

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: RENOFORM FSW 5001

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

Identified uses: Metal working

Uses advised against: No uses advised against identified.

1.3 Details of the supplier of the safety data sheet

Manufacturer / Supplier FUCHS WISURA GmbH
Am Gaswerk 2 – 10
28197 Bremen

Telephone: +49 (0)421 54903-0
Fax: +49 (0)421 54903-25

Contact Person: FUCHS WISURA GmbH, Labor (Prof. Dr. Schulz) / TD
E-mail: joachim.schulz@fuchs.com
Telephone: +49 (0)421 54903-32
Fax: +49 (0)421 54903-25

1.4 Emergency telephone number: +49 (0)421 54903-0

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

Serious eye irritation Category 2 H319: Causes serious eye irritation.

Hazard summary

Physical Hazards: No data available.

2.2 Label Elements

Thread Cutting Oil No. 3+ EMULSION, chlorine-free

Product name: RENOFORM FSW 5001



Signal Words: Warning

Hazard Statement(s): H319: Causes serious eye irritation.

Precautionary Statements

Prevention: P262: Do not get in eyes, on skin, or on clothing.

Supplemental label information

EUH208: Contains: Mo dithiophosphate. 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 of the substances listed below with harmless additions. This product is applied only as solution or emulsion in water.

Chemical name	Identifier	Concentration *	REACH Registration No.	Notes
Thiocarbamate	EINECS: 233-593-1	5,00% - <10,00%	01-2119969655-20	
Sodium sulfonate	EINECS: 271-781-5	1,00% - <5,00%	01-2119527859-22	
acid, ionic equilibrium with organic bases	Neutralisation product (*)	1,00% - <5,00%		
tert. alkanolamine, ionic equilibrium with acids	Neutralisation product (*)	1,00% - <5,00%		
Glycol derivative	EINECS: 203-961-6	1,00% - <5,00%	01-2119475104-44	
Mo dithiophosphate	EC: 947-946-9	0,10% - <1,00%	01-2120772600-59	

* 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.

Thread Cutting Oil No. 3+ EMULSION, chlorine-free

Product name: RENOFORM FSW 5001

Classification

Chemical name	Identifier	Classification
Thiocarbamate	EINECS: 233-593-1	CLP: Aquatic Chronic 4;H413
Sodium sulfonate	EINECS: 271-781-5	CLP: Eye Irrit. 2;H319
acid, ionic equilibrium with organic bases	Neutralisation product (*)	CLP: Eye Irrit. 2;H319
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
Glycol derivative	EINECS: 203-961-6	CLP: Eye Irrit. 2;H319
Mo dithiophosphate	EC: 947-946-9	CLP: , Aquatic Chronic 4;H413, Skin Sens. 1B;H317, Skin Irrit. 2;H315

CLP: Regulation No. 1272/2008.

For the wording of the listed hazard statements 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: Supply fresh air; consult doctor in case of symptoms.

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: Wash with soap and water.

Ingestion: Rinse mouth thoroughly.

4.2 Most important symptoms and effects, both acute and delayed: Causes serious 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.

Thread Cutting Oil No. 3+ EMULSION, chlorine-free

Product name: RENOFORM FSW 5001

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. 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:	Avoid contact with eyes. Wash hands thoroughly after 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:	Local regulations concerning handling and storage of waterpolluting products have to be followed.
7.3 Specific end use(s):	Not applicable
Storage Class:	10-13, combustible / non-combustible liquids and solids

Thread Cutting Oil No. 3+ EMULSION, chlorine-free

Product name: RENOFORM FSW 5001

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source
Glycol derivative	TWA	10 ppm 67,5 mg/m ³	UK. EH40 Workplace Exposure Limits (WELs), as amended (12 2011)
Glycol derivative	STEL	15 ppm 101,2 mg/m ³	UK. EH40 Workplace Exposure Limits (WELs), as amended (12 2011)
Glycol derivative	STEL	15 ppm 101,2 mg/m ³	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)
Glycol derivative	TWA	10 ppm 67,5 mg/m ³	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)

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.

Thread Cutting Oil No. 3+ EMULSION, chlorine-free

Product name: RENOFORM FSW 5001

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:	Brown
Odor:	Characteristic
Odor Threshold:	Not applicable for mixtures
pH:	8,7 (DIN 51369, 50 g/l, 20 °C)
Freezing point:	Not applicable for mixtures
Boiling Point:	No data available.
Flash Point:	180 °C ()
Evaporation Rate:	Not applicable for mixtures
Flammability (solid, gas):	Value not relevant for classification
Flammability Limit - Upper (%)-:	Value not relevant for classification
Flammability Limit - Lower (%)-:	Value not relevant for classification
Vapor pressure:	Not applicable for mixtures
Vapor density (air=1):	Not applicable for mixtures
Density:	1,01 g/cm ³ (15 °C) (DIN EN ISO 12185)

Solubility(ies)

Solubility in Water:	Emulsifiable 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: 186 mm²/s (40 °C, DIN 51659-2)

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.

