

# SAFETY DATA SHEET

acc.to ISO/DIS 11014 for USA

## 1 PRODUCT AND COMPANY IDENTIFICATION

### 1.1 Product identifier

**Product name:** PENTOSIN FFL-4 MOD

**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**

Fuchs Schmierstoffe GmbH  
Friesenheimer Str. 19  
68169 Mannheim

US Distributor  
Fuchs Lubricants Co.  
17050 Lathrop Avenue  
Harvey, IL 60426  
(708) 333-8900  
(800) 255-3924 24 hrs Emergency

Telephone: +49 621 3701-0 (ZENTRALE)  
Fax: +49 621 3701-570

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Telephone: +49 621 3701-1333  
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**1.4 US contact telephone :** 708-333-8900

**Emergency telephone:** 800-255-3924

## 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

#### Hazard summary

**Physical Hazards:** No data available.

**Product name:** PENTOSIN FFL-4 MOD

## 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 of synthetic base oils with additives.

Chemical name	Identifier	Concentration *	Notes
Hydrocarbons, low viscosity	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 - <1.00%	
hydroxyethyl-alkylamine	61791-31-9	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	Classification
Hydrocarbons, low viscosity	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. 1B;H314, Acute Tox. 4;H302, Skin Sens. 1;H317, Aquatic Chronic 3;H412
hydroxyethyl-alkylamine	61791-31-9 Acute Tox. 4;H302, Skin Corr. 1C;H314, Aquatic Acute 1;H400, Aquatic Chronic 1;H410; M-Factor (aquatic acute): 10; M-Factor (aquatic chronic): 10

## 4 FIRST AID MEASURES

**General:** Instantly remove any clothing soiled by the product.

**Product name:** PENTOSIN FFL-4 MOD

#### 4.1 Description of first aid measures

<b>Inhalation:</b>	Supply fresh air; consult doctor in case of symptoms.
<b>Eye contact:</b>	Promptly wash eyes with plenty of water while lifting the eye lids.
<b>Skin Contact:</b>	Wash with soap and water.
<b>Ingestion:</b>	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

<b>Suitable extinguishing media:</b>	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
<b>Unsuitable extinguishing media:</b>	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

<b>Special fire fighting procedures:</b>	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.
<b>Special protective equipment for fire-fighters:</b>	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

**Product name:** PENTOSIN FFL-4 MOD

### 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 (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) (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) (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) (1989)
base oil, low viscous - Mist.	TWA	5 mg/m <sup>3</sup>	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

### 8.2.Exposure controls

**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.

**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.

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<b>Respiratory Protection:</b>	Ensure good ventilation/exhaustion at the workplace. Avoid breathing vapour/ aerosol.
<b>Thermal hazards:</b>	No data available.
<b>Hygiene measures:</b>	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.
<b>Environmental Controls:</b>	No data available.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

<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
<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

### 9.2 Other information

No data available.

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## 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.

### Acute toxicity

#### Oral

##### Product:

Not classified for acute toxicity based on available data.

##### Specified substance(s)

Hydrocarbons, low viscosity	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
hydroxyethyl-alkylamine	LD 50 (Rat): 1,300 mg/kg

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#### **Dermal**

##### **Product:**

ATEmix: 4,653.49 mg/kg

##### **Specified substance(s)**

Hydrocarbons, low  
viscosity

LD 50 (Rat): > 2,001 mg/kg

base oil, low viscous

LD 50 (Rabbit): > 2,001 mg/kg (OECD 402)

#### **Inhalation**

##### **Product:**

Not classified for acute toxicity based on available data.

##### **Specified substance(s)**

Hydrocarbons, low  
viscosity

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.

##### **Specified substance(s)**

hydroxyethyl-alkylamine

OECD 404 (Rabbit): Corrosive.

#### **Serious Eye Damage/Eye Irritation:**

##### **Product:**

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

##### **Specified substance(s)**

hydroxyethyl-alkylamine

OECD 405 (Rabbit): Risk of serious damage to eyes.

#### **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.

#### **Germ Cell Mutagenicity**

##### **Product:**

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

#### **Carcinogenicity**

##### **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



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**OSHASP: 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 viscosity 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): < 1.1 mg/l

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

**Aquatic Invertebrates**

**Specified substance(s)**

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

alkyl amine EC 50 (Water Flea, 48 h): < 1.1 mg/l

hydroxyethyl-alkylamine EC 50 (Water Flea, 48 h): > 0.01 - 0.1 mg/l

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

**Fish**

**Product name:** PENTOSIN FFL-4 MOD

**Specified substance(s)**

base oil, low viscous NOEC (Fish, 14 d): > 1,000 mg/l

**Aquatic Invertebrates**

**Specified substance(s)**

base oil, low viscous NOEC (Water Flea, 21 d): 10 mg/l (OECD 211)

hydroxyethyl-alkylamine EC 10 (Water Flea, 21 d): > 0.01 - 0.1 mg/l (OECD 211)

**Toxicity to Aquatic Plants**

**Specified substance(s)**

Hydrocarbons, low viscosity EC 50 (Alga, 72 h): > 1,000 mg/l

base oil, low viscous NOEC (Alga, 72 h): > 100 mg/l (OECD 201)

hydroxyethyl-alkylamine EC 50 (Alga, 72 h): > 0.01 - 0.1 mg/l (OECD 201)

**12.2 Persistence and Degradability**

**Biodegradation**

**Product:** Not applicable for mixtures

**Specified substance(s)**

hydroxyethyl-alkylamine > 60 % (28 d, OECD 301D) 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**

**General information:**

Dispose in accordance with all applicable regulations.

**Disposal methods:**

Discharge, treatment, or disposal may be subject to national, state, or local laws.

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## 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

### 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 R-phrases and 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.
H317	May cause an allergic skin reaction.
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:** 09.06.2017

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**Product name:** PENTOSIN FFL-4 MOD

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**Disclaimer:**

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