## SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. PRODUCT IDENTIFIER

**Trade name:** **PARAFFIN PZ 65**

**Name:** Slack wax (petroleum), claytreated

**Synonyms:** Slack wax (crude oil) refined

**CAS No:** 90669-78-6

**EC No:** 292-660-3

**Index No:** 649-246-00-6

**Registration No:** 01-2119561060-53-0003

### 1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE or MIXTURE and USES ADVISED AGAINST

**Identified uses:**

Manufacture of the substance, intermediate in further production, distribution of the substance, formation and (re)packing of the substance and mixtures, coatings, anti-adhesive agents or adhesives, fertiliser industry, agents used in road-building and structures, manufacture and rubber production processes, plastic processing, lubricants, laboratories, explosives, spray (working) liquids, other consumer uses.

### 1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

| | |
|---|---|
| **Manufacturer:** | **ORLEN Południe S.A.** |
| **Address:** | ul. Fabryczna 22, 32-540 Trzebinia |
| **Telephone/Fax:** | +48 24 201 00 00 / +48 24 367 74 14 |
| **E-mail:** | reach.poludnie@orlen.pl - Technology and Development |

### 1.4. EMERGENCY TELEPHONE NUMBER

State Fire Service: 998 or 112 (using a mobile phone)

Ambulance Service: 999 or 112 (using a mobile phone)

## SECTION 2. HAZARDS IDENTIFICATION

### 2.1. CLASSIFICATION OF THE SUBSTANCE or MIXTURE

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

**Physical and chemical hazards:**

none

**Hazards to people:**

none, remark N is applicable to the product

**Environmental hazards:**

none

### 2.2. LABELLING ELEMENTS

**Pictogram**: none

**Hazard statement:** none

**Hazard identification statements**: none

**Precautionary statements:** none

### 2.3. OTHER HAZARDS

The substance does not create a hazard to humans and to the environment. May cause respiratory irritation (in the case of inhalation of vapours/mist) or thermal burns (in the case of direct contact with the boiling substance).

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. SUBSTANCES

| Substance | CAS | % share | Classification (EC) 1272/2008 | |
|---|---|---|---|---|
| Slack wax (petroleum)<br>*REACH registration No:* 01-2119561060-53-0003 | 90669-78-6 | 90-100 | - | - |

### 3.2. MIXTURES

Not applicable - the product is a substance

## SECTION 4. FIRST AID MEASURES

### 4.1. DESCRIPTION OF FIRST AID MEASURES

**General recommendations**

Take care of yourself - use self-contained breathing equipment, protective clothing and eye protection, adequately to a situation. Do not leave an injured person without care. Do not induce vomiting and do not administer anything orally to an unconscious person.

**Inhalation**

At an ambient temperature, inhalation is unlikely due to low volatility of the substance. Inhalation risk is practically excluded although possible in the case of excessive overheating of the substance. Inhalation of vapours may cause respiratory irritation. Provide fresh air. If one does not feel well, ensure medical assistance.

**Skin contact**

Wash an unprotected place of contact with water and soap.

Due to solid form (solidification point min. 50°C), contact with the hot product is possible. Cool down a place of contact with the hot product with cold water for 5 minutes. Carefully remove non-adherent clothing. Do not remove parts of clothes stuck on burnt skin. Take medical advice if skin irritation, swelling on the skin or skin redness develop(s) and persist(s).

**Eye contact**

In the case of mild irritations, rinse up open eyes with water for a few minutes. If irritation occurs, get medical attention. If accidental eye exposure occurs caused by the hot product, it is necessary to cool it down immediately to reject heat by rinsing up an eye with cold water. Immediately ensure medical help.

**Ingestion**

Unexpected problems after swallowing. If one does not feel well, ensure medical assistance.

**Instructions for a doctor**

Ensure fresh air and calm to an injured person.

### 4.2. THE MOST IMPORTANT SYMPTOMS AND EFFECTS OF EXPOSURE, BOTH ACUTE AND DELAYED

**Inhalation**

Exposure to vapours may cause respiratory irritation.

**Skin contact**

Dry skin, irritation in the case of long-lasting exposure. Contact with the hot product may cause thermal burns.

**Eye contact**

A squirt of the liquid into an eye may cause mild irritations. Contact with the hot product may cause thermal burns.

