

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Acetic acid ROTIPURAN® ≥99,9 %, LC-MS Grade

article number: **1EHL**  
Version: **3.0 en**  
Replaces version of: 2021-08-19  
Version: (2)

date of compilation: 2020-09-15  
Revision: 2023-03-23

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

### 1.1 Product identifier

|                                 |  |
|---------------------------------|--|
| Identification of the substance | <b>Acetic acid ROTIPURAN® ≥99,9 %, LC-MS Grade</b> |
| Article number                  | 1EHL   |
| Index No (GB CLP)               | 607-002-00-6                                       |
| EC number                       | 200-580-7  |
| CAS number                      | 64-19-7  |

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

|                           |   |
|---------------------------|---|
| Relevant identified uses: | Laboratory chemical<br>Laboratory and analytical use  |
| Uses advised against:     | Do not use for squirting or spraying. Do not use for products which come into direct contact with the skin. Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household). |

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

Carl Roth GmbH + Co KG  
Schoemperlenstr. 3-5  
D-76185 Karlsruhe  
Germany

**Telephone:** +49 (0) 721 - 56 06 0

**Telefax:** +49 (0) 721 - 56 06 149

**e-mail:** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

**Website:** [www.carlroth.de](http://www.carlroth.de)

Competent person responsible for the safety data sheet: :Department Health, Safety and Environment

**e-mail (competent person):** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

### 1.4 Emergency telephone number

| Name  | Street    | Postal code/city     | Telephone    | Website |
|---|-----------|----------------------|--------------|---------|
| National Poisons Information Service<br>City Hospital | Dudley Rd | B187QH<br>Birmingham | 844 892 0111 |         |

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## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification acc. to GHS

| Section | Hazard class                      | Cat-egory | Hazard class and category | Hazard statement |
|---------|-----------------------------------|-----------|---------------------------|------------------|
| 2.6     | Flammable liquid                  | 3         | Flam. Liq. 3              | H226             |
| 3.2     | Skin corrosion/irritation         | 1A        | Skin Corr. 1A             | H314             |
| 3.3     | Serious eye damage/eye irritation | 1         | Eye Dam. 1                | H318             |

For full text of abbreviations: see SECTION 16

### The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. The product is combustible and can be ignited by potential ignition sources.

### 2.2 Label elements

#### Labelling

Signal word

**Danger**

#### Pictograms

GHS02, GHS05



#### Hazard statements

H226 Flammable liquid and vapour  
H314 Causes severe skin burns and eye damage

#### Precautionary statements

##### Precautionary statements - prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P280 Wear protective gloves/protective clothing/eye protection/face protection

##### Precautionary statements - response

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting  
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  
P310 Immediately call a POISON CENTER/doctor

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### 2.3 Other hazards

#### Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

#### Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of  $\geq 0,1\%$ .

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

|                   |  |
|-------------------|--|
| Name of substance | Acetic acid                                  |
| Molecular formula | C <sub>2</sub> H <sub>4</sub> O <sub>2</sub> |
| Molar mass        | 60,05 g/mol                                  |
| CAS No            | 64-19-7                                      |
| EC No             | 200-580-7                                    |
| Index No (GB CLP) | 607-002-00-6                                 |

#### Substance, Specific Conc. Limits, M-factors, ATE

| Specific Conc. Limits   | M-Factors | ATE | Exposure route |
|---|-----------|-----|----------------|
| Skin Corr. 1A; H314: C $\geq 90\%$<br>Skin Corr. 1B; H314: $25\% \leq C < 90\%$<br>Skin Irrit. 2; H315: $10\% \leq C < 25\%$<br>Eye Dam. 1; H318: C $\geq 25\%$<br>Eye Irrit. 2; H319: $10\% \leq C < 25\%$ | -         | -   |                |

## SECTION 4: First aid measures

### 4.1 Description of first aid measures



#### General notes

Take off immediately all contaminated clothing. Self-protection of the first aider.

