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

### 1.1 Product identifier

<table>
<thead>
<tr>
<th>Trade name</th>
<th>Glycerin &gt;99%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration number (REACH)</td>
<td>The substance is exempted from the obligation to register: REACH regulation, Annex V</td>
</tr>
<tr>
<td>EC number</td>
<td>200-289-5</td>
</tr>
<tr>
<td>CAS number</td>
<td>56-81-5</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Relevant identified uses</th>
<th>Additive for cosmetic or pharmaceutic preparations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Chemicals for various applications</td>
</tr>
</tbody>
</table>

### 1.3 Details of the supplier of the safety data sheet

Robert E. M. Tilge (GmbH & Co.) KG
Bei der grünen Brücke 55
20539 Hamburg
Germany

Telephone: +49 (0) 40 78 13 66
Telefax: +49 (0) 40 78 79 20
E-Mail: remt@tilge.de
www.tilge.de
1.4 Emergency telephone number

<table>
<thead>
<tr>
<th>Country</th>
<th>Name</th>
<th>Telephone</th>
<th>Telefax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>Giftnotruf Mainz Giftinformationszentrum der Länder Rheinland-Pfalz und Hessen</td>
<td>+49 (0) 6131-19240</td>
<td>+49 (0) 6131 - 23 2468</td>
</tr>
</tbody>
</table>

As above or next toxicological information centre.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

This substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

2.2 Label elements

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

not required

2.3 Other hazards

Special danger of slipping by leaking/spilling product.

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance 1,2,3-propanetriol

Identifiers

CAS No 56-81-5
EC No 200-289-5
Molecular formula C₃H₈O₃
Molar mass 92 g/mol
SECTION 4: First aid measures

4.1 Description of first aid measures

General notes
In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation
Provide fresh air.

Following skin contact
Wash with plenty of soap and water.

Following eye contact
Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion
Rinse mouth. Do not induce vomiting.
Get medical advice/attention if you feel unwell.

Notes for the doctor
none

4.2 Most important symptoms and effects, both acute and delayed

These information are not available.

4.3 Indication of any immediate medical attention and special treatment needed
none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO2)

Unsuitable extinguishing media
water jet

5.2 Special hazards arising from the substance or mixture
Hazardous decomposition products: Section 10.

Hazardous combustion products
carbon monoxide (CO), carbon dioxide (CO2), pyrolysis products, toxic, irritant vapors / gases
5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
Co-ordinate firefighting measures to the fire surroundings.
Do not allow firefighting water to enter drains or water courses.
Collect contaminated firefighting water separately.
Fight fire with normal precautions from a reasonable distance.

**Special protective equipment for firefighters**

self-contained breathing apparatus (EN 133)

---

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Ventilate affected area.
Special danger of slipping by leaking/spilling product.
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.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

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 clean up a spill**

Collect spillage.
Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).
Product residues, To clean the floor and all objects contaminated by this material, use plenty of water.

**Appropriate containment techniques**

Use of adsorbent materials.

**Other information relating to spills and releases**

Place in appropriate containers for disposal.
Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5.
Personal protective equipment: see section 8.
Incompatible materials: see section 10.
Disposal considerations: see section 13.
SECTION 7: Handling and storage

7.1 Precautions for safe handling

Keep container tightly closed and dry.

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.
Keep away from sources of ignition - No smoking.
Take precautionary measures against static discharge.

Specific notes/details

Vapours may form explosive mixtures with air.

Measures to protect the environment

Avoid release to the environment.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.
Wash hands after use.
Preventive skin protection (barrier creams/ointments) is recommended.
Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Flammability hazards

None.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Protect against external exposure, such as

heat, humidity

Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

Ventilation requirements

Provision of sufficient ventilation.

Specific designs for storage rooms or vessels

Storage temperature

maximum storage temperature: 250 °C

Packaging compatibilities

Keep only in original container.

