Safety data sheet

according to Regulation (EC) No. 1907/2006 as amended from time to time

Printing date 17.01.2023 Version-No. 4 (replaces version 3) Revision: 17.01.2023

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

· **1.1. Product identifier**

· **Trade name / Article-No: KLEIBERIT *842.0***

· **UFI:** 7QG0-T02R-200J-VJ9X

· **1.2. Relevant identified uses of the substance / mixture or uses advised against**
For professional users only.

· **Application of the substance / the mixture** Primer

· **1.3. Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**
KLEIBERIT SE & Co. KG
Max-Becker-Str. 4
D - 76356 Weingarten / Baden
Germany

· **Further information obtainable from:**
phone: +49 (0) 7244 62-0
FAX: +49 (0) 7244 700-0
E-Mail: hse@kleiberit.com

· **1.4. Emergency telephone number:**
+44 1235 239670 European regional number (European languages)
112 Emergency telephone number for Malta
543 22 22 Icelandic University Hospital

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SECTION 2: Hazards identification

· **2.1. Classification of the substance or mixture**

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

Skin Corr. 1B	H314 Causes severe skin burns and eye damage.
Eye Dam. 1	H318 Causes serious eye damage.
Aquatic Chronic 2	H411 Toxic to aquatic life with long lasting effects.

· **2.2. Label elements**

· **Hazard pictograms**

GHS05 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**
1-Octyl-2-pyrrolidone

· **Hazard statements**
H314 Causes severe skin burns and eye damage.
H411 Toxic to aquatic life with long lasting effects.

· **Precautionary statements**
P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection / face protection.

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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.

· **Additional information:**
Contains maleic anhydride. May produce an allergic reaction.
· **2.3. Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Determination of endocrine-disrupting properties**

78-93-3 2-butanone: List II

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SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

· Registry-No's	Identification / Classification GHS-CLP	%
CAS: 2687-94-7 Reg.nr.: 01-2119446675-30-XXXX 01-0000015335-74-xxxx	1-Octyl-2-pyrrolidone Skin Corr. 1B, H314; Aquatic Chronic 2, H411	30-40%
CAS: 108-32-7 Reg.nr.: 01-2119537232-48-XXXX	propylene carbonate Eye Irrit. 2, H319	30-40%
CAS: 78-93-3 Reg.nr.: 02-2119752535-35-XXXX 01-2119457290-43-XXXX	2-butanone Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336, EUH066	<1%
CAS: 108-31-6	maleic anhydride Resp. Sens. 1, H334; STOT RE 1, H372; Skin Corr. 1B, H314; Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Sens. 1A, H317, EUH071 Specific concentration limit: Skin Sens. 1A; H317: C ≥ 0.001 %	<0.001%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

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SECTION 4: First aid measures

· **4.1. Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:**
Treat affected skin with cotton wool or cellulose. Then wash and rinse thoroughly with water and a mild cleaning agent.
· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:**
Call for a doctor immediately.

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Rinse out mouth and then drink plenty of water.

· **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.

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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.

· **5.2. Special hazards arising from the substance or mixture** No further relevant information available.

· **5.3. Advice for firefighters**

· **Protective equipment:** Wear self-contained respiratory protective device.

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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.
Particular danger of slipping on leaked/spilled product.

· **6.2. Environmental precautions:**
Do not allow to enter surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.

· **6.3. Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to item 13.

· **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.

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SECTION 7: Handling and storage

· **7.1. Precautions for safe handling**
Appropriate regular employee training.
Ensure good ventilation. This can be achieved by using a local exhaustion or general exhaust system. If these measures are insufficient to keep the vapour concentration below the workplace limit, wear an adequate respiratory protective device.
Wear protective gloves/protective clothing/eye protection/face protection.
Use at room temperature
additional to professional application with multiple and/or significant contact
limit the exposure to 4 hours
Ventilation: not less than 5 -15 air exchanges per hour.
Do not allow to reach ground water, water bodies or sewage system.

· **7.2. Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** Keep container tightly closed.

· **Information about storage in one common storage facility:** Observe the national regulations.

· **Further information about storage conditions:** None.

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· **7.3. Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

· **8.1. Control parameters**

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

2687-94-7 1-Octyl-2-pyrrolidone
Dermal DNEL long term 2.5 mg/kg (human being)
Inhalative DNEL long term 17.45 mg/m3 (human being)

108-32-7 propylene carbonate
Dermal DNEL long term 20 mg/kg (human being)
Inhalative DNEL long term 70.5 mg/m3 (human being)

78-93-3 2-butanone
Dermal DNEL long term 1,161 mg/kg (human being)
Inhalative DNEL long term 600 mg/m3 (human being)

108-31-6 maleic anhydride
Inhalative DNEL short term 0.2 mg/m3 (human being)
DNEL long term 0.081 mg/m3 (human being)

