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

1.1 Product identifier

Identification of the substance: Nitrilotriacetic acid

- Article number: 4384
- Registration number (REACH): 01-2119471481-40-XXXX
- EC number: 205-355-7
- CAS number: 139-13-9

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
Email: 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>National Poisons Information Service City Hospital</td>
<td>Dudley Rd</td>
<td>B187QH Birmingham</td>
<td>844 892 0111</td>
<td></td>
</tr>
</tbody>
</table>

Emergency information service: +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>Classification acc. to GHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>3.3</td>
</tr>
<tr>
<td>3.6</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:
- H319: Causes serious eye irritation
- H351: Suspected of causing cancer

Precautionary statements - prevention:
- P280: Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements - response:
- P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

For professional users only

Labelling of packages where the contents do not exceed 125 ml

Signal word: Warning

Symbol(s):
- H351: Suspected of causing cancer.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.

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>Nitrilotriacetic acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration number (REACH)</td>
<td>01-2119471481-40-XXXX</td>
</tr>
<tr>
<td>EC number</td>
<td>205-355-7</td>
</tr>
<tr>
<td>CAS number</td>
<td>139-13-9</td>
</tr>
<tr>
<td>Molecular formula</td>
<td>C₆H₉NO₆</td>
</tr>
<tr>
<td>Molar mass</td>
<td>191.1 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.

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
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
Irritation

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
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. Do not breathe dust. Avoid contact with skin, eyes and clothes.

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

6.3 Methods and material for containment and cleaning up
Advises on how to contain a spill
Covering of drains.

Advises on how to clean up a spill
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
Provision of sufficient ventilation.

• 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. Keep away from food, drink and animal feedingstuffs.

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
• 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 [mg/m³]</th>
<th>STEL [mg/m³]</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>GB</td>
<td>dust</td>
<td></td>
<td>i</td>
<td>WEL</td>
<td>10</td>
<td></td>
<td>EH40/2005</td>
</tr>
<tr>
<td>GB</td>
<td>dust</td>
<td></td>
<td>r</td>
<td>WEL</td>
<td>4</td>
<td></td>
<td>EH40/2005</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>29 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>chronic - local effects</td>
</tr>
<tr>
<td>DNEL</td>
<td>29 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>acute - local effects</td>
</tr>
<tr>
<td>DNEL</td>
<td>3,7 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>chronic - systemic effects</td>
</tr>
<tr>
<td>DNEL</td>
<td>11,2 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>acute - systemic effects</td>
</tr>
<tr>
<td>DNEL</td>
<td>169,6 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>0,93 mg/l</td>
<td>freshwater</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>0,093 mg/l</td>
<td>marine water</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>400 mg/l</td>
<td>sewage treatment plant (STP)</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>5,77 mg/kg</td>
<td>freshwater sediment</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>0,577 mg/kg</td>
<td>marine sediment</td>
<td>short-term (single instance)</td>
</tr>
<tr>
<td>PNEC</td>
<td>0,606 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
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
Physical state solid (powder)
Colour white
Odour odourless
Odour threshold No data available

Other physical and chemical parameters
pH (value) 1.7 – 2.7 (water: 10 g/l, 23 °C)
Melting point/freezing point 242 °C
Initial boiling point and boiling range 160 °C at 1.013 hPa
Flash point 100 °C at 1.013 hPa
Evaporation rate no data available
Flammability (solid, gas) These information are not available
Explosive limits

- lower explosion limit (LEL)  
  this information is not available

- upper explosion limit (UEL)  
  this information is not available

Explosion limits of dust clouds  
these information are not available

Vapour pressure  
<0 hPa at 20 °C

Density  
1,67 g/cm³

Vapour density  
This information is not available.

Bulk density  
350 kg/m³

Relative density  
Information on this property is not available.

