**SECTION 1: Identification**

1.1 **Product identifier**

Identification of the substance: **Acetic acid ethyl ester**

<table>
<thead>
<tr>
<th>Article number</th>
<th>7336</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration number (REACH)</td>
<td>01-2119475103-46-xxxx</td>
</tr>
<tr>
<td>Index No</td>
<td>607-022-00-5</td>
</tr>
<tr>
<td>EC number</td>
<td>205-500-4</td>
</tr>
<tr>
<td>CAS number</td>
<td>141-78-6</td>
</tr>
</tbody>
</table>

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**

<table>
<thead>
<tr>
<th>Name</th>
<th>Street</th>
<th>Postal code/city</th>
<th>Telephone</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poison and Drug Information Services</td>
<td>29th Street N.W.</td>
<td>T2N 2T9 Calgary</td>
<td>+1 403 944 1414</td>
<td></td>
</tr>
<tr>
<td>Foothills Medical Centre 1403</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Emergency information service: +49/(0)89 19240

**SECTION 2: Hazard(s) identification**

2.1 **Classification of the substance or mixture**

**Classification Hazardous Products Regulations**

<table>
<thead>
<tr>
<th>Classification acc. to GHS</th>
<th>Hazard class</th>
<th>Hazard class and category</th>
<th>Hazard statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.6</td>
<td>flammable liquid</td>
<td>(Flam. Liq. 2)</td>
<td>H225</td>
</tr>
<tr>
<td>3.3</td>
<td>serious eye damage/eye irritation</td>
<td>(Eye Irrit. 2)</td>
<td>H319</td>
</tr>
</tbody>
</table>
### Classification acc. to GHS

<table>
<thead>
<tr>
<th>Section</th>
<th>Hazard class</th>
<th>Hazard class and category</th>
<th>Hazard statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.8D</td>
<td>specific target organ toxicity - single exposure (narcotic effects, drowsiness)</td>
<td>(STOT SE 3)</td>
<td>H336</td>
</tr>
</tbody>
</table>

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

**Narcotic effects.**

### 2.2 Label elements

**Labeling GHS**

**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**

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

**Precautionary statements - response**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Call a POISON CENTER/doctor if you feel unwell.  
In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.

**Precautionary statements - storage**

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

**Precautionary statements - disposal**

Dispose of contents/container to industrial combustion plant.

**Labelling of packages where the contents do not exceed 125 ml**

**Signal word:** Danger

**Symbol(s)**

![Symbol(s)]
2.3 Other hazards
There is no additional information.

SECTION 3: Composition/information on ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>Ethyl acetate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index No</td>
<td>607-022-00-5</td>
</tr>
<tr>
<td>Registration number (REACH)</td>
<td>01-2119475103-46-xxxx</td>
</tr>
<tr>
<td>EC number</td>
<td>205-500-4</td>
</tr>
<tr>
<td>CAS number</td>
<td>141-78-6</td>
</tr>
<tr>
<td>Molecular formula</td>
<td>C₄H₈O₂</td>
</tr>
<tr>
<td>Molar mass</td>
<td>88.11 g/mol</td>
</tr>
</tbody>
</table>

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

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: Fire-fighting 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
Wear personal protective equipment/face protection. Avoid contact with skin, eyes and clothes. Do not breathe vapor/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

Keep away from sources of ignition - 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 compatible storage of chemicals.

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>CA</td>
<td>ethyl acetate</td>
<td>141-78-6</td>
<td>OEL (AB)</td>
<td>400</td>
<td>1,440</td>
<td></td>
<td></td>
<td>OHS Code</td>
</tr>
<tr>
<td>CA</td>
<td>ethyl acetate</td>
<td>141-78-6</td>
<td>OEL (BC)</td>
<td>150</td>
<td></td>
<td></td>
<td></td>
<td>&quot;BC Regulation&quot;</td>
</tr>
<tr>
<td>CA</td>
<td>ethyl acetate</td>
<td>141-78-6</td>
<td>PEV/VEA</td>
<td>400</td>
<td>1,440</td>
<td></td>
<td></td>
<td>Regulation OHS</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>

### environment 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**

Use safety goggle 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 vapors with a boiling point of > 65 °C, color 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)
Color: colorless
Odor: fruity
Odor 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)

Vapor pressure: 97 hPa at 20 °C
Density: 900.3 kg/m³ at 20 °C
Vapor 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

Oxidizing properties none

9.2 Other information

Refractive index 1.372

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

May cause decomposition by long-term light influence. Moisture-sensitive.

10.3 Possibility of hazardous reactions

Exothermic reaction with: Fluorine, Strong oxidizer,

Danger of explosion: Alkali metals, Alkaline earth metal, Violent reaction with: Strong acid, Strong al-

kali

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.

<table>
<thead>
<tr>
<th>Exposure route</th>
<th>Endpoint</th>
<th>Value</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>oral</td>
<td>LD50</td>
<td>5,620 mg/kg</td>
<td>rat</td>
<td>TOXNET</td>
</tr>
<tr>
<td>dermal</td>
<td>LD50</td>
<td>&gt;20,000 mg/kg</td>
<td>rabbit</td>
<td>ECHA</td>
</tr>
</tbody>
</table>
**Safety data sheet**
Hazardous Products Regulations (HPR)

**Acetic acid ethyl ester ROTISOLV® HPLC**

article number: 7336

<table>
<thead>
<tr>
<th>Skin corrosion/irritation</th>
<th>Shall not be classified as corrosive/irritant to skin.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Serious eye damage/eye irritation</strong></td>
<td>Causes serious eye irritation.</td>
</tr>
</tbody>
</table>

**Respiratory or skin sensitization**

Shall not be classified as a respiratory or skin sensitizer.

