

## SAFETY DATA SHEET

acc.to ISO/DIS 11014 for USA

### 1 PRODUCT AND COMPANY IDENTIFICATION

#### 1.1 Product identifier

**Product name:** PENTOSIN EG FFL-4 (TREMEC)**Other means of identification:** For further information, please refer to section 9 of the SDS.

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

**Identified uses:** Lubricant**Uses advised against:** No uses advised against identified.

#### 1.3 Details of the supplier of the safety data sheet

**Manufacturer / Supplier** Fuchs Schmierstoffe GmbH  
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68169 Mannheim

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### 2 HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

The product has been classified and labelled as hazardous according to the legislation in force.

#### Environmental Hazards

Chronic hazards to the aquatic environment Category 3

**Product name:** PENTOSIN EG FFL-4 (TREMEC)

**Hazard summary**

**Physical Hazards:** No data available.

**2.2 Label Elements**

**Hazard Statement(s):** H412: Harmful to aquatic life with long lasting effects.

**Precautionary Statements**

**Prevention:** P273: Avoid release to the environment.

**2.3 Other hazards:**

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. The product may not be released into the environment without control.

**Unknown toxicity:**

Due to information available product does not contain any ingredients of unknown toxicity.

**3 COMPOSITION / INFORMATION ON INGREDIENTS**

**General information:**

Mixture containing severely refined base oils and additives.

Chemical name	Identifier	Concentration *	Notes
Hydrocarbons, low viscous	68037-01-4	20.00 - <50.00%	
base oil, low viscous	72623-87-1	20.00 - <50.00%	
Alkyl amine	61791-44-4	0.10 - <0.25%	
prim. alkanolamine ether	218141-16-3	0.01 - <0.10%	
hydroxyethyl-alkylamine	71786-60-2	0.01 - <0.10%	

\* 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.

**Classification**

Chemical name	Identifier	Classification
Hydrocarbons, low viscous	68037-01-4	Asp. Tox. 1;H304
base oil, low viscous	72623-87-1	Asp. Tox. 1;H304
Alkyl amine	61791-44-4	Skin Corr. 1C;H314, Eye Dam. 1;H318, Aquatic Acute 1;H400, Aquatic Chronic 1;H410, Acute Tox. 4;H302; M-Factor (aquatic acute): 10; M-Factor (aquatic chronic): 1
prim. alkanolamine ether	218141-16-3	Acute Tox. 4;H302, Skin Corr. 1B;H314, Eye Dam. 1;H318, Aquatic Acute 1;H400, Aquatic Chronic 1;H410; M-Factor (aquatic acute): 100; M-Factor (aquatic chronic): 1
hydroxyethyl-alkylamine	71786-60-2	Acute Tox. 4;H302, Skin Corr. 1C;H314, Eye Dam. 1;H318, Repr. 2;H361d, Aquatic Acute 1;H400, Aquatic Chronic 1;H410; M-Factor (aquatic acute): 10; M-Factor (aquatic chronic): 10

**Product name:** PENTOSIN EG FFL-4 (TREMEC)

Please note that the mineral oils and petroleum distillates used in our products are severely refined and have a DMSO extract < 3% as measured by method IP 346 and are not classified as carcinogenic according to Note L of Annex VI of Regulation EC 1272/2008."

#### 4 FIRST AID MEASURES

**General:** 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.

**Eye contact:** Promptly wash eyes with plenty of water while lifting the eye lids.

**Skin Contact:** Wash with soap and water.

**Ingestion:** Rinse mouth thoroughly.

**4.2 Most important symptoms and effects, both acute and delayed:** May cause skin and eye irritation.

**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:** CO<sub>2</sub>, 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 with a full water jet.

**5.2 Special hazards arising from the substance or mixture:** During fire, gases hazardous to health may be formed.

##### 5.3 Advice for firefighters

**Special fire fighting procedures:** 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 protective equipment for fire-fighters:** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

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**SECTION 6: Accidental release measures**

- 6.1 Personal precautions, protective equipment and emergency procedures:** In case of spills, beware of slippery floors and surfaces.
- 6.2 Environmental Precautions:** Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Prevent from spreading (e.g. by binding or oil barriers). Environmental manager must be informed of all major spillages. 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:** See Section 8 of the SDS for Personal Protective Equipment. See Section 7 for information on safe handling See Section 13 for information on disposal.

