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

1.1 Product identifier
Identification of the substance Acetic acid ethyl ester
Article number 6784
Registration number (REACH) 01-2119475103-46-xxxx
Index No 607-022-00-5
EC number 205-500-4
CAS number 141-78-6

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: laboratory chemical laboratory and analytical use

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
Website: www.carlroth.de

Competent person responsible for the safety data sheet: Department Health, Safety and Environment
E-mail (competent person): sicherheit@carlroth.de

1.4 Emergency telephone number
Emergency information service Poison Centre Munich: +49/(0)89 19240

SECTION 2: Hazards identification

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

<table>
<thead>
<tr>
<th>Classification acc. to GHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>2.6</td>
</tr>
<tr>
<td>3.3</td>
</tr>
<tr>
<td>3.8D</td>
</tr>
</tbody>
</table>
Supplemental hazard information

<table>
<thead>
<tr>
<th>Code</th>
<th>Supplemental hazard information</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUH066</td>
<td>repeated exposure may cause skin dryness or cracking</td>
</tr>
</tbody>
</table>

The most important adverse physicochemical, human health and environmental effects
Narcotic effects.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word  Danger

Pictograms

GHS02, GHS07

Hazard statements

H225  Highly flammable liquid and vapour
H319  Causes serious eye irritation
H336  May cause drowsiness or dizziness

Precautionary statements

Precautionary statements - prevention
P210  Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243  Take action to prevent static discharges.

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

Supplemental hazard information

EUH066  Repeated exposure may cause skin dryness or cracking.

Labelling of packages where the contents do not exceed 125 ml
Signal word: Danger
Symbol(s)

EUH066  Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards

There is no additional information.
SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance: Ethyl acetate

Index No: 607-022-00-5

Registration number (REACH): 01-2119475103-46-xxxx

EC number: 205-500-4

CAS number: 141-78-6

Molecular formula: C₄H₈O₂

Molar mass: 88.11 g/mol

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes
Take off contaminated clothing.

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

Following skin contact
Rinse skin with water/shower.

Following eye contact
Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

Following ingestion
Rinse mouth. Do not induce vomiting. Observe aspiration hazard if vomiting occurs. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Following inhalation: Headaches and dizziness may occur, Breathing difficulties, Dizziness, Drowsiness, Narcosis,
Following skin contact: Has degreasing effect on the skin, Irritant effects,
After eye contact: Irritation,
After ingestion: Nausea, Vomiting, Aspiration hazard

4.3 Indication of any immediate medical attention and special treatment needed

Give sodium sulfate as laxative (1 tablespoon in 1 glass of water).
SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Co-ordinate fire-fighting measures to the fire surroundings
water spray, foam, dry extinguishing powder, carbon dioxide (CO2)

Unsuitable extinguishing media
water jet

5.2 Special hazards arising from the substance or mixture
Combustible. Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Hazardous combustion products
In case of fire may be liberated: carbon monoxide (CO), carbon dioxide (CO2)

5.3 Advice for firefighters

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. Explosive properties.

6.3 Methods and material for containment and cleaning up

Advises on how to contain a spill
Covering of drains.

Advises on how to clean up a spill
Absorb with liquid-binding material (e.g. 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
SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provision of sufficient ventilation. Avoid: Aerosol or mist formation.

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

No smoking.

Take precautionary measures against static discharge. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches.

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


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.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

<table>
<thead>
<tr>
<th>Country</th>
<th>Name of agent</th>
<th>CAS No</th>
<th>Identifier</th>
<th>TWA [ppm]</th>
<th>TWA [mg/m³]</th>
<th>STEL [ppm]</th>
<th>STEL [mg/m³]</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU</td>
<td>ethyl acetate</td>
<td>141-78-6</td>
<td>IOELV</td>
<td>200</td>
<td>734</td>
<td>400</td>
<td>1.468</td>
<td>2017/164/EU</td>
</tr>
<tr>
<td>MT</td>
<td>ethyl acetate</td>
<td>141-78-6</td>
<td>OELV</td>
<td>200</td>
<td>734</td>
<td>400</td>
<td>1.468</td>
<td>CAP. 424</td>
</tr>
</tbody>
</table>

Notation

STEL 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)

TWA 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)
Relevant DNELs/DMELs/PNECs and other threshold levels