**Ingestion**

Alimentary tract disorders (nausea, diarrhoea) may occur.

See also section 11 of the Safety Data Sheet.

### 4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

In the case of swallowing, inhalation poisoning or contact with the hot product, immediate medical attention is necessary. In other cases of exposure, medical help is necessary if symptoms persist after giving first aid in accordance with the above instructions. The Safety Data Sheet, label or packaging must be shown to medical personnel giving aid. In the case of respiratory disorders, apply an oxygen therapy or intubation. If necessary, perform artificial respiration. Control heart action (electrocardiography). Continued symptomatic treatment. Procedures should be performed by qualified medical personnel.

## SECTION 5. FIRE FIGHTING MEASURES

**General recommendations**

Inform all people around about fire; remove everyone that does not take part in liquidation of a failure from the hazardous area; if necessary, order evacuation; call rescue teams, Fire Service and the Police.

### 5.1. EXTINGUISHING MEDIA

**Appropriate:** Foam, water fog, dry fire fighting powders, carbon dioxide, fire fighting foam. In the case of small fires - sand or earth.

**Inappropriate**: pressurized water jets;

Do not use direct water jets on the burning product because they may cause the spread of fire. Avoid using foam and water on the same surface at the same time.

### 5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

| | |
|---|---|
| Flash point | min. 200°C |
| Auto-ignition temperature | min. 250°C |
| Temperature class | T3 |
| Fire hazard class | III |

Flammable product after exceeding the flash point. Carbon dioxide is the major combustion product.
Carbon monoxide is the combustion product in the case of an inappropriate amount of access to the combusted substance.

### 5.3. ADVICE FOR FIRE FIGHTERS

In the case of a fire, inform all people around about the fire; remove everyone that does not take part in liquidation of effects of the incident from the hazardous area. Effect evacuation if necessary. Call the State Fire Service, rescue teams and the Police. Only trained persons wearing appropriate clothes and fitted with appropriate protective equipment can take part in the rescue action. Fire may release carbon monoxide, carbon dioxide and soot. In the case of a large fire, do not stay in closed or poorly ventilated rooms without a breathing apparatus and protective suit. Avoid contact with eyes. Do not allow fire fighting water to reach surface water or ground water. Collect and neutralise fire fighting water.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### 6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

*CAUTION:* Area at risk of a fire.
Inform all people around about a failure; remove everyone that does not take part in liquidation of a failure from the hazardous area; if necessary, order evacuation. Isolate the leakage area.

If safe, it is advisable to eliminate any and all sources of ignition. Avoid direct contact with the releasing liquid. Do not step in the spilled product. Avoid breathing in vapours/mist. In the case of release in confined/limited space, ensure effective ventilation. Use protective clothing and equipment. Persons who do not belong to personnel of rescue teams should be immediately evacuated in accordance with the internal procedures applied in case of hazards and failures. If required by provisions, inform relevant authorities.

See also section 8 of the Safety Data Sheet.

### 6.2. ENVIRONMENTAL PRECAUTIONS

Prevent release of the substance to storm drains, water, ground, sewage system. Caution: the solidified product may block drains and sewage system. If possible and safe, liquidate or reduce leakage (seal, close liquid supply; put damaged packaging in an emergency package). Limit the spread of the spilled product by embanking the area. In the case of large leakages, if possible, cover surface of the leakage with foam to reduce the risk of a fire. If large amounts of the substance are released and in the case of contamination of the environment, inform appropriate authorities (OHS services, rescue services, environmental protection services, administrative bodies).

### 6.3. METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Cover the released substance with a non-flammable absorptive material (sand, earth, diatomaceous earth, vermiculite), collect and put in a proper, sealed, marked container/tank for waste. Neutralise in accordance with the effective regulations (see sections 13 and 15 of the Safety Data Sheet).

If the substance is released to water, the product quickly cools and is quickly solidified floating on surface. Limit its spread with the use of floating barriers or another equipment and then collect using a skimmer or another device appropriate for this purpose.

### 6.4. REFERENCE TO OTHER SECTIONS

See sections 8, 13 and 15 of the Safety Data Sheet.