#### Following inhalation

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

#### Following skin contact

After contact with skin, wash immediately with plenty of water. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

#### Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes hold-  
ing eyelids apart and consult an ophthalmologist. Protect uninjured eye.

#### Following ingestion

Rinse mouth immediately and drink plenty of water. Call a physician immediately. If swallowed  
danger of perforation of the esophagus and the stomach (strong corrosive effects).

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

Following inhalation: Irritant effects, Cough, pain, choking, and breathing difficulties,  
Following skin contact: Causes severe burns, Causes poorly healing wounds,  
After eye contact: Risk of serious damage to eyes, Risk of blindness,  
Following ingestion: Corrosion, Gastric perforation

### 4.3 Indication of any immediate medical attention and special treatment needed

none

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media



#### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings  
water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

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

Combustible. In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture. Solvent vapours are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Vapours may form explosive mixtures with air.

#### Hazardous combustion products

In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

## SECTION 6: Accidental release measures

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



#### For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray. Avoidance of ignition sources.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Danger of explosion.

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

#### Advice on how to contain a spill

Covering of drains.

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### Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

### Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Provision of sufficient ventilation. Use extractor hood (laboratory). Handle and open container with care. Clear contaminated areas thoroughly.

### Measures to prevent fire as well as aerosol and dust generation



Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharge.

### Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs. When using do not smoke.

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

Store in a well-ventilated place. Keep container tightly closed.

### Incompatible substances or mixtures

Observe hints for combined storage.

### Consideration of other advice:

Ground/bond container and receiving equipment.

### Ventilation requirements

Use local and general ventilation.

### Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

### 7.3 Specific end use(s)

No information available.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### National limit values

#### Occupational exposure limit values (Workplace Exposure Limits)

| Country | Name of agent | CAS No  | Identifier | TWA [ppm] | TWA [mg/m <sup>3</sup> ] | STEL [ppm] | STEL [mg/m <sup>3</sup> ] | Ceiling-C [ppm] | Ceiling-C [mg/m <sup>3</sup> ] | Notation | Source      |
|---------|---------------|---------|------------|-----------|--------------------------|------------|---------------------------|-----------------|--------------------------------|----------|-------------|
| EU      | acetic acid   | 64-19-7 | IOELV      | 10        | 25                       | 20         | 50                        |                 |                                |          | 2017/164/EU |
| GB      | acetic acid   | 64-19-7 | WEL        | 10        | 25                       | 20         | 50                        |                 |                                |          | EH40/2005   |

#### Notation

Ceiling-C  
STEL  
TWA

Ceiling value is a limit value above which exposure should not occur  
Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)  
Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

### 8.2 Exposure controls

#### Individual protection measures (personal protective equipment)

##### Eye/face protection



Use safety goggle with side protection. Wear face protection.

##### Skin protection



##### • hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

##### • type of material

Butyl caoutchouc (butyl rubber)

##### • material thickness

0,7mm

##### • breakthrough times of the glove material

>480 minutes (permeation: level 6)

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### • other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

### Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: E (against acidic gases like sulphur dioxide or hydrogen chloride, colour code: Yellow).

### Environmental exposure controls

Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|  |  |
|--|--|
| Physical state   | liquid   |
| Colour   | colourless                                       |
| Odour  | pungent  |
| Odour threshold  | 0,2 – 100,1 ppm                                  |
| Melting point/freezing point                             | 16,64 °C (ECHA)                                  |
| Boiling point or initial boiling point and boiling range | 117,9 °C at 101,3 kPa (ECHA)                     |
| Flammability   | flammable liquid in accordance with GHS criteria |
| Lower and upper explosion limit                          | 4 vol% (LEL) - 19,9 vol% (UEL)                   |
| Flash point  | 39 °C at 101,3 kPa (ECHA)                        |
| Auto-ignition temperature                                | 463 °C (ECHA)                                    |
| Decomposition temperature                                | not relevant                                     |
| pH (value)   | 2,4 (ECHA)                                       |
| Kinematic viscosity                                      | 1,015 mm <sup>2</sup> /s at 25 °C                |
| Dynamic viscosity  | 1,056 mPa s at 25 °C                             |
| <u>Solubility(ies)</u>                                   |  |
| Water solubility   | 602,9 g/l at 25 °C (ECHA)                        |
| <u>Partition coefficient</u>                             |  |
| Partition coefficient n-octanol/water (log value):       | -0,17 (pH value: 7, 25 °C) (ECHA)                |
| Soil organic carbon/water (log KOC)                      | 0,062 (ECHA)                                     |
| Vapour pressure  | 20,79 hPa at 25 °C                               |