**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. Do not heat up to temperatures close to the flash point.
- 7.3 Specific end use(s):** Not applicable

**8 EXPOSURE CONTROLS / PERSONAL PROTECTION**

**8.1.Exposure Limits**

Chemical name	Type	Exposure Limit Values	Source
base oil, low viscous - Inhalable fraction.	TWA	5 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values, as amended (03 2014)
base oil, low viscous	PEL	500 ppm    2,000 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
base oil, low viscous - Mist.	PEL	5 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
base oil, low viscous	TWA	400 ppm    1,600 mg/m <sup>3</sup>	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
base oil, low viscous - Mist.	TWA	5 mg/m <sup>3</sup>	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)

**8.2.Exposure controls**

**Product name:** PENTOSIN EG FFL-4 (TREMEC)

**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.

**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. Avoid contact with skin and eyes. Goggles/face shield are recommended. If risk of splashing, wear safety goggles or face shield.

**Skin protection**

**Hand Protection:**

Material: Nitrile butyl rubber (NBR).  
Min. Breakthrough time:  $\geq 480$  min  
Recommended thickness of the material:  $\geq 0.38$  mm

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:** Ensure good ventilation/exhaustion at the workplace. Avoid breathing vapour/ aerosol.

**Thermal hazards:** No data available.

**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:** No data available.

**9 PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties Appearance**

<b>Physical state:</b>	liquid
<b>Color:</b>	Brown
<b>Odor:</b>	Characteristic
<b>Odor Threshold:</b>	Not applicable for mixtures
<b>pH:</b>	Not applicable

**Product name:** PENTOSIN EG FFL-4 (TREMEC)

<b>Freezing point:</b>	Not applicable for mixtures
<b>Boiling Point:</b>	Value not relevant for classification
<b>Flash Point:</b>	220 °C
<b>Evaporation Rate:</b>	Not applicable for mixtures
<b>Flammability (solid, gas):</b>	Value not relevant for classification
<b>Flammability Limit - Upper (%)-:</b>	Not applicable for mixtures
<b>Flammability Limit - Lower (%)-:</b>	Not applicable for mixtures
<b>Vapor pressure:</b>	Not applicable for mixtures
<b>Vapor density (air=1):</b>	Not applicable for mixtures
<b>Density:</b>	0.84 g/cm <sup>3</sup> (15 °C)
<b>Solubility(ies)</b>	
<b>Solubility in Water:</b>	Insoluble in water
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	Not applicable for mixtures
<b>Autoignition Temperature:</b>	Value not relevant for classification
<b>Decomposition Temperature:</b>	Value not relevant for classification
<b>Kinematic viscosity:</b>	40 mm <sup>2</sup> /s (40 °C)
<b>Explosive properties:</b>	Value not relevant for classification
<b>Oxidizing properties:</b>	Value not relevant for classification
<b>9.2 Other information</b>	No data available.

## SECTION 10: Stability and reactivity

<b>10.1 Reactivity:</b>	Stable under normal use conditions.
<b>10.2 Chemical Stability:</b>	Stable under normal use conditions.
<b>10.3 Possibility of hazardous reactions:</b>	Stable under normal use conditions.
<b>10.4 Conditions to avoid:</b>	Stable under normal use conditions.
<b>10.5 Incompatible Materials:</b>	Strong oxidizing substances. Strong acids. Strong bases.
<b>10.6 Hazardous Decomposition Products:</b>	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

## 11 TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

<b>Inhalation:</b>	No data available.
<b>Ingestion:</b>	No data available.
<b>Skin Contact:</b>	No data available.
<b>Eye contact:</b>	No data available.

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**Product name:** PENTOSIN EG FFL-4 (TREMEC)

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**Acute toxicity**

**Oral**

**Product:**

Not classified for acute toxicity based on available data.

**Specified substance(s)**

Hydrocarbons, low viscous

LD 50 (Rat): > 5,000 mg/kg

base oil, low viscous

LD 50 (Rat): > 5,001 mg/kg (OECD 401)

Alkyl amine

LD 50 (Rat): 1,350 mg/kg (OECD 401)

hydroxyethyl-alkylamine

LD 50 (Rat): 1,500 mg/kg

**Dermal**

**Product:**

Not classified for acute toxicity based on available data.

**Inhalation**

**Product:**

Not classified for acute toxicity based on available data.

**Specified substance(s)**

Hydrocarbons, low viscous

LC 50 (Rat, 4 h): > 5 mg/l  
Dusts, mists and fumes

**Skin Corrosion/Irritation:**

**Product:**

Based on available data, the classification criteria are not met.

**Serious Eye Damage/Eye Irritation:**

**Product:**

Based on available data, the classification criteria are not met.

**Respiratory or Skin Sensitization:**

**Product:**

Skin sensitizer: Based on available data, the classification criteria are not met.

Respiratory sensitizer: Based on available data, the classification criteria are not met.

**Specified substance(s)**

Alkyl amine

No sensitizing effect (guinea pig); OECD 406

hydroxyethyl-alkylamine

No sensitizing effect (guinea pig); OECD 406

**Germ Cell Mutagenicity**

**Product:**

Based on available data, the classification criteria are not met.