### Human health values

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Threshold level</th>
<th>Protection goal, route of exposure</th>
<th>Used in</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNEL</td>
<td>734 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>chronic - systemic effects</td>
</tr>
<tr>
<td>DNEL</td>
<td>1.468 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>acute - systemic effects</td>
</tr>
<tr>
<td>DNEL</td>
<td>734 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>chronic - local effects</td>
</tr>
<tr>
<td>DNEL</td>
<td>1.468 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>acute - local effects</td>
</tr>
<tr>
<td>DNEL</td>
<td>63 mg/kg bw/day</td>
<td>human, dermal</td>
<td>worker (industry)</td>
<td>chronic - systemic effects</td>
</tr>
</tbody>
</table>

### Environmental values

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Threshold level</th>
<th>Environmental compartment</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>PNEC</td>
<td>1.65 mg/l</td>
<td>water</td>
<td>intermittent release</td>
</tr>
<tr>
<td>PNEC</td>
<td>0.24 mg/l</td>
<td>freshwater</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>0.024 mg/l</td>
<td>marine water</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>650 mg/l</td>
<td>sewage treatment plant (STP)</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>1.15 mg/kg</td>
<td>freshwater sediment</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>0.115 mg/kg</td>
<td>marine sediment</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>0.148 mg/kg</td>
<td>soil</td>
<td>short-term (single instance)</td>
</tr>
</tbody>
</table>

## 8.2 Exposure controls

### Individual protection measures (personal protective equipment)

#### Eye/face protection

![Safety goggles](image)

Use safety goggles with side protection.

#### Skin protection

- **Hand protection**
  
  Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. 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.

- **Type of material**
  
  Butyl caoutchouc (butyl rubber)

- **Material thickness**
  
  0.7mm.
breakthrough times of the glove material
>480 minutes (permeation: level 6)

other protection measures
Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.
Flame-retardant protective clothing.

Respiratory protection

Respiratory protection necessary at: Aerosol or mist formation. Type: A (against organic gases and vapours with a boiling point of > 65 °C, colour code: Brown).

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

Appearance
- Physical state: liquid (fluid)
- Colour: colourless
- Odour: fruity
- Odour threshold: 50 ppm

Other physical and chemical parameters
- pH (value): This information is not available.
- Melting point/freezing point: -83,6 °C at 1 atm
- Initial boiling point and boiling range: 77,1 °C at 101,3 kPa
- Flash point: -4 °C at 1 atm (closed cup)
- Evaporation rate: no data available
- Flammability (solid, gas): not relevant (fluid)

Explosive limits
- Lower explosion limit (LEL): 2,2 vol% (73 g/m³)
- Upper explosion limit (UEL): 11,5 vol% (470 g/m³)

Vapour pressure: 97 hPa at 20 °C
Density: 900,3 kg/m³ at 20 °C
Vapour density: 3,04 (air = 1)
Bulk density: Not applicable
Relative density: Information on this property is not available.
### Solubility(ies)

- **Water solubility**: 80,000 mg/l at 25 °C

### Partition coefficient

- **n-octanol/water (log KOW)**: 0,68 (pH value: 7, 25 °C) (ECHA)

### Auto-ignition temperature

- 427 °C at 1 atm - ECHA

### Decomposition temperature

- No data available

### Viscosity

- **Kinematic viscosity**: 0,501 mm²/s
- **Dynamic viscosity**: 0,451 mPa s at 20 °C

### Explosive properties

- Shall not be classified as explosive

### Oxidising properties

- None

### Other information

- **Refractive index**: 1,372
- **Temperature class (EU, acc. to ATEX)**: T2 (Maximum permissible surface temperature on the equipment: 300°C)

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

- Risk of ignition. Vapours can form explosive mixtures with air.

#### 10.2 Chemical stability


#### 10.3 Possibility of hazardous reactions

- Exothermic reaction with: Fluorine, Strong oxidiser.
- Danger of explosion: Alkali metals, Alkaline earth metal.
- Violent reaction with: Strong acid, Strong alkali

#### 10.4 Conditions to avoid

- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Direct light irradiation.
- Humidity.

#### 10.5 Incompatible materials

- Different plastics

#### 10.6 Hazardous decomposition products

- Hazardous combustion products: see section 5.

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

- **Acute toxicity**: Shall not be classified as acutely toxic.
Skin corrosion/irritation
Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation
Causes serious eye irritation.

Respiratory or skin sensitisation
Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties
Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

• Specific target organ toxicity - single exposure
  May cause drowsiness or dizziness.

