

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 17.05.2022

Version number 9 (replaces version 8)

Revision: 17.05.2022

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

- **1.1 Product identifier**
- **Trade name:** **KEMPERTEC FPO-Primer**
- **UFI:** 8A99-S0J3-600K-3AX4
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
 - Identified use: intended for professional use only!
- **Application of the substance / the mixture** Priming
- **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:** Medical Emergency information in case of poisoning:
Poison Information Center Mainz - 24 h - Phone: +49 (0) 6131 19240
(advisory service in German or English language)

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**

Flam. Liq. 2	H225	Highly flammable liquid and vapour.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.
Repr. 2	H361d	Suspected of damaging the unborn child.
STOT SE 3	H335-H336	May cause respiratory irritation. May cause drowsiness or dizziness.
STOT RE 2	H373	May cause damage to the hearing organs through prolonged or repeated exposure.
Asp. Tox. 1	H304	May be fatal if swallowed and enters airways.
Aquatic Chronic 3	H412	Harmful to aquatic life with long lasting effects.

- 2.2 Label elements

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

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



GHS02 GHS07 GHS08

- Signal word

Danger

- Hazard-determining components of labelling:

toluene
xylene
ethylbenzene
cyclohexane

- Hazard statements

- H225 Highly flammable liquid and vapour.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H361d Suspected of damaging the unborn child.
- H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.
- H373 May cause damage to the hearing organs through prolonged or repeated exposure.
- H304 May be fatal if swallowed and enters airways.
- H412 Harmful to aquatic life with long lasting effects.

- Precautionary statements

- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
- P331 Do NOT induce vomiting.
- 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.
- P362+P364 Take off contaminated clothing and wash it before reuse.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Additional information:

EUH208 Contains p-tert-butylphenyl 1-(2,3-epoxy)propyl ether. May produce an allergic reaction.

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- 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: consisting of the following components.

- Dangerous components:

CAS: 108-88-3 EINECS: 203-625-9	toluene Flam. Liq. 2, H225; Repr. 2, H361d; STOT RE 2, H373; Asp. Tox. 1, H304; Skin Irrit. 2, H315; STOT SE 3, H336	25-50%
CAS: 1330-20-7 EINECS: 215-535-7	xylene Flam. Liq. 3, H226; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	≥20-≤25%
CAS: 100-41-4 EINECS: 202-849-4	ethylbenzene Flam. Liq. 2, H225; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H332; Aquatic Chronic 3, H412	≥2.5-≤10%
CAS: 123-42-2	diacetone alcohol substance with a Community workplace exposure limit	2.5-10%
CAS: 123-86-4 EINECS: 204-658-1	n-butyl acetate Flam. Liq. 3, H226; STOT SE 3, H336, EUH066	2.5-10%
CAS: 110-82-7 EINECS: 203-806-2	cyclohexane Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; STOT SE 3, H336	≥0.5-≤2.5%
CAS: 3101-60-8 EINECS: 221-453-2	p-tert-butylphenyl 1-(2,3-epoxy)propyl ether Aquatic Chronic 2, H411; Skin Sens. 1, H317	≥0.25-≤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. In case of unconsciousness place patient stably in side position for transportation. Supply fresh air; consult doctor in case of complaints.
- After inhalation: Immediately wash with water and soap and rinse thoroughly. Seek medical treatment in case of complaints.
- After skin contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor. Protect unharmed eye.
- After eye contact: If symptoms persist consult doctor.
- After swallowing: No further relevant information available.
- 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: In case of fire, the following can be released:
CO₂
Hydrogen chloride (HCl)
Formation of toxic gases is possible during heating or in case of fire.
Nitrogen oxides (NO_x)
Carbon monoxide (CO)

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- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
Mouth respiratory protective device.
Do not inhale explosion gases or combustion gases.
- **Additional information** Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources.
- **6.2 Environmental precautions:** Suppress gases/fumes/haze with water spray.
Inform respective authorities in case of seepage into water course or sewage system.
Prevent from spreading (e.g. by damming-in or oil barriers).
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 item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **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** 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.
Keep respiratory protective device available.
- **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

- **8.1 Control parameters**

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

108-88-3 toluene

OEL	Short-term value: 384 mg/m ³ , 100 ppm Long-term value: 192 mg/m ³ , 50 ppm Sk, IOELV
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1330-20-7 xylene

OEL	Short-term value: 442 mg/m ³ , 100 ppm Long-term value: 221 mg/m ³ , 50 ppm Sk, IOELV
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100-41-4 ethylbenzene