Solubility(ies)

Water solubility  
1,28 g/l at 22,5 °C

Partition coefficient

n-octanol/water (log KOW)  
-3,81 (25 °C) (ECHA)

Soil organic carbon/water (log KOC)  
1,42 (ECHA)

Auto-ignition temperature  
255 °C at 1.013 hPa - ECHA

>400 °C at 1.013 Pa

Decomposition temperature  
no data available

Viscosity  
not relevant  
(liquid matter)

- kinematic viscosity  
0,509 mm²/s

- dynamic viscosity  
0,85 mPa s at 20 °C

Explosive properties  
Shall not be classified as explosive

Oxidising properties  
none

9.2 Other information

Surface tension  
50,6 mN/m (20 °C)

Temperature class (EU, acc. to ATEX)  
T3 (Maximum permissible surface temperature on the equipment: 200°C)

SECTION 10: Stability and reactivity

10.1 Reactivity

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

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, Strong alkali

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.
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
Shall not be classified as acutely toxic.

<table>
<thead>
<tr>
<th>Exposure route</th>
<th>Endpoint</th>
<th>Value</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>oral</td>
<td>LD50</td>
<td>&gt;6.400 mg/kg</td>
<td>rat</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
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
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
data are not available

• If in eyes
data are not available

• If inhaled
data are not available

• If on skin
data are not available

Other information
None
SECTION 12: Ecological information

12.1 Toxicity
acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
<th>Species</th>
<th>Source</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50</td>
<td>114 mg/l</td>
<td>fish</td>
<td>ECHA</td>
<td>96 h</td>
</tr>
<tr>
<td>EC50</td>
<td>1,000 mg/l</td>
<td>aquatic invertebrates</td>
<td>ECHA</td>
<td>48 h</td>
</tr>
<tr>
<td>ErC50</td>
<td>&gt;100 mg/l</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</th>
<th>Species</th>
<th>Source</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50</td>
<td>5,7 mg/l</td>
<td>aquatic invertebrates</td>
<td>ECHA</td>
<td>21 d</td>
</tr>
<tr>
<td>NOEC</td>
<td>&gt;54 mg/l</td>
<td>fish</td>
<td>ECHA</td>
<td>224 d</td>
</tr>
<tr>
<td>growth (EbCx) 20%</td>
<td>&gt;1,995 mg/l</td>
<td>microorganisms</td>
<td>ECHA</td>
<td>30 min</td>
</tr>
</tbody>
</table>

12.2 Process of degradability
The substance is readily biodegradable.

Theoretical Oxygen Demand with nitrification: 1,046 mg/mg
Theoretical Oxygen Demand: 0,7533 mg/mg
Theoretical Carbon Dioxide: 1,381 mg/mg

<table>
<thead>
<tr>
<th>Process</th>
<th>Degradation rate</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>biotic/abiotic</td>
<td>&gt;90 %</td>
<td>d</td>
</tr>
<tr>
<td>oxygen depletion</td>
<td>95 %</td>
<td>28 d</td>
</tr>
<tr>
<td>carbon dioxide generation</td>
<td>89 %</td>
<td>14 d</td>
</tr>
</tbody>
</table>

12.3 Bioaccumulative potential
Does not significantly accumulate in organisms.
n-octanol/water (log KOW) -3,81 (25 °C)

12.4 Mobility in soil
Henry's law constant 0 Pa m³/mol at 25 °C
The Organic Carbon normalised adsorption coefficient 1,42

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.

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.

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 not assigned to a packing group

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.

- Seveso Directive

<table>
<thead>
<tr>
<th>2012/18/EU (Seveso III)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
</tr>
<tr>
<td>not assigned</td>
</tr>
</tbody>
</table>

- Directive 75/324/EEC relating to aerosol dispensers

  Filling batch


| 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.

- 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>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>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>Abbr.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AICS</td>
<td>Australian Inventory of Chemical Substances</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

Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Description</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>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>
</tbody>
</table>
Abbr. | Descriptions of used abbreviations
---|---
EINECS | European Inventory of Existing Commercial Chemical Substances
ELINCS | European List of Notified Chemical Substances
GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
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
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)
- 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>H319</td>
<td>causes serious eye irritation</td>
</tr>
<tr>
<td>H351</td>
<td>suspected of causing cancer</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.