

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: LUBRODAL FC 331

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

Identified uses: Lubricant

Uses advised against: No uses advised against identified.

1.3 Details of the supplier of the safety data sheet

Manufacturer / Supplier	FUCHS LUBRITECH GmbH Werner-Heisenberg-Straße 1 67661 Kaiserslautern/Germany	US Distributor Fuchs Lubricants Co. 17050 Lathrop Avenue Harvey, IL 60426 (708) 333-8900 (800) 255-3924 24 hrs Emergency
Telephone:	+49 (0) 6301 3206-0	
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1.4 Emergency telephone number: +49 (0) 6301 3206-0

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

Skin sensitizer Category 1 H317: May cause an allergic skin reaction.

Hazard summary

Physical Hazards: No data available.

2.2 Label Elements

Contains: Morpholin derivative

Product name: LUBRODAL FC 331



Signal Words: Warning

Hazard Statement(s): H317: May cause an allergic skin reaction.

Precautionary Statements

Prevention: P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response: P333+P313: If skin irritation or rash occurs: Get medical advice/attention.

2.3 Other hazards: By handling of 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.

Chemical name	Identifier	Concentration *	REACH Registration No.	Notes
silicic acid sodium salt	EINECS: 215-687-4	1,00% - <5,00%	01-2119448725-31	
Morpholin derivative	EINECS: 227-062-3	0,10% - <0,60%		
Pyrrithione, sodium salt	EINECS: 223-296-5	0,001% - <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
silicic acid sodium salt	EINECS: 215-687-4	CLP: Skin Irrit. 2;H315, Eye Dam. 2;H319, STOT SE 3;H335
Morpholin derivative	EINECS: 227-062-3	CLP: Skin Corr. 1B;H314, Eye Dam. 1;H318, Skin Sens. 1;H317, Acute Tox. 4;H302, Acute Tox. 4;H312, Acute Tox. 4;H332, Muta. 2;H341, Carc. 1B;H350, STOT RE 2;H373
Pyrrithione, sodium salt	EINECS: 223-296-5	CLP: Acute Tox. 4;H302, Acute Tox. 4;H332, Eye Dam. 1;H318, Aquatic Acute 1;H400, Aquatic Chronic 2;H411; M-Factor (aquatic acute): 100; M-Factor (aquatic chronic): 1

CLP: Regulation No. 1272/2008.

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specific concentration limit

Chemical name	Identifier	specific concentration limit	Hazard class	Hazard Category	Hazard statements
Morpholin derivative	EINECS: 227-062-3	>= 0,1 % >= 0,6 % >= 6 %	Skin sensitizer Carcinogenicity Germ cell mutagenicity	1 1B 2	H317 H350 H341

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: Promptly wash eyes with plenty of water while lifting the eye lids.

Skin Contact: Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.

Ingestion: Rinse mouth thoroughly.

4.2 Most important symptoms and effects, both acute and delayed: Suspected to cause hypersensitivity and allergy.

4.3 Indication of any immediate medical attention and special treatment needed Symptoms may be delayed.

SECTION 5: Firefighting measures

General Fire Hazards: None (non-combustible). Use fire fighting measures that suit the environment.

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: No data available.

5.3 Advice for firefighters

Product name: LUBRODAL FC 331

Special fire fighting procedures: Generally this product is not burnable on account of its water content.

Special protective equipment for fire-fighters: Use standard firefighting procedures and consider the hazards of other involved materials.

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:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Prevent from spreading (e.g. by binding or oil barriers).
- 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:** Avoid contact with eyes, skin, and clothing. 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. 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: 12, Non-combustible liquids

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source
Pyrithione, sodium salt - Inhalable fraction.	AGW	1 mg/m ³	Germany. TRGS 900, Occupational Exposure Limits (AGW), as amended (09 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: $\geq 0,38$ 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:	Black
Odor:	Characteristic
Odor Threshold:	Not applicable for mixtures
pH:	$> 10,5$

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Freezing point:	Not applicable for mixtures
Boiling Point:	100 °C
Flash Point:	Not applicable
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:	1,21 g/cm3
Solubility(ies)	
Solubility in Water:	Miscible with 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
Flow time	Value not relevant for classification
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 temperature conditions and recommended use.
10.2 Chemical Stability:	No data available.
10.3 Possibility of hazardous reactions:	None under normal 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:	No dangerous decomposition products known

SECTION 11: Toxicological information

Information on likely routes of exposure

Inhalation:	No data available.
Ingestion:	No data available.
Skin Contact:	May cause an allergic skin reaction.
Eye contact:	No data available.

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11.1 Information on toxicological effects

Acute toxicity

Oral

Product:

Not classified for acute toxicity based on available data.

Specified substance(s)

Morpholin derivative

LD 50 (Rat): 550 mg/kg

Dermal

Product:

Not classified for acute toxicity based on available data.

Specified substance(s)

Morpholin derivative

LD 50 (Rabbit): 1.620 mg/kg

Inhalation

Product:

Not classified for acute toxicity based on available data.

Specified substance(s)

Morpholin derivative

LC 50 (Rat, 4 h): 3,6 mg/l

Skin Corrosion/Irritation:

Product:

Based on available data, the classification criteria are not 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 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.

Product name: LUBRODAL FC 331

SECTION 12: Ecological information

12.1 Toxicity

Acute toxicity

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

Fish

Specified substance(s)

Morpholin derivative LC 50 (Fish, 96 h): > 100 mg/l

Pyrrithione, sodium salt LC 50 (Fish, 96 h): 0,00767 mg/l (OECD 203)

Aquatic Invertebrates

Specified substance(s)

Morpholin derivative EC 50 (Water Flea, 48 h): 24 mg/l

Pyrrithione, sodium salt EC 50 (Water Flea, 48 h): 0,22 mg/l (OECD 202)

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

Aquatic Invertebrates

Specified substance(s)

Morpholin derivative NOEC (Water Flea, 21 d): 5 mg/l

Toxicity to Aquatic Plants

Specified substance(s)

Morpholin derivative EC 50 (Alga, 72 h): 4,4 mg/l

Pyrrithione, sodium salt EC 50 (Alga, 72 h): 0,46 mg/l (OECD 201)

NOEC (Alga, 72 h): 0,08 mg/l (OECD 201)

12.2 Persistence and Degradability

Biodegradation

Product: Not applicable for mixtures

Specified substance(s)

Morpholin derivative 93 % (28 d) Readily biodegradable

Pyrrithione, sodium salt > 70 % (28 d, OECD 301B) 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: No data available.

Water Hazard Class

WGK 1: slightly water-endangering.

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(WGK):

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.

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:	—

Product name: LUBRODAL FC 331

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: | — |

Store above freezing.

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:

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 1: slightly water-endangering.
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15.2 Chemical safety assessment:	No Chemical Safety Assessment has been carried out.
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SECTION 16: Other information

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

Wording of the H-statements in section 2 and 3

- | | |
|------|--|
| H302 | Harmful if swallowed. |
| H312 | Harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H341 | Suspected of causing genetic defects. |
| H350 | May cause cancer. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H400 | Very toxic to aquatic life. |
| H411 | Toxic to aquatic life with long lasting effects. |

Product name: LUBRODAL FC 331

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:	14.05.2020
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.