

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31 and 2020/878/
EU

Printing date 28.05.2025

Version number 9 (replaces version 8)

Revision: 28.05.2025

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

1.1 Product identifierTrade name: **Cu-Roflux 39**

UFI: RC89-7008-T00U-UKNS

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

No further relevant information available.

1.3 Details of the supplier of the safety data sheet**Manufacturer/Supplier:**

FELDER GMBH
Im Lipperfeld 11
D-46047 Oberhausen

Tel.: 0208/8 50 35-0

Fax.: 0208/2 60 80

<http://www.felder.de>e-mail: info@felder.de**Further information obtainable from:**

lab

(mo-thu. 8:00 a.m. - 4:00 p.m./ fr. 8:00 a.m. - 1:00 p.m.)

email: mprobst@felder.de**1.4 Emergency telephone number:**

24-hour emergency information:

Giftnotruf Berlin, counselling in German and English

Phone: (030) 30686 700

EuPCS: PC-TEC-24

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

STOT SE 3 H335 May cause respiratory irritation.

Additional information:

No classification on "flammable" Cat. 3, because test L.2 on self-sustained combustion in accordance with Annex I Regulation 286/2011 no. 2.6.4.5 is negative.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS05 GHS07 GHS09

Signal word *Danger*

Hazard-determining components of labelling:

zinc chloride

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ammonium chloride

Hazard statements

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read carefully and follow all instructions.

P260 Do not breathe dusts or mists.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Labelling of packages where the contents do not exceed 125 ml**Hazard pictograms**

GHS05 GHS07 GHS09

Signal word *Danger***Hazard-determining components of labelling:**

zinc chloride

ammonium chloride

Hazard statements

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read carefully and follow all instructions.

P260 Do not breathe dusts or mists.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P363 Wash contaminated clothing before reuse.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards**Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

SECTION 3: Composition/information on ingredients**3.2 Mixtures**

Description: Mixture: consisting of the following components.

Dangerous components:

CAS: 7646-85-7	zinc chloride	<25%
EINECS: 231-592-0	Skin Corr. 1B, H314	
Index number: 030-003-00-2	Aquatic Acute 1, H400; Aquatic Chronic 1, H410	
Reg.nr.: 01-2119472431-44	Acute Tox. 4, H302	
	Specific concentration limit: STOT SE 3; H335: C ≥ 5 %	

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CAS: 67-63-0 EINECS: 200-661-7 Index number: 603-117-00-0 Reg.nr.: 01-2119457558-25	propan-2-ol ⚠ Flam. Liq. 2, H225 ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	<10%
CAS: 12125-02-9 EINECS: 235-186-4 Index number: 017-014-00-8 Reg.nr.: 01-2119487950-27	ammonium chloride ⚠ Acute Tox. 4, H302; Eye Irrit. 2, H319	<2.5%

Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: Immediately remove any clothing soiled by the product.

After inhalation: In case of unconsciousness place patient stably in side position for transportation.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing: Drink plenty of water and provide fresh air. Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: Water with full jet

5.2 Special hazards arising from the substance or mixture No further relevant information available.

5.3 Advice for firefighters

Protective equipment: No special measures required.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralising agent.

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Information about fire - and explosion protection: Keep ignition sources away - Do not smoke.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

Further information about storage conditions: Keep container tightly sealed.

