Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 25.10.2023 Version number 24 (replaces version 23) Revision: 25.10.2023

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

· **1.1 Product identifier**

· **Product name: Chloride-3**

· **Catalog number:** 424338, 419206, 419207, 424338-0

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**

· **Application of the substance / the preparation:** Reagent for water analysis

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

· **Supplier:**
Tintometer GmbH
Schleefstraße 8-12
44287 Dortmund
Made in Germany
www.lovibond.com
phone: +49 (0)231 94510-0
e-mail: sales@lovibond.com

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom
phone : +44 1980 664800
e-mail: SDS@lovibond.uk

· **Informing department:**
e-mail: sds@lovibond.com
Product Safety Department

· **1.4 Emergency telephone number:**
+44 1235 239670
Languages: English

SECTION 2: Hazards identification

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

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


GHS08 health hazard

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.


GHS05 corrosion

Met. Corr.1 H290 May be corrosive to metals.


GHS07

Acute Tox. 4 H312 Harmful in contact with skin.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye 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**
The product is classified and labelled according to the GB CLP regulation.

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· **Hazard pictograms**

GHS05 GHS07 GHS08

· **Signal word** Warning
· **Hazard-determining components of labelling:**
mercury dinitrate
· **Hazard statements**
H290 May be corrosive to metals.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.
· **Precautionary statements**
P260 Do not breathe mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection.
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.
P390 Absorb spillage to prevent material damage.
P308+P311 IF exposed or concerned: Call a POISON CENTER/doctor.

· **2.3 Other hazards** CAS 10045-94-0: Danger by skin resorption.

· **Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
· **Determination of endocrine-disrupting properties**
The product does not contain substances with endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** aqueous solution
· **Dangerous components:**
The percent content of the mercury compound mentioned below refers to the amount of the pure mercury therein.

CAS: 7697-37-2 EINECS: 231-714-2 Index No: 007-030-00-3 Reg.nr.: 01-2119487297-23-XXXX	nitric acid Ox. Liq. 3, H272; Acute Tox. 3, H331; Met. Corr.1, H290; Skin Corr. 1A, H314, EUH071 ATE: LC50/4h inhalative: 2.65 mg/l Specific concentration limits: Ox. Liq. 3; H272: C ≥ 65 % Skin Corr. 1A; H314: C ≥ 20 % Skin Corr. 1B; H314: 5 % ≤ C < 20 %	≤2.5%
CAS: 10045-94-0 EINECS: 233-152-3 Index No: 080-002-00-6	mercury dinitrate Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330; STOT RE 2, H373; Aquatic Acute 1, H400 (M=1); Aquatic Chronic 1, H410 (M=1) Specific concentration limit: STOT RE 2; H373: C ≥ 0.1 %	0.25–<1%

· **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** Instantly remove any clothing soiled by the product.
· **After inhalation**
Supply fresh air.
Get medical advice/attention.
· **After skin contact**
Instantly rinse with water.
Seek medical advice.

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· **After eye contact** Rinse opened eye for several minutes (at least 15 min) under running water. Then consult doctor.
· **After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
Seek medical treatment.
· **4.2 Most important symptoms and effects, both acute and delayed:**
irritations
after inhalation:
mucosal irritations, cough, shortness of breath
after swallowing:
metallic taste
sickness
vomiting
bloody diarrhoea
pain
· **Danger**
Danger of system failure.
Danger of disturbed cardiac rhythm.
· **4.3 Indication of any immediate medical attention and special treatment needed:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
· **5.2 Special hazards arising from the substance or mixture**
The product is not combustible.
Formation of toxic gases is possible during heating or in case of fire.
nitrous gases
Nitrogen oxides (NOx)
mercury vapours
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
· **Additional information**
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
· **Advice for non-emergency personnel:**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
· **Advice for emergency responders:** Protective equipment: see section 8

· **6.2 Environmental precautions:**
Do not allow product to reach sewage system or water bodies.
Inform respective authorities in case product reaches water or sewage system.
· **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Neutralize with diluted sodium hydroxide solution or by throwing on lime sand, lime or sodium carbonate.
Absorb with liquid-binding material (sand, diatomite, universal binders).
Dispose of contaminated material as waste according to item 13.
· **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

