

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 10.10.2023

Version number 4

Revision: 10.10.2023

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

- **Product identifier**
- **Trade name:** technicoll® 118
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Adhesives
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
RUDERER KLEBTECHNIK GMBH
Harthäuser Str. 2
D-85604 Zorneding
Tel.: +49 (0)8106 / 24608-33
info@technicoll.de
- **Further information obtainable from:** Anwendungstechnik
- **Emergency telephone number:**
Mo. - Do.: 08:00 - 17:00 Uhr; Fr.: 08:00 - 13:00 Uhr;
Tel.: +49 (0)8106 / 24608-33

SECTION 2: Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



health hazard

Carc. 2 H351 Suspected of causing cancer.



Acute Tox. 4 H332 Harmful if inhaled.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms**



GHS02



GHS07



GHS08

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- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
tetrahydrofuran
- **Hazard statements**
H225 Highly flammable liquid and vapour.
H332 Harmful if inhaled.
H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.
- **Precautionary statements**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
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.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

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

· **Dangerous components:**

CAS: 109-99-9 EINECS: 203-726-8	tetrahydrofuran ⚠ Flam. Liq. 2, H225; ⚠ Carc. 2, H351; ⚠ Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335	>70%
CAS: 128-37-0 EINECS: 204-881-4	Butylated hydroxytoluene ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	0.1-<0.15%

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

SECTION 4: First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Show this safety data sheet to the attending physician.

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· **After inhalation:**

Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

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

Seek medical treatment.

· **After skin contact:**

Wash off immediately with soap and plenty of water.

Remove contaminated clothing and shoes.

If skin irritation persists, seek medical advice.

· **After eye contact:**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. Seek medical advice immediately.

Rinse eyes with water for at least 15 minutes.

Seek medical attention if eye irritation occurs or persists.

· **After swallowing:**

If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

· **Information for doctor:** First aiders: Pay attention to self-protection!

· **Most important symptoms and effects, both acute and delayed**

In all cases of doubt, or when symptoms persist, seek medical advice.

· **Indication of any immediate medical attention and special treatment needed**

First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

· **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:** Sharp water jet

· **Special hazards arising from the substance or mixture**

Gases/vapours, toxic

Heating causes rise in pressure with risk of bursting.

· **Advice for firefighters**

Provide a conveniently located respiratory protective device. Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

· **Protective equipment:** Mouth respiratory protective device.

SECTION 6: Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Ventilate affected area. Do not breathe vapours. Keep away from sources of ignition. Remove persons to safety.

Wear protective equipment. Keep unprotected persons away.

· **Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

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- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
- **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

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
Observe laboratory hygiene: No eating, drinking or smoking during product use.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:**
Keep away from strongly acidic and alkaline materials as well as oxidizers.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Storage class:** 3
- **Specific end use(s)**
Observe the technical data sheet.
Adhesives, sealants

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see section 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:
109-99-9 tetrahydrofuran (>70%)

WEL	Short-term value: 300 mg/m ³ , 100 ppm
	Long-term value: 150 mg/m ³ , 50 ppm
	Sk

128-37-0 Butylated hydroxytoluene (0.1-<0.15%)

WEL	Long-term value: 10 mg/m ³
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· **DNELs**

109-99-9 tetrahydrofuran

Dermal	DNEL (Langzeit-wiederholt)	25 mg/kg bw/day (Workers)
Inhalative	DNEL (Short Term Acute)	300 mg/m ³ (Workers)
	DNEL (Langzeit-wiederholt)	150 mg/m ³ (Workers)

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

· **Exposure controls**

Provide good ventilation. This can be achieved with local or room suction. Do not breathe mist/ vapours/spray.

· **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.
Store protective clothing separately.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**

Use gloves of stable material (e.g. Nitrile) - if necessary tricoted to improve the wearability.