OEL Short-term value: 884 mg/m³, 200 ppm
Long-term value: 442 mg/m³, 100 ppm
Sk, IOELV

123-42-2 diacetone alcohol

OEL Long-term value: 240 mg/m³, 50 ppm

123-86-4 n-butyl acetate

OEL Short-term value: 723 mg/m³, 150 ppm
Long-term value: 241 mg/m³, 50 ppm
IOELV

110-82-7 cyclohexane

OEL Long-term value: 700 mg/m³, 200 ppm
IOELV

- **Regulatory information** OEL: 2021 CoP for the Safety, Health and Welfare at Work

- **DNELs**

1330-20-7 xylene

Inhalative	Acute - systemic effects	221 mg/m ³ (Worker) (GESTIS DNEL List (June 2018))
	Long term - systemic effects	221 mg/m ³ (Worker) (GESTIS DNEL List (June 2018))

100-41-4 ethylbenzene

Inhalative	Long term - systemic effects	77 mg/m ³ (Worker) (GESTIS DNEL List (June 2018))
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- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Appropriate engineering controls** No further data; see item 7.

- **Individual protection measures, such as 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.
Use suitable respiratory protective device in case of insufficient ventilation.
Filter A/P2

Respiratory protection - Gas filters and combination filters according to (DIN EN 141)

- **Hand protection**



Protective gloves

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.

- **Material of gloves**

Recommended materials:
Butyl rubber, BR
Recommended thickness of the material: ≥ 0.5 mm
Penetration time (min.): < 480

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.

- **Penetration time of glove material**

The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

- **As protection from splashes gloves made of the following materials are suitable:**

Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.1 mm
Penetration time (min.): < 10

- **Eye/face protection**



Tightly sealed goggles

Protective goggles and facial protection - Classification according to EN 166

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- **Body protection:** protective clothing (EN 13034) (Contd. of page 4)

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties

- General Information	
- Physical state	Fluid
- Colour:	Light yellow
- Odour:	Like aromatic solvents
- Odour threshold:	Not determined.
- Melting point/freezing point:	Undetermined.
- Boiling point or initial boiling point and boiling range	Undetermined.
- Flammability	Not applicable.
- Lower and upper explosion limit	
- Lower:	Not determined.
- Upper:	Not determined.
- Flash point:	4 °C
- Decomposition temperature:	Not determined.
- pH	Not determined.
- Viscosity:	
- Kinematic viscosity at 20 °C	10 s (DIN 53211/4)
- Dynamic:	Not determined.
- Solubility	
- water:	Not miscible or difficult to mix.
- Partition coefficient n-octanol/water (log value)	Not determined.
- Density and/or relative density	
- Density at 20 °C:	0.9 g/cm ³
- Relative density	Not determined.
- Vapour density	Not determined.

- 9.2 Other information

- Appearance:	
- Form:	Fluid
- Important information on protection of health and environment, and on safety.	
- Auto-ignition temperature:	Product is not selfigniting.
- Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
- Solvent separation test:	
- VOC (EC)	89.60 %
- 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	Highly 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

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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 peroxides.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Carbon monoxide
Carbon dioxide
Nitrogen oxides (NOx)

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:

108-88-3 toluene

Oral	LD50	5,000 mg/kg (rat)
Dermal	LD50	12,124 mg/kg (rabbit)
Inhalative	LC50/4 h	28.1 mg/l (rat)

1330-20-7 xylene

Oral	LD50	5,251 mg/kg (mouse) 4,300 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	21.7 mg/l (rat)

100-41-4 ethylbenzene

Oral	LD50	3,500 mg/kg (rat) (AMA Archives of Industrial Health. 14/387; 1956)
Dermal	LD50	15,400 mg/kg (rabbit) (Food and Cosmetics Toxicology. 13/803; 1975)
Inhalative	LC50/4 h	11 mg/l (ATE)

123-86-4 n-butyl acetate

Oral	LD50	10,760 mg/kg (rat)
Dermal	LD50	14,112 mg/kg (rat)
Inhalative	LC50/4 h	23.4 mg/l (rat) (OECD Guideline 403 (Acute Inhalation Toxicity))

110-82-7 cyclohexane

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

- **Skin corrosion/irritation** Causes skin irritation.
- **Serious eye damage/irritation** Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **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** Suspected of damaging the unborn child.
- **STOT-single exposure** May cause respiratory irritation. May cause drowsiness or dizziness.
- **STOT-repeated exposure** May cause damage to the hearing organs through prolonged or repeated exposure.
- **Aspiration hazard** May be fatal if swallowed and enters airways.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)** Repr. 2
- **11.2 Information on other hazards**

- Endocrine disrupting properties

None of the ingredients is listed.

