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

1.1 Product identifier

Identification of the substance

**Ethylene diamine tetraacetic acid disodium salt dihydrate**

- Article number: X986
- Registration number (REACH): 01-2119486775-20-xxxx
- EC number: 205-358-3
- CAS number: 6381-92-6

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses:

- laboratory chemical
- laboratory and analytical use

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG
Schoemperlenstr. 3-5
D-76185 Karlsruhe
Germany

**Telephone:** +49 (0) 721 - 56 06 0
**Telefax:** +49 (0) 721 - 56 06 149
**e-mail:** sicherheit@carlroth.de
**Website:** www.carlroth.de

Competent person responsible for the safety data sheet: Department Health, Safety and Environment

**e-mail (competent person):** sicherheit@carlroth.de

1.4 Emergency telephone number

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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

<table>
<thead>
<tr>
<th>Section</th>
<th>Hazard class</th>
<th>Hazard class and category</th>
<th>Hazard statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1I</td>
<td>acute toxicity (inhal.)</td>
<td>(Acute Tox. 4)</td>
<td>H332</td>
</tr>
<tr>
<td>3.9</td>
<td>specific target organ toxicity - repeated exposure</td>
<td>(STOT RE 2)</td>
<td>H373</td>
</tr>
</tbody>
</table>

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)
Signal word: Warning

Pictograms

GHS07, GHS08

Hazard statements
H332 Harmful if inhaled
H373 May cause damage to organs (respiratory system) through prolonged or repeated exposure (if inhaled)

Precautionary statements
Precautionary statements - prevention
P260 Do not breathe dust.

Precautionary statements - response
P314 Get medical advice/attention if you feel unwell.

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

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>Ethylenediamine tetraacetic acid disodium salt dihydrate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration number (REACH)</td>
<td>01-2119486775-20-xxxx</td>
</tr>
<tr>
<td>EC number</td>
<td>205-358-3</td>
</tr>
<tr>
<td>CAS number</td>
<td>6381-92-6</td>
</tr>
<tr>
<td>Molecular formula</td>
<td>C₁₀H₁₄N₂Na₂O₈ * 2H₂O</td>
</tr>
<tr>
<td>Molar mass</td>
<td>372.2 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
Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion
Rinse mouth. Call a doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed
Symptoms and effects are not known to date

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.

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
Do not breathe dust. Avoid contact with skin and eyes. Provide adequate ventilation.

6.2 Environmental precautions
Keep away from drains, surface and ground water.

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
Take up mechanically. Control of dust.

Other information relating to spills and releases
Place in appropriate containers for disposal.

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. Avoid dust formation.

• Measures to prevent fire as well as aerosol and dust generation
Removal of dust deposits.

Advice on general occupational hygiene
Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed. Store in a dry place.

Incompatible substances or mixtures
Observe hints for combined storage.

Consideration of other advice

• 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>Notation</th>
<th>Identifier</th>
<th>TWA [mg/m³]</th>
<th>STEL [mg/m³]</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE</td>
<td>dusts non-specific</td>
<td></td>
<td>i</td>
<td>OELV</td>
<td>10</td>
<td></td>
<td>S.I. No. 619 of 2001</td>
</tr>
<tr>
<td>IE</td>
<td>dusts non-specific</td>
<td></td>
<td>r</td>
<td>OELV</td>
<td>4</td>
<td></td>
<td>S.I. No. 619 of 2001</td>
</tr>
</tbody>
</table>

Notation
i Inhalable fraction
r Respirable fraction
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>1,5 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>chronic - local effects</td>
</tr>
<tr>
<td>DNEL</td>
<td>3 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>acute - local 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>2,2 mg/l</td>
<td>freshwater</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>0,22 mg/l</td>
<td>marine water</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>43 mg/l</td>
<td>sewage treatment plant (STP)</td>
<td>short-term (single instance)</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection

Use safetyoggle 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**
  NBR (Nitrile rubber)

• **material thickness**
  >0,11 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.

**Respiratory protection**

Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P2 (filters at least 94 % of airborne particles, colour code: White).

