



# Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 06.02.2025

Version: 35 (replaces version 34)

Revision: 06.02.2025

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

- **1.1 Product identifier**
  - Trade name: **BITUMENLAK ZL THIX**
  - Article number: B9
  - UFI: 4SXA-71US-M00E-W69Y
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
  - **Sector of Use**
    - SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
    - SU19 Building and construction work
    - SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
  - **Product category** PC9a Coatings and paints, thinners, paint removers
  - **Process category**
    - PROC7 Industrial spraying
    - PROC10 Roller application or brushing
    - PROC19 Manual activities involving hand contact
    - PROC13 Treatment of articles by dipping and pouring
  - **Application of the substance / the mixture** solvent based, one component bituminous coating
- **1.3 Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**
    - Zandleven Coatings B.V.
    - Snekertrekweg 57-59, 8912 AA Leeuwarden, Netherlands
    - Tel: +31 58 2129545 Fax: +31 58 2155996
    - E-mail: [info@zandleven.com](mailto:info@zandleven.com) Internet: [www.zandleven.com](http://www.zandleven.com)
  - **Further information obtainable from:** R&D department: [sds@zandleven.com](mailto:sds@zandleven.com)
- **1.4 Emergency telephone number:**
  - Nationaal Vergiftigingen Informatie
  - +31 (0)88 755 8000
  - ORFILA (INRS) : + 33 (0)1 45 42 59 59
  - Centres Antipoison et de Toxicovigilance
  - ANGERS: 02 41 48 21 21
  - BORDEAUX: 05 56 96 40 80
  - LILLE: 0800 59 59 59
  - LYON: 04 72 11 69 11
  - MARSEILLE: 04 91 75 25 25
  - NANCY: 03 83 22 50 50
  - PARIS: 01 40 05 48 48
  - STRASBOURG: 03 88 37 37 37
  - TOULOUSE: 05 61 77 74 47
  - Giftnotruf der Charité, Berlin: 030/19240
  - Giftinformationszentrum-Nord der Länder Bremen, Hamburg, Niedersachsen und Schleswig-Holstein (GIZ-Nord) :0551/19 240
  - Informationszentrale gegen Vergiftungen Zentrum für Kinderheilkunde Universitätsklinikum Bonn: 0228/19240
  - Giftnotruf Erfurt Gemeinsames Giftinformationszentrum der Länder Mecklenburg-Vorpommern, Sachsen, Sachsen-Anhalt und Thüringen: 0361/730 730
  - Informations- und Beratungszentrum für Vergiftungsfälle Klinik für Kinder- und Jugendmedizin Universitätsklinikum des Saarlandes: 06841/19240
  - Giftinformationszentrum der Länder Rheinland-Pfalz und Hessen - Klinische Toxikologie - Universitätsmedizin der Johannes Gutenberg-Universität Mainz: 06131/19240
  - Vergiftungs-Informations-Zentrale Zentrum für Kinder- und Jugendmedizin Universitätsklinikum: 0761/19240
  - Giftnotruf München Toxikologische Abteilung der II. Med. Klinik und Poliklinik: 089/19240
  - Supplier
  - +31 (0)58 2677590 (during office hours)

## SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
  - **Classification according to Regulation (EC) No 1272/2008**
    - Flam. Liq. 3 H226 Flammable liquid and vapour.
    - STOT RE 1 H372 Causes damage to the central nervous system through prolonged or repeated exposure. Route of exposure: Inhalation.
    - Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

(Contd. on page 2)



## Safety data sheet

### according to Regulation (EC) No 1907/2006, Article 31

Printing date 06.02.2025

Version: 35 (replaces version 34)

Revision: 06.02.2025

Trade name: BITUMENLAK ZL THIX

(Contd. of page 1)

#### 2.2 Label elements

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

The product is classified and labelled according to the CLP regulation.