· **PNECs**

2687-94-7 1-Octyl-2-pyrrolidone

PNEC- Freshwater	0.091 mg/l (x00)
PNEC-seawater	0.0091 mg/l (x00)
PNEC-Freshwater sediment	3.14 mg/kg (x00)
PNEC-Seawater sediment	0.314 mg/kg (x00)
PNEC-soil	0.164 mg/kg (x00)
PNEC-wastewater treatment plant	170 mg/l (x00)

108-32-7 propylene carbonate

PNEC- Freshwater	0.9 mg/l (not specified)
PNEC-seawater	0.09 mg/l (not specified)
PNEC-periodic release	9 mg/l (not specified)
PNEC-soil	0.81 mg/kg (not specified)
PNEC-wastewater treatment plant	7,400 mg/l (not specified)

78-93-3 2-butanone

PNEC- Freshwater	55.8 mg/l (not specified)
PNEC-seawater	55.8 mg/l (not specified)
PNEC-Freshwater sediment	284.7 mg/kg (not specified)
PNEC-Seawater sediment	284.7 mg/kg (not specified)
PNEC-soil	22.5 mg/kg (not specified)

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PNEC-wastewater treatment plant 709 mg/l (not specified)

108-31-6 maleic anhydride

PNEC- Freshwater	0.038 mg/l (not specified)
PNEC-seawater	0.0038 mg/l (not specified)
PNEC-Freshwater sediment	0.296 mg/kg (not specified)
PNEC-Seawater sediment	0.0296 mg/kg (not specified)
PNEC-soil	0.037 mg/kg (not specified)
PNEC-wastewater treatment plant	44.6 mg/l (not specified)

· **Ingredients with biological limit values:**

78-93-3 2-butanone

BGW (Germany) 2 mg/l
Untersuchungsmaterial: Urin
Probennahmezeitpunkt: Expositionsende bzw. Schichtende
Parameter: 2-Butanon

· **CAS No. Designation of material % Type Value Unit**

108-32-7 propylene carbonate

AGW (Germany) Long-term value: 8.5 mg/m³, 2 ppm
1(I);DFG, Y, 11

78-93-3 2-butanone

IOELV (INT) Short-term value: 900 mg/m³, 300 ppm
Long-term value: 600 mg/m³, 200 ppm

AGW (Germany) Long-term value: 600 mg/m³, 200 ppm
1(I);DFG, EU, H, Y

108-31-6 maleic anhydride

AGW (Germany) Long-term value: 0.081 mg/m³, 0.02 ppm
1;=2.5=(I);DFG, Sah, Y, 11

· **8.2. Exposure controls**
limit the exposure to:
8 hours
· **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.
· **Respiratory protection:** Not necessary if room is well-ventilated.
· **Hand protection** Protective gloves
· **Material of gloves** B Polyethylennylon: Barrier™ (0,062 mm)
· **Eye/face protection** Face protection
· **Body protection:** Protective work clothing

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SECTION 9: Physical and chemical properties

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

· **General Information**	
· **Physical state**	Fluid
· **Colour:**	Yellowish
· **Odour:**	Fruit-like
· **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:**	0.9 Vol %
· **Upper:**	8 Vol %
· **Flash point:**	65 °C
· **Ignition temperature:**	370 °C
· **Decomposition temperature:**	Not determined.
· **pH at 20 °C**	8
· **Viscosity:**	
· **Kinematic viscosity**	Not determined.
· **Dynamic at 20 °C:**	ca. 15 mPas Brookfield (1 / 20 rpm)
· **Solubility**	
· **water:**	Not miscible or difficult to mix.
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Vapour pressure:**	Not determined.
· **Density and/or relative density**	
· **Density at 20 °C:**	ca. 1.06 g/cm³
· **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.
· **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**	Void
· **Flammable solids**	Void

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· **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**
see item 10.3
No further relevant information available.
· **10.2. Chemical stability** Stable when stored and used properly.
· **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.

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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/LC$_{50}$ values relevant for classification:**

2687-94-7 1-Octyl-2-pyrrolidone

Oral	LD_{50}	2,050 mg/kg (rat)
Dermal	LD_{50}	>2,000 mg/kg (rabbit)
		>4,000 mg/kg (rat)

108-32-7 propylene carbonate

Oral	LD_{50}	33,520 mg/kg (rat)
Dermal	LD_{50}	>2,000 mg/kg (rabbit)

78-93-3 2-butanone

Oral	LD_{50}	>2,193 mg/kg (rat)
Dermal	LD_{50}	>5,000 mg/kg (rbt)
Inhalative	LC_{50} /4 h	34 mg/l (rat)
	LC_{50} /4 h	>5,000 ppm (rat)

108-31-6 maleic anhydride

Oral	LD_{50}	1,090 mg/kg (rat)
Dermal	LD_{50}	2,620 mg/kg (rabbit)

· **Skin corrosion/irritation** Causes severe skin burns and eye damage.

