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

1.1 Product identifier

Identification of the substance: Acetonitrile

- Article number: T907
- Registration number (REACH): 01-2119471307-38-xxxx
- Index No: 608-001-00-3
- EC number: 200-835-2
- CAS number: 75-05-8

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 acc. to GHS

<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>3.1O</td>
<td>acute toxicity (oral)</td>
<td>(Acute Tox. 5)</td>
<td>H303</td>
</tr>
<tr>
<td>3.1D</td>
<td>acute toxicity (dermal)</td>
<td>(Acute Tox. 5)</td>
<td>H313</td>
</tr>
<tr>
<td>3.1I</td>
<td>acute toxicity (inhal.)</td>
<td>(Acute Tox. 4)</td>
<td>H332</td>
</tr>
<tr>
<td>3.3</td>
<td>serious eye damage/eye irritation</td>
<td>(Eye Irrit. 2A)</td>
<td>H319</td>
</tr>
</tbody>
</table>
2.2 Label elements

Labelling GHS

**Signal word**

Danger

**Pictograms**

![Flammable and Caution Symbols]

**Hazard statements**

H225 Highly flammable liquid and vapour
H303+H313 May be harmful if swallowed or in contact with skin
H319 Causes serious eye irritation
H332 Harmful if inhaled

**Precautionary statements**

**Precautionary statements - prevention**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash ... thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

**Precautionary statements - response**

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/... if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of water.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P321 Specific treatment (see ... on this label).
P330 Rinse mouth.
P337+P313 If eye irritation persists: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P370+P378 In case of fire: Use carbon dioxide, powder extinguisher or water spray to extinguish.

**Precautionary statements - storage**

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

**Precautionary statements - disposal**

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
Acetonitrile ROTISOLV® ≥99,9 %, UV/IR-Grade

article number: T907

Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger

Symbol(s)

H303+H313 May be harmful if swallowed or in contact with skin.
H319 Causes serious eye irritation.
P280 Wear eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER/doctor if you feel unwell.

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>Acetonitrile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index No</td>
<td>608-001-00-3</td>
</tr>
<tr>
<td>Registration number (REACH)</td>
<td>01-2119471307-38-xxxx</td>
</tr>
<tr>
<td>EC number</td>
<td>200-835-2</td>
</tr>
<tr>
<td>CAS number</td>
<td>75-05-8</td>
</tr>
<tr>
<td>Molecular formula</td>
<td>C2H3N</td>
</tr>
<tr>
<td>Molar mass</td>
<td>41.05 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. Call a doctor if you feel unwell.
Acetonitrile ROTISOLV® ≥99,9 %, UV/IR-Grade

4.2 Most important symptoms and effects, both acute and delayed

After eye contact: Irritant effects, Conjunctival redness of the eyes,
Following skin contact: Localised redness, oedema, pruritis and/or pain,
After ingestion: Irritation, Headaches and dizziness may occur,
Following inhalation: Cough, pain, choking, and breathing difficulties

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 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.
Vapours can form explosive mixtures with air.

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

5.3 Advice for firefighters
Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. 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

Advices on how to contain a spill
Covering of drains.

Advices 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.

• 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
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.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)
Acetonitrile ROTISOLV® ≥99,9 %, UV/IR-Grade

article number: T907

<table>
<thead>
<tr>
<th>Country</th>
<th>Name of agent</th>
<th>CAS No</th>
<th>Notation</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>ZA</td>
<td>acetonitrile</td>
<td>75-05-8</td>
<td>OEL (DME)</td>
<td>40</td>
<td>70</td>
<td>60</td>
<td>105</td>
<td>DME</td>
<td></td>
</tr>
<tr>
<td>ZA</td>
<td>acetonitrile</td>
<td>75-05-8</td>
<td>OEL (DoL)</td>
<td>40</td>
<td>70</td>
<td>60</td>
<td>105</td>
<td>DoL-OEL</td>
<td></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>68 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>chronic - systemic effects</td>
</tr>
<tr>
<td>DNEL</td>
<td>68 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>acute - systemic effects</td>
</tr>
<tr>
<td>DNEL</td>
<td>68 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>chronic - local effects</td>
</tr>
<tr>
<td>DNEL</td>
<td>68 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>acute - local effects</td>
</tr>
<tr>
<td>DNEL</td>
<td>32.2 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>10 mg/l</td>
<td>water</td>
<td>intermittent release</td>
</tr>
<tr>
<td>PNEC</td>
<td>10 mg/l</td>
<td>freshwater</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>1 mg/l</td>
<td>marine water</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>32 mg/l</td>
<td>sewage treatment plant (STP)</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>7.53 mg/kg</td>
<td>freshwater sediment</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>2.41 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
0.5 mm

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 characteristic mild sweet
Odour threshold No data available

Other physical and chemical parameters
pH (value) This information is not available.
Melting point/freezing point -45.7 °C
Initial boiling point and boiling range 81.6 °C at 1,013 hPa
Flash point 12.8 °C
Evaporation rate no data available
Flammability (solid, gas) not relevant (fluid)

Explosive limits
• lower explosion limit (LEL) 4.4 vol% (50 g/m³)
• upper explosion limit (UEL) 16 vol% (274 g/m³)
Explosion limits of dust clouds not relevant
Safety data sheet
GHS of the United Nations, annex 4

