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

1.1 Product identifier

Identification of the substance
n-Hexane

Article number
7567

Registration number (REACH)
01-2119480412-44-xxxx

Index No
601-037-00-0

EC number
203-777-6

CAS number
110-54-3

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

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>NSW Poisons Information Centre</td>
<td>Hawkesbury Road</td>
<td>2145 Westmead, NSW</td>
<td>131126</td>
<td></td>
</tr>
<tr>
<td>Childrens Hospital</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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
n-Hexane ROTISOLV® ≥96 %, Pestilyse® plus

article number: 7567

<table>
<thead>
<tr>
<th>Classification acc. to GHS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section</strong></td>
</tr>
<tr>
<td>2.6</td>
</tr>
<tr>
<td>3.2</td>
</tr>
<tr>
<td>3.7</td>
</tr>
<tr>
<td>3.8D</td>
</tr>
<tr>
<td>3.9</td>
</tr>
<tr>
<td>3.10</td>
</tr>
</tbody>
</table>

The most important adverse physicochemical, human health and environmental effects

Narcotic effects.

2.2 Label elements

Labelling GHS

**Signal word**  
Danger

**Pictograms**

GHS02, GHS07, GHS08

**Hazard statements**

- H225 Highly flammable liquid and vapour
- H304 May be fatal if swallowed and enters airways
- H315 Causes skin irritation
- H336 May cause drowsiness or dizziness
- H361f Suspected of damaging fertility
- H373 May cause damage to organs (nervous system) through prolonged or repeated exposure (if inhaled)

**Precautionary statements**

**Precautionary statements - prevention**

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.

**Precautionary statements - response**

- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P331 Do NOT induce vomiting.
- P370+P378 In case of fire: Use sand, carbon dioxide or powder extinguisher for extinction.

**Precautionary statements - storage**

- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P403+P235 Store in a well-ventilated place. Keep cool.
For professional users only

Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger

Symbol(s)

H304 May be fatal if swallowed and enters airways.
H361f Suspected of damaging fertility.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331 Do NOT induce vomiting.

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>n-Hexane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index No</td>
<td>601-037-00-0</td>
</tr>
<tr>
<td>Registration number (REACH)</td>
<td>01-2119480412-44-xxxx</td>
</tr>
<tr>
<td>EC number</td>
<td>203-777-6</td>
</tr>
<tr>
<td>CAS number</td>
<td>110-54-3</td>
</tr>
<tr>
<td>Molecular formula</td>
<td>C₆H₁₄</td>
</tr>
<tr>
<td>Molar mass</td>
<td>86.18 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
Remove person to fresh air and keep comfortable for breathing. In all cases of doubt, or when symp-
toms persist, seek medical advice.

Following skin contact
Rinse skin with water/shower. In case of skin irritation, consult a physician.

Following eye contact
Rinse cautiously with water for several minutes. Consult an ophthalmologist.

Following ingestion
Rinse mouth. Do not induce vomiting. Aspiration hazard. Call a physician immediately.
4.2 Most important symptoms and effects, both acute and delayed
Irritation, Dizziness, Drowsiness, Nausea, Vomiting, Corneal opacity, Narcosis, Aspiration hazard

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 can 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
Vapours are heavier than air. 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
Do not breathe vapour/spray. Avoid contact with skin and eyes. Use personal protective equipment as required. 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
Advice on how to contain a spill
Covering of drains.

Advice 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

Provide adequate ventilation as well as local exhaustion at critical locations. When not in use, keep containers tightly closed.

• 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. 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.

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>Nota-</th>
<th>Identifi-</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>AU</td>
<td>n-hexane</td>
<td>110-54-3</td>
<td>WES</td>
<td></td>
<td>20</td>
<td>72</td>
<td></td>
<td></td>
<td>WES</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

<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>75 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>chronic - systemic effects</td>
</tr>
<tr>
<td>DNEL</td>
<td>11 mg/kg bw/ day</td>
<td>human, dermal</td>
<td>worker (industry)</td>
<td>chronic - systemic effects</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. 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
  NBR (Nitrile rubber)

• material thickness
  ≥0,4 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: like: Gasoline
- Odour threshold: No data available

**Other physical and chemical parameters**
- pH (value): This information is not available.
- Melting point/freezing point: -95 °C at 1,013 hPa
- Initial boiling point and boiling range: 68 – 69 °C at 1,013 hPa
- Flash point: -22 °C at 1,013 hPa
- Evaporation rate: no data available
- Flammability (solid, gas): not relevant (fluid)