**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**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>solid (crystalline)</td>
</tr>
<tr>
<td>Colour</td>
<td>white</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**Other physical and chemical parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH (value)</td>
<td>4 – 6 (water: 50 g/l, 20 °C)</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>110 °C</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>This information is not available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>no data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>These information are not available.</td>
</tr>
</tbody>
</table>

**Explosive limits**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>• lower explosion limit (LEL)</td>
<td>this information is not available</td>
</tr>
<tr>
<td>• upper explosion limit (UEL)</td>
<td>this information is not available</td>
</tr>
<tr>
<td>Explosion limits of dust clouds</td>
<td>these information are not available</td>
</tr>
</tbody>
</table>
Ethylene diamine tetraacetic acid disodium salt dihydrate ≥ 99%, USP
article number: X986

Vapour pressure
This information is not available.

Density
This information is not available.

Vapour density
This information is not available.

Bulk density
~ 700 kg/m³

Relative density
Information on this property is not available.

Solubility(ies)

Water solubility
~ 100 g/l at 20 °C

Partition coefficient
n-octanol/water (log KOW)
This information is not available.

Auto-ignition temperature
Information on this property is not available.

Decomposition temperature
>250 °C

Viscosity
not relevant (solid matter)

Explosive properties
Shall not be classified as explosive

Oxidising properties
none

9.2 Other information
There is no additional information.

Section 10: Stability and reactivity

10.1 Reactivity
Dust explosibility.

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: Strong oxidiser

10.4 Conditions to avoid
Keep away from heat. Decomposition takes place from temperatures above: >250 °C.

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>2.800 mg/kg</td>
<td>rat</td>
<td>ECHA</td>
</tr>
</tbody>
</table>

Safety data sheet
according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU

Ethylenediamine tetraacetic acid disodium salt dihydrate ≥ 99%, USP

Ireland (en)
Skin corrosion/irritation
Shall not be classified as corrosive/irritant to skin.

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 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
  Shall not be classified as a specific target organ toxicant (single exposure).

- Specific target organ toxicity - repeated exposure
  May cause damage to organs (respiratory system) through prolonged or repeated exposure (if inhaled).

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
especially non-irritating

- If inhaled
data are not available

- If on skin
especially non-irritating

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>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50</td>
<td>41 mg/l</td>
<td>bluegill (Lepomis macrochirus)</td>
<td>96 h</td>
</tr>
<tr>
<td>EC50</td>
<td>610 mg/l</td>
<td>daphnia magna</td>
<td>24 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>EC50</td>
<td>56 mg/l</td>
<td>Pseudomonas putida</td>
<td></td>
<td>8 h</td>
</tr>
<tr>
<td>NOEC</td>
<td>25,7 mg/l</td>
<td>zebra fish (Danio rerio)</td>
<td>ECHA</td>
<td>35 d</td>
</tr>
<tr>
<td>LOEC</td>
<td>50 mg/l</td>
<td>daphnia magna</td>
<td>ECHA</td>
<td>21 d</td>
</tr>
<tr>
<td>growth (EbCx) 10%</td>
<td>&gt;500 mg/l</td>
<td>microorganisms</td>
<td>ECHA</td>
<td>30 min</td>
</tr>
</tbody>
</table>

12.2 Process of degradability
Theoretical Oxygen Demand with nitrification: 0,8811 mg/mg
Theoretical Oxygen Demand: 0,6984 mg/mg
Theoretical Carbon Dioxide: 1,182 mg/mg

12.3 Bioaccumulative potential
BCF 1,8 (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.

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.
Ethylenediamine tetraacetic acid disodium salt dihydrate ≥ 99%, USP
article number: X986

SECTION 14: Transport information

14.1 UN number
(not subject to transport regulations)

14.2 UN proper shipping name
not relevant

14.3 Transport hazard class(es)
not relevant
Class

14.4 Packing group
not relevant

14.5 Environmental hazards
none (non-environmentally hazardous acc. to the dangerous goods regulations)

14.6 Special precautions for user
There is no additional information.

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)
Not subject to ADR, RID and ADN.
• International Maritime Dangerous Goods Code (IMDG)
Not subject to IMDG.
• International Civil Aviation Organization (ICAO-IATA/DGR)
Not subject to ICAO-IATA.

