

MATERIAL SAFETY DATA SHEET
According to 91/155/EC

Printing date 21.04.2004

Reviewed on 21.04.2004

* 1 Identification of substance:

- Product details:
- Trade name: TITAN GEAR HYPOID 90
- Application of the substance / the preparation: Lubricant
- Manufacturer/Supplier:
FUCHS EUROPE SCHMIERSTOFFE GMBH EXPORT DIVISION
Friesenheimer Str. 15
D-68169 Mannheim
Tel: ++49 (0)621/3701-0 (Switch Board)
Fax: ++49 (0)621/3701-570
- Informing department:
Product safety department Tel: ++49 (0)621/3701-333
- Emergency information:
Tel: ++49 (0)621/3701-333 or ++49 (0)621/3701-0 (Switch Board)

* 2 Composition/Data on components:

- Chemical characterization
- Description:
Mixture containing severely refined base oils and additives.
- | Dangerous components: | R-phrases | |
|----------------------------------|-----------|---------|
| Organic polysulphide | | 2.5-5 % |
| R 53 | | |
| Phosphoric acid ester amine salt | | 1-2.4 % |
| N; R 51/53 | | |
- Additional information
For the wording of the listed risk phrases refer to section 16.

* 3 Hazards identification

- Hazard designation:
By handling of mineral oil products and chemical products no particular hazard is known when normal precautions (item 7) and personal protective equipment (item 8) are kept.
- Information pertaining to particular dangers for man and environment
This product is water polluting; see item 12.
Contains Alkylen amine, Thiadiazole derivative. May produce an allergic reaction.
- Classification system
The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.
The classification results from the Conventional Method of 1999/45/EC concerning specific data of compounds.

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4 First aid measures

- General information
Change clothes and shoes contaminated or soaked by the product.
Never put rags contaminated by the product into cloth-pockets.
- After inhalation
Supply fresh air; consult doctor in case of symptoms.
(eventually by inhaling the overheated product)
- After skin contact The product is not skin irritating.
- After eye contact
Rinse opened eye for several minutes under running water.
- After swallowing In case of persistent symptoms consult doctor.

5 Fire fighting measures

- Suitable extinguishing agents
CO₂, extinguishing powder or water jet. Fight larger fires
with water jet or alcohol-resistant foam.
Use fire fighting measures that suit the environment.
- For safety reasons unsuitable extinguishing agents
Water with a full water jet.
- Protective equipment:
In case of fire fighting: wear self containing breathing apparatus

6 Accidental release measures

- Person-related safety precautions:
Particular danger of slipping on leaked/ spilled product.
- Environmental protection measures:
Do not allow to enter drainage system, surface or ground water.
Prevent from spreading (e.g. by binding or oil barriers).
Do not allow to enter the ground/ soil.
- Measures for cleaning/collecting:
Absorb with liquid-binding material (sand, diatomite, acid binders,
universal binders, sawdust).
Dispose of the material collected according to regulations.
- Additional information: No dangerous materials are released.

7 Handling and storage

- Handling
• Information for safe handling: Prevent formation of aerosols.
• Information about protection against explosions and fires:
Do not heat up to temperatures close to the flash point.
- Storage
• Requirements to be met by storerooms and containers:
No special requirements.

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- Information about storage in one common storage facility:
Store away from foodstuffs.
- Further information about storage conditions:
Local regulations concerning handling and storage of waterpolluting products have to be followed.

* 8 Exposure controls and personal protection

- Additional information about design of technical systems:
No further data; see item 7.
- Components with critical values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- Additional information:
The lists that were valid during the compilation were used as basis.
- Personal protective equipment
- General protective and hygienic measures
The usual precautionary measures should be adhered to in handling the chemicals and the mineral oil products.
Avoid close or long term contact with the skin.
Use skin protection cream for preventive skin protection.
Do not carry cleaning cloths impregnated with the product in trouser pockets.
- Breathing equipment: Not required.
- Protection of hands: Protective gloves and protective skin cream.
- Material of gloves
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.
- 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: Safety glasses recommended during refilling.
- Body protection: Protective work clothing.