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### Density and/or relative density

|                         |  |
|-------------------------|--|
| Density                 | 1,04 g/cm <sup>3</sup> at 25 °C (ECHA) |
| Relative vapour density | 2,07 at 20 °C (air = 1)                |

Particle characteristics not relevant (liquid)

### Other safety parameters

Oxidising properties none

## 9.2 Other information

Information with regard to physical hazard classes: There is no additional information.

Other safety characteristics:

Maximum explosion pressure 6,3 bar

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

It's a reactive substance. Risk of ignition.

#### **If heated**

Risk of ignition. Vapours may form explosive mixtures with air.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 10.3 Possibility of hazardous reactions

**Danger of explosion:** Peroxides, Perchlorates, Hydrogen peroxide, Chromium(VI) oxide, Permanganates, for example potassium permanganate, strong oxidiser,

**Violent reaction with:** Strong alkali, Aldehydes, Alkali hydroxide (caustic alkali), Alcohols, Nitric acid

### 10.4 Conditions to avoid

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

### 10.5 Incompatible materials

different plastics, Rubber articles, iron, copper, bronze, brass, zinc

#### **Release of flammable materials with**

Metals (due to the release of hydrogen in an acid/alkaline medium)

### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.



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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Classification acc. to GHS

##### Acute toxicity

Shall not be classified as acutely toxic.

GHS of the United Nations, annex 4. May be harmful if swallowed.

| Acute toxicity |          |             |         |        |        |
|----------------|----------|-------------|---------|--------|--------|
| Exposure route | Endpoint | Value       | Species | Method | Source |
| oral           | LD50     | 3.310 mg/kg | rat     |        | TOXNET |

##### Skin corrosion/irritation

Causes severe skin burns and eye damage.

##### Serious eye damage/eye irritation

Causes serious eye damage.

##### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

##### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

##### Carcinogenicity

Shall not be classified as carcinogenic.

##### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

##### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

##### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

##### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

#### Symptoms related to the physical, chemical and toxicological characteristics

##### • If swallowed

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects)

##### • If in eyes

causes burns, Causes serious eye damage, risk of blindness

##### • If inhaled

irritant effects, cough, pain, choking, and breathing difficulties

##### • If on skin

causes severe burns, causes poorly healing wounds

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### • Other information

none

### 11.2 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0,1%.

### 11.3 Information on other hazards

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

| Aquatic toxicity (acute) |             |                       |        |               |
|--------------------------|-------------|-----------------------|--------|---------------|
| Endpoint                 | Value       | Species               | Source | Exposure time |
| LC50                     | >300,8 mg/l | fish                  | ECHA   | 96 h          |
| EC50                     | >300,8 mg/l | aquatic invertebrates | ECHA   | 48 h          |
| ErC50                    | >300,8 mg/l | algae                 | ECHA   | 72 h          |

### 12.2 Persistence and degradability

#### Biodegradation

The substance is readily biodegradable.

| Process of degradability |                  |      |
|--------------------------|------------------|------|
| Process                  | Degradation rate | Time |
| biotic/abiotic           | 99 %             | 30 d |

### 12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

|                           |                                   |
|---------------------------|-----------------------------------|
| n-octanol/water (log KOW) | -0,17 (pH value: 7, 25 °C) (ECHA) |
| BCF                       | 3,16 (ECHA)                       |

