



Gear Oils

Gear Heavy

Description

Gear Heavy utilises EP (extreme pressure) additives and is recommended for all shaft drive units where SAE 80W-90 is specified.

Application

Specifications

API GL-5
Mil-L-2105D
ZF TE-ML-05A/16B/17B/19B/21A

Typical standard analyses

Density at 15 °C, kg/l	0,896
Viscosity 40 °C, mm ² /s	149,00
Viscosity 100 °C, mm ² /s	14,80
Viscosity Index	98
Flash Point COC, °C	230
Pour Point, °C	-30
Acid number, mgKOH/g	1,60
Sulphate Ash, %	0,05

06/14/2013

The data mentioned in this product information sheet is meant to enable the reader to orientate himself about the properties and possible applications of our products. Although this overview is composed with all possible care on the stated date, the compiler does not accept any liability for damages caused by incompleteness and/or inaccuracies in this information, especially when these are caused by obvious typing errors. The terms of delivery of the supplier apply to all product supplies. The reader is advised, especially for critical applications, to make the final product choice in consultation with the supplier. Due to continual product research and development, the information contained herein is subject to changes without notification.

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.10.2011

Version number 7

Revision: 27.10.2011

* 1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** Gear Heavy
- **Article number:** PG.10.00
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use** SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- **Product category** PC24 Lubricants, greases, release products
- **Process category** PROC2 Use in closed, continuous process with occasional controlled exposure
PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/
large containers at non-dedicated facilities
PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/
large containers at dedicated facilities
PROC20 Heat and pressure transfer fluids in dispersive, professional use but closed
systems
- **Environmental release category** ERC9a Wide dispersive indoor use of substances in closed systems
ERC9b Wide dispersive outdoor use of substances in closed systems
- **Application of the substance / the preparation** Transmission oil
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:** Putoline Oil
Dollegoorweg 15
NL-7602 EC ALMELO
Tel.: +31 (0)546 818165
- **Further information obtainable from:** Product safety department - vib@putoline.com
- **Emergency telephone number:** +31 (0)546 818165 (9 AM to 4 PM, Monday to Friday)

* 2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008** The product is not classified according to the CLP regulation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.
- **Information concerning particular hazards for human and environment:** The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:** The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- **Label elements**
- **Labelling according to EU guidelines:** Observe the general safety regulations when handling chemicals.
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).
- **Special labelling of certain preparations:** Contains phosphoric acid ester amine salt, alkenylamin, substituted thiadiazole. May produce an allergic reaction.
Safety data sheet available for professional user on request.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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* 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:		
EC number: 931-384-6 Reg.nr.: 01-2119493620-38	Reaction products of bis(2-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched) <div style="font-size: small; margin-top: 5px;"> ✘ Xn R22; ✘ Xi R41; ✘ Xi R43; ✘ N R51/53 ⚠ Flam. Liq. 3, H226; ⚠ Eye Dam. 1, H318; ⚠ Aquatic Chronic 2, H411; ⚠ Acute Tox. 4, H302; Skin Sens. 1, H317 </div>	1-2.5%

- **Additional information:** The highly refined mineral oil contains <3% (w/w) DMSO extract, according to IP346. For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** If swallowed or in case of vomiting, danger of entering the lungs.

* 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO₂, dry chemical, or foam. Water can be used to cool and protect exposed material.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Remove from the water surface (e.g. skim or suck off).
- **Reference to other sections** No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special measures required.
Avoid the formation of oil haze.
- **Information about fire - and explosion protection:** No special measures required.

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- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Contains mineral oil. Under conditions which may generate mists, observe the OSHA PEL of 5 mg per cubic meter, ACGIH STEL of 10 mg per cubic meter.
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** Wash hands before breaks and at the end of work.
- **Respiratory protection:** Not required.
- **Protection of hands:** Oil resistant gloves
- **Material of gloves:** Nitrile rubber, NBR
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
PVC gloves
Neoprene gloves
- **Penetration time of glove material:** The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Goggles recommended during refilling
- **Body protection:** Protective work clothing

* 9 Physical and chemical properties

· Information on basic physical and chemical properties	
· General Information	
· Appearance:	
Form:	Liquid
Colour:	Brown
· Odour:	Characteristic
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· Drip point:	
Pour point	-30°C
· Flash point:	> 110°C
· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Density at 20°C:	0.896 g/cm ³

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· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Segregation coefficient (n-octanol/water):	Not determined.
· Viscosity: 40°C	149 mm ² /s
· Solvent content: Organic solvents:	0.1 %
· Other information	No further relevant information available.

10 Stability and reactivity

- Reactivity
- Chemical stability
- Thermal decomposition / conditions to be avoided: To avoid thermal decomposition do not overheat.
- Possibility of hazardous reactions: Reacts with strong oxidizing agents.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

* 11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information: The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version. When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.
- Sensitisation: Experimental data has shown that the concentration of potentially sensitising components present in this product does not induce skin sensitisation. May cause an allergic skin reaction in sensitive individuals.
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction) Product contains mineral oils of types shown to be noncarcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC). Other components are not known to be associated with carcinogenic effects.

* 12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability: No further relevant information available.
- Other information: The product is difficultly biodegradable.
- Behaviour in environmental systems:
- Bioaccumulative potential: No further relevant information available.
- Mobility in soil: No further relevant information available.
- Additional ecological information:
- General notes: Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water. Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

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- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation** Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue	
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

* 14 Transport information

· UN-Number	
· ADR, ADN, IMDG, IATA	Void
· UN proper shipping name	
· ADR, ADN, IMDG, IATA	Void
· Transport hazard class(es)	
· ADR, ADN, IMDG, IATA	
· Class	Void
· Packing group	
· ADR, IMDG, IATA	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	-

* 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations:**
- **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

* 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
 - H226 Flammable liquid and vapour.
 - H302 Harmful if swallowed.
 - H317 May cause an allergic skin reaction.
 - H318 Causes serious eye damage.
 - H411 Toxic to aquatic life with long lasting effects.
 - R22 Harmful if swallowed.
 - R41 Risk of serious damage to eyes.
 - R43 May cause sensitisation by skin contact.
 - R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Department issuing MSDS:** Product safety department.
- **Contact:** Product safety department
- **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)
 - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 - IMDG: International Maritime Code for Dangerous Goods
 - IATA: International Air Transport Association
 - ICAO: International Civil Aviation Organization
 - GHS: Globally Harmonized System of Classification and Labelling of Chemicals

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· Sources

67/548/EEC - Dangerous Substances Directive
99/45/EEC - Dangerous Preparations Directive

**· * Data compared to the
previous version altered.**