

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 25.11.2022

Version number 12 (replaces version 11)

Revision: 25.11.2022

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

- 1.1 Product identifier
- Trade name: **KEMPEROL 022 (A)**
- UFI: 8YT9-Y0F3-M00K-EJYN
- 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: Waterproofing
- 1.3 Details of the supplier of the safety data sheet
- Manufacturer/Supplier:
 - KEMPER SYSTEM LTD
 - Kemper House
 - 30 Kingsland Grange
 - Warrington
 - WA1 4RW
 - www.kempersystem.co.uk
 - enquiries@kempersystem.co.uk
 - phone: +44 (0)1925 445532
 - fax: +44 (0)1925 575096
- 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
 - Skin Irrit. 2 H315 Causes skin irritation.
 - Eye Irrit. 2 H319 Causes serious eye irritation.
 - 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
 - The product is classified and labelled according to the GB CLP regulation.
- Hazard pictograms



GHS07
- Signal word: Warning
- Hazard-determining components of labelling:
 - oxirane, mono[(C12-14-alkyloxy)methyl] derivs bis[4-(2,3-epoxypropoxy)phenyl]propane
 - Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-({2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy)methyl}oxirane decarboxylating cashew nut shell liquid
- Hazard statements
 - H315 Causes skin irritation.
 - H319 Causes serious eye irritation.
 - H317 May cause an allergic skin reaction.
 - H412 Harmful to aquatic life with long lasting effects.
- Precautionary statements
 - P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 - P273 Avoid release to the environment.
 - P280 Wear protective gloves / eye protection / face protection.
 - P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- Additional information:
 - EUH205 Contains epoxy constituents. May produce an allergic reaction.
 - EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
- 2.3 Other hazards
- Results of PBT and vPvB assessment
 - PBT: Not applicable.
 - vPvB: Not applicable.

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SECTION 3: Composition/information on ingredients

- 3.2 Mixtures

- Description: Mixture: consisting of the following components.

- Dangerous components:

CAS: 68609-97-2 EINECS: 271-846-8 Index number: 603-103-00-4 Reg.nr.: 01-2119485289-22	oxirane, mono[(C12-14-alkyloxy)methyl] derivs Skin Irrit. 2, H315; Skin Sens. 1, H317	12.5-25%
CAS: 1675-54-3 EINECS: 216-823-5 Index number: 603-073-00-2 Reg.nr.: 01-2119456619-26	bis[4-(2,3-epoxypropoxy)phenyl]propane Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317 Specific concentration limits: Eye Irrit. 2; H319: C ≥ 5 % Skin Irrit. 2; H315: C ≥ 5 %	≥12.5-<25%
CAS: 7727-43-7 EINECS: 231-784-4 Reg.nr.: 01-2119491274-35	barium sulphate, natural substance with a Community workplace exposure limit	12.5-25%
EC number: 701-263-0 Reg.nr.: 01-2119454392-40	Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-([4-(oxiran-2-ylmethoxy)benzyl]phenoxy)methyl)oxirane Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Skin Sens. 1, H317	≥2.5-<10%
CAS: 8007-24-7	decarboxylating cashew nut shell liquid Eye Dam. 1, H318; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Irrit. 2, H315; Skin Sens. 1A, H317	≥0.1-<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.

If symptoms persist consult doctor.

- After swallowing:

- 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

Formation of toxic gases is possible during heating or in case of fire.
Nitrogen oxides (NO_x)
Carbon monoxide (CO)

- 5.3 Advice for firefighters

- Protective equipment:

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

Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

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- **6.2 Environmental precautions:** 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.
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.
- **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
10
- **Storage class:**
- **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:

7727-43-7 barium sulphate, natural

WEL	Long-term value: 10* 4** mg/m ³ *inhalable dust **respirable dust
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- **Regulatory information** WEL: EH40/2020

