

Safety data sheet

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

Printing date 18.09.2023

Version-No. 2 (replaces version 1)

Revision: 18.09.2023

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

- **1.1. Product identifier**
- **Trade name / Article-No: KLEIBERIT 601.4.10**
- **1.2. Relevant identified uses of the substance / mixture or uses advised against**
For professional users only.
- **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
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)

SECTION 2: Hazards identification

- **2.1. Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008 - GHS/CLP**
The product is not classified as hazardous to health or environment according to the CLP regulation.
- **2.2. Label elements**
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Additional information:**
Safety data sheet available on request.
Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
Contains trimethoxyvinylsilane, dioctyltin acetylacetonate. May produce an allergic reaction.
- **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 of substances listed below with nonhazardous additions.
- **Dangerous components:**

Registry-No's	Identification / Classification GHS-CLP	%
CAS: 2768-02-7	trimethoxyvinylsilane	≥1-<2%
Reg.nr.: 01-2119513215-52-XXXX	Flam. Liq. 2, H225; Acute Tox. 4, H332; Skin Sens. 1B, H317	
CAS: 52829-07-9	Bis(2,2,6,6-tetramethyl-4-piperidyl)sebacate	≥0.25-<1%
Reg.nr.: 01-2119537297-32-XXXX	Repr. 2, H361f; Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 2, H411	

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CAS: 54068-28-9 dioctyltin acetylacetonate ≥ 0.1 -<0.5%
 Reg.nr.: 01-0000020199-67-XXXX STOT SE 2, H371; Skin Sens. 1, H317

CAS: 13463-67-7 Titandioxid ≥ 1 -<3%

· **Additional information:**

Trimethoxyvinylsilane (CAS: 2768-02-7) is classified as Skin Sens. 1B, H317 according to Annex VI of Regulation (EC) No 1772/2008 based on vivo data in laboratory animals. Mixtures with up to 5% active substance in polymers of different viscosities up to 60 mPas were examined in the "Local Lymph node assay" (OECD 429). None of these mixtures showed a sensitizing potential. Due to these results and the comparable composition, the classification and labeling with Skin Sens. 1B, H317 can be omitted for this product. Product hydrolyzes under formation of methanol (CAS No. 67-56-1). 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:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, 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.

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**
Particular danger of slipping on leaked/spilled product.
- **6.2. Environmental precautions:** Do not allow to enter 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).
- **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**
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.
Not less than 3-5 air exchanges per hour

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Appropriate regular employee training.
 Spraying: in vented cabin with laminar air flow
 Wear protective gloves/protective clothing/eye protection/face protection.
 Use only in well ventilated areas.
 Perform spray applications in automated and closed systems.
 Use at room temperature
 additional to professional application with multiple and/or significant contact
 limit the exposure to 4 hours
 Do not allow to reach ground water, water bodies or sewage system.

· **General protective and hygienic measures:**

Avoid contact with the skin.
 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:** Protect from humidity and water.

· **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:**

· **DNELs**

13463-67-7 Titandioxid

Inhalative DNEL long term 10 mg/m³ (human being)

2768-02-7 trimethoxyvinylsilane

Dermal DNEL 0.69 mg/kg (human being)

Inhalative DNEL 4.9 mg/m³ (human being)

52829-07-9 Bis(2,2,6,6-tetramethyl-4-piperidyl)sebacate

Dermal DNEL long term 1.6 mg/kg (human being)

Inhalative DNEL short term 2.82 mg/m³ (human being)

DNEL long term 2.82 mg/m³ (human being)

· **PNECs**

13463-67-7 Titandioxid

PNEC- Freshwater 0.127 mg/l (not specified)

PNEC-seawater 1 mg/l (not specified)

PNEC-Freshwater sediment 1,000 mg/kg (not specified)

PNEC-Seawater sediment 100 mg/kg (not specified)

PNEC-soil 100 mg/kg (not specified)

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

2768-02-7 trimethoxyvinylsilane

PNEC- Freshwater 0.36 mg/l (not specified)

PNEC-seawater 0.036 mg/l (not specified)

PNEC-periodic release 3.4 mg/l (not specified)

PNEC-Freshwater sediment 0.29 mg/kg (not specified)

PNEC-soil 0.048 mg/kg (not specified)

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PNEC-wastewater treatment plant 110 mg/l (not specified)

52829-07-9 Bis(2,2,6,6-tetramethyl-4-piperidyl)sebacate

PNEC- Freshwater 0.018 mg/l (not specified)

PNEC-seawater 0.0018 mg/l (not specified)

PNEC-periodic release 0.007 mg/l (not specified)

PNEC-Freshwater sediment 29 mg/kg (not specified)

PNEC-Seawater sediment 2.9 mg/kg (not specified)

PNEC-soil 5.9 mg/kg (not specified)

PNEC-wastewater treatment plant 1 mg/l (not specified)

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

Ensure that activities are executed by specialists or authorised personnel only.

