DH-1 | JOHN DEERE JDQ 78A | MACK EO-M | EO-M PLUS | MAN M 3275-1

RAVENOL Turbo-Plus SHPD SAE 15W-40 ist ein SHPD - Motorenöl für den gemischten Fuhrpark.

RAVENOL Turbo-Plus SHPD SAE 15W-40 kann für Diesel – und Benzinmotoren auch mit Turbolader eingesetzt werden.

RAVENOL Turbo-Plus SHPD SAE 15W-40 ist speziell für verlängerte Ölwechselintervalle (unter Beachtung der Herstellervorschrift) entwickelt.

Anwendungshinweis

RAVENOL Turbo-Plus SHPD SAE 15W-40 wird von den Motorenhersteller als Ganzjahres- Mehrbereichs-Motorenöl in der Viskositätsklasse SAE 15W-40 in hoch beanspruchten Nutzfahrzeug-Dieselmotoren eingesetzt.

RAVENOL Turbo-Plus SHPD SAE 15W-40 wird durch die verlängerten Ölwechselintervalle entsprechend den Herstellerangaben in Turbo-Dieselmotoren bevorzugt empfohlen.

Eigenschaften

RAVENOL Turbo-Plus SHPD 15W-40 bietet:

- Eine extrem hohe Druckaufnahmefähigkeit, sehr hohe Oxidationsstabilität
- Eine ausgezeichnete Alterungsbeständigkeit
- Hervorragendes Viskositäts-Temperaturverhalten
- Hohe Sicherheitsreserven auch bei Grenzschmierbedingungen
- Eignung für verlängerte Ölwechselintervalle
- Beste Eignung für erschwerte Betriebsbedingungen.



Eigenschaften	Einheit	Daten	Prüfung nach
Dichte bei 20°C	kg/m ³	882	EN ISO 12185
Farbe		braun	visuell
Viskosität bei 40°C	mm ² /s	115,7	DIN 51 562
Viskosität bei 100°C	mm ² /s	15,0	DIN 51 562
Viskositätsindex VI		134	DIN ISO 2909
HTHS Viskosität bei 150°C	mPa*s	4,0	ASTM D5481
Pourpoint	°C	- 36	DIN ISO 3016
Flammpunkt (COC)	°C	228	DIN ISO 2592
TBN	mg KOH/g	10,5	ASTM D2896

Alle Angaben entsprechen nach bestem Wissen dem derzeitigen Stand der Erkenntnisse und unserer Entwicklung. Änderungen bleiben vorbehalten. Alle Bezugnahme auf DIN-Normen dienen nur der Warenbeschreibung und stellen keine Garantie dar. Bei vorliegenden Problemfällen technische Beratung anfordern.

Stand: 04. Mai 2021