##### Hazard pictograms



GHS02 GHS08

##### Signal word Danger

##### Hazard-determining components of labelling:

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)

##### Hazard statements

H226 Flammable liquid and vapour.

H372 Causes damage to the central nervous system through prolonged or repeated exposure. Route of exposure: Inhalation.

H412 Harmful to aquatic life with long lasting effects.

##### Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P241 Use explosion-proof [electrical/ventilating/lighting] equipment.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P273 Avoid release to the environment.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

#### 2.3 Other hazards

##### Results of PBT and vPvB assessment

• **PBT:** Not applicable.

• **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

• **Description:** Mixture of substances listed below with nonhazardous additions.

##### Dangerous components:

Percentages of the components are expressed as a percentage by weight

EC number: 919-857-5 Reg.nr.: 01-2119463258-33	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics ⚠ Flam. Liq. 3, H226; ⚠ Asp. Tox. 1, H304; ⚠ STOT SE 3, H336, EUH066	10-25%
	Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) ⚠ Flam. Liq. 3, H226; ⚠ STOT RE 1, H372; ⚠ Asp. Tox. 1, H304; ⚠ Aquatic Chronic 2, H411; ⚠ STOT SE 3, H336, EUH066	10-25%

##### Additional information:

Note P of Annex 1A (67/548/EEC) applies to the product or one or more of its components (benzene <0.1 wt.%).

For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

##### General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

(Contd. on page 3)



## Safety data sheet

### according to Regulation (EC) No 1907/2006, Article 31

Printing date 06.02.2025

Version: 35 (replaces version 34)

Revision: 06.02.2025

**Trade name: BITUMENLAK ZL THIX**

(Contd. of page 2)

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**  
During heating or in case of fire poisonous gases are produced.
- **5.3 Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Mount respiratory protective device.  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  
Do not allow product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to section 13.  
Ensure adequate ventilation.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Store material in original, well-closed packages in a cool, well-ventilated area according to local regulations.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Recommended storage temperature:** 5 - 30 °C
- **7.3 Specific end use(s)** No further relevant information available.

EU

(Contd. on page 4)



## Safety data sheet

### according to Regulation (EC) No 1907/2006, Article 31

Printing date 06.02.2025

Version: 35 (replaces version 34)

Revision: 06.02.2025

Trade name: BITUMENLAK ZL THIX

(Contd. of page 3)

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

##### Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

##### DNEL (Derived No Effect Level) for workers:

##### Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)

Dermal	Long-term - systemic effects, worker	44 mg/kg bw/day (worker)
Inhalative	Long-term - systemic effects, worker	330 mg/m <sup>3</sup> (worker)

##### DNEL (Derived No Effect Level) for the general population:

##### Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)

Oral	Long-term - systemic effects, general population	26 mg/kg bw/day (general population)
Dermal	Long-term - systemic effects, general population	26 mg/kg bw/day (general population)
Inhalative	Long-term - systemic effects, general population	71 mg/m <sup>3</sup> (general population)

Additional information: The lists valid during the making were used as basis.

#### 8.2 Exposure controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Appropriate engineering controls No further data; see section 7.

##### Individual protection measures, such as personal protective equipment

##### General protective and hygienic measures:

Provide readily accessible eye wash stations and safety showers.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

##### Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If

workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

For organic vapors and solvents type of filter A1 or A2, for dust type of filter P (according to EN 140)

##### Hand protection



Protective gloves

Chemical resistant gloves (EN 374)

Check protective gloves prior to each use for their proper condition.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

##### Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

PVA gloves

Nylon Polyethylene (HPPE laminated film)

##### Penetration time of glove material

Ansell Barrier 02-100

breakthrough time >480 min.

thickness: 0,062 mm

(Contd. on page 5)



## Safety data sheet

### according to Regulation (EC) No 1907/2006, Article 31

Printing date 06.02.2025

Version: 35 (replaces version 34)

Revision: 06.02.2025

**Trade name: BITUMENLAK ZL THIX**

(Contd. of page 4)

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Not suitable are gloves made of the following materials:** All other materials

· **Eye/face protection**



Tightly sealed goggles

Safety glasses according to EN 166 or equivalent

· **Body protection:**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved before the product is used by a specialist.