### 12.4 Mobility in soil

|  |   |
|--|---|
| Henry's law constant                                 | 0,21 Pa m <sup>3</sup> /mol at 25 °C (ECHA) |
| The Organic Carbon normalised adsorption coefficient | 0,062 (ECHA)                                |

### 12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0,1%.

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## 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

#### Properties of waste which render it hazardous

**HP 3** flammable

**HP 4** irritant - skin irritation and eye damage

**HP 8** corrosive

### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

## SECTION 14: Transport information

### 14.1 UN number or ID number

|           |         |
|-----------|---------|
| ADRRID    | UN 2789 |
| IMDG-Code | UN 2789 |
| ICAO-TI   | UN 2789 |

### 14.2 UN proper shipping name

|           |                      |
|-----------|----------------------|
| ADRRID    | ACETIC ACID, GLACIAL |
| IMDG-Code | ACETIC ACID, GLACIAL |
| ICAO-TI   | Acetic acid, glacial |

### 14.3 Transport hazard class(es)

|           |       |
|-----------|-------|
| ADRRID    | 8 (3) |
| IMDG-Code | 8 (3) |
| ICAO-TI   | 8 (3) |

### 14.4 Packing group

|           |    |
|-----------|----|
| ADRRID    | II |
| IMDG-Code | II |

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ICAO-TI

II

### 14.5 Environmental hazards

non-environmentally hazardous acc. to the dangerous goods regulations

### 14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

### 14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

### 14.8 Information for each of the UN Model Regulations

#### Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) Additional information

|                                       |  |
|---------------------------------------|--|
| Proper shipping name                  | ACETIC ACID, GLACIAL                           |
| Particulars in the transport document | UN2789, ACETIC ACID, GLACIAL, 8 (3), II, (D/E) |
| Classification code                   | CF1  |
| Danger label(s)                       | 8+3  |



|                               |     |
|-------------------------------|-----|
| Excepted quantities (EQ)      | E2  |
| Limited quantities (LQ)       | 1 L |
| Transport category (TC)       | 2   |
| Tunnel restriction code (TRC) | D/E |
| Hazard identification No      | 83  |
| <b>Emergency Action Code</b>  | 2P  |

#### Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) Additional information

|                     |     |
|---------------------|-----|
| Classification code | CF1 |
| Danger label(s)     | 8+3 |



|                          |     |
|--------------------------|-----|
| Excepted quantities (EQ) | E2  |
| Limited quantities (LQ)  | 1 L |
| Transport category (TC)  | 2   |
| Hazard identification No | 83  |

#### International Maritime Dangerous Goods Code (IMDG) - Additional information

|  |  |
|--|--|
| Proper shipping name                     | ACETIC ACID, GLACIAL                               |
| Particulars in the shipper's declaration | UN2789, ACETIC ACID, GLACIAL, 8 (3), II, 39°C c.c. |
| Marine pollutant                         | -  |
| Danger label(s)                          | 8+3  |

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|                          |           |
|--------------------------|-----------|
| Excepted quantities (EQ) | E2        |
| Limited quantities (LQ)  | 1 L       |
| EmS                      | F-E, S-C  |
| Stowage category         | A         |
| <b>Segregation group</b> | 1 - Acids |

### International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

|  |   |
|--|---|
| Proper shipping name                     | Acetic acid, glacial                    |
| Particulars in the shipper's declaration | UN2789, Acetic acid, glacial, 8 (3), II |
| Danger label(s)                          | 8+3                                     |



|                          |       |
|--------------------------|-------|
| Excepted quantities (EQ) | E2    |
| Limited quantities (LQ)  | 0,5 L |

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### Relevant provisions of the European Union (EU)

##### Seveso Directive

| 2012/18/EU (Seveso III) |                                       |   |       |
|-------------------------|---------------------------------------|---|-------|
| No                      | Dangerous substance/hazard categories | Qualifying quantity (tonnes) for the application of lower and upper-tier requirements | Notes |
| P5c                     | flammable liquids (cat. 2, 3)         | 5.000      50.000   | 51)   |