- DNELs

68609-97-2 oxirane, mono[(C12-14-alkyloxy)methyl] derivs

Inhalative	Acute - systemic effects	3.6 mg/m ³ (Worker) (GESTIS DNEL List (June 2018))
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1675-54-3 bis[4-(2,3-epoxypropoxy)phenyl]propane

Inhalative	Acute - systemic effects	12.25 mg/m ³ (Worker) (GESTIS DNEL List (June 2018))
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7727-43-7 barium sulphate, natural

Inhalative	Acute - systemic effects	10 mg/m ³ (Worker) (GESTIS DNEL List (June 2018))
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- 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

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

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Only use chemical-protective gloves with CE-labelling of category III.
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

- Body protection:

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

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties

- General Information

- 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	200 °C
- Flammability	Not applicable.
- Lower and upper explosion limit	
- Lower:	Not determined.
- Upper:	Not determined.
- Flash point:	101 °C
- Decomposition temperature:	Not determined.
- pH	Not determined.
- Viscosity:	
- Kinematic viscosity	Not determined.
- 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:	1.2 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 does not present an explosion hazard.
- Solvent separation test:	
- VOC (EC)	2.60 %
- Change in condition	
- Evaporation rate	Not determined.

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- Information with regard to physical hazard classes
- Explosives Void
- Flammable gases Void
- Aerosols Void
- Oxidising gases Void
- Gases under pressure Void
- Flammable liquids Void
- 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 No further relevant information available.
- 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 Based on available data, the classification criteria are not met.
- Acute toxicity Based on available data, the classification criteria are not met.

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- LD/LC50 values relevant for classification:**68609-97-2 oxirane, mono[(C12-14-alkyloxy)methyl] derivs**

Oral	LD50	19,200 mg/kg (rat)
Dermal	LD50	>4,500 mg/kg (rabbit)

1675-54-3 bis[4-(2,3-epoxypropoxy)phenyl]propane

Oral	LD50	>2,000 mg/kg (rat) (OECD Guideline 401 (Acute Oral Toxicity))
Dermal	LD50	>2,000 mg/kg (rat) (OECD Guideline 402 (Acute Dermal Toxicity)) >3,450 mg/kg (rabbit) (OECD Guideline 402 (Acute Dermal Toxicity))

7727-43-7 barium sulphate, natural

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

Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-((2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy)methyl)oxirane

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

8007-24-7 decarboxylating cashew nut shell liquid

Oral	LD50	>2,000 mg/kg (rat) (OECD-guideline 423)
Dermal	LD50	1,100 mg/kg (ATE)

- Skin corrosion/irritation	Causes skin irritation.
- Serious eye damage/irritation	Causes serious eye irritation.
- Respiratory or skin sensitisation	May cause an allergic skin reaction.
- 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	Based on available data, the classification criteria are not met.
- 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:****68609-97-2 oxirane, mono[(C12-14-alkyloxy)methyl] derivs**

EbC50	843 mg/l (Pseudokirchneriella subcapitata)
LC50/96 h	1,800 mg/l (LEPOMUS MACROCHIRUS) >5,000 mg/l (Oncorhynchus mykiss (Regenbogenforelle))
NOEC	500 mg/l (Pseudokirchneriella subcapitata) (NOEC (72 hr))

1675-54-3 bis[4-(2,3-epoxypropoxy)phenyl]propane

NOEC 72h	4.2 mg/l (Selenastrum capricornutum)
ErC50	>11 mg/l (Scenedesmus capricornutum) (72h)
LC50/96 h	1.5 mg/l ((Salmo gairdneri) Regenbogenforelle)
EC50	1.8 mg/l (Daphnia magna) (48 h)
NOEC	0.3 mg/l (Daphnia magna)

7727-43-7 barium sulphate, natural

EC50	32 mg/l (Daphnia magna) (Ba-Ion; 48 h)
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Reaction mass of 2,2'-[methylenebis(2,1-phenyleneoxymethylene)]bis(oxirane) and 2,2'-[methylenebis(4,1-phenyleneoxymethylene)]bis(oxirane) and 2-((2-[4-(oxiran-2-ylmethoxy)benzyl]phenoxy)methyl)oxirane

