Aniline ≥ 98%, for synthesis

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

**1.1 Product identifier**
- Identification of the substance: Aniline
- Article number: 9931
- Registration number (REACH): This information is not available.
- Index No: 612-008-00-7
- EC number: 200-539-3
- CAS number: 62-53-3

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

**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
- Competent person responsible for the safety data sheet e-mail: 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>Section</th>
<th>Hazard class</th>
<th>Hazard class and category</th>
<th>Hazard statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1O</td>
<td>acute toxicity (oral)</td>
<td>(Acute Tox. 3)</td>
<td>H301</td>
</tr>
<tr>
<td>3.1D</td>
<td>acute toxicity (dermal)</td>
<td>(Acute Tox. 3)</td>
<td>H311</td>
</tr>
<tr>
<td>3.1I</td>
<td>acute toxicity (inhal.)</td>
<td>(Acute Tox. 3)</td>
<td>H331</td>
</tr>
<tr>
<td>3.3</td>
<td>serious eye damage/eye irritation</td>
<td>(Eye Dam. 1)</td>
<td>H318</td>
</tr>
<tr>
<td>3.4S</td>
<td>skin sensitisation</td>
<td>(Skin Sens. 1)</td>
<td>H317</td>
</tr>
<tr>
<td>3.5</td>
<td>germ cell mutagenicity</td>
<td>(Muta. 2)</td>
<td>H341</td>
</tr>
<tr>
<td>3.6</td>
<td>carcinogenicity</td>
<td>(Carc. 2)</td>
<td>H351</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>3.9</td>
<td>specific target organ toxicity - repeated exposure</td>
<td>(STOT RE 1)</td>
<td>H372</td>
</tr>
<tr>
<td>4.1A</td>
<td>hazardous to the aquatic environment - acute hazard</td>
<td>(Aquatic Acute 1)</td>
<td>H400</td>
</tr>
<tr>
<td>4.1C</td>
<td>hazardous to the aquatic environment - chronic hazard</td>
<td>(Aquatic Chronic 2)</td>
<td>H411</td>
</tr>
</tbody>
</table>

### Remarks
For full text of Hazard- and EU Hazard-statements: see SECTION 16.

#### 2.2 Label elements

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

**Signal word** Danger

**Pictograms**

![Pictograms](image)

**Hazard statements**

- H301+H311+H331: Toxic if swallowed, in contact with skin or if inhaled.
- H317: May cause an allergic skin reaction.
- H318: Causes serious eye damage.
- H341: Suspected of causing genetic defects.
- H351: Suspected of causing cancer.
- H372: Causes damage to organs through prolonged or repeated exposure.
- H410: Very toxic to aquatic life with long lasting effects.

**Precautionary statements**

**Precautionary statements - prevention**

- P273: Avoid release to the environment.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.

**Precautionary statements - response**

- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- 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.
- P308+P313: IF exposed or concerned: Get medical advice/attention.

For professional users only
Aniline ≥ 98%, for synthesis

Labelling of packages where the contents do not exceed 125 ml
Signal word: Danger

Symbol(s)

- H301+H311+H331: Toxic if swallowed, in contact with skin or if inhaled.
- H317: May cause an allergic skin reaction.
- H318: Causes serious eye damage.
- H341: Suspected of causing genetic defects.
- H351: Suspected of causing cancer.
- H372: Causes damage to organs through prolonged or repeated exposure.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- P304+P340: IF INHALED: Remove person to fresh air and keep at rest in a position 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.
- P308+P313: IF exposed or concerned: Get medical advice/attention.

