

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 11.05.2018

Version number 7

Revision: 11.05.2018

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

- 1.1 Product identifier
- Trade name: **KEMPEROL 1K-PUR**
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
- Application of the substance / the mixture: Identified use: intended for professional use only!
Waterproofing
- 1.3 Details of the supplier of the safety data sheet
- Manufacturer/Supplier: KEMPER SYSTEM GmbH & Co. KG
Holländische Strasse 32-36
34246 Vellmar
Deutschland / Germany
Telefon: +49 (0)561 / 8295-0
Telefax: +49 (0)561 / 8295-5110
E-Mail: MSDS@KEMPER-SYSTEM.COM
- Further information obtainable from: research & development
- 1.4 Emergency telephone number: Giftinformationszentrum der Länder Rheinland-Pfalz und Hessen
Langenbeckstraße 1; Gebäude 601; 55131 Mainz
Tel. Nr.: +49 (0)6131 / 19 24 0
Universitätsmedizin der Johannes Gutenberg-Universität Mainz

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.
- Eye Irrit. 2 H319 Causes serious eye irritation.
- Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin Sens. 1 H317 May cause an allergic skin reaction.
- Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.
- 2.2 Label elements
- Labelling according to Regulation (EC) No 1272/2008
- Hazard pictograms


GHS02


GHS08

- Signal word: Danger
- Hazard-determining components of labelling: Poly[oxy(methyl-1,2-ethanediyl)], alpha-hydro-omega-hydroxy-, polymer with 2,4-diisocyanato-1-methylbenzene
4-methyl-m-phenylene diisocyanate
1,6-hexanediyl-bis(2-(2-(1-ethylpentyl)-3-oxazolidinyl)ethyl)carbamate
Phenol, methylstyrenated
Isophorondiisocyanate homopolymer
- Hazard statements: H226 Flammable liquid and vapour.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
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.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- Additional information: EUH204 Contains isocyanates. May produce an allergic reaction.
- 2.3 Other hazards
- Results of PBT and vPvB assessment
- PBT: Not applicable.

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- vPvB: Not applicable. (Contd. of page 1)

SECTION 3: Composition/information on ingredients

- 3.2 Chemical characterisation: Mixtures

- **Description:** Mixture: consisting of the following components.

- Dangerous components:

CAS: 37273-56-6 EC number: 609-378-7	Poly[oxy(methyl-1,2-ethanediy)], alpha-hydro-omega-hydroxy-, polymer with 2,4-diisocyanato-1-methylbenzene Eye Irrit. 2, H319; Skin Sens. 1, H317	25-50%
CAS: 7727-43-7 EINECS: 231-784-4 Reg.nr.: 01-2119491274-35	barium sulphate, natural substance with a Community workplace exposure limit	25-50%
EC number: 918-668-5 Reg.nr.: 01-2119455851-35	hydrocarbons, C9, aromatic Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H335-H336	12.5-25%
CAS: 140921-24-0 ELINCS: 411-700-4 Index number: 616-079-00-5 Reg.nr.: 01-2119890830-32	1,6-hexanediyl-bis(2-(2-(1-ethylpentyl)-3-oxazolidinyl)ethyl)carbamate Skin Sens. 1, H317	2.5-10%
CAS: 68512-30-1 EINECS: 270-966-8 Reg.nr.: 01-2119555274-38	Phenol, methylstyrenated Skin Irrit. 2, H315; Skin Sens. 1, H317; Aquatic Chronic 3, H412	0.5-2.5%
CAS: 53880-05-0 EC number: 931-312-3 Reg.nr.: 01-2119488734-24	Isophorondiisocyanate homopolymer Skin Sens. 1, H317; STOT SE 3, H335	0.5-2.5%
CAS: 584-84-9 EINECS: 209-544-5 Index number: 615-006-00-4 Reg.nr.: 01-2119486974-18	4-methyl-m-phenylene diisocyanate Acute Tox. 1, H330; Resp. Sens. 1, H334; Carc. 2, H351; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335; Aquatic Chronic 3, H412	<0.5%

- **Additional information:** 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.

Do not leave affected persons unattended.

Personal protection for the First Aider.

Take affected persons out of danger area and lay down.

- After inhalation:

In case of unconsciousness place patient stably in side position for transportation.

Supply fresh air; consult doctor in case of complaints.

- After skin contact:

Immediately wash with water and soap and rinse thoroughly.

