SAFETY DATA SHEET

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

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

1.1 Product identifier

Product name: MARINE RENOLIN ZAF 15 LT

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 Schmierstoffe GmbH Friesenheimer Straße 19 68169 Mannheim
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-FS@fuchs.com

1.4 Emergency telephone number: +49 621 3701-1333 / +49 621 3701-0 (Mo-Do 8-17, Fr 8-16)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The product has been classified and labelled as hazardous according to regulation (EU) 1272/2008 (CLP).

Classification according to Regulation (EC) No 1272/2008 as amended.

Health Hazards

Acute toxicity (Inhalation - dust and mist)	Category 4	H332: Harmful if inhaled.
Skin irritation	Category 2	H315: Causes skin irritation.
Aspiration Hazard	Category 1	H304: May be fatal if swallowed and enters airways.

Environmental Hazards

Chronic hazards to the aquatic environment	Category 2	H411: Toxic to aquatic life with long lasting effects.

Hazard summary

Physical Hazards: No data available.

Health Hazards

Ingestion: If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

2.2 Label Elements

Contains: Base oil, low viscous



Signal Words: Danger

Hazard Statement(s):
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H332: Harmful if inhaled.
H411: Toxic to aquatic life with long lasting effects.

Precautionary Statement

Prevention:
P262: Do not get in eyes, on skin, or on clothing.
P273: Avoid release to the environment.

Response:
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331: Do NOT induce vomiting.
P312: Call a POISON CENTER/doctor if you feel unwell.

Supplemental label information

EUH208: Contains alkylmethacrylate. May produce an allergic reaction.

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

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

Chemical name	Identifier	Concentration *	REACH Registration No.	Notes
Base oil, low viscous	EINECS: 265-148-2	50,00 - <100,00%	01-2119489867-12	
Phenolic antioxidant agent	EINECS: 204-884-0	0,10 - <0,25%	01-2119490822-33	
alkylmethacrylate	EINECS: 201-297-1	0,10 - <1,00%	01-2119452498-28	

* 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	EINECS: 265-148-2	CLP:	Asp. Tox. 1;H304, Acute Tox. 4;H332, Skin Irrit. 2;H315, Aquatic Chronic 2;H411
Phenolic antioxidant agent	EINECS: 204-884-0	CLP:	Aquatic Acute 1;H400, Aquatic Chronic 1;H410, Skin Irrit. 2;H315
alkylmethacrylate	EINECS: 201-297-1	CLP:	Flam. Liq. 2;H225, Skin Irrit. 2;H315, Skin Sens. 1B;H317, STOT SE 3;H335

CLP: Regulation No. 1272/2008.

For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

General: Instantly remove any clothing soiled by the product.

4.1 Description of first aid measures

Inhalation: Move to fresh air. Call a POISON CENTER/doctor if you feel unwell.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

Skin Contact: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. Get medical attention.

Ingestion: Call a physician or poison control center immediately. Rinse mouth. Never give liquid to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed: Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. Causes skin irritation. If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

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 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:	Ventilate closed spaces before entering them. See Section 8 of the SDS for Personal Protective Equipment. Keep upwind. Keep unauthorized personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. In case of spills, beware of slippery floors and surfaces. Keep away from sources of ignition - No smoking.
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. Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk.

SECTION 7: Handling and storage:

7.1 Precautions for safe handling:	Minimize dust generation and accumulation. Do not eat, drink or smoke when working with the product. Take usual precautions when handling mineral oil products or chemical products. Avoid contact with skin. Wash hands thoroughly after handling. Prevent formation of aerosols. Observe good industrial hygiene practices. Provide adequate ventilation.
7.2 Conditions for safe storage, including any incompatibilities:	Store locked up. 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
Storage Class:	10, Combustible liquids

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

Occupational Exposure Limits

Chemical name	type	Exposure Limit Values	Source
alkylmethacrylate	AGW	50 ppm 210 mg/m3	Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace (01 2012)

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. Avoid contact with eyes.