7.3 Specific end use(s)

No information available.
8.1 Control parameters

### 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>glycerol</td>
<td>56-81-5</td>
<td>mist</td>
<td>WEL</td>
<td>10</td>
<td></td>
<td>EH40/2005</td>
</tr>
</tbody>
</table>

**Notation**
- mist: as mists
- 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

### Human health values

#### Relevant DNELs 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>229 mg/kg</td>
<td>human, oral</td>
<td>consumer (private households)</td>
<td>chronic - systemic effects</td>
</tr>
<tr>
<td>DNEL</td>
<td>56 mg/m³</td>
<td>human, inhalatory</td>
<td>worker (industry)</td>
<td>chronic - local effects</td>
</tr>
<tr>
<td>DNEL</td>
<td>33 mg/m³</td>
<td>human, inhalatory</td>
<td>consumer (private households)</td>
<td>chronic - local effects</td>
</tr>
</tbody>
</table>

### Environmental values

#### Relevant PNECs and other threshold levels

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Threshold level</th>
<th>Environmental compartment</th>
</tr>
</thead>
<tbody>
<tr>
<td>PNEC</td>
<td>0.885 mg/l</td>
<td>freshwater</td>
</tr>
<tr>
<td>PNEC</td>
<td>0.0885 mg/l</td>
<td>marine water</td>
</tr>
<tr>
<td>PNEC</td>
<td>1.000 mg/l</td>
<td>sewage treatment plant (STP)</td>
</tr>
<tr>
<td>PNEC</td>
<td>3.3 mg/kg</td>
<td>freshwater sediment</td>
</tr>
<tr>
<td>PNEC</td>
<td>0.33 mg/kg</td>
<td>marine sediment</td>
</tr>
<tr>
<td>PNEC</td>
<td>0.141 mg/kg</td>
<td>soil</td>
</tr>
<tr>
<td>PNEC</td>
<td>8.85 mg/l</td>
<td>water</td>
</tr>
</tbody>
</table>
8.2 Exposure controls

Appropriate engineering controls
General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection
Wear eye/face protection.

Hand protection

<table>
<thead>
<tr>
<th>Material</th>
<th>Material thickness</th>
<th>Breakthrough times of the glove material</th>
</tr>
</thead>
<tbody>
<tr>
<td>NR: natural rubber, latex</td>
<td>≥ 0,5 mm</td>
<td>&gt;480 minutes (permeation: level 6)</td>
</tr>
<tr>
<td>CR: chloroprene (chlorobutadiene) rubber</td>
<td>≥ 0,5 mm</td>
<td>&gt;480 minutes (permeation: level 6)</td>
</tr>
<tr>
<td>NBR: acrylonitrile-butadiene rubber</td>
<td>≥ 0,35 mm</td>
<td>&gt;480 minutes (permeation: level 6)</td>
</tr>
<tr>
<td>IIR: isobutene-isoprene (butyl) rubber</td>
<td>≥ 0,5 mm</td>
<td>&gt;480 minutes (permeation: level 6)</td>
</tr>
<tr>
<td>FKM: fluoro-elastomer</td>
<td>≥ 0,4 mm</td>
<td>&gt;480 minutes (permeation: level 6)</td>
</tr>
<tr>
<td>PVC: polyvinyl chloride</td>
<td>≥ 0,5 mm</td>
<td>&gt;480 minutes (permeation: level 6)</td>
</tr>
</tbody>
</table>

Wear suitable gloves.
Chemical protection gloves are suitable, which are tested according to EN 374.
Check leak-tightness/impermeability prior to use.
In the case of wanting to use the gloves again, clean them before taking off and air them well.
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.

Respiratory protection
In case of inadequate ventilation wear respiratory protection.
Type: A-P2 (combined filters against particles and organic gases and vapours, colour code: Brown/White).

Environmental exposure controls
Use appropriate container to avoid environmental contamination.
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
- Form: viscous
- Colour: colourless
- Odour: pleasant
- Odour threshold: these information are not available

**Other safety parameters**
- pH (value): these information are not available
- Melting point/freezing point: 18 – 22 °C
- Initial boiling point and boiling range: 290 °C at 1,013 hPa
  - 130 °C (conc.)
- Flash point: ≥180 °C
- Evaporation rate: these information are not available
- Flammability (solid, gas): not relevant (fluid)

**Explosive limits**
- Lower explosion limit (LEL): 0.9 vol%
- Upper explosion limit (UEL): 11.3 vol%
- Vapour pressure: 0.0025 hPa at 50 °C (conc.)
- Density: ~1.26 g/cm³ at 20 °C
- Vapour density: these information are not available
- Relative density: these information are not available

**Solubility(ies)**
- Water solubility: miscible in any proportion

**Partition coefficient**
- n-octanol/water (log KOW): -1.75 (pH value: 7.4, 25 °C) (OECD 107)
- Auto-ignition temperature: 400 °C
- Relative self-ignition temperature for solids: not relevant (Fluid)
Decomposition temperature 290 °C

**Viscosity**

**Kinematic viscosity** these information are not available

**Dynamic viscosity** 1,412 mPa s at 20 °C

Explosive properties not explosive

Oxidising properties shall not be classified as oxidising

### 9.2 Other information

**Temperature class (EU, acc. to ATEX)** T2

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

#### 10.2 Chemical stability

Hygroscopic substance.