If there is a risk of ignition by static electricity, anti-static protective clothing should be worn. For the best protection against static discharge, clothing should consist of anti-static overalls, boots and gloves.

For further information on materials and design requirements and test methods consult the European standard EN 1149.

· **Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Physical state**

Liquid

· **Colour:**

According to product specification

· **Odour:**

Characteristic

· **Odour threshold:**

Not determined.

· **Melting point/freezing point:**

Undetermined.

· **Boiling point or initial boiling point and boiling range**

36 °C (Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics)

Flammable.

· **Flammability**

· **Lower and upper explosion limit**

· **Lower:**

0.6 Vol % (Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%))

· **Upper:**

7 Vol % (Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%))

· **Flash point:**

38 °C

· **Auto-ignition temperature:**

>200 °C (Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%))

· **Decomposition temperature:**

Not determined.

· **pH**

Not determined.

· **Viscosity:**

· **Kinematic viscosity**

at 40 °C: > 20,5 mm<sup>2</sup>/s

· **Dynamic at 20 °C:**

2,500 mPas

· **Solubility**

· **water:**

Not miscible or difficult to mix.

· **Partition coefficient n-octanol/water (log value)**

Not determined.

· **Vapour pressure at 20 °C:**

2.3 hPa (Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%))

· **Density and/or relative density**

· **Density at 20 °C:**

1.09 g/cm<sup>3</sup>

· **Relative density**

Not determined.

· **Vapour density**

Not determined.

(Contd. on page 6)



## Safety data sheet

### according to Regulation (EC) No 1907/2006, Article 31

Printing date 06.02.2025

Version: 35 (replaces version 34)

Revision: 06.02.2025

Trade name: BITUMENLAK ZL THIX

(Contd. of page 5)

**· 9.2 Other information****· Appearance:****· Form:**

Fluid

**· Important information on protection of health and environment, and on safety.****· Ignition temperature:**

Product is not selfigniting.

**· Explosive properties:**

Not determined.

**· Change in condition****· Evaporation rate**

Not determined.

**· Information with regard to physical hazard classes****· Explosives**

Void

**· Flammable gases**

Void

**· Aerosols**

Void

**· Oxidising gases**

Void

**· Gases under pressure**

Void

**· Flammable liquids**

Flammable liquid and vapour.

**· Flammable solids**

Void

**· Self-reactive substances and mixtures**

Void

**· Pyrophoric liquids**

Void

**· Pyrophoric solids**

Void

**· Self-heating substances and mixtures**

Void

**· Substances and mixtures, which emit flammable gases in contact with water**

Void

**· Oxidising liquids**

Void

**· Oxidising solids**

Void

**· Organic peroxides**

Void

**· Corrosive to metals**

Void

**· Desensitised explosives**

Void

**SECTION 10: Stability and reactivity****· 10.1 Reactivity** No further relevant information available.**· 10.2 Chemical stability****· Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.**· 10.3 Possibility of hazardous reactions** No dangerous reactions known.**· 10.4 Conditions to avoid** No further relevant information available.**· 10.5 Incompatible materials:** No further relevant information available.**· 10.6 Hazardous decomposition products:** No dangerous decomposition products known.**SECTION 11: Toxicological information****· 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****· Acute toxicity** Based on available data, the classification criteria are not met.**· LD/LC50 values relevant for classification:****Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, < 2% aromatics**

Oral LD50 &gt;5,000 mg/kg (rat)

Dermal LD50 &gt;5,000 mg/kg (rab)

**Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)**

Oral LD50 &gt;5,000 mg/kg (rat)

Dermal LD50 3,400 mg/kg (rab)

Inhalative LC50/4 h 13.1 mg/l (rat)

