RAVENOL TDG 75W-110

ART.-NR. 1221109

1 L I 1221109-001
4 L I 1221109-004
10 L I 1221109-010
20 L I 1221109-020
60 L I 1221109-060
60 L I 1221109-D60
208 L I 1221109-208
208 L I 1221109-D28
1000 L I 1221109-700

VISKOSITÄT 75W-110
SPEZIFIKATIONEN API GL-4 IAPI GL-5 IMT-1
HERSTELLUNGSART VOLLSYNTHETISCH
FREIGABE ZF TE-ML 05A I ZF TE-ML 12N I ZF TE-ML 16F I ZF TE-ML 21A (ZF001438)
EMPFEHLUNGEN DAF I MACK GO-J I MIL-PRF-2105E I SAE J2360 I MEETS THE REQUIEREMENT OF SCANIA STO 1:0 I ZF TE-ML 05B I ZF TE-ML 07A I ZF TE-ML 08 I ZF TE-ML 19C I ZF TE-ML 21B

RAVENOL TDG 75W-110 ist ein vollsynthetisches "Total Drive Line" Leichtlauf-Getriebeöl.

RAVENOL TDG 75W-110 ist konzipiert auf Basis von synthetischen Grundölen und eine darauf abgestimmte spezielle Additivierung. Dadurch wird die Einhaltung der heutigen Praxisanforderungen übertroffen.

RAVENOL TDG 75W-110 ist hervorragend geeignet bei sehr hohen mechanischen und thermischen Belastungen von Handschaltgetrieben und Hinterachsen von PKW und LKW.

Anwendungshinweis

RAVENOL TDG 75W-110 ist ein Hochleistungs-Getriebeöl speziell entwickelt für Handschaltgetrieben und Hinterachsen von PKW und schwere LKW. Dieses "Total Drive Line" Öl ist als universelles Produkt hervorragend geeignet für Anwendung in Werkstätten.

Dieses Öl kann für ein breites Anwendungsgebiet eingesetzt werden.

Eigenschaften

RAVENOL TDG 75W-110 bietet:

- Eine ausgezeichnete thermische Stabilität.
- Starken Schutz vor Rostbildung, Korrosion, Schaumbildung.
- Einen niedrigen Stockpunkt.
- Hervorragende EP-Eigenschaften.
- Ein gutes Schaltverhalten bei niedrigen Temperaturen.
- Eine verlängerte Lebensdauer.
- Kraftstoffersparnis

Eigenschaften	Einheit	Daten	Prüfung nach
Dichte bei 20°C	kg/m³	874,0	EN ISO 12185
Farbe		braun	visuell
Viskosität bei 100°C	mm²/s	21,4	DIN 51562-10
Viskosität bei 40°C	mm²/s	163,5	DIN 51562-10
Viskositätsindex VI		155	DIN ISO 2909
Brookfield Viskosität	mPa*s	155.000	ASTM D 2983
Pourpoint	°C	- 45	DIN ISO 3016
Flammpunkt (COC)	°C	204	DIN ISO 2592
Cu-Korrosion		1a	ASTM D130

Alle Angaben entsprechen nach bestem Wissen dem derzeitigen Stand der Erkenntisse 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: 12. September 2019

Ravensberger Schmierstoffvertrieb GmbH I Jöllenbecker Str. 2 I 33824 Werther / Germany
Telefon: +49 5203 9719 0 I Telefax: +49 5203 9719 40 I E-Mail: kontakt@ravenol.de
www.ravenol.de

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 TDG 75W-110

Article No.:
1221109

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
D

Telephone: +49 5203 9719 0
Telefax: +49 5203 9719 48
E-mail: kontakt@ravenol.de
Website: www.ravenol.de
E-mail (competent person): kontakt@ravenol.de

1.4. Emergency telephone number

Abt. 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 (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]:
This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP].

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]
According to EC directives or the corresponding national regulations the product does not have to be labelled.

Signal word: Warning

Hazard statements: -

Supplemental Hazard information (EU)	
EUH208	Contains Olefin sulfide, reaction products of bis (4-methyl pentan-2-yl) phosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched).May produce an allergic reaction.
EUH210	Safety data sheet available on request.

Precautionary statements: -

2.3. Other hazards

No data available

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Additional information:
The base oil / mineral oil used has a value of less than 3% DMSO, so it is not classified as a carcinogen.

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No. 1272/2008 [CLP]	Concen-tration
CAS No.: 68037-01-4 **EC No.:** 500-183-1 **REACH No.:** 01-2119486452-34	**1-decene, homopolymer, hydrogenated** Asp. Tox. 1 H304	25 – 50 Wt %
CAS No.: 68937-96-2 **EC No.:** 273-103-3	**Polysulfides, di-tert-Bu** **Warning** H317-H412	2.5 – 10 Wt %
EC No.: 931-384-6 **REACH No.:** 01-2119493620-38-0000	**Reaction products of bis(4-methylpentan-2- yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched)** **Danger** H302-H317-H318-H411	1 – 2.5 Wt %
CAS No.: 0000000-01-5	**Baseoils low viscosity, comparable (<20,5 mm²/s at 40°C)** **Danger** H304	1 – 2.5 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:
No special measures are necessary. Remove contaminated, saturated clothing immediately.