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>Aniline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index No</td>
<td>612-008-00-7</td>
</tr>
<tr>
<td>EC number</td>
<td>200-539-3</td>
</tr>
<tr>
<td>CAS number</td>
<td>62-53-3</td>
</tr>
<tr>
<td>Molecular formula</td>
<td>C₆H₇N</td>
</tr>
<tr>
<td>Molar mass</td>
<td>93.13 g/mol</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1 Description of first aid measures

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

**Following inhalation**
Provide fresh air. Call a physician immediately. If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

**Following skin contact**
Rinse skin with water/shower. After contact with skin, wash immediately with plenty of water. Call a physician in any case.
**Following eye contact**
In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

**Following ingestion**
Rinse mouth immediately and drink plenty of water. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

4.2 **Most important symptoms and effects, both acute and delayed**
Risk of blindness, Nausea, Risk of serious damage to eyes, Vomiting, Allergic reactions

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: nitrogen oxides (NOx), carbon monoxide (CO), carbon dioxide (CO2)

5.3 **Advice for firefighters**
Do not allow firefighting water to enter drains or water courses. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

---

**SECTION 6: Accidental release measures**

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

- **For non-emergency personnel**
  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.

6.2 **Environmental precautions**
Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

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

- **Advises on how to contain a spill**
  Covering of drains.
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.

Reference to other sections

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Provision of sufficient ventilation. Use extractor hood (laboratory). Handle and open container with care.

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

Keep away from sources of ignition - No smoking.

Advice on general occupational hygiene
When using do not eat or drink. Thorough skin-cleansing after handling the product.

7.2 Conditions for safe storage, including any incompatibilities
Store in a place accessible by authorized persons only.

Incompatible substances or mixtures
Observe hints for combined storage.

Consideration of other advice
Store locked up.

• Ventilation requirements
Use local and general ventilation.

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>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>
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</thead>
<tbody>
<tr>
<td>GB</td>
<td>aniline</td>
<td>62-53-3</td>
<td>WEL</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>EH40/2005</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
Use safety goggles with side protection.

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

Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Butyl caoutchouc (butyl rubber)

0,7mm. >480 minutes (permeation: level 6)

### 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>4 mg/kg</td>
<td>human, dermal</td>
<td>worker (industry)</td>
<td>acute - systemic effects</td>
</tr>
<tr>
<td>DNEL</td>
<td>15,4 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>acute - systemic effects</td>
</tr>
<tr>
<td>DNEL</td>
<td>2 mg/kg</td>
<td>human, dermal</td>
<td>worker (industry)</td>
<td>chronic - systemic effects</td>
</tr>
<tr>
<td>DNEL</td>
<td>7,7 mg/m³</td>
<td>human, inhalatory</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>0,0012 mg/l</td>
<td>freshwater</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>0,00012 mg/l</td>
<td>marine water</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>2 mg/l</td>
<td>sewage treatment plant (STP)</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>0,153 mg/kg</td>
<td>freshwater sediment</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>0,0153 mg/kg</td>
<td>marine sediment</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>0,033 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 goggles with side protection.

**Skin protection**

• **hand protection**

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

• **type of material**

Butyl caoutchouc (butyl rubber)

• **material thickness**

0,7mm.

• **breakthrough times of the glove material**

>480 minutes (permeation: level 6)
Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection
Respiratory protection necessary at: Aerosol or mist formation. Type: 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
- Colour: light brown
- Odour: disagreeable
- Odour threshold: No data available

**Other physical and chemical parameters**
- **pH (value)**: This information is not available.
- **Melting point/freezing point**: -6.2 °C
- **Initial boiling point and boiling range**: 184.4 °C at 1.013 hPa
- **Flash point**: 76 °C at 1.013 hPa
- **Evaporation rate**: no data available
- **Flammability (solid, gas)**: not relevant (fluid)

**Explosive limits**
- **lower explosion limit (LEL)**: 1.2 vol% (48 g/m³)
- **upper explosion limit (UEL)**: 11 vol% (425 g/m³)

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

**Vapour pressure**: 0.4 hPa at 20 °C

**Density**: 1.02 g/cm³ at 20 °C

**Vapour density**: 3.22 (air = 1)

**Bulk density**: Not applicable

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

**Solubility(ies)**

**Water solubility**: 35 g/l at 20 °C
**SECTION 10: Stability and reactivity**

10.1 Reactivity
In case of warming: 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
Danger of explosion: Oxygen, Nitric acid, Perchlorates, Oxidisers, Nitrate, Exothermic reaction with: Acetic anhydride, Acids

10.4 Conditions to avoid
Direct light irradiation.

10.5 Incompatible materials
There is no additional information.

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>780 mg/kg</td>
<td>rat</td>
<td>ECHA</td>
</tr>
</tbody>
</table>

**Skin corrosion/irritation**

Shall not be classified as corrosive/irritant to skin.
Causes serious eye damage.
May cause an allergic skin reaction. May cause sensitization by skin contact.