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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

· **Material of gloves**

NBR (nitrile rubber)

Thickness of the glove material ≥ 0.4 mm

It is recommended to clarify the chemical resistance of the above mentioned protective gloves for special applications with the glove manufacturer.

with the glove manufacturer. The instructions and information of the protective glove manufacturer regarding

use, storage, maintenance and replacement must be observed. Penetration time of the glove material in

Depending on the strength and duration of skin exposure.

Recommended glove brands: EN ISO 374

The selection of a suitable glove depends not only on the material but also on other quality features and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of glove materials cannot be calculated in advance and must therefore be checked before use.

· **Penetration time of glove material**

> 0.3 mm.

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

· **Eye protection:**

Eye glasses with side protection: EN 166



Tightly sealed goggles

· **Body protection:**

When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn.

· **Limitation and supervision of exposure into the environment**

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form:	Liquid
Colour:	Colourless
Odour:	Ether-like
Odour threshold:	Not determined.

· **pH-value at 20 °C:** 7-8

· **Change in condition**

Melting point/freezing point:	-108.5 °C
Initial boiling point and boiling range:	66 °C

· **Flash point:** -17 °C

· **Flammability (solid, gas):** Highly flammable.

· **Auto-ignition temperature:** 230 °C

· **Decomposition temperature:** Not determined.

· **Ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

Lower:	1.5 Vol %
Upper:	12 Vol %

· **Vapour pressure at 20 °C:** 200 hPa

· **Vapour pressure at 50 °C:** 550 hPa

· **Density at 20 °C:** 0.89 g/cm³

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

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· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic at 20 °C:	20 mm²/s
· Solvent content:	
Organic solvents:	70-99.9 %
VOC (EC)	100.00 %
· Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions**
Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.
- **Conditions to avoid**
Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7. Hazardous decomposition byproducts may form with exposure to high temperatures.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**
Hazardous decomposition byproducts may form with exposure to high temperatures e.g.: Carbon dioxide (CO₂), Carbon monoxide, smoke.

SECTION 11: Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
Harmful if inhaled.

· **LD/LC50 values relevant for classification:**

109-99-9 tetrahydrofuran

Oral	LD50	1,650 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat) (OECD 402)
Inhalative	LC50/4 h	>14.7 mg/l (rat)

128-37-0 Butylated hydroxytoluene

Oral	LD50	890 mg/kg (rat)
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- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

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- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **Overall assessment on CMR properties**
Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity**
Suspected of causing cancer.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause drowsiness and dizziness.
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.

SECTION 12: Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** Partition coefficient n-octanol/water = 6.2
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:**
The substances in the mixture do not fulfil the PBT/vPvB criteria according to UK REACH, Annex XIII.
- **Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

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SECTION 14: Transport information

· UN-Number	UN2056
· ADR, IMDG, IATA	
· UN proper shipping name	2056 TETRAHYDROFURAN
· ADR	TETRAHYDROFURAN
· IMDG, IATA	
· Transport hazard class(es)	
· ADR, IMDG, IATA	
	
· Class	3 Flammable liquids.
· Label	3
· Packing group	
· ADR, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Flammable liquids.
· Hazard identification number (Kemler code):	33
· EMS Number:	F-E,S-D
· Stowage Category	B
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· ADR	
· 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
· Transport category	2
· Tunnel restriction code	D/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 2056 TETRAHYDROFURAN, 3, II

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SECTION 15: Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms**



GHS02 GHS07 GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
tetrahydrofuran
- **Hazard statements**
H225 Highly flammable liquid and vapour.
H332 Harmful if inhaled.
H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.
- **Precautionary statements**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
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.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category** P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **National regulations:** Observe in addition any national regulations!
- **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.
H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.

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H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS:** Anwendungstechnik

· **Contact:**

Beratung technicoll

Tel.: +49 (0)8106 / 24608-33

Mail: Beratung@technicoll.de

· **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)

DNEL: Derived No-Effect Level (UK 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 Irrit. 2: Serious eye damage/eye irritation – Category 2

Carc. 2: Carcinogenicity – 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

· **Sources**

The preparation of the safety data sheet is based on the information provided by our raw material suppliers.