

SAFETY DATA SHEET

acc.to ISO/DIS 11014 for USA

1 PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Product name: RENOLIN ZAF 32 XHV

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 fluid

Uses advised against: No uses advised against identified.

1.3 Details of the supplier of the safety data sheet

Manufacturer / Supplier

FUCHS LUBRICANTS GERMANY GmbH
Friesenheimer Str. 19
68169 Mannheim
Telephone: +49 621 3701-0 (ZENTRALE)
Fax: +49 621 3701-570

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

Contact for request of safety data sheets

E-mail: Automotive lubricants CS.Services-FLG@fuchs.com
Industrial lubricants
Telephone: +49 621 3701-0 (ZENTRALE)

Informing department for safety data sheets

E-mail: produktsicherheit-FLG@fuchs.com

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 not been classified as hazardous and does not need to be labelled according to the legislation in force.

Hazard summary

Physical Hazards: No data available.

2.2 Label Elements Not applicable

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- 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

3.2 Mixtures

General information: Mixture containing severely refined base oils and additives.

Chemical name	Identifier	Concentration *	Notes
Base oil, low viscous	8042-47-5	50.00 - <100.00%	
Base oil, low viscous	64742-54-7	5.00 - <10.00%	
Base oil, low viscous	64742-55-8	1.00 - <5.00%	
Alkyl methacrylate	80-62-6	0.10 - <1.00%	

* 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
Base oil, low viscous	8042-47-5	Asp. Tox. 1;H304
Base oil, low viscous	64742-54-7	Asp. Tox. 1;H304
Base oil, low viscous	64742-55-8	Asp. Tox. 1;H304
Alkyl methacrylate	80-62-6	Flam. Liq. 2;H225, Skin Irrit. 2;H315, Skin Sens. 1B;H317, STOT SE 3;H335

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 Nota L/ Nota N 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.

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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: 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 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.

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: 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: 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.

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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):** No data available.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION
8.1.Exposure Limits

Chemical name	Type	Exposure Limit Values		Source
Base oil, low viscous - Mist.	PEL		5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
Base oil, low viscous - Mist.	TWA		5 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
Base oil, low viscous - Inhalable fraction.	TWA		5 mg/m ³	US. ACGIH Threshold Limit Values, as amended (02 2012)
Base oil, low viscous - Inhalable fraction.	TWA		5 mg/m ³	US. ACGIH Threshold Limit Values, as amended (03 2014)
Base oil, low viscous	PEL	500 ppm	2,000 mg/m ³	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 ³	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 ³	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
Base oil, low viscous - Mist.	TWA		5 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
Base oil, low viscous - Inhalable fraction.	TWA		5 mg/m ³	US. ACGIH Threshold Limit Values, as amended (03 2014)
Base oil, low viscous - Mist.	PEL		5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
Base oil, low viscous - Mist.	TWA		5 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
Alkyl methacrylate	PEL	100 ppm	410 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
Alkyl methacrylate	TWA	100 ppm	410 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
Alkyl methacrylate	TWA	50 ppm		US. ACGIH Threshold Limit Values, as amended (02 2012)
Alkyl methacrylate	STEL	100 ppm		US. ACGIH Threshold Limit Values, as amended (02 2012)

8.2.Exposure controls

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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: 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: ≥ 480 min
Recommended thickness of the material: ≥ 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

Physical state:	liquid
Form:	liquid
Color:	Pale yellow
Odor:	Characteristic
Odor Threshold:	Not applicable for mixtures
pH:	substance/mixture is non-soluble (in water)

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Freezing point:	Not applicable for mixtures
Boiling Point:	Value not relevant for classification
Flash Point:	135 °C
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
Relative vapor density:	Not applicable for mixtures
Density:	0.85 g/ml (15.00 °C)
Solubility(ies)	
Solubility in Water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	Not applicable for mixtures
Auto-ignition temperature:	Value not relevant for classification
Decomposition Temperature:	Value not relevant for classification
Kinematic viscosity:	32 mm ² /s (40.00 °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.

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Acute toxicity

Oral

Product:

Not classified for acute toxicity based on available data.

Specified substance(s)

Base oil, low viscous LD 50 (Rat): > 5,001 mg/kg (OECD 401)

Base oil, low viscous LD 50 (Rat): > 5,000 mg/kg (OECD 423)

Base oil, low viscous LD 50 (Rat): > 5,000 mg/kg

Dermal

Product:

Not classified for acute toxicity based on available data.

Specified substance(s)

Base oil, low viscous LD 50 (Rabbit): > 5,000 mg/kg (OECD 402)

Base oil, low viscous LD 50 (Rabbit): > 5,000 mg/kg (OECD 402)

Inhalation

Product:

Not classified for acute toxicity based on available data.

Skin Corrosion/Irritation:

Product:

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

Specified substance(s)

Base oil, low viscous OECD 404 (Rabbit): Not irritant.

Base oil, low viscous (Rabbit): Not irritant.

Serious Eye Damage/Eye Irritation:

Product:

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

Specified substance(s)

Base oil, low viscous OECD 405 (Rabbit): Not irritant.

Base oil, low viscous OECD 405 (Rabbit): Not irritant.

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)

Base oil, low viscous No sensitizing effect (guinea pig); OECD 406

Base oil, low viscous No sensitizing effect (guinea pig); OECD 406

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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

OSHA: 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

General information: Not applicable Not applicable**12.1 Toxicity****Acute toxicity****Product:** Based on available data, the classification criteria are not met.**Fish****Specified substance(s)**

Base oil, low viscous LC 50 (Fish, 96 h): > 1,001 mg/l (OECD 203)

Base oil, low viscous LC 50 (Fish, 96 h): > 101 mg/l (OECD 203)

Base oil, low viscous LL 50 (Fish, 96 h): > 100 mg/l

Aquatic Invertebrates**Specified substance(s)**

Base oil, low viscous EC 50 (Water Flea, 48 h): > 101 mg/l (OECD 202)

Base oil, low viscous EC 50 (Water Flea, 48 h): > 10,000 mg/l (OECD 202)

Base oil, low viscous EC 50 (Water Flea, 48 h): > 10,000 mg/l

Product name: RENOLIN ZAF 32 XHV

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

Aquatic Invertebrates

Specified substance(s)

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

Toxicity to Aquatic Plants

Specified substance(s)

Base oil, low viscous EC 50 (Alga, 72 h): > 1,001 mg/l

Base oil, low viscous EC 50 (Alga, 72 h): > 101 mg/l

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

12.2 Persistence and Degradability

Biodegradation

Product: Not applicable for mixtures

Specified substance(s)

Base oil, low viscous 31 % (28 d, OECD 301F)

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: No data available.

13 Disposal considerations

13.1 Waste treatment methods

General information: Dispose in accordance with all applicable regulations.

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.

14 TRANSPORT INFORMATION

DOT

Not Regulated.

TDG

Not Regulated.

IMDG - International Maritime Dangerous Goods Code

Not Regulated.

Product name: RENOLIN ZAF 32 XHV

IATA

Not Regulated.

15 REGULATORY INFORMATION**US Federal Regulations****US State Regulations****Inventory Status**

DSL	On or in compliance with the inventory
TSCA	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**

H225	Highly flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.

Revision Date: 05.07.2023

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.