

Safety data sheet
according to Regulation (EC) No. 1907/2006 as amended from
time to time

Printing date 27.06.2025


Version-No. 4.0 (replaces version 3.0)

Revision: 27.06.2025

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

- **1.1. Product identifier**
- **Trade name / Article-No: KLEIBERIT 842.1**
- **UFI: RGMX-T0SX-P008-E4PA**
- **1.2. Relevant identified uses of the substance / mixture or uses advised against**
For professional users only.
- **Application of the substance / the mixture** Priming
- **1.3. Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
KLEIBERIT SE & Co. KG
Max-Becker-Str. 4
76356 Weingarten
Germany
- **Further information obtainable from:**
phone: +49 (0) 7244 62-0
FAX: +49 (0) 7244 700-0
E-Mail: hse@kleiberit.com
- **1.4. Emergency telephone number:**
+44 1235 239670 European regional number (European languages)
112 Emergency telephone number for Malta
543 22 22 Icelandic University Hospital
National Poisons Information Centre Ireland:
+353 (0)1 809 2166 Members of the public Number (8am-10pm)
+353 (0)1 809 2566 Healthcare professional telephone Number (24hrs)

SECTION 2: Hazards identification

- **2.1. Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008 - GHS/CLP**
Acute Tox. 4 H302 Harmful if swallowed.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
- **2.2. Label elements**
- **Hazard pictograms**

GHS07
- **Signal word** Warning
- **Hazard-determining components of labelling:**
1-Butylpyrrolidin-2-on
methanol
- **Hazard statements**
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

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Precautionary statements

- P280 Wear protective gloves / eye protection.
 P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
 P302+P352 IF ON SKIN: Wash with plenty of water and soap.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P332+P313 If skin irritation occurs: Get medical advice/attention.
 P337+P313 If eye irritation persists: Get medical advice/attention.

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

- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Determination of endocrine-disrupting properties**
Not applicable.

78-93-3 2-butanone: List II

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

- **Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:

Registry-No's	Identification / Classification GHS-CLP	%
CAS: 3470-98-2 Reg.nr.: 01-2120062728-48-XXXX	1-Butylpyrrolidin-2-on Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319	20-30%
CAS: 78-93-3 Reg.nr.: 02-2119752535-35-XXXX 01-2119457290-43-XXXX	2-butanone Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336, EUH066	<2%
CAS: 67-56-1 Reg.nr.: 01-2119433307-44-XXXX	methanol Flam. Liq. 2, H225; Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; STOT SE 1, H370 ATE: LC ₅₀ inhalative: 130.7 mg/l Specific concentration limits: STOT SE 1; H370: C ≥ 10 % STOT SE 2; H371: 3 % ≤ C < 10 %	<0.5%

- **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:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

After skin contact:

Treat affected skin with cotton wool or cellulose. Then wash and rinse thoroughly with water and a mild cleaning agent.

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

- **After swallowing:** 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.

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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:** Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

- **6.1. Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Particular danger of slipping on leaked/spilled product.
- **6.2. Environmental precautions:** No special measures required.
- **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.
- **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**
Handle the substance preferably in closed system
Enclosure or extractor facilities are required.
Ensure good ventilation. This can be achieved by using a local exhaustion or general exhaust system. If these measures are insufficient to keep the vapour concentration below the workplace limit, wear an adequate respiratory protective device.
Spraying: in vented cabin with laminar air flow
Wear protective gloves/protective clothing/eye protection/face protection.
Application temperature is not higher than 20°C above the surrounding temperature
additional to professional application with multiple and/or significant contact
limit the exposure to 4 hours
Wear suitable protective gloves and protective goggles /face protection during work.
Clean the pipe before decoupling
- **General protective and hygienic measures:** Keep good industrial hygiene.
- **7.2. Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Keep container tightly closed.
- **Information about storage in one common storage facility:** Observe the national regulations.
- **Further information about storage conditions:** Store only outside or in explosion proof rooms.
- **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:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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Trade name / Article-No: KLEIBERIT 842.1*(Contd. of page 3)***· DNELs****3470-98-2 1-Butylpyrrolidin-2-on**

Dermal DNEL long term 10 mg/kg (human being)

Inhalative DNEL long term 24.1 mg/m³ (human being)**78-93-3 2-butanone**

Dermal DNEL long term 1,161 mg/kg (human being)

Inhalative DNEL long term 600 mg/m³ (human being)**67-56-1 methanol**

Dermal DNEL short term 40 mg/kg (human being)

