



Safety data sheet according to 1907/2006/EC, Article 31

Printing date 20.05.2022


Version-No. 1

Revision: 20.05.2022

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

- **1.1. Product identifier**
- **Trade name / Article-No: KLEIBERIT 842.6**
- **UFI: 8A4R-X0KU-100R-J9C5**
- **1.2. Relevant identified uses of the substance / mixture or uses advised against**
Restricted to professional users.
- **Application of the substance / the mixture** Adhesives
- **1.3. Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
KLEIBERIT SE & Co. KG
Max-Becker-Str. 4
D - 76356 Weingarten / Baden
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

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.
- **Precautionary statements**
P280 Wear protective gloves / eye protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

(Contd. on page 2)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.05.2022

Version-No. 1

Revision: 20.05.2022

Trade name / Article-No: KLEIBERIT 842.6*(Contd. of page 1)*

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.

P333+P313 If skin irritation or rash 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**

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	40-50%
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 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.

(Contd. on page 3)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.05.2022

Version-No. 1

Revision: 20.05.2022

Trade name / Article-No: KLEIBERIT 842.6
(Contd. of page 2)

- **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.
- **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 item 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.

(Contd. on page 4)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.05.2022

Version-No. 1

Revision: 20.05.2022

Trade name / Article-No: **KLEIBERIT 842.6***(Contd. of page 3)*

SECTION 8: Exposure controls/personal protection

- **8.1. Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

- **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**

- **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)

(Contd. on page 5)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.05.2022

Version-No. 1

Revision: 20.05.2022

Trade name / Article-No: KLEIBERIT **842.6**

(Contd. of page 4)

- **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) 30 mg/l

- Untersuchungsmaterial: Urin

- Probennahmezeitpunkt: bei Langzeitexposition: am Schichtende nach mehreren vorangegangenen Schichten, Expositionsende bzw. Schichtende

- Parameter: Methanol

- **CAS No. Designation of material % Type Value Unit**

- 78-93-3 2-butanone**

- IOELV (INT) Short-term value: 900 mg/m³, 300 ppm

- Long-term value: 600 mg/m³, 200 ppm

- AGW (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 item 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.

- **Hand protection** Protective gloves

- **Material of gloves** B Polyethylenlylon: 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**

Fluid

(Contd. on page 6)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.05.2022

Version-No. 1

Revision: 20.05.2022

Trade name / Article-No: KLEIBERIT **842.6***(Contd. of page 5)*

· Colour:	Yellow tint
· Odour:	Weak, characteristic
· Odour threshold:	Not determined.
· Melting point/freezing point:	Undetermined.
· Boiling point or initial boiling point and boiling range	200 °C
· Flammability	Not applicable.
· Lower and upper explosion limit	
· Lower:	0.9 Vol %
· Upper:	8.7 Vol %
· Flash point:	61 °C
· Ignition temperature:	212 °C
· 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. 1.05 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.	
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· 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

(Contd. on page 7)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.05.2022

Version-No. 1

Revision: 20.05.2022

Trade name / Article-No: KLEIBERIT **842.6**

(Contd. of page 6)

· 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.
- **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:**
 - 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 (rbt)
 - 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 85 mg/l (rat)
- **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.

(Contd. on page 8)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.05.2022

Version-No. 1

Revision: 20.05.2022

Trade name / Article-No: KLEIBERIT **842.6**

(Contd. of page 7)

- 11.2 Information on other hazards
- Endocrine disrupting properties

78-93-3 2-butanone: List II

SECTION 12: Ecological information

- 12.1. Toxicity
- Aquatic toxicity:

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.

- 12.6. Other adverse effects

- Behaviour in sewage processing plants:

- Remark:

At correct sewage disposal in small quantities to biological sewage plants failures of the activated sludge are not expected.

- 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.

(Contd. on page 9)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.05.2022

Version-No. 1

Revision: 20.05.2022

Trade name / Article-No: **KLEIBERIT 842.6**

(Contd. of page 8)

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.
- **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
- **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**

78-93-3 2-butanone: 3
- **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:** Restricted to professional users.
- **VOC - 2010/75/EU [g/L]:** 21.0 g/l
- **VOC - 2010/75/EU [%]:** 2.00 %

(Contd. on page 10)



Safety data sheet according to 1907/2006/EC, Article 31

Printing date 20.05.2022

Version-No. 1

Revision: 20.05.2022

Trade name / Article-No: KLEIBERIT **842.6**

(Contd. of page 9)

- **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.
- EUH066 Repeated exposure may cause skin dryness or cracking.

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

- **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
- 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