

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 25.06.2020



Version number 4

Revision: 25.06.2020

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

- 1.1 Product identifier
- Trade name: **KEMPERDUR AC Park+**
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
- Application of the substance / the mixture: Coating
- 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. 2 H225 Highly flammable liquid and vapour.
- Skin Irrit. 2 H315 Causes skin irritation.
- Skin Sens. 1 H317 May cause an allergic skin reaction.
- STOT SE 3 H335 May cause respiratory irritation.
- 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
- The product is classified and labelled according to the CLP regulation.
-  
- GHS02 GHS07
- Signal word
- Danger
- Hazard-determining components of labelling:
- methyl methacrylate
- 2-ethylhexyl acrylate
- Triethylene glycol dimethacrylate
- 2,2-bis(acryloyloxymethyl)butyl acrylate
- 2-(2H-Benzotriazol-2-yl)-p-cresol
- bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate
- Reaction mass of 2,2'-[(4-methylphenyl)imino]bisethanol and Ethanol 2-[[2-(2-hydroxyethoxy)ethyl](4-methylphenyl)amino]-
- Hazard statements
- H225 Highly flammable liquid and vapour.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H335 May cause respiratory irritation.
- 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.
- P261 Avoid breathing 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].
- P405 Store locked up.
- 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.

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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: 80-62-6 EINECS: 201-297-1 Index number: 607-035-00-6 Reg.nr.: 01-2119452498-28	methyl methacrylate Flam. Liq. 2, H225; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335	25-50%
CAS: 103-11-7 EINECS: 203-080-7 Index number: 607-107-00-7 Reg.nr.: 01-2119453158-37	2-ethylhexyl acrylate Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335; Aquatic Chronic 3, H412	12.5-25%
CAS: 109-16-0 EINECS: 203-652-6 Reg.nr.: 01-2119969287-21	Triethylene glycol dimethacrylate Skin Sens. 1, H317	0.5-2.5%
CAS: 15625-89-5 EINECS: 239-701-3 Index number: 607-111-00-9 Reg.nr.: 01-2119489896-11	2,2-bis(acryloyloxymethyl)butyl acrylate Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; Aquatic Chronic 3, H412	0.5-2.5%
CAS: 2440-22-4 EINECS: 219-470-5 Reg.nr.: 01-2119583811-34	2-(2H-Benzotriazol-2-yl)-p-cresol Aquatic Chronic 1, H410; Skin Sens. 1B, H317	0.5-2.5%
EC number: 915-687-0 Reg.nr.: 01-2119491304-40	bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Sens. 1, H317	0.5-2.5%
EC number: 911-490-9 Reg.nr.: 01-2119979579-10	Reaction mass of 2,2'-[(4-methylphenyl)imino]bisethanol and Ethanol 2-[[2-(2-hydroxyethoxy)ethyl](4-methylphenyl)amino]- Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317; 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:

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.  
Use fire extinguishing methods suitable to surrounding conditions.

#### - 5.2 Special hazards arising from the substance or mixture

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.  
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.

**- 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**

Ensure good ventilation/exhaustion at the workplace.  
Store in cool, dry place in tightly closed receptacles.  
Prevent formation of aerosols.

**- Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.  
Use explosion-proof apparatus / fittings and spark-proof tools.

**- 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:**

**80-62-6 methyl methacrylate**

WEL	Short-term value: 416 mg/m <sup>3</sup> , 100 ppm
	Long-term value: 208 mg/m <sup>3</sup> , 50 ppm

**- Regulatory information**

WEL: EH40/2020

**- 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.  
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)

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**- Protection of hands:**



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:  $\geq 0.5$  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:  $\geq 0.1$  mm

Penetration time (min.):  $< 10$

**- Eye protection:**



Tightly sealed goggles

Protective goggles and facial protection - Classification according to EN 166 protective clothing (EN 13034)

**- Body protection:**

### SECTION 9: Physical and chemical properties

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

**- General Information**

**- Appearance:**

Form: Fluid

Colour: Light grey

- Odour: Characteristic

- 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: 10 °C

- Flammability (solid, gas): Not applicable.

- Ignition temperature: Not determined.

- 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: 1.12 g/cm<sup>3</sup>

- Relative density: Not determined.

- Vapour density: Not determined.

- Evaporation rate: Not determined.

**- Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

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- Partition coefficient: n-octanol/water:	Not determined.
- Viscosity:	
Dynamic at 20 °C:	12,500 mPas
Kinematic:	Not determined.
- Solvent content:	
VOC (EC)	1.51 %
- 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 and stored 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:	No dangerous decomposition products known.

### 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:

##### 80-62-6 methyl methacrylate

Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)
Inhalative	LC50/4 h	29.8 mg/l (rat)

##### 103-11-7 2-ethylhexyl acrylate

Oral	LD50	4,435 mg/kg (rat) (IUCLID)
Dermal	LD50	7,522 mg/kg (rabbit) (IUCLID)

##### 109-16-0 Triethylene glycol dimethacrylate

Oral	LD50	10,066 mg/kg (rat)
Inhalative	LC50/4 h	>2,000 mg/l (mouse)

##### 15625-89-5 2,2-bis(acryloyloxymethyl)butyl acrylate

Oral	LD50	3,180-5,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat) 5,170 mg/kg (rabbit)

##### 2440-22-4 2-(2H-Benzotriazol-2-yl)-p-cresol

Oral	LD50	>10,000 mg/kg (rat) (OECD 423)
Dermal	LD50	>2,000 mg/kg (rat) (OECD 402)
Inhalative	LC50/4 h	>403 mg/l (rat) (OECD 403)

##### bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate

Oral	LD50	>2,300 mg/kg (rat) (IUCLID)
Inhalative	NOAEC	6.3 mg/l (daphnia) ((21 day))

##### Reaction mass of 2,2'-[(4-methylphenyl)imino]bisethanol and Ethanol 2-[[2-(2-hydroxyethoxy)ethyl](4-methylphenyl)amino]-

Oral	LD50	619 mg/kg (rat) (OECD 401)
Dermal	LD50	>2,000 mg/kg (rat) (OECD 402)

- Primary irritant effect:	
- Skin corrosion/irritation	Causes skin irritation.
- Serious eye damage/irritation	Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation	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.
- Reproductive toxicity	Based on available data, the classification criteria are not met.
- STOT-single exposure	May cause respiratory irritation.
- STOT-repeated exposure	Based on available data, the classification criteria are not met.