DNEL long term 40 mg/kg (human being)

Inhalative DNEL short term 260 mg/m³ (human being)DNEL long term 260 mg/m³ (human being)**· PNECs****dibasic esters**

PNEC- Freshwater 0.018 mg/l (not specified)

PNEC-seawater 0.0018 mg/l (not specified)

PNEC-Freshwater sediment 0.16 mg/kg (not specified)

PNEC-Seawater sediment 0.016 mg/kg (not specified)

PNEC-soil 0.09 mg/kg (not specified)

PNEC-wastewater treatment plant 10 mg/l (not specified)

3470-98-2 1-Butylpyrrolidin-2-on

PNEC- Freshwater 4 mg/l (not specified)

PNEC-seawater 0.4 mg/l (not specified)

PNEC-periodic release 1 mg/l (not specified)

PNEC-Freshwater sediment 29.6 mg/kg (not specified)

PNEC-Seawater sediment 2.96 mg/kg (not specified)

PNEC-soil 3.57 mg/kg (not specified)

PNEC-wastewater treatment plant 30.62 mg/l (not specified)

78-93-3 2-butanone

PNEC- Freshwater 55.8 mg/l (not specified)

PNEC-seawater 55.8 mg/l (not specified)

PNEC-Freshwater sediment 284.7 mg/kg (not specified)

PNEC-Seawater sediment 284.7 mg/kg (not specified)

PNEC-soil 22.5 mg/kg (not specified)

PNEC-wastewater treatment plant 709 mg/l (not specified)

67-56-1 methanol

PNEC- Freshwater 154 mg/l (not specified)

PNEC-seawater 15.4 mg/l (not specified)

PNEC-soil 23.5 mg/kg (not specified)

PNEC-wastewater treatment plant 100 mg/l (not specified)

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· **Ingredients with biological limit values:**

78-93-3 2-butanone

BGW (Germany) 2 mg/l

Untersuchungsmaterial: Urin

Probennahmezeitpunkt: Expositionsende bzw. Schichtende

Parameter: 2-Butanon

67-56-1 methanol

BGW (Germany) 15 mg/l

Untersuchungsmaterial: Urin

Probennahmezeitpunkt: Expositionsende bzw. Schichtende, bei Langzeitexposition: am

Schichtende nach mehreren vorangegangenen Schichten

Parameter: Methanol

CAS No.	Designation of material	%	Type	Value	Unit
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78-93-3 2-butanone

IOELV (INT) Short-term value: 900 mg/m³, 300 ppmLong-term value: 600 mg/m³, 200 ppmAGW (Germany) Long-term value: 600 mg/m³, 200 ppm

1(I);DFG, EU, H, Y

67-56-1 methanol

IOELV (INT) Long-term value: 260 mg/m³, 200 ppm

Skin

AGW (Germany) Long-term value: 130 mg/m³, 100 ppm

2(II);DFG, EU, H, Y

· **8.2. Exposure controls**

limit the exposure to:

8 hours

additional to professional application with multiple and/or significant contact

limit the exposure to 4 hours

· **Appropriate engineering controls** No further data; see section 7.

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

· **Respiratory protection:**

Not necessary if room is well-ventilated.

At spray application respiratory protection must be worn.

Filter A/P2

· **Hand protection** Protective gloves

· **Material of gloves** B Polyethylenylon: Barrier™ (0,062 mm)

· **Eye/face protection** Safety glasses

· **Body protection:** Protective work clothing

SECTION 9: Physical and chemical properties

· **9.1. Information on basic physical and chemical properties**

· **General Information**

· **Physical state**

Liquid

· **Colour:**

Yellow tint

· **Odour:**

Weak, characteristic

· **Odour threshold:**

Not determined.

· **Melting point/freezing point:**

Undetermined.

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· Boiling point or initial boiling point and boiling range	196-225 °C
· Flammability	Not applicable.
· Lower and upper explosion limit	
· Lower:	0.9 Vol %
· Upper:	8.7 Vol %
· Flash point:	>100 °C
· Auto-ignition temperature:	212 °C (3470-98-2 1-Butylpyrrolidin-2-on)
· Decomposition temperature:	Not determined.
· pH	Not determined.
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic at 20 °C:	ca. 20 mPas
· Solubility	
· water:	Not miscible or difficult to mix.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	0.4 hPa
· Density and/or relative density	
· Density at 20 °C:	ca. 1.04 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· 9.2. Other information	
· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Explosive properties:	Not determined.
· 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
- see item 10.3
- No further relevant information available.