EC50	1.8 mg/l (ALGAE) (72h)
EC50	2.55 mg/l (Daphnia magna) (48h)
EC50	2.54 mg/l (Leuciscus idus (Goldorfe)) (96h)

8007-24-7 decarboxylating cashew nut shell liquid

EC50	>100 mg/l /48 h (Daphnia magna) (OECD 202 (48 hr))
EC50	>1,000 mg/l (Bacteria) (OECD 209)

- 12.2 Persistence and degradability No further relevant information available.**- 12.3 Bioaccumulative potential** No further relevant information available.

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- 12.4 Mobility in soil No further relevant information available.
- 12.5 Results of PBT and vPvB assessment Not applicable.
- 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 Harmful to fish
- Remark: Harmful to fish
- Additional ecological information: Harmful to aquatic organisms
- 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.

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

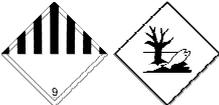
- European waste catalogue	
08 04 09*	waste adhesives and sealants containing organic solvents or other hazardous substances
15 01 10*	packaging containing residues of or contaminated by hazardous substances
17 02 03	plastic

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

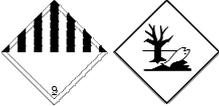
SECTION 14: Transport information

- 14.1 UN number or ID number
- ADR, IMDG, IATA UN3082
- 14.2 UN proper shipping name
- ADR 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700))
- IMDG ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700), Bisphenol F epichlorhydrin resin MW $<$ 700), MARINE POLLUTANT
- IATA ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700))

- 14.3 Transport hazard class(es)

- ADR
- 
- Class 9 (M6) Miscellaneous dangerous substances and articles.
- Label 9

- IMDG, IATA

- 
- Class 9 Miscellaneous dangerous substances and articles.
- Label 9

- 14.4 Packing group
- ADR, IMDG, IATA III

- 14.5 Environmental hazards: Product contains environmentally hazardous substances: reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

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<ul style="list-style-type: none"> - Marine pollutant: - Special marking (ADR): - Special marking (IATA): 	<ul style="list-style-type: none"> Yes Symbol (fish and tree) Symbol (fish and tree) Symbol (fish and tree) 	
<ul style="list-style-type: none"> - 14.6 Special precautions for user - Hazard identification number (Kemler code): - EMS Number: - Stowage Category 	<ul style="list-style-type: none"> Warning: Miscellaneous dangerous substances and articles. 90 F-A,S-F A 	
<ul style="list-style-type: none"> - 14.7 Maritime transport in bulk according to IMO instruments 		<ul style="list-style-type: none"> Not applicable.
<ul style="list-style-type: none"> - Transport/Additional information: 		
<ul style="list-style-type: none"> - ADR - Limited quantities (LQ) - Excepted quantities (EQ) 		<ul style="list-style-type: none"> 5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<ul style="list-style-type: none"> - Transport category - Tunnel restriction code 		<ul style="list-style-type: none"> 3 (-)
<ul style="list-style-type: none"> - IMDG - Limited quantities (LQ) - Excepted quantities (EQ) 		<ul style="list-style-type: none"> 5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<ul style="list-style-type: none"> - UN "Model Regulation": 		<ul style="list-style-type: none"> UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (REACTION PRODUCT: BISPHENOL-A-(EPICHLORHYDRIN) EPOXY RESIN (NUMBER AVERAGE MOLECULAR WEIGHT ≤ 700)), 9, III

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.
- 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.
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 H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.
- Department issuing SDS: research & development
- Contact: research & development

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- **Date of previous version:**
- **Version number of previous version:**
- **Abbreviations and acronyms:**

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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 (UK REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity – 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. 1A: Skin sensitisation – Category 1A
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.**