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SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
· **Advice on safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Hygiene measures:**
Avoid contact with the skin.
Avoid contact with the eyes.
Take off immediately all contaminated clothing.
Wash hands during breaks and at the end of the work.
Do not eat, drink or smoke when using this product.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Requirements to be met by storerooms and containers:**
Store in cool location.
Keep only in original packaging.
· **Information about storage in one common storage facility:**
Store away from metals.
Do not store together with alkalis (caustic solutions).
· **Further information about storage conditions:**
Keep container tightly sealed.
Protect from heat and direct sunlight.
Protect from the effects of light.
Protect from humidity and keep away from water.
· **Recommended storage temperature:** 20°C +/- 5°C

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

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
CAS: 7697-37-2 nitric acid	
WEL (Great Britain)	Short-term value: 2.6 mg/m³, 1 ppm
IOELV (European Union)	Short-term value: 2.6 mg/m³, 1 ppm
CAS: 10045-94-0 mercury dinitrate	
WEL (Great Britain)	Long-term value: 0.02 mg/m³ as Hg
BOELV (European Union)	Long-term value: 0.02 mg/m³ as Hg
IOELV (European Union)	Long-term value: 0.02 mg/m³ as Hg

· **Regulatory information**
WEL (Great Britain): EH40/2020
IOELV (European Union): (EU) 2019/1831
BOELV (European Union): EU 2022/431
· **Additional information:** IOELV = Indicative Occupational Exposure Limit
· **Recommended monitoring procedures:**
Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

· **Ingredients with biological limit values:**	
CAS: 10045-94-0 mercury dinitrate	
BMGV (Great Britain)	20 µmol/mol creatinine Medium: urine Sampling time: random Parameter: mercury

· **Regulatory information** BMGV (Great Britain): EH40/2011

· **Additional information:** The lists that were valid during the compilation were used as basis.

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· **8.2 Exposure controls**

· **Engineering measures:**
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
See item 7.

· **Individual protection measures, such as personal protective equipment**
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.
· **Eye/face protection**
Safety glasses
Use safety glasses that have been tested and approved in accordance with government standards such as EN 166.
· **Hand protection**
Protective gloves.
Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
· **Material of gloves**
nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
· **Penetration time of glove material**
Value for the permeation: Level = 1 (< 10 min)
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Other skin protection (body protection):** Protective work clothing.
· **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
· **Recommended filter device for short term use:** Special gas filter Hg-P3

· **Environmental exposure controls** Do not allow product to reach sewage system or water bodies.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **Physical state**	Fluid
· **Form:**	Solution
· **Colour:**	Colourless
· **Odour:**	Odourless
· **Odour threshold:**	Not applicable.
· **Melting point/Freezing point:**	Not determined.
· **Boiling point or initial boiling point and boiling range**	100°C (CAS: 7732-18-5 water)
· **Flammability**	The product is not combustible.
· **Explosive properties:**	Product is not explosive.
· **Lower and upper explosion limit**	
Lower:	Not applicable.
Upper:	Not applicable.
· **Flash point:**	Not applicable.
· **Auto-ignition temperature:**	Not applicable.
· **Decomposition temperature:**	Not determined.
· **pH at 20°C**	~ 1
· **Kinematic viscosity**	Not determined.
· **Solubility**	
· **Water:**	Fully miscible
· **Partition coefficient n-octanol/water (log value)**	Not applicable (mixture).
· **Vapour pressure:**	Not determined.
· **Density and/or relative density**	
· **Density at 20°C:**	1 g/cm³
· **Relative density:**	Not determined.
· **Relative gas density**	Not determined.
· **Particle characteristics**	Not applicable (liquid).

· **9.2 Other information**

· **Information with regard to physical hazard classes**	
· **Corrosive to metals**	May be corrosive to metals.
· **Metals that are corroded by the substance or mixture**	Information on incompatible materials can be found in Sections 7 and 10.

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· **Metal corrosion rate:**	acc. to "Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Fifth revised Edition"
· **Corrosion rate (steel)**	> 320 mm/a
· **Other safety characteristics**	
· **Oxidising properties:**	none
· **Additional information**	
· **Solids content:**	< 0.5 %
· **Solvent content:**	
· **Organic solvents:**	0.0 %
· **Water:**	> 97 %

SECTION 10: Stability and reactivity

· **10.1 Reactivity** see section 10.3
· **10.2 Chemical stability** Stable at ambient temperature (room temperature).
· **10.3 Possibility of hazardous reactions**
Reacts with metals forming hydrogen (Danger of explosion in case of large amounts!)
Corrosive action on metals
Reacts with ammonia (NH_3).
Reacts with acids and alkali (lyes).
Reacts with reducing agents
· **10.4 Conditions to avoid** To avoid thermal decomposition do not overheat.
· **10.5 Incompatible materials:**
metals
alkali metals
organic solvents
organic substances
· **10.6 Hazardous decomposition products:** see section 5

SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

· **Acute toxicity**
Classification according to calculation procedure:
Harmful in contact with skin.