Storage class: 8 A

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7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

67-63-0 propan-2-ol

WES (Australia)	Short-term value: 1230 mg/m ³ , 500 ppm Long-term value: 983 mg/m ³ , 400 ppm
AGW (Germany)	Long-term value: 500 mg/m ³ , 200 ppm 2(II);DFG, Y
WEL (Great Britain)	Short-term value: 1250 mg/m ³ , 500 ppm Long-term value: 999 mg/m ³ , 400 ppm
OEL (Ireland)	Short-term value: 400 ppm Long-term value: 200 ppm Skin

12125-02-9 ammonium chloride

WES (Australia)	Short-term value: 20 mg/m ³ Long-term value: 10 mg/m ³ fume
WEL (Great Britain)	Short-term value: 20 mg/m ³ Long-term value: 10 mg/m ³
OEL (Ireland)	Short-term value: 20 mg/m ³ Long-term value: 10 mg/m ³

Regulatory information

WES (Australia): Workplace exposure standards for airborne contaminants

AGW (Germany): TRGS 900

WEL (Great Britain): EH40/2020

OEL (Ireland): 2024 CoP for the Safety, Health and Welfare at Work

recommended monitoring procedures in accordance with 2020/878/EU no. 8.1.2:

67-63-0 propan-2-ol: MétroPol Fiche 077 Alcools en C3 à C8(F), MTA/MA-016/A89(ESP), BIA 8415(D)

12125-02-9 ammonium chloride: OSHA, ID-188 (E) "ammonia"

Ingredients with biological limit values:

67-63-0 propan-2-ol

BGW (Germany)	25 mg/l Untersuchungsmaterial: Vollblut Probennahmezeitpunkt: Expositionsende bzw. Schichtende Parameter: Aceton
	25 mg/l Untersuchungsmaterial: Urin Probennahmezeitpunkt: Expositionsende bzw. Schichtende Parameter: Aceton

Regulatory information BGW (Germany): TRGS 903

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

Appropriate engineering controls

Ensure adequate ventilation.

Remove the fumes by means of suitable suction devices.

Individual protection measures, such as personal protective equipment

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Respiratory protection:

Use suitable respiratory protective device in case of insufficient ventilation.

filter AB-P2

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Hand protection

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

Nitrile rubber, NBR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

Recommended thickness of the material: ≥ 0.33 mm

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions.

Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

Value for the permeation: Level ≤ 6

As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, NBR

Natural rubber, NR

Eyeface protection

Tightly sealed goggles

Body protection: Protective work clothing

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties**General Information**

Colour:	Colourless
Odour:	Alcohol-like
Odour threshold:	Not determined.
Boiling point or initial boiling point and boiling range	82 °C
Flammability	Not applicable.
Lower and upper explosion limit	
Lower:	Not determined.
Upper:	Not determined.
Flash point:	> 65 °C
Auto-ignition temperature:	425 °C
Decomposition temperature:	Not determined.
pH at 20 °C	4.7-4.8
Viscosity:	
Kinematic viscosity	Not determined.
Dynamic:	Not determined.
Solubility	
water:	Not miscible or difficult to mix.
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure at 20 °C:	23 hPa
Density and/or relative density	
Density at 20 °C:	1.14-1.15 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.

9.2 Other information**Appearance:****Form:**

Liquid

Important information on protection of health and environment, and on safety.

Ignition temperature:

Product is not selfigniting.

Explosive properties:

Product does not present an explosion hazard.

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Solvent content:	
Organic solvents:	9.7 %
Water:	68.5 %
VOC (EC)	9.69 %
Change in condition	
Evaporation rate	Not determined.

Information with regard to physical hazard classes

Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Void
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

SECTION 10: Stability and reactivity

- 10.1 Reactivity** *No further relevant information available.*
- 10.2 Chemical stability**
- Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- 10.3 Possibility of hazardous reactions** *No dangerous reactions known.*
- 10.4 Conditions to avoid** *No further relevant information available.*
- 10.5 Incompatible materials:** *No further relevant information available.*
- 10.6 Hazardous decomposition products:** *No dangerous decomposition products known.*

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**Acute toxicity***Harmful if swallowed.***LD/LC50 values relevant for classification:****ATE (Acute Toxicity Estimates)**

Oral | LD50 | 5,649-6,408 mg/kg (rat)

