

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: RENOLIN MEG 5 CONC

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

Identified uses: Antifreeze/coolant

Uses advised against: No uses advised against identified.

1.3 Details of the supplier of the safety data sheet

Manufacturer / Supplier FUCHS LUBRICANTS NORWAY AS
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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 (Oral) Category 4 H302: Harmful if swallowed.

Specific Target Organ Toxicity - Repeated Exposure Category 2 H373: May cause damage to organs through prolonged or repeated exposure.

Hazard summary

Physical Hazards: No data available.

2.2 Label Elements

Contains: Ethanediol

Product name: RENOLIN MEG 5 CONC



Signal Words: Warning

Hazard Statement(s): H302: Harmful if swallowed.
H373: May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements

Prevention: P264: Wash hands thoroughly after handling.

Response: P312: Call a POISON CENTER or doctor/ physician if you feel unwell.

2.3 Information on 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.

Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

General information: Mixture of the substances listed below with harmless additions.

Chemical name	Identifier	Concentration *	REACH Registration No.	Notes
Ethanediol	EINECS: 203-473-3	50,00% - <100,00%	01-2119456816-28	
tert. alkanolamine, ionic equilibrium with acids	Neutralisation product (*)	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.

(*) Neutralisation product: Equilibrium of Ionic Pairs in aqueous solution according to REACH Annex V, 4.

Classification

Chemical name	Identifier	Classification
Ethanediol	EINECS: 203-473-3	CLP: Acute Tox. 4;H302, STOT RE 2;H373
tert. alkanolamine, ionic equilibrium with acids	Neutralisation product (*)	CLP: Acute Tox. 4;H302, Acute Tox. 3;H311, Acute Tox. 3;H331, Flam. Liq. 3;H226, Eye Irrit. 2;H319, Skin Irrit. 2;H315

CLP: Regulation No. 1272/2008.

Product name: RENOLIN MEG 5 CONC

SECTION 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. Call a POISON CENTER or doctor/ physician 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.

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.

Product name: RENOLIN MEG 5 CONC

- 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.

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:** Do not eat, drink or smoke when working with the product. Take usual precautions when handling mineral oil products or chemical products. Prevent formation of aerosols. Observe good industrial hygiene practices. Provide adequate ventilation.
- 7.2 Conditions for safe storage, including any incompatibilities:** Store in original tightly closed container. Keep separate from food, feedstuffs, fertilizers and other sensitive material. Store away from incompatible materials. No special precautions necessary if used correctly. Use only containers specifically permitted for this substance/product. Protect from contamination
- 7.3 Specific end use(s):** Not applicable

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source
Ethanediol	STEL	40 ppm 104 mg/m3	Norway. Regulation No. 1358 on Measures and Limit Values for Physical and Chemical Factors in Work Environment and Infection Groups for Biological Factors, as amended (01 2013)
Ethanediol	NORMEN	20 ppm 52 mg/m3	Norway. Regulation No. 1358 on Measures and Limit Values for Physical and Chemical Factors in Work Environment and Infection Groups for Biological Factors, as amended (01 2013)
Ethanediol	TWA	20 ppm 52 mg/m3	EU. Indicative Occupational Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, as amended (12 2009)
Ethanediol	STEL	40 ppm 104 mg/m3	EU. Indicative Occupational Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, as amended (12 2009)

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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: 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: $\geq 0,38$ 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: 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: Blue
Odor: Characteristic
pH: 8,5 (100 %)

Product name: RENOLIN MEG 5 CONC

Freezing point:	not determined
Boiling Point:	not determined
Flash Point:	Not applicable
Evaporation Rate:	Not applicable for mixtures
Flammability (solid, gas):	not determined
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:	1,11 g/cm ³ (15 °C) (DIN 51757)
Solubility(ies)	
Solubility in Water:	Soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	Not applicable for mixtures
Autoignition Temperature:	not determined
Decomposition Temperature:	not determined
Flow time	Value not relevant for classification
Explosive properties:	Value not relevant for classification
Oxidizing properties:	Value not relevant for classification
Particle characteristics:	Not applicable
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:	No data available.
Ingestion:	Harmful if swallowed.
Skin Contact:	No data available.
Eye contact:	No data available.