Acetonitrile ROTISOLV® ≥99.9 %, UV/IR-Grade
article number: T907

Vapour pressure 94.51 hPa at 20 °C
Density 0.782 g/cm³ at 20 °C
Vapour density 1.42 (air = 1)
Bulk density Not applicable
Relative density Information on this property is not available.
Solubility(ies)
Water solubility 1,000 g/l at 25 °C
Partition coefficient
n-octanol/water (log KOW) -0.34
Soil organic carbon/water (log KOC) 0.654 (ECHA)
Auto-ignition temperature 524 °C - ECHA
Decomposition temperature no data available
Viscosity
• dynamic viscosity 0.39 mPa s at 20 °C
Explosive properties Shall not be classified as explosive
Oxidising properties none

9.2 Other information
Refractive index 1.344

SECTION 10: Stability and reactivity

10.1 Reactivity
Risk of ignition. Vapours can 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
Violent reaction with: Peroxides, Strong oxidiser, Strong acid

10.4 Conditions to avoid
There are no specific conditions known which have to be avoided.

10.5 Incompatible materials
Rubber articles

10.6 Hazardous decomposition products
Hazardous combustion products: see section 5.
SECTION 11: Toxicological information

11.1 Information on toxicological effects

**Acute toxicity**

<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>469 mg/kg</td>
<td>mouse</td>
<td>ECHA</td>
</tr>
<tr>
<td>dermal</td>
<td>LD50</td>
<td>&gt;2,000 mg/kg</td>
<td>rabbit</td>
<td>ECHA</td>
</tr>
</tbody>
</table>

**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**
  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**
  nausea, vomiting, dizziness

- **If in eyes**
  slightly irritant but not relevant for classification

- **If inhaled**
  cough, pain, choking, and breathing difficulties

- **If on skin**
  Prolonged or repeated contact with skin or mucous membrane result in irritation symptoms such as redness, blistering, dermatitis, etc

**Other information**
None
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 (mg/l)</th>
<th>Species</th>
<th>Source</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50</td>
<td>1,640</td>
<td>fish</td>
<td>ECHA</td>
<td>96 h</td>
</tr>
<tr>
<td>EC50</td>
<td>3,560</td>
<td>algae</td>
<td>ECHA</td>
<td>72 h</td>
</tr>
<tr>
<td>ErC50</td>
<td>9,696</td>
<td>algae</td>
<td>ECHA</td>
<td>72 h</td>
</tr>
</tbody>
</table>

**Aquatic toxicity (chronic)**

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value (mg/l)</th>
<th>Species</th>
<th>Source</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50</td>
<td>&gt;102</td>
<td>fish</td>
<td>ECHA</td>
<td>7 d</td>
</tr>
<tr>
<td>LOEC</td>
<td>&gt;102</td>
<td>fish</td>
<td>ECHA</td>
<td>21 d</td>
</tr>
<tr>
<td>NOEC</td>
<td>102</td>
<td>fish</td>
<td>ECHA</td>
<td>21 d</td>
</tr>
</tbody>
</table>

12.2 Process of degradability
The substance is readily biodegradable.
Theoretical Oxygen Demand with nitrification: 3.118 mg/mg
Theoretical Oxygen Demand: 1.559 mg/mg
Theoretical Carbon Dioxide: 2.144 mg/mg

<table>
<thead>
<tr>
<th>Process</th>
<th>Degradation rate</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>biotic/abiotic</td>
<td>98 %</td>
<td>28 d</td>
</tr>
<tr>
<td>carbon dioxide generation</td>
<td>70 %</td>
<td>21 d</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential
Does not significantly accumulate in organisms.

n-octanol/water (log KOW) -0.34

12.4 Mobility in soil

Henry's law constant $3.5 \text{ Pa m}^3/\text{mol at 20 °C}$
The Organic Carbon normalised adsorption coefficient 0.654

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
1648

14.2 UN proper shipping name
ACETONITRILE

Hazardous ingredients
Acetonitrile

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
1648
Proper shipping name: ACETONITRILE

Particulars in the transport document: UN1648, ACETONITRILE, 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: 1648

Proper shipping name: ACETONITRILE

Particulars in the shipper's declaration: UN1648, ACETONITRILE, 3, II, 12.8°C c.c.

Class: 3

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: 1648

Proper shipping name: Acetonitrile

Particulars in the shipper's declaration: UN1648, Acetonitrile, 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

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>KECI</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>
<tr>
<td>PH</td>
<td>PICCS</td>
<td>substance is listed</td>
</tr>
<tr>
<td>TR</td>
<td>CICR</td>
<td>substance is listed</td>
</tr>
<tr>
<td>TW</td>
<td>TCSI</td>
<td>substance is listed</td>
</tr>
<tr>
<td>US</td>
<td>TSCA</td>
<td>substance is listed</td>
</tr>
</tbody>
</table>

Legend

AICS: Australian Inventory of Chemical Substances
CICR: Chemical Inventory and Control Regulation
CSCL-ENCS: List of Existing and New Chemical Substances (CSCL-ENCS)
DLS: 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
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.
### 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>CAS</td>
<td>Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)</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>DME</td>
<td>Department of Minerals and Energy: Mine Health and Safety Act, 1996 (Occupational Exposure Limits for Airborne Pollutants)</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>DoL-OEL</td>
<td>Department of Labour: Hazardous Chemical Substances Regulations, 1995 (Occupational Exposure Limits - Control Limits/Recommended Limits)</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>
<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>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
- 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 vapour</td>
</tr>
<tr>
<td>H303</td>
<td>may be harmful if swallowed</td>
</tr>
<tr>
<td>H313</td>
<td>may be harmful in contact with skin</td>
</tr>
<tr>
<td>H319</td>
<td>causes serious eye irritation</td>
</tr>
<tr>
<td>H332</td>
<td>harmful if inhaled</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.