**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/packages
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/packages
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)**

<table>
<thead>
<tr>
<th>UN number</th>
<th>1173</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper shipping name</td>
<td>ETHYL ACETATE</td>
</tr>
<tr>
<td>Particulars in the transport document</td>
<td>UN1173, ETHYL ACETATE, 3, II, (D/E)</td>
</tr>
<tr>
<td>Class</td>
<td>3</td>
</tr>
<tr>
<td>Classification code</td>
<td>F1</td>
</tr>
<tr>
<td>Packing group</td>
<td>II</td>
</tr>
<tr>
<td>Danger label(s)</td>
<td>3</td>
</tr>
</tbody>
</table>

- **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)**

<table>
<thead>
<tr>
<th>UN number</th>
<th>1173</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper shipping name</td>
<td>ETHYL ACETATE</td>
</tr>
<tr>
<td>Particulars in the shipper's declaration</td>
<td>UN1173, ETHYL ACETATE, 3, II, -4°C c.c.</td>
</tr>
<tr>
<td>Class</td>
<td>3</td>
</tr>
</tbody>
</table>
Acetic acid ethyl ester ROTISOLV® HPLC

article number: 7336

Marine pollutant -
Packing group II
Danger label(s) 3

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

  Excepted quantities (EQ) E2
  Limited quantities (LQ) 1 L

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)
Toxic Substance Control Act (TSCA)
Not listed.
The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)
Not listed.
CERCLA
List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)
### New Jersey Worker and Community Right to Know Act

<table>
<thead>
<tr>
<th>Name of substance</th>
<th>CAS No</th>
<th>Wt%</th>
<th>Remarks</th>
<th>Classifications</th>
<th>Listed in</th>
<th>Substance number</th>
<th>DOT number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid ethyl ester</td>
<td>141-78-6</td>
<td>100</td>
<td></td>
<td>F3</td>
<td>1 2 3 4 8 15 17 20 21</td>
<td>0841</td>
<td>1173</td>
</tr>
</tbody>
</table>

**Legend**

2. "2009 TLVs® and BEIs®, Threshold Limit Values and Biological Exposure Indices," American Conference of Governmental Industrial Hygienists (ACGIH), 2009.
F3 Flammable - Third Degree

### California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

Not listed.

### Drug precursors

Not listed.

**Industry or sector specific available guidance(s)**

NPCA-HMIS® III

## Safety data sheet

Hazardous Products Regulations (HPR)

### Acetic acid ethyl ester ROTISOLV® HPLC

**article number:** 7336

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic</td>
<td>/</td>
<td>none</td>
</tr>
<tr>
<td>Health</td>
<td>2</td>
<td>temporary or minor injury may occur</td>
</tr>
<tr>
<td>Flammability</td>
<td>3</td>
<td>material that can be ignited under almost all ambient temperature conditions</td>
</tr>
<tr>
<td>Physical hazard</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive</td>
</tr>
<tr>
<td>Personal protection</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

### NFPA® 704


<table>
<thead>
<tr>
<th>Category</th>
<th>Degree of hazard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>3</td>
<td>material that can be ignited under almost all ambient temperature conditions</td>
</tr>
<tr>
<td>Health</td>
<td>0</td>
<td>material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material</td>
</tr>
<tr>
<td>Instability</td>
<td>0</td>
<td>material that is normally stable, even under fire conditions</td>
</tr>
<tr>
<td>Special hazard</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### National regulations Canada:
**Domestic Substances List (DSL)**

Substance is 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>
<tr>
<td>KR</td>
<td>KECl</td>
<td>substance is listed</td>
</tr>
<tr>
<td>MX</td>
<td>INSQ</td>
<td>substance is listed</td>
</tr>
<tr>
<td>NZ</td>
<td>NZIoC</td>
<td>substance is listed</td>
</tr>
</tbody>
</table>
### 15.2 Chemical Safety Assessment

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

### Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;BC Regulation&quot;</td>
<td>OHS Regulation: Section 5.48 (British Columbia)</td>
</tr>
<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>CAS</td>
<td>Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)</td>
</tr>
<tr>
<td>CERCLA</td>
<td>Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)</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>&quot;Globally Harmonized System of Classification and Labelling of Chemicals&quot; developed by the United Nations</td>
</tr>
<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>
</tbody>
</table>
Safety data sheet  
Hazardous Products Regulations (HPR)

Acetic acid ethyl ester ROTISOLV® HPLC  
article number: 7336

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<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>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>Regulation OHS</td>
<td>Regulation respecting occupational health and safety: Permissible exposure values for airborne contaminants (Quebec)</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>TWA</td>
<td>time-weighted average</td>
</tr>
<tr>
<td>vPvB</td>
<td>very Persistent and very Bioaccumulative</td>
</tr>
</tbody>
</table>

**Key literature references and sources for data**
- Hazardous Products Regulations (HPR)
- UN Recommendations on the Transport of Dangerous Good
- 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 vapor</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.