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- **10.2. Chemical stability** Stable when stored and used properly.
- **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:**

dibasic esters

Oral LD₅₀ >5,000 mg/kg (rat)Dermal LD₅₀ >2,000 mg/kg (ATE)

3470-98-2 1-Butylpyrrolidin-2-on

Oral LD₅₀ >300-2,000 mg/kg (rat)Dermal LD₅₀ >2,000 mg/kg (rat)

78-93-3 2-butanone

Oral LD₅₀ >2,193 mg/kg (rat)Dermal LD₅₀ >5,000 mg/kg (rabbit)Inhalative LC₅₀ /4 h 34 mg/l (rat)LC₅₀ /4 h >5,000 ppm (rat)

67-56-1 methanol

Oral LD₅₀ 143 mg/kg (human being)

7,300 mg/kg (mouse)

5,900 mg/kg (rat)

Dermal LD₅₀ 20,000 mg/kg (rabbit)Inhalative LC₅₀ /4 h >115.9 mg/l (ATE)LC₅₀ 130.7 mg/l (ATE)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Causes skin irritation.
- **Serious eye damage/irritation** Causes serious eye irritation.
- **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** Based on available data, the classification criteria are not met.
- **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.
- **11.2. Information on other hazards**
- **Endocrine disrupting properties**

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SECTION 12: Ecological information

· 12.1. Toxicity

· Aquatic toxicity:

dibasic esters

EC₅₀ 112-150 mg / l / 48h (water flea - daphnia)

3470-98-2 1-Butylpyrrolidin-2-on

LC₅₀ >100 mg / l / 96h (Fathead minnow - Pimephales promelas)EC₅₀ >100 mg / l / 48h (water flea - daphnia)EC₅₀ >160 mg / l / 72h (green algae-Ps.kirchneriella subcapitata)

78-93-3 2-butanone

LC₅₀ 2,990 mg / l / 96h (Fathead minnow - Pimephales promelas)EC₅₀ 308 mg / l / 48h (water flea - daphnia)EC₅₀ 1,972 mg / l / 72h (green algae-Ps.kirchneriella subcapitata)

67-56-1 methanol

LC₅₀ 15,500 mg / l / 96h (Bluegill - Lepomis macrochirus)

· 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 For information on endocrine disrupting properties see section 11.

· 12.7. Other adverse effects

· Additional ecological information:

· General notes: Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

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

08 04 09* waste adhesives and sealants containing organic solvents or other hazardous substances

· Uncleaned packaging:

· Recommendation:

Non contaminated packagings may be recycled.

Empty contaminated packagings thoroughly. Disposal must be made according to official regulations.

SECTION 14: Transport information

· 14.1. UN number or ID number

· ADR, IMDG, IATA

Void

· 14.2. UN proper shipping name

· DOT, ADR, IMDG, IATA

Void

· 14.3. Transport hazard class(es)

· Class

Void

· 14.4. Packing group

· ADR, IMDG, IATA

Void

· 14.5. Environmental hazards:

Not applicable.

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- **14.6. Special precautions for user** Not applicable.
- **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**
See position no 2 - Hazards Identification
- **Directive 2012/18/EU - Seveso-III:**
- **Named dangerous substances - ANNEX I** None of the ingredients is included.
- **Regulation (EC) No 1907/2006 - REACH, ANNEX XVII** Conditions of restriction: 3, 69
- **Regulation (EU) No 649/2012**

None of the ingredients is listed.
- **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.
- **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**

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

78-93-3 2-butanone: 3
- **National regulations:**
- **D: Waterhazard class** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **Other regulations, limitations and prohibitive regulations:** For professional users only.
- **VOC - 2010/75/EU [g/L]:** <20.0 g/l
- **VOC - 2010/75/EU [%]:** <2.00 %
- **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.

- **Relevant phrases**
- H225 Highly flammable liquid and vapour.
- H301 Toxic if swallowed.
- H302 Harmful if swallowed.
- H311 Toxic in contact with skin.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H336 May cause drowsiness or dizziness.
- H370 Causes damage to organs.
- H371 May cause damage to organs.
- EUH066 Repeated exposure may cause skin dryness or cracking.

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- **Department issuing SDS:** Safety & Environment

- **Version number of previous version:** 3.0

- **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

DOT: US Department of Transportation

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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

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. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

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

STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

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