

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended.



Filling and Packaging – Worldwide

Gear Fluid 460

date of version: 02.02.2018 V 1.2
date of issue: 15.12.2017

1 | 13

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

1.1 Product identifier

Product name: Gear Fluid 460

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

Identified uses: lubricant

Uses advised against: No usage which is apart from.

1.3 Details of the supplier of the safety data sheet

Manufacturer / Supplier KHS GmbH Juchostr. 20
44143 Dortmund
www.khs.com
Germany

Telephone: +49 (0)231 / 569-10000

Fax: +49 (0)231 / 569-410300

Contact Person: Service Products

E-Mail: service.products@khs.com

1.4 Emergency telephone number +49 (0)6131 / 19240 (24h-emergency call)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture The product has not been classified as hazardous and does not need to be labelled according to regulation (EU) no 1272/2008 (CLP).

2.2 Label elements not applicable

Hazard statements: none

Precautionary statements:

Supplemental label elements: The product may not be released into the environment without control. By handling of chemical products no particular hazard is known when normal precautions (item 7) and personal protective equipment (item 8) are kept.

2.3 Other hazards

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended.



Filling and Packaging – Worldwide

Gear Fluid 460

date of version: 02.02.2018 V 1.2
date of issue: 15.12.2017

2 | 13

SECTION 3: Composition/information on ingredients

3.1 Chemical characterization

General information: Synthesis oil preparation with additives. The ingredients are not hazardous and below the consideration limits.

3.2 hazardous components

| chemical definition | Identifier | Concentration * | classification CLP |
|------------------------|------------------|-----------------|--|
| phosphat-ester derivat | confidential | 0,10 - 1,00% | H315 Causes skin irritation. |
| | confidential | | H319 Causes serious eye irritation |
| | confidential | | H411 Toxic to aquatic life with long lasting effects |
| oleic acid derivative | REACH: 203-749-3 | 0,10 - 1,00% | H318 Causes serious eye damage |
| | 01-2119488991-20 | | H400 Very toxic to aquatic life |
| | | | H332 Harmful if inhaled |
| | | | H315 Causes skin irritation. |

All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.

SECTION 4: First aid measures

General: Change clothes and shoes contaminated or soaked by the product.
Never put rags contaminated by the product into clothing pockets.
Instantly remove any clothing soiled by the product.

4.1 Description of first aid measures

Inhalation: Supply fresh air; consult doctor in case of symptoms.

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended.



Filling and Packaging – Worldwide

Gear Fluid 460

date of version: 02.02.2018 V 1.2
date of issue: 15.12.2017

3 | 13

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|---|---|
| Eye contact: | Promptly wash eyes with plenty of water while lifting the eye lids. |
| Skin Contact: | Wash with soap and water. Im allgemeinen ist das Produkt nicht hautreizend. |
| Ingestion: | Rinse mouth thoroughly. |
| 4.2 Most important symptoms and effects, both acute and delayed | |
| 4.3 Indication of any immediate medical attention and special treatment needed | Get medical attention if symptoms occur. |

SECTION 5: Firefighting measures

| | |
|--|---|
| 5.1 Extinguishing media | |
| Suitable extinguishing media: | CO2, fire extinguishing powder or fog like water spraying. Extinguish larger fires with alcohol resistant foam or spray water with suitable surfactant added |
| Unsuitable extinguishing media: | water in full jet. |
| Special hazards arising from the substance or mixture | During fire, gases hazardous to health may be formed. |
| Advice for firefighters | Move container from fire area if it can be done without risk. Dispose of fire debris and contaminated fire fighting water in accordance with official regulations. Collect contaminated fire fighting water separately. It must not enter drains. |
| Special fire fighting procedures: | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |

