

# Acetic Anhydride in Tetrahydrofuran

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878  
Issue date: 6/24/2021 Revision date: 10/26/2023 Supersedes version of: 9/12/2023 Version: 3.1

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

#### 1.1. Product identifier

Product form	: Mixture
Trade name	: Acetic Anhydride in Tetrahydrofuran
UFI	: AQS2-C0W2-S00S-X6PJ
Product code	: NC-0702
Type of product	: Synthesis Reagent
Synonyms	: CAP A
Product group	: End product

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

##### 1.2.1. Relevant identified uses

Main use category	: Professional use, Laboratory chemical
Industrial/Professional use spec	: Industrial For professional use only
Use of the substance/mixture	: Laboratory chemicals Substance manufacture
Function or use category	: Laboratory chemicals

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

emp Biotech GmbH GmbH  
Robert-Rössle-Str. 10  
DE- 13125 Berlin  
Deutschland  
T +49 (0)30 94 89 22 01 (Monday-Friday, 9:00 am-5:00 pm) - F +49 (0)30 94 89 32 01  
[info@empbiotech.com](mailto:info@empbiotech.com) - [www.empbiotech.com](http://www.empbiotech.com)

#### 1.4. Emergency telephone number

Emergency number	: Giftnotruf Berlin +49 30 30686700 (Beratung in Deutsch), 24 Stunden, 7 Tage/Woche; International: INFOTRAC +1-352-323-3500 (Phone) or in the US 800-535-5053 (toll-free), 24 hours/day, 7 days/week
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### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2	H225
Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Inhalation)	H332
Skin Irrit. 2	H315
Eye Dam. 1	H318
Carc. 2	H351
STOT SE 3	H335

Full text of hazard classes, H- and EUH-statements: see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

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### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS02

GHS05

GHS07

GHS08

Signal word (CLP)

: Danger

Hazard statements (CLP)

: H225 - Highly flammable liquid and vapour.

H302+H332 - Harmful if swallowed or if inhaled.

H315 - Causes skin irritation.

H318 - Causes serious eye damage.

H335 - May cause respiratory irritation.

H351 - Suspected of causing cancer.

Precautionary statements (CLP)

: P280 - Wear protective gloves, protective clothing, eye protection, face protection, hearing protection.

P301+P312 - IF SWALLOWED: Call a POISON CENTER, doctor if you feel unwell.

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 - Call a POISON CENTER, doctor if you feel unwell.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313 - IF exposed or concerned: Get medical advice/attention.

EUH-statements

: EUH019 - May form explosive peroxides.

### 2.3. Other hazards

Other hazards which do not result in classification

: This substance / mixture does not contain any components of 0.1% or higher that are either classified as persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

#### Component

Tetrahydrofuran (109-99-9)

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

#### Component

Tetrahydrofuran(109-99-9)

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Tetrahydrofuran substance with national workplace exposure limit(s) (DE); substance with a Community workplace exposure limit	CAS-No.: 109-99-9 EC-No.: 203-726-8 EC Index-No.: 603-025-00-0 REACH-no: 01-2119444314-46-XXXX	80 – 95	Flam. Liq. 2, H225 Carc. 2, H351 Eye Irrit. 2, H319 STOT SE 3, H335

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Acetic anhydride substance with national workplace exposure limit(s) (DE)	CAS-No.: 108-24-7 EC-No.: 203-564-8 EC Index-No.: 607-008-00-9 REACH-no: 01-2119486470-36	5 – 20	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314

Specific concentration limits:		
Name	Product identifier	Specific concentration limits (%)
Tetrahydrofuran	CAS-No.: 109-99-9 EC-No.: 203-726-8 EC Index-No.: 603-025-00-0 REACH-no: 01-2119444314-46-XXXX	(25 ≤ C < 100) STOT SE 3, H335 (25 ≤ C < 100) Eye Irrit. 2, H319
Acetic anhydride	CAS-No.: 108-24-7 EC-No.: 203-564-8 EC Index-No.: 607-008-00-9 REACH-no: 01-2119486470-36	(1 ≤ C < 5) Eye Irrit. 2, H319 (5 ≤ C < 25) Skin Irrit. 2, H315 (5 ≤ C < 25) Eye Dam. 1, H318 (5 ≤ C < 100) STOT SE 3, H335 (25 ≤ C < 100) Skin Corr. 1B, H314

Full text of H- and EUH-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Consult a doctor. Show this safety data sheet to the doctor in attendance.
First-aid measures after inhalation	: Move person to fresh air and ensure comfortable breathing. Call a physician immediately. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.
First-aid measures after skin contact	: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Rinse skin with water/shower. Ask for medical advice.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if possible. Continue rinsing. Get immediate medical advice/attention.
First-aid measures after ingestion	: Ask for medical advice. Drink water immediately (max. 2 cups).