##### Notation

51) Flammable liquids, categories 2 or 3 not covered by P5a and P5b

##### Deco-Paint Directive

|             |           |
|-------------|-----------|
| VOC content | 100 %     |
| VOC content | 1.040 g/l |

##### Industrial Emissions Directive (IED)

|             |           |
|-------------|-----------|
| VOC content | 100 %     |
| VOC content | 1.040 g/l |

##### Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

not listed

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### Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

### Water Framework Directive (WFD)

not listed

### Regulation on the marketing and use of explosives precursors

not listed

### Regulation on drug precursors

not listed

### Regulation on substances that deplete the ozone layer (ODS)

not listed

### Regulation concerning the export and import of hazardous chemicals (PIC)

not listed

### Regulation on persistent organic pollutants (POP)

not listed

### National regulations(GB)

#### List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

not listed

#### Restrictions according to GB REACH, Annex 17

| Dangerous substances with restrictions (GB REACH, Annex 17) |  |        |    |
|---|--|--------|----|
| Name of substance   | Name acc. to inventory   | CAS No | No |
| Acetic acid   | this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC |        | 3  |
| Acetic acid   | flammable / pyrophoric   |        | 40 |

### Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

### National inventories

| Country | Inventory  | Status              |
|---------|------------|---------------------|
| AU      | AIIC       | substance is listed |
| CA      | DSL        | substance is listed |
| CN      | IECSC      | substance is listed |
| EU      | ECSI       | substance is listed |
| EU      | REACH Reg. | substance is listed |
| JP      | CSCL-ENCS  | substance is listed |
| KR      | KECI       | substance is listed |
| MX      | INSQ       | substance is listed |
| NZ      | NZIoC      | substance is listed |

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| Country | Inventory | Status                          |
|---------|-----------|---------------------------------|
| PH      | PICCS     | substance is listed             |
| TR      | CICR      | substance is listed             |
| TW      | TCSI      | substance is listed             |
| US      | TSCA      | substance is listed as "ACTIVE" |

### Legend

|            |   |
|------------|---|
| AIIC       | Australian Inventory of Industrial Chemicals                            |
| CICR       | Chemical Inventory and Control Regulation                               |
| CSCL-ENCS  | List of Existing and New Chemical Substances (CSCL-ENCS)                |
| DSL        | Domestic Substances List (DSL)  |
| ECSI       | EC Substance Inventory (EINECS, ELINCS, NLP)                            |
| IECSC      | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ       | National Inventory of Chemical Substances                               |
| KECI       | Korea Existing Chemicals Inventory                                      |
| NZIoC      | New Zealand Inventory of Chemicals                                      |
| PICCS      | Philippine Inventory of Chemicals and Chemical Substances (PICCS)       |
| REACH Reg. | REACH registered substances   |
| TCSI       | Taiwan Chemical Substance Inventory                                     |
| TSCA       | Toxic Substance Control Act   |

## 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

| Section | Former entry (text/value)   | Actual entry (text/value)   | Safety-relevant |
|---------|---|---|-----------------|
| 2.2     | Labelling of packages where the contents do not exceed 125 ml:<br>Signal word: Danger |   | yes             |
| 2.2     |   | Labelling of packages where the contents do not exceed 125 ml:<br>change in the listing (table)                 | yes             |
| 2.2     |   | Labelling of packages where the contents do not exceed 125 ml:<br>change in the listing (table)                 | yes             |
| 2.2     |   | Labelling of packages where the contents do not exceed 125 ml:<br>change in the listing (table)                 | yes             |
| 2.3     |   | Endocrine disrupting properties:<br>Does not contain an endocrine disruptor (EDC) in a concentration of ≥ 0,1%. | yes             |
| 14.8    |   | Regulations concerning the International Carriage of Dangerous Goods by Rail (RID)Additional information        | yes             |
| 14.8    |   | Classification code:<br>CF1   | yes             |
| 14.8    |   | Danger label(s):<br>8+3   | yes             |
| 14.8    |   | Danger label(s):<br>change in the listing (table)   | yes             |
| 14.8    |   | Excepted quantities (EQ):<br>E2   | yes             |