9 Physical and chemical properties:

- General Information
- Form: Fluid
- Colour: Yellow
- Smell: Characteristic

Value/Range Unit Method

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- Change in condition
- Melting point/Melting range: Not determined
- Boiling point/Boiling range: not applicable or not determined
- Flash point: 210 ° C ISO 2592
- Decomposition temperature: Not determined
- Self-inflammability: Product is not selfigniting.
- Danger of explosion: Product is not explosive.
- Density at 15 ° C 0.91 g/cm3 DIN 51 757
- Solubility in / Miscibility with
- Water: Not miscible or difficult to mix
- Viscosity or Consistency-Class:
- kinematic: at 100 ° C 17 mm²/s DIN 51 562

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided:
No decomposition below 100°C if used according to specifications.
- Dangerous reactions No dangerous reactions known
- Dangerous products of composition:
No dangerous decomposition products known

11 Toxicological information

- Acute toxicity:
- Primary irritant effect:
- on the skin: No irritant effect known.
- on the eye: No irritant effect known.
- Sensitization: No sensitizing effect 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 according to our actual informations.

12 Ecological information:

- Behaviour in environmental systems:
- Mobility and bioaccumulation potential: No data available
- Ecotoxicological effects:
- Behaviour in sewage processing plants:
The product swims on the water surface.

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- General notes:
German Water Endangering Class 2 (Self-assessment): hazardous for water.
Do not allow to reach ground water, water bodies or sewage system.
Danger to drinking water if even small quantities leak into soil.

* 13 Disposal considerations

- Product:
- Recommendation
Smaller quantities have to be disposed in line with local legislation. After prior treatment product has to be landfilled, recycled or incinerated under adherence to the regulations pertaining to the disposal of especially hazardous waste.
When storing used mineral oil products, ensure that the categories for waste oil and mixing instructions are observed.
Delivery of waste oil only to officially authorized collectors.
- European waste catalogue
13 02 05: mineral-based non-chlorinated engine, gear and lubricating oils
- Uncleaned packagings:
- Recommendation:
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. Small one-way packagings have to be disposed according to the local regulations.
EWC 15 01 99.

14 Transport information

- Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)
• ADR/RID-GGVS/E Class: -
- Maritime transport IMDG/GGVSea:
• IMDG/GGVSea Class: -
- Air transport ICAO-TI and IATA-DGR:
• ICAO/IATA Class: -
- Transport/Additional information:
No dangerous good acc. to dangerous goods/ transport directions.

* 15 Regulatory information

- Designation according to EU guidelines:
Observe the normal safety regulations when handling chemicals or mineral oil products.
The product is not subject to identification regulations under EC Directives until 2001/59/EC (28. ATP) and the Ordinance on Hazardous
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Materials. The concentrations of the dangerous compounds, which are possibly specified under point 2, are not above the value for classification. Local regulations must be kept.

- Special designation of certain preparations:
Contains Alkylen amine, Thiadiazole derivative. May produce an allergic reaction.
- National regulations
- German Water Hazard Class:
Water Endangering Class 2 (Self-assessment): hazardous for water.

* 16 Other information:

All ingredients are listed in the European Inventories. These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. This data sheet is a safety data sheet according to 91/155/EU. For products which are not subject to classification according to EU lists this data sheet is made on a voluntary base.

- Relevant R-phrases
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
53 May cause long-term adverse effects in the aquatic environment.
- Department issuing data specification sheet:
FUCHS EUROPE SCHMIERSTOFFE GMBH Export Division
Product Safety Departement
- Contact:
Product Safety Departement:
Tel: ++49(0)621/3701-333, Mrs. Manuwald
- Validity:
With this latest edition of this MSDS all former editions are not valid any longer.
Changed items are marked with "*".
- * Data compared to the previous version altered.