• 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
  nausea, vomiting, aspiration hazard

• If in eyes
  Irritating to eyes

• If inhaled
  headache, vertigo, breathing difficulties, dizziness, drowsiness, narcosis

• If on skin
  Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation)

Other information
None

SECTION 12: Ecological information

12.1 Toxicity
acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
<th>Species</th>
<th>Source</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50</td>
<td>230 mg/l</td>
<td>Pimephales promelas</td>
<td>ECHA</td>
<td>96 h</td>
</tr>
</tbody>
</table>
Aquatic toxicity (chronic)

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
<th>Species</th>
<th>Source</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOEC</td>
<td>2,4 mg/l</td>
<td>daphnia magna</td>
<td>ECHA</td>
<td>21 d</td>
</tr>
</tbody>
</table>

12.2 Process of degradability
The substance is readily biodegradable.
Theoretical Oxygen Demand: 1,816 mg/mg
Theoretical Carbon Dioxide: 1,998 mg/mg

<table>
<thead>
<tr>
<th>Process</th>
<th>Degradation rate</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>biotic/abiotic</td>
<td>100 %</td>
<td>28 d</td>
</tr>
<tr>
<td>oxygen depletion</td>
<td>62 %</td>
<td>5 d</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential
Does not significantly accumulate in organisms.
n-octanol/water (log KOW) 0,68 (pH value: 7, 25 °C)
BCF 30 (ECHA)

12.4 Mobility in soil
Data are not available.

12.5 Results of PBT and vPvB assessment
Data are not available.

12.6 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.

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.
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 1173
14.2 UN proper shipping name ETHYL ACETATE
14.3 Transport hazard class(es)
   Class 3 (flammable liquids)
14.4 Packing group II (substance presenting medium danger)
14.5 Environmental hazards none (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 Transport in bulk according to Annex II of MARPOL and the IBC Code
The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations
   • Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
     UN number 1173
     Proper shipping name ETHYL ACETATE
     Particulars in the transport document UN1173, ETHYL ACETATE, 3, II, (D/E)
     Class 3
     Classification code F1
     Packing group II
     Danger label(s) 3

     Excepted quantities (EQ) E2
     Limited quantities (LQ) 1 L
     Transport category (TC) 2
     Tunnel restriction code (TRC) D/E
     Hazard identification No 33
   • International Maritime Dangerous Goods Code (IMDG)
     UN number 1173
     Proper shipping name ETHYL ACETATE
Safety data sheet
according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU

Acetic acid ethyl ester ROTIPURAN® ≥99,5 %, p.a., ACS, ISO

article number: 6784

Particulars in the shipper’s declaration

<table>
<thead>
<tr>
<th>Class</th>
<th>Marine pollutant</th>
<th>Packing group</th>
<th>Danger label(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>-</td>
<td>II</td>
<td>3</td>
</tr>
</tbody>
</table>

Special provisions (SP)
- 

Excepted quantities (EQ)
E2

Limited quantities (LQ)
1 L

EmS
F-E, S-D

Stowage category
B

• International Civil Aviation Organization (ICAO-IATA/DGR)

UN number
1173

Proper shipping name
Ethyl acetate

Particulars in the shipper’s declaration
UN1173, Ethyl acetate, 3, II

Class
3

Packing group
II

Danger label(s)
3

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)

• Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)
  Not listed.

• Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)
  Not listed.

• Regulation 850/2004/EC on persistent organic pollutants (POP)
  Not listed.
Restrictions according to REACH, Annex XVII

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Wt%</th>
<th>Type of registration</th>
<th>Conditions of restriction</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid ethyl ester</td>
<td>100</td>
<td>1907/2006/EC annex XVII</td>
<td>R3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Acetic acid ethyl ester</td>
<td>100</td>
<td>1907/2006/EC annex XVII</td>
<td>R40</td>
<td>40</td>
<td></td>
</tr>
</tbody>
</table>

Legend

R3
1. Shall not be used in:
   - ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
   - games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
   - tricks and jokes,
2. Articles not complying with paragraph 1 shall not be placed on the market.
3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
   - can be used as fuel in decorative oil lamps for supply to the general public, and,
   - present an aspiration hazard and are labelled with R65 or H304,
4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
   (a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: 'Keep lamps filled with this liquid out of the reach of children'; and, by 1 December 2010, 'Just a sip of lamp oil - or even sucking the wick of lamps - may lead to life-threatening lung damage';
   (b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter may lead to life threatening lung damage';
   (c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.
6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.
7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.

R40
1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:
   - metallic glitter intended mainly for decoration,
   - artificial snow and frost,
   - 'whooppee' cushions,
   - silly string aerosols,
   - imitation excrement,
   - horns for parties,
   - decorative flakes and foams,
   - artificial cobwebs,
   - stink bombs.
2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with:
   - for professional users only.
3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/324/EEC (2).
4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.

Restrictions according to REACH, Title VIII
None.