## SECTION 7. HANDLING AND STORING THE SUBSTANCES AND MIXTURES

The substance is not classified as hazardous - extraordinary measures are not necessary. Avoid direct contact with the substance.

### 7.1. PRECAUTIONS FOR SAFE HANDLING

In the place of use and storage of the substance, it is necessary to ensure easy access to rescue equipment (in case of a fire, release etc.).

**Precautions for safe handling**

Avoid long-lasting contact with skin; avoid contamination of eyes. Use personal protection equipment in compliance with information published in section 8 of the Safety Data Sheet.

**Recommendations on fire protection and explosion protection**

Eliminate any and all ignition sources. Apply precautions to prevent the accumulation of static electricity charges. Protect containers/tanks against overheating. Avoid contact with strong oxidants.

**Occupational health and safety recommendations**

Comply with the generally binding occupational health and safety provisions. Proceed in accordance with the good industrial hygiene principles. Avoid the risk of slipping - immediately remove the spilled product. Do not eat, do not drink, do not smoke in the substance manufacture, processing, use and storage place. Wash your hands with water and soap after the end of work. Do not use contaminated clothes. Take off contaminated clothes, clean/wash before re-use.

Do not gather and do not keep materials contaminated with the substance at work stations, in pockets etc.

*CAUTION:* Leave contaminated/saturated clothes, rags and other materials contaminated with the oil in a safe place, far from sources of heat and sources of ignition.

### 7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Store in sealed, properly marked containers/tanks, in dry rooms, on hard surface. Avoid contact with flammable and oxidizing substances. It is recommended that the ban on smoking cigarettes and on using open flame is introduced.

Works connected with cleaning, controlling and maintaining the inner structure of storage tanks and containers may be performed only by qualified and appropriately equipped personnel, in accordance with the binding provisions.

Warehouse installations should be designed in such a way as to prevent contamination of water and soil in the case of a leakage or spillage.

### 7.3. SPECIFIC END USE(S)

See subsection 1.2. For more information, please contact the manufacturer/supplier.

## SECTION 8. EXPOSURE CONTROL AND PERSONAL PROTECTION EQUIPMENT

### 8.1. CONTROL PARAMETERS

**The highest permissible exposure limits under working environment conditions**

*Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the maximum permissible concentration and intensity of factors harmful to health in the working environment*

Solid paraffin - inhalable fraction: TLV-TWA: 2 mg/m$^3$, TLV-STEL: - ; TLV-CL: -

### 8.2. EXPOSURE CONTROL

**Engineering controls**

-

**Personal protection equipment**

The necessity to use and selection of appropriate personal protection equipment should take into consideration the type of hazard posed by the substance, conditions in a workplace and manner of handling the substance.

Use protection equipment of renowned manufacturers. Personal protection equipment should meet the requirements specified in the standards and provisions.

***Protection of the airways***

Avoid contact with vapours, in the case of normal use exposure by the inhalation route is unlikely. Use mechanical ventilation at work stations and in closed rooms and buildings.

***Hand protection***

Protective gloves resistant to oil, resistant to temperature. Material of gloves must be selected taking into consideration recommendations of the gloves' manufacturer within the scope of the piercing time, penetration rate and degradation time. It is advisable to change gloves on a regular basis and to replace them immediately if any signs of their wear, damage (rupture, piercing) or changes in appearance (colour, elasticity, shape) occur. Thickness of gloves' layer is specified by a manufacturer based on the permeability exposure class. Penetration time for material of which gloves are made: it is necessary to obtain information from gloves' manufacturer on precise piercing time and to obey it.

***Protection equipment of eyes and face***

Protective goggles in tight casing (goggles) and face protection in the event of performing activities posing the risk of spraying into an eye, this particularly refers to the hot substance.

***Skin and body protection***

Safety apron or other protective clothes of coated fabrics, resistant to the substance, protective anti-slip footwear. In the case of exposure to the hot product - protective clothes and protective heat-resistant footwear.

***Occupational health and safety requirements***

Avoid exposure to vapours and direct contact with the hot liquid. Observe basic occupational health and safety rules: do not eat and do not drink at a work station, wash hands using water and soap upon finishing work each and every time, protect clothes from contamination and – if this happens – immediately take off the contaminated clothing.