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects	: The most important known symptoms and effects are described on the label (see 2.2) and / or in section 11.
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### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Carbon dioxide. Dry powder.
Unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: Combustible.
Explosion hazard	: Vapors are heavier than air and may spread along floors. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.

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Hazardous decomposition products in case of fire : Carbon oxides. Nitrous gases (NOx). Fire may cause evolution of:  
Nitrogen oxides  
Caution! in contact with water product releases:  
Organic acids  
Pay attention to flashback.

### 5.3. Advice for firefighters

Protection during firefighting : Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.  
Other information : Remove container from danger zone and cool with water. Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Protective equipment : For personal protection see section 8.  
Emergency procedures : Avoid breathing vapours, mist, gas, spray. Avoid substance contact. Ensure adequate ventilation, observe emergency procedures, consult an expert. Keep away from heat and sources of ignition.

#### 6.1.2. For emergency responders

Protective equipment : Wear recommended personal protective equipment.  
Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Do not allow to enter drains or water courses. Be careful of explosion risk.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

### 6.4. Reference to other sections

Information on exposure controls/personal protective equipment and on Instructions for disposal can be found in sections 8 and 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Use under laboratory hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.  
Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Remove contaminated clothes.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed in a dry, well-ventilated place. Keep away from heat and sources of ignition.  
Storage temperature : 2 – 20 °C  
Storage area : Storage class (TRGS 510): See section 15.1.2.

### 7.3. Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### 8.1.1 National occupational exposure and biological limit values

Acetic anhydride (108-24-7)	
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA) [1]	0.42 mg/m <sup>3</sup>
AGW (OEL TWA) [2]	0.1 ppm Remarks: A risk of fetal damage need not be feared if the workplace limit value (AGW) and the biological limit value (BGW) are observed.
Tetrahydrofuran (109-99-9)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Tetrahydrofuran
IOEL TWA	150 mg/m <sup>3</sup>
IOEL TWA [ppm]	50 ppm
IOEL STEL	300 mg/m <sup>3</sup>
IOEL STEL [ppm]	100 ppm
Remark	Skin
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Tetrahydrofuran
AGW (OEL TWA) [1]	150 mg/m <sup>3</sup>
AGW (OEL TWA) [2]	50 ppm
Remark	DFG,EU,H,Y
Germany - Biological limit values (TRGS 903)	
Local name	Tetrahydrofuran
Biological limit value	2 mg/l Urine Remarks: End of exposure or end of shift.

##### 8.1.2. Recommended monitoring procedures

No additional information available

##### 8.1.3. Air contaminants formed

No additional information available

##### 8.1.4. DNEL and PNEC

No additional information available

##### 8.1.5. Control banding

No additional information available

#### 8.2. Exposure controls

##### 8.2.1. Appropriate engineering controls

###### Appropriate engineering controls:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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### 8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



#### 8.2.2.1. Eye and face protection

**Eye protection:**

Wear eye protection. Safety glasses. EN 166

#### 8.2.2.2. Skin protection

**Skin and body protection:**

Wear protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Flame retardant antistatic protective clothing

**Hand protection:**

Wear protective gloves. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

. Splash contact-material: butyl-rubber

Minimum layer thickness: 0,3 mm

Break through time: 10 min

#### 8.2.2.3. Respiratory protection

**Respiratory protection:**

Wear respiratory protection. Required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards:

DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type ABEK.

#### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

**Environmental exposure controls:**

Do not let product enter drains. Risk of explosion.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Appearance	: Clear.
Odour	: Ether-like.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: 64 °C At 1,013 hPa (main component)
Flammability	: Not available
Explosive properties	: product does not present an explosion hazard.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: -20 °C (main component)
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available

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Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Vapors can form an explosive mixture with air. Peroxides may be formed.

### 10.2. Chemical stability

The product is chemically stable under standard ambient conditions (room temperature). Sensitivity to light. Air sensitive.

### 10.3. Possibility of hazardous reactions

A risk of explosion and/or of toxic gas formation exists with the following substances:

Alkali hydroxides

Hydrides

Oxidizing agents

Bromine

Oxygen.

### 10.4. Conditions to avoid

High temperature. Heat. Moisture.

### 10.5. Incompatible materials

Rubber. Several plastics. Tin.

### 10.6. Hazardous decomposition products

In the event of fire: see section 5.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Harmful if inhaled.