Thread Cutting Oil No. 3+ EMULSION, chlorine-free

Product name: RENOFORM FSW 5001

- 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:** No data available.
- Skin Contact:** No data available.
- Eye contact:** Causes eye irritation.

11.1 Information on toxicological effects

Acute toxicity

Oral

- Product:** ATEmix: 73.333 mg/kg
- Specified substance(s)**
- Thiocarbamate LD 50 (Rat): 16.000 mg/kg
- acid, ionic equilibrium with organic bases LD 50 (Rat): 6.176 mg/kg
- tert. alkanolamine, ionic equilibrium with acids LD 50 (Rat): 1.320 mg/kg
- Glycol derivative LD 50 (Rat): 3.384 mg/kg

Dermal

- Product:** ATEmix: 47.500 mg/kg
- Specified substance(s)**
- tert. alkanolamine, ionic equilibrium with acids LD 50 (Guinea Pig): 855 mg/kg
- Glycol derivative LD 50 (Rabbit): 2.700 mg/kg
- Mo dithiophosphate LD 50 (Rabbit): 10.000 mg/kg

Inhalation

- Product:** ATEmix: 166,67 mg/l
Vapour

Skin Corrosion/Irritation:

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

Thread Cutting Oil No. 3+ EMULSION, chlorine-free

Product name: RENOFORM FSW 5001

Serious Eye Damage/Eye Irritation:

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

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)

acid, ionic equilibrium with organic bases LC 50 (Fish, 96 h): 15 mg/l

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

Glycol derivative LC 50 (Fish, 96 h): 1.300 mg/l

Mo dithiophosphate LC 50 (Rainbow Trout, 48 h): 100 mg/l

Aquatic Invertebrates

Specified substance(s)

acid, ionic equilibrium with organic bases EC 50 (Water Flea, 48 h): 22,5 mg/l

Thread Cutting Oil No. 3+ EMULSION, chlorine-free

Product name: RENOFORM FSW 5001

tert. alkanolamine, ionic equilibrium with acids	EC 50 (Water Flea, 48 h): 165 mg/l
Glycol derivative	EC 50 (Water Flea, 48 h): > 101 mg/l
Mo dithiophosphate	EC 50 (Water Flea, 48 h): 100 mg/l (OECD 202)

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

Toxicity to Aquatic Plants

Specified substance(s)

acid, ionic equilibrium with organic bases	EC 50 (Alga, 72 h): 62,9 mg/l
tert. alkanolamine, ionic equilibrium with acids	EC 50 (Alga, 72 h): 44 mg/l
Glycol derivative	EC 50 (Alga, 96 h): > 101 mg/l
Mo dithiophosphate	EC 50 (Alga, 72 h): 100 mg/l (OECD 201)

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:

No data available.

Water Hazard Class (WGK):

WGK 2: significantly water-endangering.

SECTION 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.

European Waste Codes

Thread Cutting Oil No. 3+ EMULSION, chlorine-free

Product name: RENOFORM FSW 5001

Unused product: 12 01 09*: machining emulsions and solutions free of halogens

SECTION 14: Transport information

ADR/RID

14.1 UN 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: –
14.6 Special precautions for user: –

ADN

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

IMDG

14.1 UN 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: –
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 Transport in bulk according to Annex II of MARPOL and the IBC Code: Not applicable.

SECTION 15: Regulatory information

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

Thread Cutting Oil No. 3+ EMULSION, chlorine-free

Product name: RENOFORM FSW 5001

EU Regulations

Regulation (EC) No. 2037/2000 Substances that deplete the ozone layer: none

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

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

H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H413	May cause long lasting harmful effects to aquatic life.

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. It was derived from the test data and/or the application of the conventional method.

Revision Date: 05.08.2020

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.

Available ex stock in plastic containers

1 kg container	Art. no. FZ191215.01
5 kg container	Art. no. FZ191215.05
10 kg container	Art. no. FZ191215.10
20 kg container	Art. no. FZ191215.20

For up-to-date safety information, see: www.emuge.de/msds



Made in Germany



Gewindeschneidöle und -pasten
Thread cutting oils and pastes



Kühlschmierstoffe
Coolant-Lubricants

An overview of our thread cutting oils and pastes can be found in our flyer „cooling lubricants“, available under article no. **ZP10067.DEGB**

EMUGE-Werk Richard Glimpel GmbH & Co. KG

Fabrik für Präzisionswerkzeuge

🏠 Nürnberger Straße 96-100 • 91207 Lauf

☎ (0 91 23) 1 86-0 • 📠 (0 91 23) 1 43 13

✉ info@emuge-franken.com • 🌐 www.emuge-franken.com