**Environmental exposure control**

Protect to prevent the substance from getting into the environment. It is necessary to take into consideration protection of the area around storage tanks and containers.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| a) Appearance | : Solid body below the solidification point, liquid above the solidification point |
| b) Odour | : without odour or slight odour characteristic of solid hydrocarbons |
| c) Odour threshold | : No data - it is a subjective sensation and is not appropriate to warn against excessive danger |
| d) pH | : Neutral |
| e) Melting point/Solidification point | : min. 50 °C |
| f) Initial boiling point and boiling range | : min. 300°C |
| g) Flash point | : min. 190°C |
| h) Evaporation rate | : No data - not specified in the Chemical Safety Report |
| i) Flammability (of solid body, gas) | : Not classified as flammable |
| j) Upper/Lower flammability limits or Upper/Lower explosion limits | : Not applicable |
| k) Vapour pressure | : negligible in normal use conditions at 20°C, 0-20 Pa at 80°C |
| l) Vapour density | : No data - not specified in the Chemical Safety Report |
| m) Relative density per 15°C | : max. 0.96 |
| n) Solubility | : Freely soluble in hydrocarbon solvents, not soluble in water |
| o) N-octanol/water partition coefficient | : No data - not specified in the Chemical Safety Report |
| p) Auto-ignition temperature | : > 250°C |
| q) Decomposition temperature | : Not applicable |
| r) Viscosity | : 3.0-5.5 $mm^2/s$ at 100°C |
| s) Explosive properties | : No data - not specified in the Report |
| t) Oxidizing properties | : No data - not specified in the Report |

### 9.2. OTHER INFORMATION

None

## SECTION 10. STABILITY AND REACTIVITY

### 10.1. REACTIVITY

The substance is not reactive.

### 10.2. CHEMICAL STABILITY

The substance is stable under normal conditions, and also at a predicted temperature and under predicted pressure during storage and handling.

### 10.3. POSSIBILITY OF HAZARDOUS REACTIONS

Unknown.

### 10.4. CONDITIONS TO AVOID

Flames, electricity and sparks, hot surface, other sources of ignition and a high temperature. Avoid temperature above 80°C to avoid the product overheating or/and temperature above 200°C to avoid ignition of the mixture

### 10.5. INCOMPATIBLE MATERIALS

Strong oxidants.

### 10.6. HAZARDOUS DECOMPOSITION PRODUCTS

Unknown. The products are released under fire conditions - see section 5.

## SECTION 11. TOXICOLOGICAL INFORMATION

The substance is not classified as hazardous to human health.
LD50 >5,000 mg/kg (orally, rat)
LD50 >2,000 mg/kg (skin, rat)

**Skin caustic/irritating effect**
None

**Acute eye damage/eye irritation**
None

**Respiratory tract irritation**
At an ambient temperature, inhalation is unlikely due to low volatility of the substance. In the case of inhalation of vapours/mist generated at high temperatures, respiratory tract irritations may occur.

**Sensitizing effect**
Respiratory tract effect is not expected but it is advisable to avoid breathing in vapours (of liquid paraffin) which may cause a respiratory tract irritation. None with regard to skin. NOAEL: 1,500 mg/kg of body weight/day (orally) NOAEL: 2,000 mg/kg of body weight/day (skin)

**Germ cell mutagenicity**

None

**Carcinogenicity**

None

**Reproductive toxicity**

None NOAEL: 1,000 mg/kg of body weight/day (orally rat)

**Aspiration hazard**

None

The substance is not classified in any hazard class. Based on available data, the classification criteria are not met.

## SECTION 12. ECOLOGICAL INFORMATION

### 12.1. TOXICITY

**Aquatic environment (including sediment)**

Short-term toxicity / prolonged toxicity to fish

LL50 (96 h): *Pimephales promelas* >100 mg/L

No experimental data for prolonged toxicity.

Short-term toxicity / prolonged toxicity to crustaceans

EL50 (48 h): *Daphnia magna* ≥ 10,000mg/L

Toxicity to algae and aquatic plants

NOEL (72h) Pseudokirchneriella subcapitata ≥ 100 mg/L

Toxicity to aquatic microorganisms

NOEL (10 min): *Photobacterium phosphoreum* >1.93 mg/L

**Soil environment**

No data.