#### 10.3 Possibility of hazardous reactions

In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture.

#### 10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect from moisture.

#### 10.5 Incompatible materials

oxidisers

#### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

Toxic substances (Acrolein)

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

If not otherwise specified the classification is based on:

Animal studies; Evidence from any other toxicity tests; Expert judgement (weight of evidence determination).

**Classification according to GHS (1272/2008/EC, CLP)**

This substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.
### Acute toxicity

Shall not be classified as acutely toxic (oral).

Shall not be classified as acutely toxic (dermal).

<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>12,600 mg/kg</td>
<td>rat</td>
<td></td>
</tr>
<tr>
<td>oral</td>
<td>LD50</td>
<td>27,200 mg/kg</td>
<td>rat, female</td>
<td>ECHA</td>
</tr>
<tr>
<td>oral</td>
<td>LD50</td>
<td>23,000 mg/kg</td>
<td>mouse, male</td>
<td>ECHA</td>
</tr>
<tr>
<td>oral</td>
<td>LD50</td>
<td>≥10,000 mg/kg</td>
<td>guinea pig</td>
<td>ECHA</td>
</tr>
<tr>
<td>dermal</td>
<td>LD50</td>
<td>&gt;18,700 mg/kg</td>
<td>rabbit</td>
<td></td>
</tr>
<tr>
<td>dermal</td>
<td>LD50</td>
<td>56,750 mg/kg</td>
<td>guinea pig</td>
<td>ECHA</td>
</tr>
<tr>
<td>inhalation: dust/mist</td>
<td>LC0</td>
<td>&gt;11 mg/l/1h</td>
<td>rat, male</td>
<td>ECHA</td>
</tr>
<tr>
<td>inhalation: dust/mist</td>
<td>LC50</td>
<td>&gt;2.75 mg/l/4h</td>
<td>rat, male</td>
<td>ECHA</td>
</tr>
</tbody>
</table>

### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

(ECHA)

### Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

(ECHA)

### Respiratory or skin sensitisation

#### Skin sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

#### Respiratory sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.


### Carcinogenicity

Shall not be classified as carcinogenic.

(ECHA)
**Reproductive toxicity**

Shall not be classified as a reproductive toxicant.

(ECHA)

**Specific target organ toxicity - single exposure**

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**Specific target organ toxicity - repeated exposure**

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

<table>
<thead>
<tr>
<th>Chronic toxicity</th>
<th>Exposure route</th>
<th>Endpoint</th>
<th>Value</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>oral</td>
<td>NOAEL</td>
<td>8,000 – 10,000 mg/kg</td>
<td>rat</td>
<td>ECHA</td>
<td></td>
</tr>
<tr>
<td>inhalation: dust/mist</td>
<td>NOAEL</td>
<td>167 mg/m³</td>
<td>rat</td>
<td>ECHA</td>
<td></td>
</tr>
</tbody>
</table>

**Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

### SECTION 12: Ecological information

#### 12.1 Toxicity

**Aquatic toxicity (acute)**

Based on available data, the classification criteria are not met.

<table>
<thead>
<tr>
<th>Aquatic toxicity (acute)</th>
<th>Endpoint</th>
<th>Value</th>
<th>Species</th>
<th>Source</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LC50</td>
<td>54,000 mg/l</td>
<td>rainbow trout (Oncorhynchus mykiss)</td>
<td>ECHA</td>
<td>96 h</td>
</tr>
<tr>
<td></td>
<td>LC50</td>
<td>1,955 mg/l</td>
<td>daphnia magna</td>
<td>ECHA</td>
<td>48 h</td>
</tr>
</tbody>
</table>

**Aquatic toxicity (chronic)**

No data available.

#### 12.2 Persistence and degradability

<table>
<thead>
<tr>
<th>Process of degradability</th>
<th>Process</th>
<th>Degradation rate</th>
<th>Time</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DOC removal</td>
<td>94 %</td>
<td>1 d</td>
<td>ECHA</td>
</tr>
</tbody>
</table>
Biodegradation
The substance is readily biodegradable.

