

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.01.2023

Version number 108.02 (replaces version 108.01)

Revision: 24.01.2023

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

- 1.1 Product identifier

- Trade name **TH97**

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

No further relevant information available.

- Application of the substance / the mixture

Release agent

Restrictions on use apply to this product according to Regulation (EU) no. 1907/2006 Annex XVII (see section 15)

- 1.3 Details of the supplier of the safety data sheet

- Manufacturer/Supplier:

Riepe GmbH & Co. KG
Theodor Rosenbaum Str. 28-30
32257 Bünde - Deutschland
Tel.: +49 (0) 5223 - 687407-0
Fax: +49 (0) 5223 - 687407-50
E-Mail: info@riepe.eu

- Informing department:

Tel.: +49 (0) 5223 - 687407-0
E-mail: info@riepe.eu

- 1.4 Emergency telephone number:

Poison Control Center, Mainz
Tel. 00 49 / 61 31 / 19 240

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture

- Classification according to Regulation (EC) No 1272/2008

Flam. Liq. 3 H226 Flammable liquid and vapour.

- 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



GHS02

- Signal word Warning

- Hazard statements

H226 Flammable liquid and vapour.

- Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P370+P378 In case of fire: Use CO₂, powder or water spray to extinguish.

P403+P235 Store in a well-ventilated place. Keep cool.

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.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.01.2023

Version number 108.02 (replaces version 108.01)

Revision: 24.01.2023

Trade name TH97

(Contd. of page 1)

- 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 the substances listed below with harmless additions- **Dangerous components:**

CAS: 64-17-5 EINECS: 200-578-6 Index number: 603-002-00-5 Reg.nr.: 01-2119457610-43	ethanol Flam. Liq. 2, H225; Eye Irrit. 2, H319 Specific concentration limit: Eye Irrit. 2; H319: C ≥ 50 %	≥25-<50%
CAS: 78-93-3 EINECS: 201-159-0 Index number: 606-002-00-3 Reg.nr.: 01-2119457290-43	2-Butanone Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336, EUH066	≤1%

- **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 advice:** Instantly remove any clothing soiled by the product.- **After inhalation** Supply fresh air; consult doctor in case of symptoms.- **After skin contact**

In general the product does not cause skin irritation.

Wash with soap and water.

- **After eye contact**

Rinse immediately opened eye for several minutes under running water. Then consult doctor.

- **After swallowing**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; instantly call for medical help.

- **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, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.- **5.2 Special hazards arising from the substance or mixture**

Can form explosive gas-air mixtures. In case of incomplete combustion carbon monoxide can arise. Fumes are heavier than air and distributed over ground. Inflammation is possible from a far distance.

- **5.3 Advice for firefighters**- **Protective equipment:** Wear self-contained breathing apparatus.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.01.2023

Version number 108.02 (replaces version 108.01)

Revision: 24.01.2023

Trade name TH97

(Contd. of page 2)

- Additional information

Endangered containers in the surrounding area should be cooled with a water-hose.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment and keep unprotected persons away.
Extinguish naked flames. Remove flammable sources. No smoking. Avoid sparks. Avoid contact with skin, eyes and clothing. Avoid inhalation of fumes. Air contaminated rooms thoroughly. Protect against electrostatic sparks.

- 6.2 Environmental precautions:

Prevent material from reaching sewage system, holes and cellars.

Dilute with much water.

If large amounts are released, the authorities must be informed.

- 6.3 Methods and material for containment and cleaning up:

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

Contaminated material has to be disposed as waste (see 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 information on disposal.

Danger of explosion

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling Keep containers tightly sealed.**- Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

- 7.2 Conditions for safe storage, including any incompatibilities**- Storage**

Protect against direct sunlight, other sources of heat and ignition.

Store in cool, dry conditions in well sealed containers.