Product name: RENOLIN MEG 5 CONC

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Oral

Product: ATEmix: 534 mg/kg
Specified substance(s)
 Ethanediol LD 50 (Human): 1.600 mg/kg
 tert. alkanolamine, ionic
 equilibrium with acids LD 50 (Rat): 1.320 mg/kg

Dermal

Product: ATEmix: 573.825 mg/kg
Specified substance(s)
 Ethanediol LD 50 (Mouse): 3.500 mg/kg
 tert. alkanolamine, ionic
 equilibrium with acids LD 50 (Guinea Pig): 855 mg/kg

Inhalation

Product: ATEmix: 2.013,42 mg/l Vapour

Skin Corrosion/Irritation:

Product: Based on available data, the classification criteria are not met.
Specified substance(s)
 Ethanediol (Rabbit, 20 h):
 Not irritating

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)
 Ethanediol
 No sensitizing effect (guinea pig); OECD 406

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.

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Specific Target Organ Toxicity - Repeated Exposure

Product: Based on available data, the classification criteria are met.
Specified substance(s)
 Ethanediol Kidney
 May cause damage to kidneys through prolonged or repeated exposure if swallowed

Aspiration Hazard

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

11.2 Information on other hazards

Endocrine disrupting properties

Product: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: Ecological information

12.1 Toxicity

Acute toxicity

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

Fish

Specified substance(s)
 Ethanediol LC 50 (Fish, 96 h): 72.860 mg/l

tert. alkanolamine, ionic equilibrium with acids LC 50 (Fish, 96 h): 147 mg/l

Aquatic Invertebrates

Specified substance(s)
 Ethanediol EC 50 (Water Flea, 48 h): > 100 mg/l (OECD 202)

tert. alkanolamine, ionic equilibrium with acids EC 50 (Water Flea, 48 h): 165 mg/l

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

Fish

Specified substance(s)
 Ethanediol NOEC (Fish, 7 d): 15.380 mg/l

Aquatic Invertebrates

Specified substance(s)
 Ethanediol NOEC (Water Flea, 7 d): 8.590 mg/l

Toxicity to Aquatic Plants

Specified substance(s)
 tert. alkanolamine, ionic equilibrium with acids EC 50 (Alga, 72 h): 44 mg/l

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12.2 Persistence and Degradability

Biodegradation

Product: Not applicable for mixtures
Specified substance(s)
 Ethanediol > 90 % (10 d, OECD 301A) The product is easily 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 Endocrine disrupting properties

Product: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects: No data available.

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

16 01 14*: antifreeze fluids containing hazardous substances

SECTION 14: Transport information

ADR/RID

- 14.1 UN number or ID number: —
- 14.2 UN Proper Shipping Name: —
- 14.3 Transport Hazard Class(es)
 Class: Non-dangerous goods
 Label(s): —
 Hazard No. (ADR): —
 Tunnel restriction code: —
- 14.4 Packing Group: —
- 14.5 Environmental hazards: —

Product name: RENOLIN MEG 5 CONC

14.6 Special precautions for user: –

IMDG

14.1 UN number or ID number: –
14.2 UN Proper Shipping Name: –
14.3 Transport Hazard Class(es)
Class: Non-dangerous goods
Label(s): –
EmS No.: –
14.3 Packing Group: –
14.5 Environmental hazards: –
14.6 Special precautions for user: –

IATA

14.1 UN number or ID number: –
14.2 Proper Shipping Name: –
14.3 Transport Hazard Class(es):
Class: Non-dangerous goods
Label(s): –
14.4 Packing Group: –
14.5 Environmental hazards: –
14.6 Special precautions for user: –

14.7 Maritime transport in bulk according to IMO instruments: Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

EU Regulations

EU. Regulation 1005/2009/EC on substances that deplete the ozone layer, Annex I, Controlled Substances: none

EU. Regulation 2019/1021/EU on persistent organic pollutants (POPs) (recast), as amended: none

National Regulations

D-Nr. 34002

15.2 Chemical safety assessment:

No Chemical Safety Assessment has been carried out.

DIRECTIVE 2012/18/EU (SEVESO III) on the control of major-accident hazards involving dangerous substances

Not applicable

SECTION 16: Other information

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

Product name: RENOLIN MEG 5 CONC

Wording of the H-statements in section 2 and 3

H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.

Other information:

The classification complies with the current EU lists; however, it has been supplemented with expert literature information and information provided by/about our company. The following evaluation methods were used: - On the basis of test data - Calculation Method - Bridging Principle "Substantially similar mixtures" - Expert Judgement

Revision Date:

17.11.2022

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.