**Explosive limits**
- lower explosion limit (LEL): 1.1 vol%
- upper explosion limit (UEL): 7.5 vol%

**Explosion limits of dust clouds**: not relevant

**Vapour pressure**: 160 hPa at 20 °C

**Density**: 0.66 g/cm³ at 20 °C

**Vapour density**: 2.79 (air = 1)

**Bulk density**: Not applicable

**Relative density**: Information on this property is not available.

**Solubility(ies)**
- Water solubility: <0.1 g/l at 20 °C

**Partition coefficient**
- n-octanol/water (log KOW): 4 (pH value: 7, 20 °C) (ECHA)
- Soil organic carbon/water (log KOC): 3.34 (ECHA)
- Auto-ignition temperature: 225 °C - ECHA

**Decomposition temperature**: no data available

**Viscosity**
- kinematic viscosity: 0.5 mm²/s at 20 °C
- dynamic viscosity: 0.33 mPa s at 20 °C

**Explosive properties**: Shall not be classified as explosive

**Oxidising properties**: none
**n-Hexane ROTISOLV® ≥96 %, Pestilyse® plus**

**article number: 7567**

### 9.2 Other information

#### 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, Chlorine, Iodine, Strong oxidiser, Nitrogen oxides (NOx), => Explosive properties

**10.4 Conditions to avoid**
Keep away from heat.

**10.5 Incompatible materials**
plastic and rubber

**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>inhalation: vapour</td>
<td>LC50</td>
<td>176 mg/l/4h</td>
<td>rat</td>
<td>RTECS</td>
</tr>
<tr>
<td>oral</td>
<td>LD50</td>
<td>25,000 mg/kg</td>
<td>rat</td>
<td>TOXNET</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**
Causes skin irritation.

**Serious eye damage/eye irritation**
Shall not be classified as seriously damaging to the eye or eye irritant.

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

**Summary of evaluation of the CMR properties**

**Reproductive toxicity:**
Suspected of damaging fertility

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

- **Specific target organ toxicity - repeated exposure**
  May cause damage to organs (nervous system) through prolonged or repeated exposure (if inhaled).
Aspiration hazard
May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics
• If swallowed
  nausea, vomiting, aspiration hazard
• If in eyes
  Irritating to eyes, corneal opacity
• If inhaled
  Irritation to respiratory tract, fatigue, narcosis
• If on skin
  causes skin irritation

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>LL50</td>
<td>12.51 mg/l</td>
<td>fish</td>
<td>ECHA</td>
<td>96 h</td>
</tr>
<tr>
<td>EL50</td>
<td>21.85 mg/l</td>
<td>aquatic invertebrates</td>
<td>ECHA</td>
<td>48 h</td>
</tr>
</tbody>
</table>

12.2 Process of degradability
The substance is readily biodegradable.
Theoretical Oxygen Demand: 3.527 mg/mg
Theoretical Carbon Dioxide: 3.064 mg/mg

<table>
<thead>
<tr>
<th>Process</th>
<th>Degradation rate</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>oxygen depletion</td>
<td>83 %</td>
<td>10 d</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential
The substance fulfils the very bioaccumulative criterion.
n-octanol/water (log KOW) 4 (pH value: 7, 20 °C)
BCF 501.2 (ECHA)

12.4 Mobility in soil
The Organic Carbon normalised adsorption coefficient 3.34

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.

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 1208
14.2 UN proper shipping name HEXANES
   Hazardous ingredients n-Hexane
14.3 Transport hazard class(es)
   Class 3 (flammable liquids)

14.4 Packing group II (substance presenting medium danger)
14.5 Environmental hazards hazardous to the aquatic environment

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 1208
   Proper shipping name HEXANES
   Particulars in the transport document UN1208, HEXANES, 3, II, (D/E), environmentally hazardous
   Class 3
   Classification code F1
### n-Hexane ROTISOLV® ≥96 %, Pestilyse® plus

**article number:** 7567

<table>
<thead>
<tr>
<th>Packing group</th>
<th>II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Danger label(s)</td>
<td>3 + &quot;fish and tree&quot;</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>yes (hazardous to the aquatic environment)</td>
</tr>
<tr>
<td>Excepted quantities (EQ)</td>
<td>E2</td>
</tr>
<tr>
<td>Limited quantities (LQ)</td>
<td>1 L</td>
</tr>
<tr>
<td>Transport category (TC)</td>
<td>2</td>
</tr>
<tr>
<td>Tunnel restriction code (TRC)</td>
<td>D/E</td>
</tr>
<tr>
<td>Hazard identification No</td>
<td>33</td>
</tr>
</tbody>
</table>