Primary irritant effect:**Skin corrosion/irritation***Causes severe skin burns and eye damage.***Serious eye damage/irritation***Causes serious eye damage.***Respiratory or skin sensitisation** *Based on available data, the classification criteria are not met.***Germ cell mutagenicity** *Based on available data, the classification criteria are not met.***Carcinogenicity** *Based on available data, the classification criteria are not met.***Reproductive toxicity** *Based on available data, the classification criteria are not met.***STOT-single exposure***May cause respiratory irritation.***STOT-repeated exposure** *Based on available data, the classification criteria are not met.***Aspiration hazard** *Based on available data, the classification criteria are not met.*

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11.2 Information on other hazards**Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information**12.1 Toxicity****Aquatic toxicity:** No further relevant information available.**12.2 Persistence and degradability** No further relevant information available.**12.3 Bioaccumulative potential** No further relevant information available.**12.4 Mobility in soil** No further relevant information available.**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects**Remark:** Toxic for fish**Additional ecological information:****General notes:**

Toxic for aquatic organisms

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Also poisonous for fish and plankton in water bodies.

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

European waste catalogue

06 03 13*: solid salts and solutions containing heavy metals

HP 8: Corrosive

HP 14: Ecotoxic

cleaned plastic can:

15 01 02: plastic packaging

packaging:

15 01 01: paper and cardboard packaging

Uncleaned packaging: 15 01 10*: packaging containing residues of or contaminated by hazardous substances**Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agents:** Water, if necessary together with cleansing agents.**SECTION 14: Transport information****14.1 UN number or ID number****ADR, IMDG, IATA**

UN3264

14.2 UN proper shipping name**ADR**

3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (ZINC CHLORIDE), ENVIRONMENTALLY HAZARDOUS CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (ZINC CHLORIDE), MARINE POLLUTANT

IMDG**IATA**

CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (ZINC CHLORIDE)

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14.3 Transport hazard class(es)**ADR, IMDG**

Class
Label
IATA

8 Corrosive substances.
8



Class
Label

8 Corrosive substances.
8

14.4 Packing group

ADR, IMDG, IATA

III

14.5 Environmental hazards:

Product contains environmentally hazardous substances: zinc chloride

Marine pollutant:

Yes
Symbol (fish and tree)

Special marking (ADR):

Symbol (fish and tree)

14.6 Special precautions for user

Warning: Corrosive substances.

Hazard identification number (Kemler code):

80

EMS Number:

F-A, S-B

Segregation groups

(SGG1) Acids

Stowage Category

A

Stowage Code

SW2 Clear of living quarters.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

Transport/Additional information:**ADR**

Limited quantities (LQ)

5L

Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

Transport category

3

Tunnel restriction code

E

IMDG

Limited quantities (LQ)

1L

Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

UN "Model Regulation":

UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
(ZINC CHLORIDE), 8, III, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

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

Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients is listed.

Seveso category E2 Hazardous to the Aquatic Environment

Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t

Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t

REGULATION (EU) 2019/1021 on persistent organic pollutants (POP) None of the ingredients are included.

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 65

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

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REGULATION (EU) 2019/1148**Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

National regulations:**Information about limitation of use:** *Employment restrictions concerning juveniles must be observed.***Waterhazard class:** *Water hazard class 3 (Self-assessment): extremely hazardous for water.***15.2 Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.***SECTION 16: Other information***This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.***Reasons for changes:**

13.05.2015: adaption to Regulation 453/2010 appendix II

18.01.2017: adaption to Regulation 830/2015/EU, 2012/18/EU

06.09.2017: chapter 11.1, chapter 9: pH, density

10.04.2018: chapter 13

29.10.2019: chapter 1

13.02.2023: chapter 8, 14, 15, 16

28.05.2025: chapter 1, 8, 16

Information referred to in Annex I, point 1.3.4.2 of Regulation 1272/2008/EC:**Relevant phrases**

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Contact: Dr. M. Probst**Version number of previous version:** 8**Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

ATE: Acute toxicity estimate values

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

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