**· Primary irritant effect:****· Skin corrosion/irritation** Based on available data, the classification criteria are not met.**· Serious eye damage/irritation** Based on available data, the classification criteria are not met.**· Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

(Contd. on page 7)



## Safety data sheet

### according to Regulation (EC) No 1907/2006, Article 31

Printing date 06.02.2025

Version: 35 (replaces version 34)

Revision: 06.02.2025

Trade name: BITUMENLAK ZL THIX

(Contd. of page 6)

- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure**  
Causes damage to the central nervous system through prolonged or repeated exposure. Route of exposure: Inhalation.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**

**· Endocrine disrupting properties**

None of the ingredients is listed.

### SECTION 12: Ecological information

**· 12.1 Toxicity****· Aquatic toxicity:****Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)**

EC50/72 h | 4.6-10 mg/l (Pseudokirchnerella subcapitata)

EC50/48 h | 10-22 mg/l (Daphnia magna)

LC50/96 h | 10-30 mg/l (Oncorhynchus mykiss)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**  
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.  
Harmful to aquatic organisms

### SECTION 13: Disposal considerations

**· 13.1 Waste treatment methods****· Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

**· European waste catalogue**

08 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01 00	wastes from MFSU and removal of paint and varnish
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances
HP3	Flammable
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP14	Ecotoxic

(Contd. on page 8)

EU





## Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 06.02.2025

Version: 35 (replaces version 34)

Revision: 06.02.2025

Trade name: BITUMENLAK ZL THIX

(Contd. of page 7)

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### SECTION 14: Transport information

Transport in accordance with ADR/RID, IMDG and ICAO/IATA.

**14.1 UN number or ID number**

· ADR/RID/ADN, ADN, IMDG

Void

· IATA

UN1263

**14.2 UN proper shipping name**

· ADR/RID/ADN, ADN, IMDG

Void

· IATA

PAINT

**14.3 Transport hazard class(es)**

· ADR/RID/ADN, ADN, IMDG

· Class

Void

· IATA



· Class

3 Flammable liquids.

· Label

3

**14.4 Packing group**

· ADR/RID/ADN, IMDG

Void

· IATA

III

**14.5 Environmental hazards:**

· Marine pollutant:

No

**14.6 Special precautions for user**

Not applicable.

**14.7 Maritime transport in bulk according to IMO instruments**

Not applicable.

**Transport/Additional information:**

· ADR/RID/ADN

· Remarks:

Up to 450 litre exempted according to ADR 2.2.3.1.5.

· IMDG

· Remarks:

Up to 450 litre: Transport in accordance with Packs 2.3.2.5 of the IMDG Code.

· IATA

· Remarks:

The "viscosity exemption" provisions do NOT apply to air transport.

· UN "Model Regulation":

Void

### SECTION 15: Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· Directive 2012/18/EU

· Named dangerous substances - ANNEX I None of the ingredients is listed.

· Seveso category P5c FLAMMABLE LIQUIDS

· Qualifying quantity (tonnes) for the application of lower-tier requirements 5,000 t

(Contd. on page 9)





## Safety data sheet

### according to Regulation (EC) No 1907/2006, Article 31

Printing date 06.02.2025

Version: 35 (replaces version 34)

Revision: 06.02.2025

**Trade name: BITUMENLAK ZL THIX**

(Contd. of page 8)

- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

· **REGULATION (EU) 2019/1148**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Classification according to Regulation (EC) No 1272/2008**

The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

· **Contact:** J. Dijkstra

· **Date of previous version:** 19.04.2023

· **Version number of previous version:** 34

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 3: Flammable liquids – Category 3

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

Asp. Tox. 1: Aspiration hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· **Sources**

- ECHA European Chemical Agency - <http://echa.europa.eu/information-on-chemicals>

- SDS of raw materials supplied by producer/supplier.

· **\* Data compared to the previous version altered.**

EU