· **Acute toxicity estimate ($ATE_{(MIX)}$) - Calculation method:**		
Dermal	CLP $ATE_{(MIX)}$	1927 mg/kg (.)

· **LD/LC50 values that are relevant for classification:**		
CAS: 7697-37-2 nitric acid		
Oral	LDLo	430 mg/kg (human) (IUCLID)
Inhalative	LC50/4h	0.5 mg/l (aerosol (dust, mist)) (ATE) 2.65 mg/l (Vapor)
CAS: 10045-94-0 mercury dinitrate		
Oral	LD50	26 mg/kg (rat) (Gestis)
Dermal	LD50	5 mg/kg (ATE)
	LD50.	75 mg/kg (rat) (Gestis)
Inhalative	LC50/4h	0.05 mg/l /ATE (aerosol (dust, mist))

· **Skin corrosion/irritation** Causes skin irritation.
· **Serious eye damage/irritation** Causes serious eye irritation.
· **Information on components:** CAS 7697-37-2 / 10045-94-0: chronic: dermatitis

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Information on components:** CAS 10045-94-0: Sensitizing effect by skin contact is possible by prolonged/repeated exposure.

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.

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· **Reproductive toxicity** Based on available data, the classification criteria are not met.

· **STOT (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.
· **STOT (specific target organ toxicity) -repeated exposure**
May cause damage to organs through prolonged or repeated exposure.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

· **Information on likely routes of exposure**
An intake of nitric acid (during occupational handling) is mainly to be expected via the respiratory tract.
Exposure to acid vapors caused irritation to the eyes and skin but damage to the airways is of the greatest concern. [GESTIS]
A primary intake pathway for mercury(II)-nitrate cannot be stated. Intake is possible via the gastrointestinal tract, lung and also through skin penetration. [GESTIS]

· **Additional toxicological information:**
Mercury compounds have a cytotoxic and protoplasmatoxic effect.
The principal signs manifest themselves in the CNS.

CAS: 7697-37-2 nitric acid
. (source: GESTIS) Main toxic effects Acute: Irritation and corrosion to the eyes, airways and skin, danger of severe damage to the eyes and lungs, after swallowing life threatening chemical burns in the gastrointestinal tract Chronic: Diseases of the airways, damage to the teeth
CAS: 7783-34-8 mercury nitrate monohydrate
. (source: GESTIS) Main toxic effects Acute: probable severe irritation through to chemical burns to mucous membranes and skin, damage to the eyes; skin sensitizing potential, toxic effects to the gastrointestinal system, functional disturbances or damage to the kidneys. Chronic: damage to the skin and kidneys. Repeated or prolonged contact with the skin can cause skin damage (reddening, inflammation, ulcerative changes) which are irritatively or (following sensitization) allergically related.

· **11.2 Information on other hazards**
· **Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

· **Other information**
Other dangerous properties can not be excluded.
According to the information available to us, the chemical, physical and toxicological properties of the substances mentioned in Chapter 3 have not been thoroughly investigated.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
CAS: 7697-37-2 nitric acid	
LC50	72 mg/l/96h (mosquitofish) (IUCLID)
CAS: 10045-94-0 mercury dinitrate	
LC50	0.5 mg/l/48h (gold orfe)
LC50	0.17 mg/l/96h (fathhead minnow) (ECOTOX)

· **12.2 Persistence and degradability** .
· **Other information:**
Mixture of inorganic compounds.
Methods for the determination of biodegradability are not applicable to inorganic substances.
· **12.3 Bioaccumulative potential**
Pow = n-octanol/wasser partition coefficient
log Pow < 1 = Does not accumulate in organisms.

CAS: 7697-37-2 nitric acid	
log Pow	-2.3 (.)

· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

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· **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
Depending on the concentration, phosphorus and/or nitrogen compounds may contribute to the eutrophication of water supplies.
Forms corrosive mixtures with water even if diluted.
Avoid transfer into the environment.
· **Water hazard:**
Do not allow product to reach ground water, water bodies or sewage system.
Danger to drinking water if even small quantities leak into soil.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Hand over to disposers of hazardous waste.