Gear Fluid 460

date of version: 02.02.2018 V 1.2
date of issue: 15.12.2017

4 | 13

SECTION 6: Accidental release measure

| | |
|--|--|
| 6.1 Personal precautions, protective equipment and emergency procedures | In case of spills, beware of slippery floors and surfaces. |
| 6.2 Environmental precautions | Prevent from spreading (e.g. by binding or oil barriers). Avoid release to the environment. Environmental manager must be informed of all major spillages. Prevent further leakage or spillage if safe to do so. Do not allow to enter drainage system, surface or ground water. |
| 6.3 Methods and material for containment and cleaning up | Absorb with liquid-binding material (sand, diatomite, acidbinders, universal binders, sawdust). Dispose of the material collected according to regulations. Stop the flow of material, if this is without risk. |
| 6.4 Reference to other sections | Section 01 Contact information in case of an emergency Section 07 Handling and storage Section 08 appropriate personal protective equipment Section 13 Disposal considerations |

SECTION 7: Handling and storage

| | |
|---|---|
| 7.1 Precautions for safe handling | Prevent formation of aerosols. Do not eat, drink or smoke when working with the product. Take usual precautions when handling mineral oil products or chemical products. Observe good industrial hygiene practices. Provide adequate ventilation. |
| 7.2 Conditions for safe storage, including any incompatibilities | Local regulations concerning handling and storage of waterpolluting products have to be followed. |
| 7.3 Specific end use(s) | no data available. |
| Storage Class: | 10, combustible liquids |

Gear Fluid 460

date of version: 02.02.2018 V 1.2
date of issue: 15.12.2017

5 | 13

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

8.2 Exposure controls

None of the components have assigned exposure limits.

8.2.1 Appropriate engineering controls:

Provide adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

8.2.2 Individual protection measures, such as personal protective equipment

General information:

Wash hands before breaks and after work. Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. The usual precautionary measures should be adhered to in handling the chemicals or the mineral oil products.

Eye/face protection:

safety glasses (EN 166) recommended during refilling.

Hand Protection:

Material: Nitrile butyl rubber (NBR).
Avoid long-term and repeated skin contact. Suitable gloves can be recommended by the glove supplier. Use skin protection cream for preventive skin protection.
Protective gloves, where permitted in acc. To safety directions. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Other:

Do not carry cleaning cloths impregnated with the product in trouser pockets. Wear suitable protective clothing.

Respiratory Protection:

Seek advice from local supervisor. Ensure good ventilation/exhaustion at the workplace. Avoid breathing vapour/aerosol.

Thermal hazards:

no data available.

Gear Fluid 460

date of version: 02.02.2018 V 1.2
date of issue: 15.12.2017

6 | 13

Hygiene measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

Environmental Controls:

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

| | |
|--|--------------------------------|
| Physical state: | liquid |
| Form: | liquid |
| colour: | colourless |
| odor: | characteristic |
| odor threshold: | no data available. |
| pH: | not applicable |
| boiling Point: | no data available. |
| flash point: | not applicable |
| flash point: | >200°C |
| evaporation Rate: | no data available. |
| flammability (solid, gas): | no data available. |
| flammability limit - Upper (%)-: | no data available. |
| flammability Limit - Lower (%)-: | no data available. |
| vapor pressure: | no data available. |
| vapor density (air=1): | no data available. |
| density: | 0,85 g/cm ³ (15 °C) |
| solubility(ies) | |
| solubility in Water: | unsoluble in water |
| solubility (other): | no data available. |
| partition coefficient (n-octanol/water): | no data available. |
| autoignition Temperature: | |
| autoignition Temperature: | no data available. |
| decomposition Temperature: | no data available. |
| kinematic viscosity: | 460mm ² /s (40°C) |
| explosive properties: | no data available. |
| oxidizing properties: | no data available. |
| 9.2 other information | no data available. |

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Filling and Packaging – Worldwide

Gear Fluid 460

date of version: 02.02.2018 V 1.2
date of issue: 15.12.2017

7 | 13

SECTION 10: stability and reactivity

| | |
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| 10.1 reactivity | Stable under normal use conditions. |
| 10.2 chemical stability | no data available. |
| 10.3 possibility of hazardous reactions | none |
| 10.4 conditions to avoid | Avoid heat or contamination. |
| 10.5 incompatible materials | Strong oxidizing substances. Strong acids. Strong bases. |
| 10.6 hazardous decomposition products | Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. |

SECTION 11: toxicological information

11.1 information on likely routes of exposure

Acute toxicity

Oral product: Not classified for acute toxicity based on available data.

specific substances
phosphat-ester derivat LD 50 (rat): > 2.001 mg/kg (OECD 401)
oleic acid derivative LD 50 (rat): 9.200 mg/kg

Dermal product: Not classified for acute toxicity based on available data.

specific substances
phosphat-ester derivat LD 50 (rat): > 2.001 mg/kg (OECD 402)
oleic acid derivative no data available.