List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list
Not listed
• **Seveso Directive**

<table>
<thead>
<tr>
<th>No</th>
<th>Dangerous substance/hazard categories</th>
<th>Qualifying quantity (tonnes) for the application of lower and upper-tier requirements</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>P5c</td>
<td>flammable liquids (cat. 2, 3)</td>
<td>5.000</td>
<td>50.000</td>
</tr>
</tbody>
</table>

**Notation**

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

• **Directive 75/324/EEC relating to aerosol dispensers**

**Filling batch**


<table>
<thead>
<tr>
<th>VOC content</th>
<th>100 % 900,3 g/l</th>
</tr>
</thead>
</table>

**Directive on industrial emissions (VOCs, 2010/75/EU)**

<table>
<thead>
<tr>
<th>VOC content</th>
<th>100 %</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>VOC content</th>
<th>900,3 g/l</th>
</tr>
</thead>
</table>

**Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II**

not listed

**Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)**

not listed

**Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)**

not listed

**Regulation 98/2013/EU on the marketing and use of explosives precursors**

not listed

**Regulation 111/2005/EC laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

not listed

**National inventories**

Substance is listed in the following national inventories:

<table>
<thead>
<tr>
<th>Country</th>
<th>National inventories</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>AU</td>
<td>AICS</td>
<td>substance is listed</td>
</tr>
<tr>
<td>CA</td>
<td>DSL</td>
<td>substance is listed</td>
</tr>
<tr>
<td>CN</td>
<td>IECSC</td>
<td>substance is listed</td>
</tr>
<tr>
<td>EU</td>
<td>ECSI</td>
<td>substance is listed</td>
</tr>
<tr>
<td>EU</td>
<td>REACH Reg.</td>
<td>substance is listed</td>
</tr>
<tr>
<td>JP</td>
<td>CSCL-ENCS</td>
<td>substance is listed</td>
</tr>
</tbody>
</table>
Acetic acid ethyl ester ROTIPURAN® ≥99.5%, p.a., ACS, ISO

**Abbreviations and acronyms**

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)</td>
</tr>
<tr>
<td>BCF</td>
<td>bioconcentration factor</td>
</tr>
<tr>
<td>CAP. 424</td>
<td>Occupational Health and Safety Authority Act (CAP. 424)</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>CMR</td>
<td>Carcinogenic, Mutagenic or toxic for Reproduction</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations (see IATA/DGR)</td>
</tr>
<tr>
<td>DMEL</td>
<td>Derived Minimal Effect Level</td>
</tr>
<tr>
<td>DNEL</td>
<td>Derived No-Effect Level</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European List of Notified Chemical Substances</td>
</tr>
<tr>
<td>EmS</td>
<td>Emergency Schedule</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
</tbody>
</table>
### Abbreviations and Descriptions

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IATA/DGR</td>
<td>Dangerous Goods Regulations (DGR) for the air transport (IATA)</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>Index No</td>
<td>the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008</td>
</tr>
<tr>
<td>IOELV</td>
<td>indicative occupational exposure limit value</td>
</tr>
<tr>
<td>MARPOL</td>
<td>International Convention for the Prevention of Pollution from Ships (abbr. of &quot;Marine Pollutant&quot;)</td>
</tr>
<tr>
<td>NLP</td>
<td>No-Longer Polymer</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent, Bioaccumulative and Toxic</td>
</tr>
<tr>
<td>PNEC</td>
<td>Predicted No-Effect Concentration</td>
</tr>
<tr>
<td>ppm</td>
<td>parts per million</td>
</tr>
<tr>
<td>REACH</td>
<td>Registration, Evaluation, Authorisation and Restriction of Chemicals</td>
</tr>
<tr>
<td>RID</td>
<td>Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)</td>
</tr>
<tr>
<td>STEL</td>
<td>short-term exposure limit</td>
</tr>
<tr>
<td>SVHC</td>
<td>Substance of Very High Concern</td>
</tr>
<tr>
<td>TWA</td>
<td>time-weighted average</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile Organic Compounds</td>
</tr>
<tr>
<td>vPvB</td>
<td>very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

### Key Literature References and Sources for Data
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)
- Dangerous Goods Regulations (DGR) for the air transport (IATA)
- International Maritime Dangerous Goods Code (IMDG)

### List of Relevant Phrases (Code and Full Text as Stated in Chapter 2 and 3)

<table>
<thead>
<tr>
<th>Code</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>H225</td>
<td>highly flammable liquid and vapour</td>
</tr>
<tr>
<td>H319</td>
<td>causes serious eye irritation</td>
</tr>
<tr>
<td>H336</td>
<td>may cause drowsiness or dizziness</td>
</tr>
</tbody>
</table>

### Disclaimer

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.