**Carcinogenicity**

**Product name:** PENTOSIN EG FFL-4 (TREMEC)

**Product:** Based on available data, the classification criteria are not met.

**IARC: IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**  
No carcinogenic components identified

**NTP: US. National Toxicology Program (NTP) Report on Carcinogens:**  
No carcinogenic components identified

**OSHAS: US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**  
No carcinogenic components identified

**Reproductive toxicity**

**Product:** Based on available data, the classification criteria are not met.

**Specific Target Organ Toxicity - Single Exposure**

**Product:** Based on available data, the classification criteria are not met.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** Based on available data, the classification criteria are not met.

**Aspiration Hazard**

**Product:** Based on available data, the classification criteria are not met.

**12 ECOLOGICAL INFORMATION**

**12.1 Toxicity**

**Acute toxicity**

**Product:** Based on available data, the classification criteria are not met.

**Fish**

**Specified substance(s)**

Hydrocarbons, low viscous LC 50 (Fish, 96 h): > 750 mg/l

base oil, low viscous LC 50 (Fish, 96 h): > 100 mg/l (OECD 203)

Alkyl amine LC 50 (Fish, 96 h): 0.1 mg/l (OECD 203)

hydroxyethyl-alkylamine LC 50 (Fish, 96 h): 0.1 mg/l (OECD 203)

**Aquatic Invertebrates**

**Specified substance(s)**

Hydrocarbons, low viscous EC 50 (Water Flea, 48 h): 190 mg/l

Alkyl amine EC 50 (Water Flea, 48 h): 0.043 mg/l (OECD 202)

hydroxyethyl-alkylamine EC 50 (Water Flea, 48 h): 0.48 mg/l (OECD 202)

**Chronic ToxicityProduct:** Based on available data, the classification criteria are met.

**Fish**

**Product name:** PENTOSIN EG FFL-4 (TREMEC)

<b>Specified substance(s)</b> base oil, low viscous	NOEC (Fish, 14 d): > 1,000 mg/l
<b>Aquatic Invertebrates Specified substance(s)</b> base oil, low viscous	NOEC (Water Flea, 21 d): 10 mg/l (OECD 211)
Alkyl amine	EC 10 (Water Flea, 21 d): 0.0107 mg/l (OECD 211)
hydroxyethyl-alkylamine	EC 10 (Water Flea, 21 d): 0.279 mg/l (OECD 211)
<b>Toxicity to Aquatic Plants Specified substance(s)</b> Hydrocarbons, low viscous	EC 50 (Alga, 72 h): > 1,000 mg/l
base oil, low viscous	NOEC (Alga, 72 h): > 100 mg/l (OECD 201)
Alkyl amine	EC 50 (Alga, 72 h): 0.0538 mg/l (OECD 201) NOEC (Alga, 72 h): 0.0156 mg/l
hydroxyethyl-alkylamine	EC 50 (Alga, 72 h): 0.107 mg/l (OECD 201) EC 10 (Alga, 72 h): 0.0092 mg/l (OECD 201)

## 12.2 Persistence and Degradability

### Biodegradation

<b>Product:</b>	Not applicable for mixtures
<b>Specified substance(s)</b> Alkyl amine	63 % (28 d, OECD 301D) Readily biodegradable
hydroxyethyl-alkylamine	> 60 % (28 d, OECD 301B) Readily biodegradable

## 12.3 Bioaccumulative potential

**Product:** Not applicable for mixtures

## 12.4 Mobility in soil:

**Product:** Not applicable for mixtures

## 12.5 Results of PBT and vPvB assessment:

The product does not contain any substances fulfilling the PBT/vPvB criteria.

## 12.6 Other adverse effects:

Harmful to aquatic life with long lasting effects.

## 13 Disposal considerations

### 13.1 Waste treatment methods

<b>General information:</b>	Dispose in accordance with all applicable regulations.
<b>Disposal methods:</b>	Discharge, treatment, or disposal may be subject to national, state, or local laws.

**Product name:** PENTOSIN EG FFL-4 (TREMEC)

**14 TRANSPORT INFORMATION**

**DOT**

Not regulated.

**IMDG - International Maritime Dangerous Goods Code**

Not regulated.

**IATA**

Not regulated.

**15 REGULATORY INFORMATION**

**US Federal Regulations**

**US State Regulations**

**US. California Proposition 65**

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

**Inventory Status**

TSCA	On or in compliance with the inventory
DSL	On or in compliance with the inventory

**16 OTHER INFORMATION**

**Revision Information:** Vertical lines in the margin indicate an amendment.

**Wording of the H-statements in section 2 and 3**

H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H361d	Suspected of damaging the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

**Revision Date:** 29.07.2020

**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.

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