- Requirements to be met by storerooms and containers:

Observe official regulations on storage and handling of water hazardous substances

- Information about storage in one common storage facility: Store away from oxidising agents.**- Further information about storage conditions:**

Pay attention to regulations/technical rules for the storage of combustible liquids.

- Storage class 3 (VCI - Konzept, 2007)**- 7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- 8.1 Control parameters**- Components with critical values that require monitoring at the workplace:****78-93-3 2-Butanone**

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

Long-term value: 600 mg/m³, 200 ppm

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.01.2023

Version number 108.02 (replaces version 108.01)

Revision: 24.01.2023

Trade name TH97

(Contd. of page 3)

- DNELs		
64-17-5 ethanol		
Oral	DNEL (population)	87 mg/kg bw/day (Long-term, systemic effects)
Dermal	DNEL (worker)	8,238 mg/kg bw/day (Long-term, systemic effects)
Inhalative	DNEL (worker)	380 mg/m ³ (Long-term, systemic effects)
	DNEL (population)	114 mg/m ³ (Long-term, systemic effects)
78-93-3 2-Butanone		
Oral	DNEL (population)	31 mg/kg bw/day (Long-term, systemic effects)
Dermal	DNEL (worker)	1,161 mg/kg bw/day (Long-term, systemic effects)
	DNEL (population)	412 mg/kg bw/day (Long-term, systemic effects)
Inhalative	DNEL (worker)	600 mg/m ³ (Long-term, systemic effects)
	DNEL (population)	106 mg/m ³ (Long-term, systemic effects)
- PNECs		
64-17-5 ethanol		
PNEC water	2.75 mg/l (intermittent releases)	
	0.96 mg/l (freshwater)	
	0.79 mg/l (marine water)	
PNEC sediment	3.6 mg/kg dw (freshwater)	
	2.9 mg/kg dw (marine water)	
PNEC soil	0.63 mg/kg dw (soil)	
PNEC STP	580 mg/l (sewage plant)	
78-93-3 2-Butanone		
PNEC water	55.8 mg/l (freshwater)	
	55.8 mg/l (marine water)	
PNEC sediment	284.74 mg/kg dw (freshwater)	
	284.7 mg/kg dw (marine water)	
PNEC soil	22.5 mg/kg dw (soil)	
PNEC STP	709 mg/l (sewage plant)	

- Additional information: The lists that were valid during the compilation were used as basis.

- 8.2 Exposure controls

- Appropriate engineering controls

Room ventilation i.e. vacuum suction. Measures to be taken against electro-static sparks.

- Individual protection measures, such as personal protective equipment

- General protective and hygienic measures

Wash hands during breaks and at the end of the work.

Avoid contact with the eyes and skin.

Gases, fumes and aerosols should not be inhaled.

- Breathing equipment: Not necessary if room is well-ventilated.

- Recommended filter device for short term use: Combination filter A-P2

- Hand protection Solvent resistant gloves

- Material of gloves

Butylrubber, BR, recommended thickness of the material: ≥ 0.7 mm, penetration time: ≥ 480 min.

Fluorocarbon rubber (Viton), recommended thickness of the material: ≥ 0.7 mm, penetration time: ≥ 480 min.

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.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.01.2023

Version number 108.02 (replaces version 108.01)

Revision: 24.01.2023

Trade name TH97

(Contd. of page 4)

- **Penetration time of glove material** Change gloves if notice sign of disenchantment.
- **Eye/face protection** Tightly sealed safety glasses.
- **Body protection:**
Standard protective clothing. Chemical resistant safety-shoes or boots. If skin contact is possible, wear impenetrable protective clothing against this solvent.

* SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties

- General Information

- | | |
|---|------------------------------------|
| - Colour: | Colourless |
| - Smell: | Alcohol-like |
| - Odour threshold: | Not determined. |
| - Melting point/freezing point: | Not determined |
| - Boiling point or initial boiling point and boiling range | 82 °C |
| - Flammability | Not applicable. |
| - Lower and upper explosion limit | |
| - Lower: | 3.5 Vol % (ethanol) |
| - Upper: | 15 Vol % (ethanol) |
| - Flash point: | 25 °C |
| - Ignition temperature: | 425 °C (ethanol) |
| - Decomposition temperature: | Not determined. |
| - pH | Not applicable.
Not determined. |
| - pH-value: | |
| - Viscosity: | |
| - Kinematic viscosity | Not determined. |
| - dynamic: | Not determined. |
| - Solubility | |
| - Water: | Fully miscible |
| - Partition coefficient n-octanol/water (log value) | Not determined. |
| - Vapour pressure at 20 °C: | 57 hPa (64-17-5 ethanol) |
| - Density and/or relative density | |
| - Density at 20 °C | 0.922 g/cm ³ |
| - Relative density | Not determined. |
| - Vapour density | Not determined. |

- 9.2 Other information

- | | |
|--|---|
| - Appearance: | Anwendungstemperatur < 40 °C |
| - Form: | Fluid |
| - Important information on protection of health and environment, and on safety. | |
| - Self-inflammability: | Product is not selfigniting. |
| - Explosive properties: | Product is not explosive. However, formation of explosive air/steam mixtures is possible. |
| - Evaporation rate | Not determined. |

- Information with regard to physical hazard classes

- | | |
|--------------------------|------|
| - Explosives | Void |
| - Flammable gases | Void |
| - Aerosols | Void |

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.01.2023

Version number 108.02 (replaces version 108.01)

Revision: 24.01.2023

Trade name TH97

(Contd. of page 5)

- Oxidising gases	Void
- Gases under pressure	Void
- Flammable liquids Flammable liquid and vapour.	
- 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.
To avoid: warmth, flames, sparks
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** strong oxidizing agents
- **10.6 Hazardous decomposition products:**
Formation of carbon monoxide and carbon dioxide in case of fire.

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 that are relevant for classification:**

64-17-5 ethanol

Oral	LD50	10,470 mg/kg (rat) (OECD 401)
Dermal	LD50	>2,000 mg/kg (rabbit) (OECD 402)
Inhalative	LC 50 / 4 h	>50 mg/l (rat) (OECD 403) >20 mg/l (mouse)

78-93-3 2-Butanone

Oral	LD50	3,300 mg/kg (rat)
Dermal	LD50	5,000 mg/kg (rbt)
Inhalative	LC 50 / 4 h	34.5 mg/l (rat) 40 mg/l (mus)

- **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.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.01.2023

Version number 108.02 (replaces version 108.01)

Revision: 24.01.2023

Trade name TH97

(Contd. of page 6)

- **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.

- STOT-repeated exposure:	
64-17-5 ethanol	
Oral	NOAEL 1,760 mg/kg (rat) (OECD 408, 90 d, target organ: liver)

- 11.2 Information on other hazards	
- Endocrine disrupting properties	
78-93-3	2-Butanone
<i>List II</i>	

SECTION 12: Ecological information

- 12.1 Toxicity

- Aquatic toxicity:	
64-17-5 ethanol	
LC 50 / 48 h	8,140 mg/l (Leuciscus idus)
EC 50 / 48 h	>10,000 mg/l (Daphnia magna)
EC 50 / 72 h	275 mg/l (Chlorella vulgaris) (OECD 201)
78-93-3 2-Butanone	
LC 50 / 96 h	>3,000 mg/l (fish)
EC 50 / 48 h	1,382 mg/l (Daphnia)

- **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**

- Respiratory inhibition of communal activated sludge EC 20 (mg/l according to ISO 8192 B):	
64-17-5 ethanol	
EC 50 (static)	>100 mg/l (Chlorella pyrenoidosa) (OECD 201)

- Additional ecological information:	
- General notes: Water hazard class 1 (Self-assessment): slightly hazardous for water.	

SECTION 13: Disposal considerations

- 13.1 Waste treatment methods

The following advice is related to new material and not to any processed products. In case of a mixture with other products other disposal methods may become necessary. If in doubt seek advice from product supplier or from local authorities.

- Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. If possible, send to be recycled, otherwise burn or deposit in a certified facility.

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.01.2023

Version number 108.02 (replaces version 108.01)

Revision: 24.01.2023

Trade name TH97

(Contd. of page 7)

- Waste disposal key number:

Since 01/01/99 the waste code numbers have not only been product-related but are also essentially application-related. The valid waste code number of the application can be obtained from the European waste catalogue.

- Uncleaned packagings: Disposal must be made according to official regulations.**- Recommendation:**

Rented packaging: After optimal emptying, close immediately and return to the supplier without cleaning. Care should be taken that no other materials get into the packaging.

Other containers: After complete emptying and cleaning, send to be reconditioned or recycled.

Caution: Leftovers in the containers may cause the risk of explosion.

Uncleaned containers should not be perforated, cut or welded.

* SECTION 14: Transport information

- 14.1 UN number or ID number - ADR/RID/ADN, IMDG, IATA	UN1170
- 14.2 UN proper shipping name - ADR/RID/ADN - IMDG - IATA	1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) ETHANOL SOLUTION
- 14.3 Transport hazard class(es) - ADR/RID/ADN - Class - Label	3 (F1) Flammable liquids. 3
- IMDG, IATA - Class - Label	3 Flammable liquids. 3
- 14.4 Packing group - ADR/RID/ADN, IMDG, IATA	III
- 14.5 Environmental hazards: - Marine pollutant:	Not applicable. No
- 14.6 Special precautions for user - Kemler Number: - EMS Number: - Stowage Category	Warning: Flammable liquids. 30 F-E,S-D A
- 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
- Transport/Additional information: - ADR/RID/ADN - Limited quantities (LQ) - Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

(Contd. on page 9)

EUE

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.01.2023

Version number 108.02 (replaces version 108.01)

Revision: 24.01.2023

Trade name TH97

(Contd. of page 8)

- IMDG	
- Limited quantities (LQ)	5L
- Excepted quantities (EQ)	Código E4 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
- UN "Model Regulation":	UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, III

SECTION 15: Regulatory information

- 15.1 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 CLP regulation.
- Hazard pictograms



GHS02

- Signal word Warning
- Hazard statements
H226 Flammable liquid and vapour.
- Precautionary statements
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P370+P378 In case of fire: Use CO₂, powder or water spray to extinguish.
P403+P235 Store in a well-ventilated place. Keep cool.
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
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

- 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

- 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

- Information about limitation of use:

Employment restrictions concerning young persons must be observed.

(Contd. on page 10)

EUE

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 26.01.2023

Version number 108.02 (replaces version 108.01)

Revision: 24.01.2023

Trade name TH97

(Contd. of page 9)

- Other regulations, limitations and prohibitive regulations

- Substances of very high concern (SVHC) according to REACH, Article 57

None of the ingredients is listed.

- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- UFI market placements:

- Relevant phrases

Complete wording of hazard statements and risk phrases (H- and R-phrases) mentioned in section 3. These phrases refer to the constituents. The labelling for this product is stated in section 2.

- Department issuing data specification sheet: see item 1: Informing department

- Version number of previous version: 108.01

- Abbreviations and acronyms:

LEV: Local Exhaust Ventilation

NOAEL: No Observed Adverse Effect Level

RPE: Respiratory Protective Equipment

RCR: Risk Characterisation Ratio (RCR= PEC/PNEC)

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 Harmonized System of Classification and Labelling of Chemicals

CLP: Classification, Labelling and Packaging (Regulation (EC) No. 1272/2008)

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)

TRGS: Technische Regeln für Gefahrstoffe (Technical Rules for Dangerous Substances, BAuA, Germany)

ISO: International Organisation for Standardisation

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Flam. Liq. 3: Flammable liquids – Category 3

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

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

- * Data compared to the previous version altered.