**Emergency Action Code**

- **International Maritime Dangerous Goods Code (IMDG)**
  - UN number: 1208
  - Proper shipping name: HEXANES
  - Particulars in the shipper's declaration: UN1208, HEXANES, 3, II, -22°C c.c., MARINE POLLUTANT
  - Class: 3
  - Marine pollutant: yes (P) (hazardous to the aquatic environment)
  - Packing group: II
  - Danger label(s): 3 + "fish and tree"

- **International Civil Aviation Organization (ICAO-IATA/DGR)**
  - UN number: 1208
  - Proper shipping name: Hexanes
  - Particulars in the shipper's declaration: UN1208, Hexanes, 3, II
  - Class: 3
  - Environmental hazards: yes (hazardous to the aquatic environment)
  - 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**: E
n-Hexane ROTISOLV® ≥96 %, Pestilyse® plus

article number: 7567

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>
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<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

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AICS</td>
<td>Australian Inventory of Chemical Substances</td>
</tr>
<tr>
<td>CICR</td>
<td>Chemical Inventory and Control Regulation</td>
</tr>
<tr>
<td>CSCL-ENCS</td>
<td>List of Existing and New Chemical Substances (CSCL-ENCS)</td>
</tr>
<tr>
<td>DSL</td>
<td>Domestic Substances List (DSL)</td>
</tr>
<tr>
<td>ECSI</td>
<td>EC Substance Inventory (EINECS, ELINCS, NLP)</td>
</tr>
<tr>
<td>IECSC</td>
<td>Inventory of Existing Chemical Substances Produced or Imported in China</td>
</tr>
<tr>
<td>INSQ</td>
<td>National Inventory of Chemical Substances</td>
</tr>
<tr>
<td>KECI</td>
<td>Korea Existing Chemicals Inventory</td>
</tr>
<tr>
<td>NZIoC</td>
<td>New Zealand Inventory of Chemicals</td>
</tr>
<tr>
<td>PICCS</td>
<td>Philippine Inventory of Chemicals and Chemical Substances</td>
</tr>
<tr>
<td>REACH Reg.</td>
<td>REACH registered substances</td>
</tr>
<tr>
<td>TCSI</td>
<td>Taiwan Chemical Substance Inventory</td>
</tr>
<tr>
<td>TSCA</td>
<td>Toxic Substance Control Act</td>
</tr>
</tbody>
</table>

15.2 Chemical Safety Assessment
No Chemical Safety Assessment has been carried out for this substance.
SECTION 16: Other information

16.1 Indication of changes (revised safety data sheet)

<table>
<thead>
<tr>
<th>Section</th>
<th>Former entry (text/value)</th>
<th>Actual entry (text/value)</th>
<th>Safety-relevant</th>
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<tbody>
<tr>
<td>2.1</td>
<td>Classification acc. to GHS: change in the listing (table)</td>
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</tr>
<tr>
<td>2.2</td>
<td>Pictograms: change in the listing (table)</td>
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<tr>
<td>2.2</td>
<td>Hazard statements: change in the listing (table)</td>
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</tr>
<tr>
<td>2.2</td>
<td>Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)</td>
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<td></td>
</tr>
</tbody>
</table>

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>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>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>EL50</td>
<td>Effective Loading 50 %: the EL50 corresponds to the loading rate required to produce a response in 50% of the test organisms</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>LC50</td>
<td>Lethal Concentration 50 %: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval</td>
</tr>
<tr>
<td>LL50</td>
<td>Lethal Loading 50 %: the LL50 corresponds to the loading rate causing 50 % lethality</td>
</tr>
<tr>
<td>Abbr.</td>
<td>Descriptions of used abbreviations</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------------</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>
<tr>
<td>WES</td>
<td>Safe Work Australia: Workplace exposure standards for airborne contaminants</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>H304</td>
<td>may be fatal if swallowed and enters airways</td>
</tr>
<tr>
<td>H315</td>
<td>causes skin irritation</td>
</tr>
<tr>
<td>H336</td>
<td>may cause drowsiness or dizziness</td>
</tr>
<tr>
<td>H361f</td>
<td>suspected of damaging fertility</td>
</tr>
<tr>
<td>H373</td>
<td>may cause damage to organs (nervous system) through prolonged or repeated exposure (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.