### 12.2. PERSISTENCE AND DEGRADABILITY

**It is not naturally biodegradable.**

### 12.3. BIOACCUMULATIVE POTENTIAL

The substance is water insoluble and therefore it is estimated that it has a negligible BCF. The product does not demonstrate high accumulative potential.

### 12.4. MOBILITY IN SOIL

No migration potential in soil.

### 12.5. RESULTS OF PBT and vPvB ASSESSMENT

Assessment of toxicity: The substance is not classified as PBT/vPvB. It does not contain PBT ingredients included on the SVHC candidate list in concentration above 0.1%.

**12.6. OTHER ADVERSE EFFECTS**

No data.

**ADDITIONAL INFORMATION ON BEHAVIOUR AND FATE IN THE ENVIRONMENT**

**No data.**

## SECTION 13. WASTE DISPOSAL CONSIDERATIONS

**Classification of waste**: appropriate to the place of generation based on the criteria laid down in the binding provisions. If the product has been used in any further operations/processes, the end-user should define the waste generated and assign an appropriate code.

**Handling the waste product**

Do not dispose to sewage system. Prevent contamination of surface and ground waters. Do not store in municipal waste dumpsites. Consider reuse.

Recovery or treatment of the waste product should be performed in compliance with the applicable provisions.

Recommended treatment method: thermal treatment.

**Handling packaging waste**

Empty tanks and containers may contain remnants of the material. Ensure that they are properly cleaned.

Recovery (recycling) or treatment of the packaging waste must be performed in compliance with the applicable provisions.

Reusable packaging should be reused after cleaning.

The waste treatment process must be carried out in professional, authorised waste incineration plants or waste recycling/treatment plants.

Dispose of the waste in compliance with the applicable provisions:

*Act of 14 December 2012 on waste (OJ 2013 No 0 item 21, as amended).*

*Act of 13 June 2013 on packaging and packaging waste management (OJ 2013 No 0 item 888, as amended).*

*Regulation of the Minister of the Environment of 9 December 2014 on the waste catalogue (OJ 2014 item 1923).*

## SECTION 14. TRANSPORT INFORMATION

The substance is not subject to regulations on the transport of dangerous goods included in ADR (road transport), RID (rail transport), ADN (inland transport), IMDG (marine transport), ICAO/IATA (air transport).

| | |
|---|---|
| **14.1. UN NUMBER** | Not applicable |
| **14.2. UN PROPER SHIPPING NAME** | Not applicable |
| **14.4. PACKING GROUP** | Not applicable |
| **14.5. ENVIRONMENTAL HAZARDS** | Not applicable |
| **14.6. SPECIAL PRECAUTIONS FOR USERS: ADR** | During loading, transport and unloading of the substance in liquid form (solidification point<temperature of transported mixture< 100°C) it is necessary to remember about the risk of scalding |

| | |
|---|---|
| | oneself with the hot product. For this purpose, use protective gloves resistant to temperature, protective goggles, protective clothes. Scalded places must be immediately cooled down by means of water or ice. Ask for medical help. |
| **14.7. TRANSPORT IN BULK IN ACCORDANCE WITH ANNEX II TO THE MARPOL CONVENTION AND THE IBC CODE** | Not applicable |

## SECTION 15. REGULATORY INFORMATION

Act of 25 February 2011 on chemical substances and mixtures thereof (OJ of 2011 No 63, item 322)
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (corrigendum OJ L 136, 29.5.2007, as amended)
Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) of 18 December 2006 (OJ L 133, 31.05.2010)
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (OJ EU L No 353, 31.12.2008, as amended)
Commission Regulation (EC) No 790/2009 of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation of the European Parliament and of the Council (EC) No 1272/2008 of 16 December 2008 on classification, labelling and packaging of substances and mixtures
Regulation of the Minister of Health of 10 August 2012 on the criteria and classification of chemical substances and their mixtures (OJ of 2012 Item 1018)
Regulation of the Minister of Health of 2 February 2011 on tests and measurements of factors harmful to health in the working environment (OJ of 2011 No 33, item 166)
Regulation of the Minister of Economy of 21 December 2005 on basic requirements for personal protection equipment (OJ of 2005 No 259, item 2173)
Regulation of the Minister of Labour and Social Policy of 26 September 1997 on general occupational health and safety provisions (consolidated text OJ of 2003 No 169, item 1650, as amended)
Regulation of the Minister of Health of 30 December 2004 on occupational health and safety with regard to chemical factors at the workplace (OJ of 2005 No 11, item 86, as amended)
Act of 24 August 1991 on fire protection (OJ of 2009 No 178, item 1380, as amended)
Act of 14 December 2012 on waste (OJ No 2013 item 21)
Act of 13 June 2013 on packaging and packaging waste management (OJ No 2013 item 888)
Regulation of the Minister of the Environment of 27 September 2001 on the waste catalogue (OJ No 112, item