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### Additional information

: Tetrahydrofuran:  
LD50 Oral: Rat - male and female: 1.650 mg/kg  
Remarks: (ECHA)  
Symptoms: Irritation of mucous membranes  
LC50 Inhalation: Rat - male and female: 4 h: > 16,9 mg/l  
Remarks: (US-EPA)  
Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:., damage of respiratory tract  
LD50 Dermal: Rat - male and female: > 2.000 mg/kg  
Remarks: (OECD Test Guideline 402)  
Acetic anhydride:  
LD50 Oral - Rat - male and female: 630 mg/kg  
Remarks: (ECHA)  
LC50 Inhalation - Rat - male: 4 h - 1,67 mg/l  
Remarks: (OECD Test Guideline 412)  
(ECHA)  
Dermal: No data available

Acetic Anhydride in Tetrahydrofuran	
ATE CLP (oral)	500 mg/kg bodyweight
ATE CLP (gases)	4500 ppmv/4h
ATE CLP (vapours)	11 mg/l/4h
ATE CLP (dust,mist)	1.5 mg/l/4h

Acetic anhydride (108-24-7)	
LD50 oral rat	1780 mg/kg - AMA Archives of Industrial Hygiene and Occupational Medicine. Vol. 4, Pg. 119, 1951.
LD50 dermal rabbit	4290 mg/kg - Union Carbide Data Sheet. Vol. 8/7/1963.
LC50 Inhalation - Rat	4.18 mg/l/4h - Toxicology of Drugs and Chemicals, Deichmann, W.B., New York, Academic Press, Inc., 1969Vol. -, Pg. 607, 1969.

Tetrahydrofuran (109-99-9)	
LD50 oral rat	1650 mg/kg - GAF Material Safety Data Sheet.

Skin corrosion/irritation : Causes skin irritation.  
Additional information : Acetic anhydride:  
Skin - in vitro test:  
Result: Causes burns. - 4 h  
Remarks: (ECHA)

Acetic anhydride (108-24-7)	
pH	≈ 3 at 20 °C; 10 g/l

Tetrahydrofuran (109-99-9)	
pH	7 – 8 at 20 °C; 200 g/l

Serious eye damage/irritation : Causes serious eye damage.  
Additional information : Tetrahydrofuran:  
Eyes - Rabbit  
Result: Eye irritation  
Remarks: (ECHA)  
(Regulation (EC) No 1272/2008, Annex VI)  
  
Acetic anhydride:  
Eyes - Rat  
Result: Corrosive - 24 h  
Remarks: (ECHA)



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Acetic anhydride (108-24-7)	
pH	≈ 3 at 20 °C; 10 g/l

Tetrahydrofuran (109-99-9)	
pH	7 – 8 at 20 °C; 200 g/l

Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Additional information	: Tetrahydrofuran: Suspected of causing cancer.
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.
Additional information	: Tetrahydrofuran: Inhalation: May cause respiratory irritation. - Respiratory system May cause drowsiness or dizziness. - Nervous system Acute oral toxicity: Irritation of mucous membranes Acute inhalation toxicity: mucosal irritations, Cough, Shortness of breath Possible damages: damage of respiratory tract
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

Acetic anhydride (108-24-7)	
Viscosity, kinematic	0.778 mm²/s

Tetrahydrofuran (109-99-9)	
Viscosity, kinematic	0.539 mm²/s

### 11.2. Information on other hazards

#### 11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties	: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH article 57(f) or commission delegated regulation (EU) 2017/2100 or commission regulation (EU) 2018/605 at levels of 0.1% or higher.
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#### 11.2.2. Other information

Potential adverse human health effects and symptoms	: Central nervous system depression, Cough, Chest pain, Difficulty in breathing. Exposure to high airborne concentrations can cause anesthetic effects, Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice, The substance should be handled with special care.
Other information	: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## SECTION 12: Ecological information

### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

Acetic anhydride (108-24-7)	
LC50 - Fish [1]	> 300.82 mg/l Semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - 96 h (OECD Test Guideline 203) Remarks: (in analogy to similar products)
EC50 - Crustacea [1]	> 1000 mg/l Static test EC50 - Daphnia magna (Water flea) - 48 h (OECD Test Guideline 202)
ErC50 algae	> 300.82 mg/l Static test ErC50 - Skeletonema costatum - 72 h (ISO 10253)

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Tetrahydrofuran (109-99-9)	
LC50 - Fish [1]	2160 mg/l Flow-through test LC50 - Pimephales promelas (fathead minnow) - 96 h (OECD Test Guideline 203)
EC50 - Other aquatic organisms [1]	3485 mg/l Static test EC50 - Daphnia magna (Water flea) - 48 h (OECD Test Guideline 202)