Persistence
Data are not available.

12.3 Bioaccumulative potential
Data are not available.

n-octanol/water (log KOW) -1.75 (pH value: 7.4, 25 °C)
(ECHA)

12.4 Mobility in soil
Data are not available.

12.5 Results of PBT and vPvB assessment
According to the results of its assessment, this substance is not a PBT or a vPvB.

12.6 Other adverse effects
Data are not available.

Endocrine disrupting potential
Not listed.

Remarks
Wassergefährdungsklasse, WGK (water hazard class): 1

SECTION 13: Disposal considerations

13.1 Waste treatment methods
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
Handle contaminated packages in the same way as the substance itself.

Remarks
Please consider the relevant national or regional provisions.
Glycerin >99%

SECTION 14: Transport information

14.1 UN number
not subject to transport regulations

14.2 UN proper shipping name
-

14.3 Transport hazard class(es)
Class
-

14.4 Packing group
-

14.5 Environmental hazards
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)

Restrictions according to REACH, Annex XVII
not listed

List of substances subject to authorisation (REACH, Annex XIV)
not listed

Seveso Directive
### Glycerin >99%

#### 2012/18/EU (Seveso III)

<table>
<thead>
<tr>
<th>No</th>
<th>Dangerous substance/hazard categories</th>
<th>Qualifying quantity (tonnes) for the application of lower and upper-tier requirements</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>not assigned</td>
<td></td>
<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

### National inventories

<table>
<thead>
<tr>
<th>Country</th>
<th>Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>AU</td>
<td>AICS</td>
<td>substance is listed</td>
</tr>
<tr>
<td>CA</td>
<td>DSL</td>
<td>substance is listed</td>
</tr>
<tr>
<td>CN</td>
<td>IECSC</td>
<td>substance is listed</td>
</tr>
<tr>
<td>EU</td>
<td>ECSI</td>
<td>substance is listed</td>
</tr>
<tr>
<td>EU</td>
<td>REACH Reg.</td>
<td>substance is listed</td>
</tr>
<tr>
<td>JP</td>
<td>CSCL-ENCS</td>
<td>substance is listed</td>
</tr>
<tr>
<td>KR</td>
<td>KECI</td>
<td>substance is listed</td>
</tr>
<tr>
<td>MX</td>
<td>INSQ</td>
<td>substance is listed</td>
</tr>
<tr>
<td>NZ</td>
<td>NZIoC</td>
<td>substance is listed</td>
</tr>
<tr>
<td>PH</td>
<td>PICCS</td>
<td>substance is listed</td>
</tr>
<tr>
<td>TR</td>
<td>CICR</td>
<td>substance is listed</td>
</tr>
<tr>
<td>TW</td>
<td>TCSI</td>
<td>substance is listed</td>
</tr>
<tr>
<td>US</td>
<td>TSCA</td>
<td>substance is listed</td>
</tr>
</tbody>
</table>

**Legend**
- **AICS**: Australian Inventory of Chemical Substances
- **CICR**: Chemical Inventory and Control Regulation
15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance by the supplier.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Indication of changes: Section 1, 8, 12, 15

Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbr.</th>
<th>Descriptions of used abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADN</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)</td>
</tr>
<tr>
<td>ADR</td>
<td>Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)</td>
</tr>
<tr>
<td>CLP</td>
<td>Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</td>
</tr>
<tr>
<td>DGR</td>
<td>Dangerous Goods Regulations (see IATA/DGR)</td>
</tr>
<tr>
<td>DNEL</td>
<td>Derived No-Effect Level</td>
</tr>
<tr>
<td>EC No</td>
<td>The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)</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>
<tr>
<td>Abbr.</td>
<td>Descriptions of used abbreviations</td>
</tr>
<tr>
<td>----------</td>
<td>------------------------------------------------------------------------</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>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>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 (Regula-tions 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>WEL</td>
<td>Workplace exposure limit</td>
</tr>
</tbody>
</table>

**Key literature references and sources for data**

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).
International Maritime Dangerous Goods Code (IMDG).
Dangerous Goods Regulations (DGR) for the air transport (IATA).

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**Disclaimer**

This information is based upon the present state of our knowledge.
This SDS has been compiled and is solely intended for this product.