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Trade name: **KEMPERDUR AC Park+**- **Aspiration hazard**

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

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### SECTION 12: Ecological information

## - 12.1 Toxicity

- **Aquatic toxicity:****80-62-6 methyl methacrylate**

NOEC	37 mg/l (Daphnia magna) (21 days; OECD 202 Part 2, flow)
EC3	37 mg/l (Scenedesmus quadricauda) (DIN 38412 Part 9; 8d)
EC0	100 mg/l (Pseudomonas putida)
EC50	69 mg/l (Daphnia magna) (48 h; OECD 202)
LC 50	>79 mg/l (Oncorhynchus mykiss (Regenbogenforelle)) (96 h; OECD 203)

**103-11-7 2-ethylhexyl acrylate**

Inhalative	LC50/8h	1.19 mg/l (rat) (OECD 403)
	LC50/96 h	1.8 mg/l (Oncorhynchus mykiss (Regenbogenforelle))
	EC50	17 mg/l (Daphnia magna) (48h; IUCLID)
	EC50	>10,000 mg/l (Pseudomonas putida) (30 min.; IUCLID)
	IC50	44 mg/l (DESMODESMUS SUBSPICATUS) (72h, IUCLID)
	LC50	23 mg/l (Leuciscus idus (Goldorfe)) (48h; IUCLID)

**15625-89-5 2,2-bis(acryloyloxymethyl)butyl acrylate**

	EC20	625 mg/l (Belebtschlamm) (30 min.; Methods ISO 8192)
	ErC50	4.86 mg/l (DESMODESMUS SUBSPICATUS) (OECD 201)
	EC50	19.9 mg/l (Daphnia magna) (OECD 202)
	ErC10	0.57 mg/l (DESMODESMUS SUBSPICATUS) (OECD 201)
	LC 50	1.47 mg/l (Leuciscus idus (Goldorfe)) (Methods DIN 38412 - part 15)

**2440-22-4 2-(2H-Benzotriazol-2-yl)-p-cresol**

	LC50/96 h	>0.17 mg/l (Oncorhynchus mykiss (Regenbogenforelle)) (OECD 203)
	EC50	>1,000 mg/l (Daphnia magna) (24h; OECD 202)

**bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate**

	LC50/96 h (static)	0.97 mg/l (LEPOMUS MACROCHIRUS) (OECD 203; IUCLID)
	EC50	0.22 mg/l (ALGAE) ((72 hr))
	EC50	20 mg/l (Daphnia magna) (OECD 202/1; IUCLID)

**Reaction mass of 2,2'-[(4-methylphenyl)imino]bisethanol and Ethanol 2-[[2-(2-hydroxyethoxy)ethyl](4-methylphenyl)amino]-**

	LC50/96 h	>100 mg/l (Cyprinus Carpio) (OECD 203 (96 hr))
	EC50	>100 mg/l (Scenedesmus subspicatus) (OECD 201; static)
	EC50	48 mg/l (Daphnia magna) (OECD 202; part 1 static)
	EC50	>100 mg/l (Cyprinus Carpio) (96h; OECD 203; ISO 7346; 92/69/CEE; C.1 static)
	NOEC	>100 mg/l (Scenedesmus subspicatus) (OECD 201, static)

## - 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.

- **Ecotoxic effects:**- **Remark:**

Harmful to fish

- **Additional ecological information:**- **General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Harmful to aquatic organisms

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

## - 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. 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, IMDG, IATA**

UN1993

**- 14.2 UN proper shipping name**  
**- ADR**

1993 FLAMMABLE LIQUID, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED)  
FLAMMABLE LIQUID, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED)

**- IMDG, IATA**

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

Not applicable.

**- Transport/Additional information:**

**- ADR**

**- Limited quantities (LQ)**  
**- Excepted quantities (EQ)**

1L  
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)**  
**- Excepted quantities (EQ)**

1L  
Code: E2  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 500 ml

**- UN "Model Regulation":**

UN 1993 FLAMMABLE LIQUID, N.O.S. (METHYL METHACRYLATE MONOMER, STABILIZED), 3, II

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### 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
- National regulations:
- Information about limitation of use:      Employment restrictions concerning juveniles must be observed.  
Employment restrictions concerning pregnant and lactating women must be observed.  
Employment restrictions concerning women of child-bearing age 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**      H225 Highly flammable liquid and vapour.  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H400 Very toxic to aquatic life.  
H410 Very 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. 2: Flammable liquids – Category 2  
Acute Tox. 4: Acute toxicity - oral – Category 4  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Dam. 1: Serious eye damage/eye irritation – Category 1  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
Skin Sens. 1: Skin sensitisation – Category 1  
Skin Sens. 1B: Skin sensitisation – Category 1B  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
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 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3
- **Sources**      - [www.echa.europa.eu](http://www.echa.europa.eu)  
- [www.baua.de](http://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](http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index.jsp)  
- [www.dguv.de/ifa/gestis/gestis-dnel-liste](http://www.dguv.de/ifa/gestis/gestis-dnel-liste)
- **Data compared to the previous version altered.**