1206, as amended)
Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the maximum permissible concentration and intensity of factors harmful to health in the working environment

## SECTION 16. OTHER INFORMATION

**UPDATES:**
Not applicable - version 1.0 CLP

**ADDITIONAL INFORMATION IMPORTANT FOR PROTECTION OF HEALTH AND THE ENVIRONMENT**
The employer is obliged to observe the provisions specified in section 15 of the Safety Data Sheet (if it refers to a concrete case):

- training of staff members within the scope of the risk for health, hygiene requirements, use of personal protection equipment, measures preventing accidents, rescue proceedings etc.,
- monitoring of staff members' health state,
- control of the working environment, in particular application of methods for early detection of exposure,
- keeping a register of works and a register of staff members,
- taking up measures and actions reducing exposure

**Meaning of H symbols used in section 3**
H350 May cause cancer
H301 Toxic if swallowed
H311 Toxic in contact with skin
H330 Potentially lethal if inhaled
H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage
H317 May cause an allergic skin reaction
H341 Suspected of causing genetic defects
H335 May cause respiratory irritation
H225 Extremely flammable liquid and vapours
H331 Toxic if inhaled
H370 Causes damage to organs

**Abbreviations and acronyms used in the Safety Data Sheet**
UVCB Substance of Unknown or Variable composition, Complex reaction products or Biological materials
TLV-TWA Threshold Limit Value-Time-Weighted Average
TLV-STEL Threshold Limit Value, Short Term Exposure Limit
TLV-CL Threshold Limit Value-Ceiling Level
BLVs Biological Limit Values
vPvB very Persistent, very Bioaccumulative (substance)
PBT Persistent, Bioaccumulative and Toxic (substance)
PNEC Predicted No Effect Concentration
DNEL Derived No-Effect Level
$LD_{50}$ Dose that will kill 50% of the test animals

$LC_{50}$ Concentration that will kill 50% of the test animals
STOT Specific Target Organ Toxicity
NOAEL No Observed Adverse Effect Level
NOAEC No Observed Adverse Effect Concentration
$LL_{50}$ Lethal Loading
$EL_{50}$ Effective Loading rate of the test substance resulting in 50% effect
$ErL_{50}$ Effective Loading rate of the test substance that causes growth rate reduction to 50%
$EbL_{50}$ Effective Loading rate of the test substance that causes 50% reduction in algal cell biomass
NOEL No Observed Effect Level
Kmw Membrane-water partition coefficient
LOEL Lowest Observed Effect Level
(Q)SAR Qualitative or Quantitative Structure–Activity Relationship
OECD Organisation for Economic Co-operation and Development
RID Regulations concerning the International Transport of Dangerous Goods by Rail
ADR The European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG The International Maritime Dangerous Goods Code
IATA The International Air Transport Association

**References:**
Legal provisions quoted in sections 2 – 15 of the Safety Data Sheet.
The product is not classified as hazardous - the chemical safety report for the substance is not required.

**SCOPE OF RESPONSIBILITIES:** The information in the Safety Data Sheet relates to the above-mentioned substance/mixture only and cannot be applied to similar products. The Safety Data Sheet was developed based on our best knowledge and collected up-to-date information. However, this information is provided without guarantees considered as binding (indirect or direct). Storage, use, liquidation as well as conditions and manners of handling this material by user are beyond our control. For these reasons, we cannot bear responsibility for losses, damage and costs which arise from or are in another way connected with storage, use, liquidation or manner of handling the material. This Safety Data Sheet was prepared only to provide information concerning risk for health, safety and environmental protection. It is not a specification of the substance.