· **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.· **Hand protection**

Protective gloves

Avoid direct contact with the chemical/ the product/ the preparation by organisational measures.

· **Material of gloves** Synthetic rubber gloves· **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

· **Colour:**

White

· **Odour:**

Characteristic

· **Odour threshold:**

Not determined.

· **Melting point/freezing point:**

Undetermined.

· **Boiling point or initial boiling point and boiling range**

>300 °C

· **Flammability**

Not applicable.

· **Lower and upper explosion limit**· **Lower:**

Not determined.

· **Upper:**

Not determined.

· **Flash point:**

>100 °C

· **Auto-ignition temperature:**

330 °C (166412-78-8 1,2-cyclohexanedicarboxylate)

· **Decomposition temperature:**

Not determined.

· **pH**

Not determined.

· **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:**

Not determined.

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- **Density and/or relative density**
- **Density at 20 °C:** ca. 1.55 g/cm³
- **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:** 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
- **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** Product hydrolyzes under formation of methanol (CAS No. 67-56-1).
- **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** humidity
- **10.5. Incompatible materials:** No further relevant information available.
- **10.6. Hazardous decomposition products:** Methanol - On reaction with water or air humidity

SECTION 11: Toxicological information

- **11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC₅₀ values relevant for classification:**

13463-67-7 Titandioxid

- | | | |
|--------|------------------|------------------------|
| Oral | LD ₅₀ | >10,000 mg/kg (rat) |
| Dermal | LD ₅₀ | >10,000 mg/kg (rabbit) |

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2768-02-7 trimethoxyvinylsilaneOral LD₅₀ 7,120-7,236 mg/kg (rat) (OECD 401)Dermal LD₅₀ 3,200 mg/kg (rabbit) (OECD 402)Inhalative LC₅₀ /4 h 16.8 mg/l (rat) (OECD 403)**52829-07-9 Bis(2,2,6,6-tetramethyl-4-piperidyl)sebacate**Oral LD₅₀ >2,000 mg/kg (rat)Dermal LD₅₀ >2,000 mg/kg (rat)**54068-28-9 dioctyltin acetylacetonate**Oral LD₅₀ 2,500 mg/kg (rat)Dermal LD₅₀ >2,000 mg/kg (rat)

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **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**

None of the ingredients is listed.

SECTION 12: Ecological information

- **12.1. Toxicity**
- **Aquatic toxicity:**

2768-02-7 trimethoxyvinylsilaneLC₅₀ 191 mg / l / 96h (Fathead minnow - Pimephales promelas)EC₅₀ 169 mg / l / 48h (water flea - daphnia)**52829-07-9 Bis(2,2,6,6-tetramethyl-4-piperidyl)sebacate**LC₅₀ 4.4 mg / l / 96h (Bluegill - Lepomis macrochirus)

4.4 mg / l / 96h (fish)

EC₅₀ 8.6 mg / l / 48h (water flea - daphnia)**54068-28-9 dioctyltin acetylacetonate**LC₅₀ 86 mg / l / 96h (Fathead minnow - Pimephales promelas)EC₅₀ 58.6 mg / l / 48h (water flea - daphnia)EC₅₀ 300 mg / l / 24h (Chlorophyceae - Scenedesmus subspicatus)

- **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.

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- **12.7 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 2 (German Regulation) (Self-assessment): hazardous for water
Danger to drinking water if even small quantities leak into the ground.
Do not allow product to reach sewage system or any water course.

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.
Must be specially treated adhering to official regulations.
- **European waste catalogue**
08 04 10 waste adhesives and sealants other than those mentioned in 08 04 09
- **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.
- **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: 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.

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EU

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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:**

- **D: Waterhazard class** Water hazard class 2 (Self-assessment): hazardous for water.

- **VOC - 2010/75/EU [g/L]:** <50.0 g/l

- **VOC - 2010/75/EU [%]:** <4.00 %

- **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.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

H361f Suspected of damaging fertility.

H371 May cause damage to organs.

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

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

- **Version number of previous version:** 1

- **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. 4: Acute toxicity – Category 4

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

Skin Sens. 1: Skin sensitisation – Category 1

Skin Sens. 1B: Skin sensitisation – Category 1B

Repr. 2: Reproductive toxicity – Category 2

STOT SE 2: Specific target organ toxicity (single exposure) – Category 2

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

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