Following inhalation:
In case of respiratory tract irritation, consult a physician. Provide fresh air.

In case of skin contact:
In case of skin irritation, consult a physician. After contact with skin, wash immediately with plenty of water and soap.

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.

After ingestion:
Rinse mouth thoroughly with water. If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Self-protection of the first aider:
First aider: Pay attention to self-protection!

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

No data available

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

Observe risk of aspiration if vomiting occurs. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
alcohol resistant foam Dry extinguishing powder Carbon dioxide (CO2)

Unsuitable extinguishing media:
Full water jet

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Gases/vapours, toxic

Hazardous combustion products:
Nitrogen oxides (NOx) Carbon monoxide. Carbon dioxide (CO2)

5.3. Advice for firefighters

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

5.4. Additional information

Co-ordinate fire-fighting measures to the fire surroundings. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

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.

6.1.2. For emergency responders

Personal protection equipment:

Use appropriate respiratory protection.

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).

6.3. Methods and material for containment and cleaning up

For containment:

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

For cleaning up:

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

No special measures are necessary.

Fire prevent measures:

No special fire protection measures are necessary.

Environmental precautions:

See section 8.

Advices on general occupational hygiene

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500. Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff. Remove contaminated, saturated clothing.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep/Store only in original container.

Requirements for storage rooms and vessels:

Shafts and sewers must be protected from entry of the product. Keep/Store only in original container.

Hints on storage assembly:

Do not store together with: Strong acid, Strong alkali, Oxidising agent

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

7.3. Specific end use(s)

Recommendation:

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

No data available

8.1.2. biological limit values

No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
Polysulfides, di-tert-Bu CAS No.: 68937-96-2	1.66 mg/kg bw/day	① DNEL worker ② DNEL long-term dermal (systemic)

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:

Suitable eye protection: Filling and transfer

Skin protection:

Hand protection
Suitable material: NBR (Nitrile rubber), PVC (Polyvinyl chloride)
Thickness of the glove material: >= 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.
Suitable protective clothing: Protective clothing:

Respiratory protection:

Usually no personal respirative protection necessary.

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	*not determined*			
Melting point/freezing point	*not determined*			
Freezing point	*not determined*			
Initial boiling point and boiling range	*not determined*			
Decomposition temperature (°C):	*not determined*			
Flash point	204 °C			
Evaporation rate	*not determined*			
Ignition temperature in °C	*not determined*			
Upper/lower flammability or explosive limits	*not determined*			
Vapour pressure	*not determined*			
Vapour density	*not determined*			
Density	874 kg/m³	20 °C		
Bulk density	*not determined*			
Water solubility (g/L)	insoluble			
Partition coefficient: n-octanol/ water	*not determined*			
Dynamic viscosity	*not determined*			
Kinematic viscosity	163.5 mm²/s	40 °C		

9.2. Other information
No data available

SECTION 10: Stability and reactivity

10.1. Reactivity
No known hazardous reactions.

10.2. Chemical stability
The product is stable under storage at normal ambient temperatures.

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.

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

10.6. Hazardous decomposition products
No known hazardous decomposition products.

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:
No irritant effect.

Eye damage/irritation:
No irritant effect.

Respiratory or skin sensitisation:
No sensitizing effects known.

Germ cell mutagenicity:
No indications of human germ cell mutagenicity exist.

Carcinogenicity:
No indication of human carcinogenicity. The base oil / mineral oil used has a value of less than 3% DMSO, so it is not classified as a carcinogen.

Reproductive toxicity:
No indications of human reproductive toxicity exist.

Aspiration hazard:
Observe risk of aspiration if vomiting occurs.

Additional information:
Persons with a history of skin sensitisation problems should not be employed in any process in which this product is used. May cause an allergic skin reaction.

SECTION 12: Ecological information

12.1. Toxicity
Aquatic toxicity:
No information available.

12.2. Persistence and degradability
Additional information:
No information available.

12.3. Bioaccumulative potential
Accumulation / Evaluation:
No information available.

12.4. Mobility in soil
No data 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.

12.6. Other adverse effects
No data available

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:
Delivery to an approved waste disposal company.

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:
Completely emptied packages can be recycled.

13.2. Additional information
No data available

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
No

Additional information:
No dangerous good in sense of these transport regulations.

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

Water hazard class (WGK)

WGK:
2 - deutlich wassergefährdend

Description:
hazardous to water (WGK 2)

Technische Regeln für Gefahrstoffe

Minimum protective measures according to TRGS 500

Other regulations, restrictions and prohibition regulations

Altöl-Verordnung (AltölV)

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

sections 1-16

16.2. Abbreviations and acronyms

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)

16.4. Classification for mixtures and used evaluation method according to regulation (EC) 1272/2008 [CLP]

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

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

Hazard statements	
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

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.