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SECTION 12: Ecological information

- 12.1 Toxicity

- Aquatic toxicity:

1330-20-7 xylene

LC50/96 h	26.7 mg/l (Pimephales promelas)
LC50	2.6 mg/l (Oncorhynchus mykiss (Regenbogenforelle)) (96h; OECD 203)
EC50	2.2 mg/l (Pseudokirchneriella subcapitata) (72h; OECD 201)
IC50	2.2 mg/l (ALGAE)
NOEC	157 mg/l (Belebtschlamm) (OECD 209)
	1.17 mg/l (Ceriodaphnia dubia) (7d; US EPA 600/4-91/003)
	>1.3 mg/l (Oncorhynchus mykiss (Regenbogenforelle)) (56d)
IC50	1 mg/l (Daphnia magna) (24h; OECD 202)

123-86-4 n-butyl acetate

LC50/96 h	18 mg/l (PISCIS - Fisch) (OECD 203 (96 hr))
NOEC	200 mg/l (DESMODESMUS SUBSPICATUS)
EC50	44 mg/l (daphnia) (OECD 202 (48 hr))
EC50	>100 mg/l (ALGAE)
	647.7 mg/l (DESMODESMUS SUBSPICATUS)
EC50	72.8 mg/l (daphnia)
IC50	356 mg/l (Tetrahymena)

110-82-7 cyclohexane

LC50	55 mg/l (Leuciscus idus melanotus) (48h)
EC50	3.78 mg/l (Daphnia magna) (48h)
EC50	200 mg/l (Photobacterium phosphoreum) (5 min.)
EC50	>500 mg/l (DESMODESMUS SUBSPICATUS) (72 h)

- **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:** Harmful to aquatic organisms
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.

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.
Disposal according to official regulations

- European waste catalogue

08 04 09*	waste adhesives and sealants containing organic solvents or other hazardous substances
15 01 10*	packaging containing residues of or contaminated by hazardous substances
17 02 03	plastic

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

SECTION 14: Transport information

- **14.1 UN number or ID number**
- **ADR, IMDG, IATA** UN1263

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- 14.2 UN proper shipping name

- ADR 1263 PAINT
- IMDG, IATA PAINT

- 14.3 Transport hazard class(es)

- ADR



- Class 3 (F1) Flammable liquids.
- Label 3

- IMDG, IATA



- Class 3 Flammable liquids.
- Label 3

- 14.4 Packing group

- ADR, IMDG, IATA II

- 14.5 Environmental hazards:

Not applicable.

- 14.6 Special precautions for user

Warning: Flammable liquids.

- Hazard identification number (Kemler code):

33

- EMS Number:

F-E,S-E

- Stowage Category

B

- 14.7 Maritime transport in bulk according to IMO instruments Not applicable.

- Transport/Additional information:

- ADR

- Limited quantities (LQ)

5L

- Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

- Transport category

2

- Tunnel restriction code

D/E

- IMDG

- Limited quantities (LQ)

5L

- Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

- UN "Model Regulation":

UN 1263 PAINT, 3, II

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

- Qualifying quantity (tonnes) for the application of upper-tier requirements

50,000 t

- REGULATION (EC) No 1907/2006 ANNEX XVII

Conditions of restriction: 3, 48, 57

- 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.

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- 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

108-88-3 toluene

3

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

108-88-3 toluene

3

- 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.

The safety data sheet issued is also compliant with the regulation Annex I of Regulation (EU) no. 453/2010 and Annex II of Regulation (EU) no. 2020/878.

- Relevant phrases

- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H361d Suspected of damaging the unborn child.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.
- EUH066 Repeated exposure may cause skin dryness or cracking.

- Department issuing SDS:

research & development

- Contact:

research & development

- Date of previous version:

06.12.2021

- Version number of previous version:

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- Abbreviations and acronyms:

- 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)
- VOC: Volatile Organic Compounds (USA, EU)
- 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. 2: Flammable liquids – Category 2
- Flam. Liq. 3: Flammable liquids – Category 3
- Acute Tox. 4: Acute toxicity – Category 4
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- Skin Sens. 1: Skin sensitisation – Category 1
- Repr. 2: Reproductive toxicity – Category 2
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
- Asp. Tox. 1: Aspiration hazard – Category 1
- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic 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

- www.echa.europa.eu
- www.baua.de
- IFA: Institute für Occupational Safety and Health of the German Social Accident Insurance:
 - www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index.jsp
 - www.dguv.de/ifa/gestis/gestis-dnel-liste

- * Data compared to the previous version altered.