SAFETY DATA SHEET

acc.to ISO/DIS 11014 for USA

1 PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Product name: PENTOSIN FFL-4

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: Hydraulic/transmission fluid

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
Telephone:	+49 621 3701-0 (ZENTRALE)	
Fax:	+49 621 3701-570	
Contact Person:	Fuchs Schmierstoffe GmbH Abteilung Produktsicherheit	
Telephone:	+49 621 3701-1333	
Fax:	+49 621 3701-7303	
E-mail:	PRODUKTSICHERHEIT@FUCHS-SCHMIERSTOFFE.DE	

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.

2.2 Label Elements

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

Precautionary Statement

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 viscosity	68037-01-4	15.00 - 40.00%	
base oil, low viscous	72623-87-1	15.00 - 40.00%	
alkyl amine	61791-44-4	0.10 - 1.00%	
hydroxyethyl-alkylamine	61791-31-9	0.01 - 0.25%	

* 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.

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. The product is not skin irritating.

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_2, 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 inaccordance 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.

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

None of the components have assigned exposure limits.

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 inhandling 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). 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 propertiesAppearance

Physical state:	liquid
Color:	Dark yellow
Odor:	Characteristic
Odor Threshold:	Not applicable for mixtures
pH:	not applicable
Freezing point:	Not applicable for mixtures
Boiling Point:	Value not relevant for classification

Flash Point:	220 °C (DIN EN ISO 2592)
Evaporation Rate:	Not applicable for mixtures
Flammability (solid, gas):	Value not relevant for classification
Flammability Limit - Upper (%)–:	Not applicable for mixtures
Flammability Limit - Lower (%)–:	Not applicable for mixtures
Vapor pressure:	Not applicable for mixtures
Vapor density (air=1):	Not applicable for mixtures
Density:	0.83 g/cm3 (15 °C)
Solubility(ies)	
Solubility in Water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	Not applicable for mixtures
Autoignition Temperature:	Value not relevant for classification
Decomposition Temperature:	Value not relevant for classification
Kinematic viscosity:	87 mm2/s (20 °C)
Explosive properties:	Value not relevant for classification
Oxidizing properties:	Value not relevant for classification
9.2 Other information	No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity:	Stable under normal use conditions.
10.2 Chemical Stability:	Stable under normal use conditions.
10.3 Possibility of hazardous reactions:	Stable under normal use conditions.
10.4 Conditions to avoid:	Stable under normal use conditions.
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.

11 TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation:	No data available.
Ingestion:	No data available.

Skin Contact:	No data available.
Eye contact:	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): > 5,000 mg/kg
alkyl amine	LD 50 (Rat): 1,350 mg/kg
hydroxyethyl-alkylamine	LD 50 (Rat): 1,300 mg/kg

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

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

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
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.

Aquatic Invertebrates

Specified substance(s)

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
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.

14 TRANSPORT INFORMATION

DOT

Not regulated.

IMDG - International Maritime Dangerous Goods Code

Not regulated.

IATA

Not regulated.

15 REGULATORY INFORMATION

US Federal Regulations

Inventory Status

TSCA	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: 13.09.2016

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.