Seek medical treatment in case of complaints.

- After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

Protect unharmed eye.

- 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:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.

- For safety reasons unsuitable extinguishing agents:

Water with full jet

- 5.2 Special hazards arising from the substance or mixture

Carbon monoxide (CO)

Nitrogen oxides (NOx)

Hydrogen cyanide (HCN)

Formation of toxic gases is possible during heating or in case of fire.

- 5.3 Advice for firefighters

- Protective equipment:

Do not inhale explosion gases or combustion gases.

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- Additional information

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

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SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources.

- 6.2 Environmental precautions:

Avoid contact with skin and eyes
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
Prevent from spreading (e.g. by damming-in or oil barriers).

- 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 item 13.

- 6.4 Reference to other sections

Do not flush with water or aqueous cleansing agents
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

Store in cool, dry place in tightly closed receptacles.
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.

- 7.2 Conditions for safe storage, including any incompatibilities

- Storage:

- Requirements to be met by storerooms and receptacles:

Store only in the original receptacle.

- Information about storage in one common storage facility:

Store away from foodstuffs.

- Further information about storage conditions:

Protect from frost.
Store in dry conditions.
Keep container tightly sealed.
Recommended storage temperature: 5-30 °C

- Storage class:

3

- 7.3 Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection

- Additional information about design of technical facilities:

No further data; see item 7.

- 8.1 Control parameters

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

7727-43-7 barium sulphate, natural

WEL	Long-term value: 10* 4** mg/m ³ *inhalable dust **respirable dust
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584-84-9 4-methyl-m-phenylene diisocyanate

WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
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- Additional information:

The lists valid during the making were used as basis.

- 8.2 Exposure controls

- Personal protective equipment:

- General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

- Respiratory protection:

When used properly and under normal conditions, breathing protection is not required.

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<p>- Protection of hands:</p>	<p>Use suitable respiratory protective device in case of insufficient ventilation. Filter A/P2 Respiratory protection - Gas filters and combination filters according to EN 141</p>
<p>- Material of gloves</p>	<p>Protective gloves</p> <p>Only use chemical-protective gloves with CE-labelling of category III. 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 After use of gloves apply skin-cleaning agents and skin cosmetics.</p> <p>Recommended materials: Butyl rubber, BR Recommended thickness of the material: ≥ 0.5 mm 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.</p>
<p>- Penetration time of glove material</p>	<p>The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.</p>
<p>- As protection from splashes gloves made of the following materials are suitable:</p>	<p>Nitrile rubber, NBR Recommended thickness of the material: ≥ 0.1 mm Penetration time (min.): <10</p>
<p>- Eye protection:</p>	<p>Tightly sealed goggles</p> <p>Protective goggles and facial protection - Classification according to EN 166</p>
<p>- Body protection:</p>	<p>Protective work clothing Impervious protective clothing</p>

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties

- General Information

- Appearance:

Form: Fluid
Colour: According to product specification

- Odour: Aromatic

- Odour threshold: Not determined.

- pH-value: Not determined.

- Change in condition

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: Undetermined.

- Flash point: 31 °C

- Flammability (solid, gas): Not applicable.

- Decomposition temperature: Not determined.

- Auto-ignition temperature: Product is not selfigniting.

- Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- Explosion limits:

Lower: Not determined.

Upper: Not determined.

- Density at 20 °C: 1.45 g/cm³

- Relative density: Not determined.

- Vapour density: Not determined.

- Evaporation rate: Not determined.

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- Solubility in / Miscibility with water:	Not miscible or difficult to mix.
- Partition coefficient: n-octanol/water:	Not determined.
- Viscosity: Dynamic:	Not determined.
Kinematic at 20 °C:	119 s (ISO 6 mm)
- Solvent content: VOC (EC)	15.88 %
- 9.2 Other information	No further relevant information available.

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	Reacts with alcohols, amines, aqueous acids and alkalis. Reacts with water.
- 10.4 Conditions to avoid	No further relevant information available.
- 10.5 Incompatible materials:	Amines, acids, alkalis, strong oxidants, alcohols
- 10.6 Hazardous decomposition products:	Hydrogen chloride (HCl) Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects	
- Acute toxicity	Based on available data, the classification criteria are not met.