### 12.2. Persistence and degradability

Acetic Anhydride in Tetrahydrofuran	
Persistence and degradability	Not established.
Acetic anhydride (108-24-7)	
Biodegradation	> 95 % Zahn-Wellens Test - Exposure time 5 d Result: Readily biodegradable. (OECD Test Guideline 302B)
Tetrahydrofuran (109-99-9)	
Biodegradation	39 % Biodegradability aerobic Biochemical oxygen demand Exposure time 28 d Result: Not readily biodegradable. (OECD Test Guideline 301D)

### 12.3. Bioaccumulative potential

Acetic Anhydride in Tetrahydrofuran	
Bioaccumulative potential	Not established.
Acetic anhydride (108-24-7)	
Partition coefficient n-octanol/water (Log Pow)	≈ -0.5 Bioaccumulation is not expected.
Bioaccumulative potential	No bioaccumulation is to be expected (log Pow ≤ 4).
Tetrahydrofuran (109-99-9)	
Partition coefficient n-octanol/water (Log Kow)	0.46
Bioaccumulative potential	No bioaccumulation is to be expected (log Pow ≤ 4).

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

Acetic Anhydride in Tetrahydrofuran	
Results of PBT assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Component	
Tetrahydrofuran (109-99-9)	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH article 57(f) or commission delegated regulation (EU) 2017/2100 or commission regulation (EU) 2018/605 at levels of 0.1% or higher.

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### 12.7. Other adverse effects

Tetrahydrofuran	: Toxicity to fish: Flow-through test: LC50: Pimephales promelas (fathead minnow). 2.160 mg/l - 96 h Remarks: (OECD Test Guideline 203) Toxicity to daphnia and other aquatic invertebrates: Static test: EC50: Daphnia magna (Water flea): 3.485 mg/l - 48 h Remarks: (OECD Test Guideline 202) Toxicity to bacteria: Static test: EC20: activated sludge: ca. 800 mg/l - 0,5 h Remarks: (OECD Test Guideline 209)
Acetic anhydride	: Toxicity to fish : Semi-static test: LC50 - Oncorhynchus mykiss (rainbow trout): > 300,82 mg/l - 96 h Remarks: (OECD Test Guideline 203) (in analogy to similar products) Toxicity to daphnia and other aquatic invertebrates: Static test: EC50 - Daphnia magna (Water flea): > 1.000 mg/l - 48 h Remarks: (OECD Test Guideline 202) Toxicity to algae: Static test: ErC50 - Skeletonema costatum: > 300,82 mg/l - 72 h Remarks: (ISO 10253) Toxicity to bacteria: Static test: NOEC - Pseudomonas putida: 1.150 mg/l - 16 h Remarks: (ECHA)







## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods	: Product residues are to be disposed of in compliance with national and regional regulations dispose. Keep chemicals in original containers. Not with other waste mix. Uncleaned containers are to be treated according to the product. Pay attention to the waste policy 2008/98/EG.
Product/Packaging disposal recommendations	: Contaminated packaging to be disposed as unused product.
Ecology - waste materials	: Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

ADR	IMDG	IATA
<b>14.1. UN number or ID number</b>		
UN 2924	UN 2924	UN 2924
<b>14.2. UN proper shipping name</b>		
FLAMMABLE LIQUID, CORROSIVE, N.O.S. ( Mixture of Acetic anhydride and Tetrahydrofuran)	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Mixture of Acetic anhydride and Tetrahydrofuran)	FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Mixture of Acetic anhydride and Tetrahydrofuran)
<b>14.3. Transport hazard class(es)</b>		
3 (8)	3 (8)	3 (8)
 	 	 
<b>14.4. Packing group</b>		
II	II	II

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ADR	IMDG	IATA
14.5. Environmental hazards		
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available		

### 14.6. Special precautions for user

#### Overland transport

Tunnel restriction code (ADR) : D/E

#### Transport by sea

No data available

#### Air transport

No data available

### 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

#### 15.1.1. EU-Regulations

##### REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

##### REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

##### REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

##### PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

##### POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

##### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

##### Seveso Directive (Disaster Risk Reduction)

Seveso Additional information	: REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	: Acetic anhydride
	Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	: FLAMMABLE LIQUIDS

##### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

# Acetic Anhydride in Tetrahydrofuran

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

### 15.1.2. National regulations

#### Germany

Employment restrictions	: Observe restrictions according Act on the Protection of Working Mothers (MuSchG). Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).
Water hazard class (WGK)	: WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1).
Storage class (LGK, TRGS 510)	: LGK 3 - Flammable liquids.
Hazardous Incident Ordinance (12. BImSchV)	: Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

### 15.2. Chemical safety assessment

For this product a chemical safety assessment was not carried out.

## SECTION 16: Other information

Data sources	: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
Other information	: None.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Carc. 2	Carcinogenicity, Category 2
EUH019	May form explosive peroxides.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Safety Data Sheet (SDS), EU

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.