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: Respirator type: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

Thermal hazards: Not known.

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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	
Physical state:	liquid
Form:	liquid
Color:	Pale yellow
Odor:	Characteristic
Odor Threshold:	Not applicable for mixtures
pH:	not applicable not applicable
Freezing point:	Not applicable for mixtures
Boiling Point:	Value not relevant for classification
Flash Point:	96 °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
Vapor density (air=1):	Not applicable for mixtures
Density:	0,87 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
Autoignition Temperature:	Value not relevant for classification
Decomposition Temperature:	Value not relevant for classification
Kinematic viscosity:	14,2 mm2/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.

SECTION 11: Toxicological information

Information on likely routes of exposure

Inhalation: Harmful if inhaled.

Ingestion: No data available.

Skin Contact: Causes skin irritation.

Eye contact: No data available.

11.1 Information on toxicological effects

Acute toxicity

Oral

Product:

Not classified for acute toxicity based on available data.

Specified substance(s)

Base oil, low viscous	LD 50 (Rat): > 5.000 mg/kg
Phenolic antioxidant agent	LD 50 (Rat): > 2.001 mg/kg

Dermal

Product:

Not classified for acute toxicity based on available data.

Specified substance(s)

Base oil, low viscous	LD 50 (Rabbit): > 2.001 mg/kg

Inhalation

Product: ATEmix: 2,11 mg/l
Dusts, mists and fumes

Specified substance(s)

Base oil, low viscous	LC 50 (Rat, 4 h): > 1,78 mg/l Dusts, mists and fumes

Skin Corrosion/Irritation:

Product: Based on available data, the classification criteria are 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.

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.

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: May be fatal if swallowed and enters airways.

Other Adverse Effects: No data available.

SECTION 12: Ecological information

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): 1,13 - 65 mg/l
Phenolic antioxidant agent	LC 50 (Fish, 96 h): 0,11 mg/l

Aquatic Invertebrates

Specified substance(s)

Phenolic antioxidant agent	EC 50 (Water Flea, 48 h): 0,45 mg/l

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

Toxicity to Aquatic Plants

Specified substance(s)

Phenolic antioxidant agent	EC 50 (Alga, 72 h): 3,6 mg/l

12.2 Persistence and Degradability

Biodegradation
Product: Not applicable for mixtures

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: Toxic to aquatic life with long lasting effects.

Water Hazard Class (WGK): WGK 2: water-endangering.

SECTION 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.

European Waste Codes

13 01 10*: mineral based non-chlorinated hydraulic oils

SECTION 14: Transport information

ADR/RID

14.1 UN Number:	UN 3082
14.2 UN Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Base oil, low viscous)
14.3 Transport Hazard Class(es)	
Class:	9
Label(s):	9
Hazard No. (ADR):	90
Tunnel restriction code:	(E)
14.4 Packing Group:	III
14.5 Environmental hazards:	Dangerous for the environment
14.6 Special precautions for user:	–

IMDG

14.1 UN Number:	UN 3082
14.2 UN Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Base oil, low viscous)
14.3 Transport Hazard Class(es)	
Class:	9
Label(s):	9
EmS No.:	F-A, S-F
14.3 Packing Group:	III
14.5 Environmental hazards:	Marine pollutant
14.6 Special precautions for user:	–

IATA

14.1 UN Number:	UN 3082
14.2 Proper Shipping Name:	Environmentally hazardous substance, liquid, n.o.s.(Base oil, low viscous)
14.3 Transport Hazard Class(es):	
Class:	9
Label(s):	9MI
14.4 Packing Group:	III
14.5 Environmental hazards:	Dangerous for the environment
14.6 Special precautions for user:	–

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: not applicable.

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 Substances that deplete the ozone layer: none

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

National Regulations

Water Hazard Class (WGK): WGK 2: water-endangering.

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

SECTION 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.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
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: 31.05.2016

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.