Summary of evaluation of the CMR properties
Germ cell mutagenicity:
Suspected of causing genetic defects
Carcinogenicity:
Suspected of causing cancer

• Specific target organ toxicity - single exposure
  Shall not be classified as a specific target organ toxicant (single exposure).

• Specific target organ toxicity - repeated exposure
  Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard
Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics
• If swallowed
data are not available
• If in eyes
  Causes serious eye damage, risk of blindness
• If inhaled
data are not available
• If on skin
data are not available

Other information
Cardiac arrhythmias, Headache, Dyspnoea, Blood pressure drop, Cyanosis (blue coloured blood), Nausea

SECTION 12: Ecological information

12.1 Toxicity
Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute)
Very toxic to aquatic organisms.

<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>28,3 mg/l</td>
<td>fish</td>
<td>ECHA</td>
<td>48 h</td>
</tr>
<tr>
<td>EC50</td>
<td>0,16 mg/l</td>
<td>aquatic invertebrates</td>
<td>ECHA</td>
<td>48 h</td>
</tr>
<tr>
<td>ErC50</td>
<td>175 mg/l</td>
<td>algae</td>
<td>ECHA</td>
<td>72 h</td>
</tr>
</tbody>
</table>
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Aquatic toxicity (chronic)
May cause long-term adverse effects in the aquatic environment.

<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>8.2 mg/l</td>
<td>fish</td>
<td>ECHA</td>
<td>7 d</td>
</tr>
<tr>
<td>EC50</td>
<td>0.044 mg/l</td>
<td>aquatic invertebrates</td>
<td>ECHA</td>
<td>21 d</td>
</tr>
<tr>
<td>NOEC</td>
<td>0.39 mg/l</td>
<td>fish</td>
<td>ECHA</td>
<td>32 d</td>
</tr>
</tbody>
</table>

12.2 Process of degradability
The substance is readily biodegradable.
Theoretical Oxygen Demand with nitrification: 3,092 mg/mg
Theoretical Oxygen Demand: 2,405 mg/mg
Theoretical Carbon Dioxide: 2,835 mg/mg

<table>
<thead>
<tr>
<th>Process</th>
<th>Degradation rate</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>oxygen depletion</td>
<td>70 %</td>
<td>15 d</td>
</tr>
<tr>
<td>DOC removal</td>
<td>100 %</td>
<td>5 d</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential
Does not significantly accumulate in organisms.
n-octanol/water (log KOW) 0.91 (pH value: 7.5, 25 °C)
BCF 2.6 (2.6)

12.4 Mobility in soil
Henry's law constant 0.205 Pa m³/mol at 25 °C
The Organic Carbon normalised adsorption coefficient 2,114 (20 °C)

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

12.6 Other adverse effects
Hazardous to water.

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. Avoid release to the environment. Refer to special instructions/safety data sheets.
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**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

<table>
<thead>
<tr>
<th>14.1</th>
<th>UN number</th>
<th>1547</th>
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<tbody>
<tr>
<td>14.2</td>
<td>UN proper shipping name</td>
<td>ANILINE</td>
</tr>
<tr>
<td>14.3</td>
<td>Hazardous ingredients</td>
<td>Aniline</td>
</tr>
<tr>
<td>14.4</td>
<td>Transport hazard class(es)</td>
<td>Class 6.1 (toxic substances)</td>
</tr>
<tr>
<td>14.5</td>
<td>Packing group</td>
<td>II (substance presenting medium danger)</td>
</tr>
<tr>
<td>14.6</td>
<td>Environmental hazards</td>
<td>hazardous to the aquatic environment</td>
</tr>
</tbody>
</table>