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| Section | Former entry (text/value)  | Actual entry (text/value)   | Safety-relevant |
|---------|--|---|-----------------|
| 14.8    |  | Limited quantities (LQ):<br>1 L   | yes             |
| 14.8    |  | Transport category (TC):<br>2   | yes             |
| 14.8    |  | Hazard identification No:<br>83   | yes             |
| 15.1    | Restrictions according to REACH, Annex XVII  |   | yes             |
| 15.1    |  | Dangerous substances with restrictions (REACH, Annex XVII):<br>change in the listing (table)            | yes             |
| 15.1    | List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list:<br>Not listed. |   | yes             |
| 15.1    | VOC content:<br>100 %<br>, 1.040 g/l   | VOC content:<br>100 %   | yes             |
| 15.1    |  | VOC content:<br>1.040 g/l   | yes             |
| 15.1    |  | National regulations(GB)  | yes             |
| 15.1    |  | List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list:<br>not listed | yes             |
| 15.1    |  | Restrictions according to GB REACH, Annex 17  | yes             |
| 15.1    |  | Dangerous substances with restrictions (GB REACH, Annex 17):<br>change in the listing (table)           | yes             |
| 15.1    |  | National inventories:<br>change in the listing (table)  | yes             |

### Abbreviations and acronyms

| Abbr.       | Descriptions of used abbreviations   |
|-------------|--|
| 2017/164/EU | Commission Directive establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU |
| ADR         | Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)  |
| ATE         | Acute Toxicity Estimate  |
| BCF         | Bioconcentration factor  |
| CAS         | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)   |
| Ceiling-C   | Ceiling value  |
| DGR         | Dangerous Goods Regulations (see IATA/DGR)   |
| EC50        | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval                                   |
| EC No       | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)                                  |



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| Abbr.     | Descriptions of used abbreviations  |
|-----------|---|
| EH40/2005 | EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> ) |
| EINECS    | European Inventory of Existing Commercial Chemical Substances   |
| ELINCS    | European List of Notified Chemical Substances   |
| EmS       | Emergency Schedule  |
| ErC50     | ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control                |
| GB CLP    | The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended)                            |
| GB REACH  | The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)  |
| GHS       | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations   |
| IATA      | International Air Transport Association   |
| IATA/DGR  | Dangerous Goods Regulations (DGR) for the air transport (IATA)  |
| ICAO      | International Civil Aviation Organization   |
| ICAO-TI   | Technical instructions for the safe transport of dangerous goods by air   |
| IMDG      | International Maritime Dangerous Goods Code   |
| IMDG-Code | International Maritime Dangerous Goods Code   |
| index No  | The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008  |
| IOELV     | Indicative occupational exposure limit value  |
| LC50      | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval                                     |
| LD50      | Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval  |
| LEL       | Lower explosion limit (LEL)   |
| NLP       | No-Longer Polymer   |
| PBT       | Persistent, Bioaccumulative and Toxic   |
| ppm       | Parts per million   |
| REACH     | Registration, Evaluation, Authorisation and Restriction of Chemicals  |
| RID       | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)               |
| STEL      | Short-term exposure limit   |
| TWA       | Time-weighted average   |
| UEL       | Upper explosion limit (UEL)   |
| VOC       | Volatile Organic Compounds  |
| vPvB      | Very Persistent and very Bioaccumulative  |
| WEL       | Workplace exposure limit  |

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### Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### List of relevant phrases (code and full text as stated in section 2 and 3)

| Code | Text                                     |
|------|--|
| H226 | Flammable liquid and vapour.             |
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye damage.               |

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.