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
• Restrictions according to REACH, Title VIII
None.
• List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list
not listed
Safety data sheet
according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU

Ethylenediamine tetraacetic acid disodium salt dihydrate ≥ 99%, USP
article number: X986

• Seveso Directive

<table>
<thead>
<tr>
<th>2012/18/EU (Seveso III)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
</tr>
<tr>
<td>----</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II
not listed

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)
not listed

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)
not listed

Regulation 98/2013/EU on the marketing and use of explosives precursors
not listed

Regulation 111/2005/EC laying down rules for the monitoring of trade between the Community and third countries in drug precursors
not listed

National inventories
Substance is listed in the following national inventories:

<table>
<thead>
<tr>
<th>Country</th>
<th>National inventories</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>AU</td>
<td>AICS</td>
<td>substance is listed</td>
</tr>
<tr>
<td>CA</td>
<td>DSL</td>
<td>substance is listed</td>
</tr>
<tr>
<td>CN</td>
<td>IECSC</td>
<td>substance is listed</td>
</tr>
<tr>
<td>EU</td>
<td>ECSI</td>
<td>substance is listed</td>
</tr>
<tr>
<td>EU</td>
<td>REACH Reg.</td>
<td>substance is listed</td>
</tr>
<tr>
<td>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>
</tbody>
</table>

Legend
AICS   Australian Inventory of Chemical Substances
CICR   Chemical Inventory and Control Regulation
DSL    Domestic Substances List (DSL)
ECSI   EC Substance Inventory (EINECS, ELINCS, NLP)
IECSSC  Inventory of Existing Chemical Substances Produced or Imported in China
INSQ   National Inventory of Chemical Substances
NZIoC  New Zealand Inventory of Chemicals
PICCS  Philippine Inventory of Chemicals and Chemical Substances
REACH Reg.  REACH registered substances
TCSI   Taiwan Chemical Substance Inventory
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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</thead>
<tbody>
<tr>
<td>2.2</td>
<td>Pictograms: change in the listing (table)</td>
<td>yes</td>
<td></td>
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<tr>
<td>2.2</td>
<td>Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>8.1</td>
<td>Occupational exposure limit values (Workplace Exposure Limits): not relevant</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>8.1</td>
<td>Occupational exposure limit values (Workplace Exposure Limits): change in the listing (table)</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>8.1</td>
<td>Relevant DNELs/DMELs/PNECs and other threshold levels</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>8.1</td>
<td>• human health values</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>8.1</td>
<td>• human health values: change in the listing (table)</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>8.1</td>
<td>• environmental values</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>8.1</td>
<td>• environmental values: change in the listing (table)</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>14.8</td>
<td>• International Civil Aviation Organization (ICAO-IATA/DGR): Not subject to ICAO-IATA.</td>
<td>yes</td>
<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>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>CMR</td>
<td>Carcinogenic, Mutagenic or toxic for Reproduction</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations (see IATA/DGR)</td>
</tr>
<tr>
<td>DMEL</td>
<td>Derived Minimal Effect Level</td>
</tr>
<tr>
<td>DNEL</td>
<td>Derived No-Effect Level</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Commercial Chemical Substances</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European List of Notified Chemical Substances</td>
</tr>
<tr>
<td>GHS</td>
<td>“Globally Harmonized System of Classification and Labelling of Chemicals” developed by the United Nations</td>
</tr>
</tbody>
</table>
Abbr. | Descriptions of used abbreviations
---|---
IATA | International Air Transport Association
IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO | International Civil Aviation Organization
IMDG | International Maritime Dangerous Goods Code
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
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
SVHC | Substance of Very High Concern
TWA | time-weighted average
vPvB | very Persistent and very Bioaccumulative

Key literature references and sources for data
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)
- Dangerous Goods Regulations (DGR) for the air transport (IATA)
- International Maritime Dangerous Goods Code (IMDG)

List of relevant phrases (code and full text as stated in chapter 2 and 3)

<table>
<thead>
<tr>
<th>Code</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>H332</td>
<td>harmful if inhaled</td>
</tr>
<tr>
<td>H373</td>
<td>may cause damage to organs (respiratory 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.