**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 | 1547 |
| Proper shipping name | ANILINE |
| Particulars in the transport document | UN1547, ANILINE, 6.1, II, (D/E), environmentally hazardous |
| Class | 6.1 |
| Classification code | T1 |
| Packing group | II |
| Danger label(s) | 6.1 + "fish and tree" |
| Environmental hazards | yes (hazardous to the aquatic environment) |
| Special provisions (SP) | 279, 802(ADN) |
| Excepted quantities (EQ) | E4 |
| Limited quantities (LQ) | 100 ml |
| Transport category (TC) | 2 |
| Tunnel restriction code (TRC) | D/E |
Hazard identification No 60
Emergency Action Code 3X
• International Maritime Dangerous Goods Code (IMDG)
  UN number 1547
  Proper shipping name ANILINE
  Particulars in the shipper’s declaration UN1547, ANILINE, 6.1, II, MARINE POLLUTANT
  Class 6.1
  Marine pollutant yes (hazardous to the aquatic environment)
  Packing group II
  Danger label(s) 6.1 + "fish and tree"

Special provisions (SP) 279
Excepted quantities (EQ) E4
Limited quantities (LQ) 100 ml
EmS F-A, S-A
Stowage category A

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
  Not listed
• List of substances subject to authorisation (REACH, Annex XIV)
  Not listed
• Seveso Directive

<table>
<thead>
<tr>
<th>2012/18/EU (Seveso III)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No</strong></td>
</tr>
<tr>
<td>H2</td>
</tr>
<tr>
<td>E1</td>
</tr>
</tbody>
</table>
Aniline ≥ 98%, for synthesis

article number: 9931

Notation
41) - Category 2, all exposure routes
56) - category 3, inhalation exposure route
56) Hazardous to the Aquatic Environment in category Acute 1 or Chronic 1

• Limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products (2004/42/EC, Deco-Paint Directive)
VOC content 100 %

• Directive on industrial emissions (VOCs, 2010/75/EU)
VOC content 100 %

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

National inventories
Substance is listed in the following national inventories:
- EINECS/ELINCS/NLP (Europe)
- REACH (Europe)

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

SECTION 16: Other information

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>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>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>
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.

Abbr. | Descriptions of used abbreviations
--- | ---
IMDG | International Maritime Dangerous Goods Code
Index No | the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
MARPOL | International Convention for the Prevention of Pollution from Ships (abbr. of “Marine Pollutant”)
NLP | No-Longer Polymer
PBT | Persistent, Bioaccumulative and Toxic
PNEC | Predicted No-Effect Concentration
ppm | parts per million
REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals
RID | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
STEL | short-term exposure limit
TWA | time-weighted average
VOC | Volatile Organic Compounds
vPvB | very Persistent and very Bioaccumulative
WEL | workplace exposure limit

Key literature references and sources for data
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)

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>H301</td>
<td>toxic if swallowed</td>
</tr>
<tr>
<td>H311</td>
<td>toxic in contact with skin</td>
</tr>
<tr>
<td>H317</td>
<td>may cause an allergic skin reaction</td>
</tr>
<tr>
<td>H318</td>
<td>causes serious eye damage</td>
</tr>
<tr>
<td>H331</td>
<td>toxic if inhaled</td>
</tr>
<tr>
<td>H341</td>
<td>suspected of causing genetic defects</td>
</tr>
<tr>
<td>H351</td>
<td>suspected of causing cancer</td>
</tr>
<tr>
<td>H372</td>
<td>causes damage to organs through prolonged or repeated exposure</td>
</tr>
<tr>
<td>H400</td>
<td>very toxic to aquatic life</td>
</tr>
<tr>
<td>H411</td>
<td>toxic to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

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