Inhalation product: Not classified for acute toxicity based on available data.

specific substances
phosphat-ester derivat no data available.
oleic acid derivative LC 50 (rat, 4 h): 1,37 mg/l

skin corrosion/irritation: product: no data available.

specific substances
phosphat-ester derivat no data available.
oleic acid derivative no data available.

serious eye damage/eye irritation product: no data available.

product:

SAFETY DATA SHEET

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Filling and Packaging – Worldwide

Gear Fluid 460

date of version: 02.02.2018 V 1.2
date of issue: 15.12.2017

8 | 13

specific substances
phosphat-ester derivat
oleic acid derivative no data available.

respiratory or skin sensitization: Skin sensitisation: Based on available data, the classification criteria are not met.

product:

specific substances
phosphat-ester derivat no data available.
oleic acid derivative no data available.

germ cell mutagenicity no data available.

product:

in vitro
specific substances
phosphat-ester derivat no data available.
oleic acid derivative no data available.

in vivo
specific substances
phosphat-ester derivat no data available.
oleic acid derivative no data available.

carcinogenicity no data available.

product:

specific substances
phosphat-ester derivat no data available.
oleic acid derivative no data available.

reproductive toxicity no data available.

product:

specific substances
phosphat-ester derivat no data available.
oleic acid derivative no data available.

specific target organ toxicity - single exposure no data available.

product:

specific substances
phosphat-ester derivat no data available.
oleic acid derivative no data available.

specific target organ toxicity - repeated exposure no data available.

product:

specific substances

SAFETY DATA SHEET

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Filling and Packaging – Worldwide

Gear Fluid 460

date of version: 02.02.2018 V 1.2
date of issue: 15.12.2017

9 | 13

| | |
|-------------------------------|--------------------|
| phosphat-ester derivat | no data available. |
| oleic acid derivative | no data available. |
| aspiration hazard | no data available. |
| product: | |
| specific substances | |
| phosphat-ester derivat | no data available. |
| oleic acid derivative | no data available. |
| other adverse effects: | no data available. |
| specific substances | |
| phosphat-ester derivat | no data available. |
| oleic acid derivative | no data available. |

SECTION 12 :Ecological information

12.1 Toxicity

Acute toxicity

| | |
|--------------------------------|--|
| fish product: | no data available. |
| specific substances | |
| phosphat-ester derivat | LC 50 (fish, 96 h): 5,5 mg/l (OECD 203) |
| oleic acid derivative | LC 50 (fish, 96 h): 3,2 - 4,6 mg/l |
| aquatic invertebrates product: | no data available. |
| specific substances | |
| phosphat-ester derivat | EC50 (water flea, 48 h): 1,2 mg/l (OECD 202) |
| oleic acid derivative | EC50 (water flea, 48 h): 0,53 mg/l |

chronic toxicity product:

| | |
|--------------------------------|--------------------|
| fish product: | no data available. |
| specific substances | |
| phosphat-ester derivat | no data available. |
| oleic acid derivative | no data available. |
| aquatic invertebrates product: | no data available. |
| specific substances | |
| phosphat-ester derivat | no data available. |
| oleic acid derivative | no data available. |