- LD/LC50 values relevant for classification:

37273-56-6 Poly[oxy(methyl-1,2-ethanediyl)], alpha-hydro-omega-hydroxy-, polymer with 2,4-diisocyanato-1-methylbenzene

Oral	LD50	>5,000 mg/kg (rat)
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7727-43-7 barium sulphate, natural

Oral	LD50	>15,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)

hydrocarbons, C9, aromatic

Oral	LD50	>3,492 mg/kg (rat) (OECD 401)
Dermal	LD50	>3,160 mg/kg (rabbit) (OECD 402)

140921-24-0 1,6-hexanediyl-bis(2-(2-(1-ethylpentyl)-3-oxazolidinyl)ethyl)carbamate

Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)

68512-30-1 Phenol, methylstyrenated

Oral	LD50	>2,000 mg/kg (rat) (OECD 423)
Dermal	LD50	>2,000 mg/kg (rat) (OECD 402)

53880-05-0 Isophorondiisocyanate homopolymer

Oral	LD50	>14,000 mg/kg (rat) (OECD 401)
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584-84-9 4-methyl-m-phenylene diisocyanate

Oral	LD50	5,110 mg/kg (rat) (male; OECD 401)
		4,130 mg/kg (rat) (female; OECD 401)
Dermal	LD50	>9,400 mg/kg (rabbit) (OECD 402)
Inhalative	LC50/4 h	107 mg/l (rat) (OECD 403)
	LC50/1 h	0.47 mg/l (rat) (OECD 403)
	LC50	0.47 mg/l (rat) (1h; OECD 403)

- Primary irritant effect:	
- Skin corrosion/irritation	Based on available data, the classification criteria are not met.
- Serious eye damage/irritation	Causes serious eye irritation.
- Respiratory or skin sensitisation	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)	
- Germ cell mutagenicity	Based on available data, the classification criteria are not met.
- Carcinogenicity	Based on available data, the classification criteria are not met.

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- | | |
|--|---|
| <ul style="list-style-type: none"> - Reproductive toxicity - STOT-single exposure - STOT-repeated exposure - Aspiration hazard | <p>Based on available data, the classification criteria are not met.</p> <p>Based on available data, the classification criteria are not met.</p> <p>Based on available data, the classification criteria are not met.</p> <p>Based on available data, the classification criteria are not met.</p> |
|--|---|

SECTION 12: Ecological information

- 12.1 Toxicity

- Aquatic toxicity:

37273-56-6 Poly[oxy(methyl-1,2-ethanediyl)], alpha-hydro-omega-hydroxy-, polymer with 2,4-diisocyanato-1-methylbenzene

EC50 >10,000 mg/l (Belebtschlamm) (OECD 209)

7727-43-7 barium sulphate, natural

EC50 32 mg/l (Daphnia magna) (Ba-Ion; 48 h)

hydrocarbons, C9, aromatic

LL 50 9.2 mg/l (Oncorhynchus mykiss (Regenbogenforelle)) (96h; OECD 203)

EL 50 2.9 mg/l (Pseudokirchneriella subcapitata) (72h; OECD 201)

3.2 mg/l (Daphnia magna) (48h; OECD 202)

EC50 >99 mg/l (Belebtschlamm) (10 min.; OECD 209)

140921-24-0 1,6-hexanediyl-bis(2-(2-(1-ethylpentyl)-3-oxazolidinyl)ethyl)carbamate

LC50/96 h 316 mg/l (Danio rerio (Zebrafisch)) (OECD 203)

EC50 1.77 mg/l (Bakterien) (activated sludge; ISO 8192-1986 E)

IC50 43 mg/l (DESMODESMUS SUBSPICATUS) (72h; OECD 201)

EC50 193 mg/l (Daphnia magna) (48h; OECD 202)

68512-30-1 Phenol, methylstyrenated

ErC50 15 mg/l (daphnia) (OECD TG 201)

LC50/96 h 25.8 mg/l (daphnia) (OECD TG 203)

EC50 14-51 mg/l (daphnia) (OECD TG 202)

53880-05-0 Isophorondiisocyanate homopolymer

LC50/96 h >1.51 mg/l (Cyprinus Carpio) (Richtlinie 67/548/EWG, Anhang V, C.1.)