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· **Serious eye damage/irritation** Causes serious eye damage.
· **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** 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**

78-93-3 2-butanone: List II

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SECTION 12: Ecological information

· **12.1. Toxicity**
· **Aquatic toxicity:**

2687-94-7 1-Octyl-2-pyrrolidone
LC_{50} >12.8 mg / l / 96h (fish)
EC_{50} 12.2 mg / l / 48h (water flea - daphnia)
EC_{50} 19 mg / l / 72h (algae)

108-32-7 propylene carbonate
LC_{50} >1,000 mg / l / 96h (fish)
EC_{50} >1,000 mg / l / 48h (water flea - daphnia)
EC_{50} >900 mg / l / 72h (algae)

78-93-3 2-butanone
LC_{50} 2,990 mg / l / 96h (Fathead minnow - Pimephales promelas)
EC_{50} 308 mg / l / 48h (water flea - daphnia)
EC_{50} 1,972 mg / l / 72h (green algae-Ps.kirchneriella subcapitata)

108-31-6 maleic anhydride
LC_{50} 75 mg / l / 96h (Fathead minnow - Pimephales promelas)
EC_{50} 42.81 mg / l / 48h (water flea - daphnia)
EC_{50} 74.32 mg / l / 72h (green algae - Desmodesmus subspicatus)
· **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** For information on endocrine disrupting properties see section 11.
· **12.6. Other adverse effects**
· **Remark:** Harmful to fish

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· **Behaviour in sewage processing plants:**
· **Remark:**
At correct sewage disposal in small quantities to biological sewage plants failures of the activated sludge are not expected.
· **Additional ecological information:**
· **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Danger to drinking water if even small quantities leak into the ground.
Do not allow product to reach sewage system or any water course.

SECTION 13: Disposal considerations

· **13.1. Waste treatment methods**
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
· **European waste catalogue**
08 04 09* waste adhesives and sealants containing organic solvents or other hazardous substances
· **Uncleaned packaging:**
· **Recommendation:**
Non contaminated packagings may be recycled.
Empty contaminated packagings thoroughly. Disposal must be made according to official regulations.

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SECTION 14: Transport information

· **14.1. UN number or ID number**
· **ADR, IMDG, IATA** UN3267
· **14.2. UN proper shipping name**
· **DOT** Corrosive liquid, basic, organic, n.o.s. (1-Octyl-2-pyrrolidone)
· **ADR** 3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (1-Octyl-2-pyrrolidone), ENVIRONMENTALLY HAZARDOUS
· **IMDG** CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (1-Octyl-2-pyrrolidone), MARINE POLLUTANT
· **IATA** CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (1-Octyl-2-pyrrolidone)
· **14.3. Transport hazard class(es)**
· **Class** 8 Corrosive substances.
· **Label** 8
· **14.4. Packing group**
· **ADR, IMDG, IATA** II
· **14.5. Environmental hazards:** Product contains environmentally hazardous substances: 1-Octyl-2-pyrrolidone
· **Marine pollutant:** Symbol (fish and tree)
· **Special marking (ADR):** Symbol (fish and tree)
· **14.6. Special precautions for user** Warning: Corrosive substances.
· **Hazard identification number (Kemler code):** 80
· **EMS Number:** F-A,S-B
· **Segregation groups** (SGG18) Alkalis
· **Stowage Category** B

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· **Stowage Code**	SW2 Clear of living quarters.
· **Segregation Code**	SG35 Stow "separated from" SGG1-acids
· **14.7. Maritime transport in bulk according to IMO instruments**	Not applicable.
· **ADR**	
· **Limited quantities (LQ)**	1L
· **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**	E
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

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SECTION 15: Regulatory information

· **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
See position no 2 - Hazards Identification

· **Directive 2012/18/EU - Seveso-III:**
· **Named dangerous substances - ANNEX I** None of the ingredients is included.
· **Seveso category** E2 Hazardous to the Aquatic Environment
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
· **Regulation (EC) No 1907/2006 - REACH, ANNEX XVII** Conditions of restriction: 3
· **Regulation (EU) No 649/2012**

None of the ingredients is listed.
· **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**

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

78-93-3 2-butanone: 3

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· **National regulations:**

· **D: Waterhazard class** Water hazard class 2 (Self-assessment): hazardous for water.
· **Other regulations, limitations and prohibitive regulations:** Restricted to professional users.
· **VOC - 2010/75/EU [g/L]:** <25.0 g/l
· **VOC - 2010/75/EU [%]:** <2.00 %

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

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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.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H336 May cause drowsiness or dizziness.
H372 Causes damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.
EUH066 Repeated exposure may cause skin dryness or cracking.
EUH071 Corrosive to the respiratory tract.

· **Department issuing SDS:** Safety & Environment
· **Version number of previous version:** 3
· **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
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (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
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1A: Skin sensitisation – Category 1A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2