SAFETY DATA SHEET

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Gear Fluid 460

date of version: 02.02.2018 V 1.2
date of issue: 15.12.2017

10 | 13

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| | no data available. |
| specific substances | |
| oleic acid derivative | EC50 (alga, 72 h): > 10 mg/l (OECD 201) |
| phosphat-ester derivat | EC50 (alga, 72 h): 5,1 mg/l |
| 12.2 Persistence and Degradability | no data available. |
| product: | |
| specific substances | |
| phosphat-ester derivat | Not readily biodegradable. |
| oleic acid derivative | no data available. |
| 12.3 Bioaccumulative potential | no data available. |
| product: | |
| specific substances | |
| phosphat-ester derivat | no data available. |
| oleic acid derivative | no data available. |
| 12.4 mobility in soil | no data available. |
| product: | |
| specific substances | |
| phosphat-ester derivat | no data available. |
| oleic acid derivative | no data available. |
| 12.5 results of PBT and vPvB assessment: | no data available. |
| specific substances | |
| phosphat-ester derivat | no data available. |
| oleic acid derivative | no data available. |
| 12.6 other adverse effects | no data available. |
| specific substances | |
| phosphat-ester derivat | no data available. |
| oleic acid derivative | no data available. |
| water hazard class (WGK): | WGK 1: slightly water-endangering. |

SECTION 13: disposal considerations

13.1 waste treatment methods

general information: Dispose in accordance with all applicable regulations.

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Filling and Packaging – Worldwide

Gear Fluid 460

date of version: 02.02.2018 V 1.2
date of issue: 15.12.2017

11 | 13

disposal methods: Do not empty into drains; dispose of this material and its container in a safe way. When storing used products, ensure that the waste categories and mixing instructions are observed.

SECTION 14: transport information

ADR/RID

14.1 UN number:
14.2 UN proper shipping name:
14.3 transport hazard class(es) non-dangerous goods
class
label(s)
hazard no. (ADR):
tunnel restriction code:
14.4 packing group:
14.5 environmental hazards:
14.6 special precautions for user:

ADN

14.1 UN number:
14.2 UN proper shipping name:
14.3 transport hazard class(es) non-dangerous goods
class
14.4 packing group:
14.5 environmental hazards:
14.6 special precautions for user:

IMDG

14.1 UN number:
14.2 UN proper shipping name:
14.3 transport hazard class(es) non-dangerous goods
class
14.4 packing group:
14.5 environmental hazards:
14.6 special precautions for user:

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Filling and Packaging – Worldwide

Gear Fluid 460

date of version: 02.02.2018 V 1.2
date of issue: 15.12.2017

12 | 13

IATA

14.1 UN number:
14.2 UN proper shipping name:
14.3 transport hazard class(es) non-dangerous goods
class
14.4 packing group:
14.5 environmental hazards:
14.6 special precautions for user:

SECTION 15: regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

EU Regulations

Regulation (EC) No. 2037/2000 none
Substances that deplete the ozone layer:

Regulation (EC) No. 850/2004 on none
persistent organic pollutants:

national regulations

water hazard class (WGK): WGK 1: slightly water-endangering.

15.2 chemical safety assessment: No Chemical Safety Assessment has been carried out.

Gear Fluid 460

date of version: 02.02.2018 V 1.2
date of issue: 15.12.2017

13 | 13

SECTION 16: other information

| | |
|--|--|
| revision Information: | Vertical lines in the margin indicate an amendment. |
| wording of the H-statements in section 2 and 3 | H315 Causes skin irritation. H318 Causes serious eye damage H319 Causes serious eye irritation H332 Harmful if inhaled H400 Very toxic to aquatic life H411 Toxic to aquatic life with long lasting effects |
| other information: | 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 mentioned in regulation EU 1272/2008 (CLP). |
| revision date: | 02.02.2018 section 10.5 has been corrected. section 9 viscosity has been attached. |
| disclaimer: | The data contained in this safety data sheet are based on our current knowledge and experience and are given to the best of our knowledge and belief. It characterizes the product only with regard to safety requirements for handling, transport and disposal. The data do not describe the product's properties (tech. product specification). Neither should any agreed property nor the suitability of the product for any specific technical application be deduced from the data contained in this safety data sheet. Modifications on this document are not allowed. The data are not transferable to other products. In the case of mixing the product with other products or in the case of processing, the data in this safety data sheet are not necessarily valid for the new-made material. It is the responsibility of the recipient of the product to observe federal, state and local law. Please contact us to obtain up-to-date safety data sheets. This document was issued electronically and has no signature. |