EC50 >3.36 mg/l (Daphnia magna) (OECD 202)

EC50 >10,000 mg/l (Belebtschlamm) (OECD 209)

584-84-9 4-methyl-m-phenylene diisocyanate

NOEC >1,000 mg/kg (Eisenia foetida) (14 days; OECD 207)

NOEC 1.1 mg/kg (Daphnia magna) (21d)

ErC50 4,300 mg/l (Clorella vulgaris) (96h; OECD 201)

3,230 mg/l (Skeletonema costatum) (96h; OECD 201)

LC50/96 h 133 mg/l (Oncorhynchus mykiss (Regenbogenforelle)) (OECD 203)

EC50 >100 mg/l (Belebtschlamm) (3h; OECD 209)

EC50 12.5 mg/l (Daphnia magna) (OECD 202)

EC50 >100 mg/l (Belebtschlamm)

- 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.

- Ecotoxicological 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

- 12.5 Results of PBT and vPvB assessment

- PBT:

Not applicable.

- vPvB:

Not applicable.

- 12.6 Other adverse effects

No further relevant information available.

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.

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Disposal according to official regulations

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- European waste catalogue

08 04 09*	waste adhesives and sealants containing organic solvents or other hazardous substances
08 04 10	waste adhesives and sealants other than those mentioned in 08 04 09

- Uncleaned packaging:

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

SECTION 14: Transport information

- 14.1 UN-Number
- ADR, ADN, IMDG
- IATA

Void
UN1866

- 14.2 UN proper shipping name
- ADR, ADN, IMDG
- IATA

Void
RESIN SOLUTION

- 14.3 Transport hazard class(es)
- ADR, ADN, IMDG
- Class

Void

- IATA



- Class
- Label

3 Flammable liquids.
3

- 14.4 Packing group
- ADR, IMDG
- IATA

Void
III

- 14.5 Environmental hazards:
- Marine pollutant:

No

- 14.6 Special precautions for user
- Stowage Category

Not applicable.
A

- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

- Transport/Additional information:

- ADR

- Remarks:

Kein Gut der Kl. 3 gemäß 2.2.3.1.5 ADR / 2.3.2.5 IMDG-Code
ADR: Verpackung > 450 l = UN 1866 - Kl. 3 - HARZLÖSUNG, entzündbar - VP III
IMDG: Verpackung > 30 l = UN 1866 - Kl. 3 - HARZLÖSUNG, entzündbar - VP III
Außerhalb ADR / IMDG = UN 1866 - Kl. 3 - HARZLÖSUNG, entzündbar - VP III

Not goods of cl. 3 in accordance with 2.2.3.1.5 ADR / 2.3.2.5 IMDG-Code
ADR: Packaging > 450 l = UN 1866 - cl. 3 - RESIN SOLUTION, flammable - PG III
IMDG: Packaging > 30 l = UN 1866 - cl. 3 - RESIN SOLUTION, flammable - PG III
Outside ADR / IMDG = UN 1866 - cl. 3 - RESIN SOLUTION, flammable - PG III

- 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

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- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 40
- **National regulations:**
- **Information about limitation of use:** Employment restrictions concerning women of child-bearing age must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.
Employment restrictions concerning juveniles must be observed.
- **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.

- **Relevant phrases**
 - H226 Flammable liquid and vapour.
 - H304 May be fatal if swallowed and enters airways.
 - H315 Causes skin irritation.
 - H317 May cause an allergic skin reaction.
 - H319 Causes serious eye irritation.
 - H330 Fatal if inhaled.
 - H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 - H335 May cause respiratory irritation.
 - H336 May cause drowsiness or dizziness.
 - H351 Suspected of causing cancer.
 - H411 Toxic to aquatic life with long lasting effects.
 - H412 Harmful to aquatic life with long lasting effects.
- **Department issuing SDS:** research & development
- **Contact:** research & development
- **Abbreviations and acronyms:**
 - ADR: Accord européen sur le transport 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)
 - VOC: Volatile Organic Compounds (USA, EU)
 - 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
 - Acute Tox. 1: Acute toxicity – Category 1
 - Skin Irrit. 2: Skin corrosion/irritation – Category 2
 - Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
 - Resp. Sens. 1: Respiratory sensitisation – Category 1
 - Skin Sens. 1: Skin sensitisation – Category 1
 - Carc. 2: Carcinogenicity – Category 2
 - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 - 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**
 - Internet:
 - www.echa.com
 - www.baua.de
 - www.gestis.itrust.de (IFA: Institute für Occupational Safety and Health of the German Social Accident Insurance)
- *** Data compared to the previous version altered.**