· **European waste catalogue**	
16 05 07*	discarded inorganic chemicals consisting of or containing hazardous substances
06 04 04*	wastes containing mercury

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

· **14.1 UN number or ID number**	
· **ADR, IMDG, IATA**	UN3264
· **14.2 UN proper shipping name**	
· **ADR**	3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)
· **IMDG, IATA**	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)
· **14.3 Transport hazard class(es)**	
· **ADR**	
	
· **Class**	8 (C1) Corrosive substances.
· **Label**	8
· **IMDG, IATA**	
	
· **Class**	8 Corrosive substances.
· **Label**	8
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	III
· **14.5 Environmental hazards:**	Not applicable.
· **14.6 Special precautions for user**	Warning: Corrosive substances.
· **Kemler Number:**	80
· **EMS Number:**	F-A,S-B
· **Segregation groups**	(SGG1) Acids
· **Stowage Category**	A
· **Stowage Code**	SW2 Clear of living quarters.

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· **Segregation Code**	SG36 Stow "separated from" SGG18-alkalis. SG49 Stow "separated from" SGG6-cyanides
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **Transport category**	3
· **Tunnel restriction code**	E
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

*
SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Poisons Act UK**

· **Regulated explosives precursors**

The concentration of the substance is less than the stated mass percentage and should still be considered as reportable substance:

CAS: 7697-37-2	nitric acid	3%

· **Regulated poisons**

CAS: 10045-94-0	mercury dinitrate	Listed

· **Reportable explosives precursors**

None of the ingredients is listed.

· **Reportable poisons**

None of the ingredients is listed.

· **Regulation (EU) 2019/1148 on the marketing and use of explosives precursors**

This product is regulated by Regulation (EU) 2019/1148:
All suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.
Please see https://ec.europa.eu

· **explosives precursors - ANNEX I**

CAS 7697-37-2: c < 3%

CAS: 7697-37-2	nitric acid	*

· **Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)**

CAS: 10045-94-0	mercury dinitrate	Annex I Part 1 Annex I Part 3 Annex V Part 2

· **Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:**

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.

· **Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:**

None of the ingredients is listed.

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· **REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)**
None of the ingredients is listed.

· **LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)**
None of the ingredients is listed.

· **Substances of very high concern (SVHC) according to REACH, Article 57**
This product does not contain any substances of very high concern above the legal concentration limit of ≥ 0.1% (w / w).
· **Substances of very high concern (SVHC) according to UK REACH**
This product does not contain any substances of very high concern above the legal concentration limit of ≥ 0.1% (w / w).

· **Directive 2012/18/EU (SEVESO III):**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 18

· **Information about limitation of use:**
Employment restrictions concerning young persons must be observed (94/33/EC).
Employment restrictions concerning pregnant and lactating women must be observed (92/85/EEC).

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

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Training hints** Provide adequate information, instruction and training for operators.

· **Relevant phrases**
H272 May intensify fire; oxidiser.
H290 May be corrosive to metals.
H300 Fatal if swallowed.
H310 Fatal in contact with skin.
H314 Causes severe skin burns and eye damage.
H330 Fatal if inhaled.
H331 Toxic if inhaled.
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.
EUH071 Corrosive to the respiratory tract.

· **Abbreviations and acronyms:**
OECD: Organisation for Economic Co-operation and Development
STOT: specific target organ toxicity
SE: single exposure
RE: repeated exposure
EC50: half maximal effective concentration
IC50: half maximal inhibitory concentration
NOEL or NOEC: No Observed Effect Level or Concentration
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Ox. Liq. 3: Oxidizing liquids – Category 3
Met. Corr.1: Corrosive to metals – Category 1
Acute Tox. 2: Acute toxicity – Category 2
Acute Tox. 1: Acute toxicity – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 3: Acute toxicity – Category 3
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
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

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Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· **Sources**
Data arise from safety data sheets, reference works and literature.
ECOTOX Database
GESTIS- Stoffdatenbank (Substance Database, Germany)
IUCLID (International Uniform Chemical Information Database)
ECHA: European CHemicals Agency http://echa.europa.eu
RTECS (Registry of Toxic Effects of Chemical Substances)

· *** Data compared to the previous version altered.**