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

revised on: 29.08.2023 Version number 7 (replaces version 6) Creation Date: 23.12.2015

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

· **1.1 Product identifier**

· **Trade name: 1-Propanol**

· **Article number:** 1188
· **CAS Number:**
71-23-8
· **EC number:**
200-746-9
· **Index number:**
603-003-00-0
· **Registration number** 01-2119486761-29-XXXX
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
· **Sector of Use**
SU9 Manufacture of fine chemicals
SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
SU24 Scientific research and development
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
· **Product category**
PC19 Intermediate
PC20 Processing aids such as pH-regulators, flocculants, precipitants, neutralization agents
PC21 Laboratory chemicals
PC29 Pharmaceuticals
PC39 Cosmetics, personal care products
PC40 Extraction agents
· **Process category**
PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4 Chemical production where opportunity for exposure arises
PROC5 Mixing or blending in batch processes
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC15 Use as laboratory reagent
· **Environmental release category**
ERC1 Manufacture of the substance
ERC2 Formulation into mixture
ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
ERC6a Use of intermediate
· **Application of the substance / the mixture**
Industrial use
Laboratory chemicals
Solvents
Chemical analytics

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Th. Geyer GmbH & Co. KG
Dornierstr. 4 – 6
D-71272 Renningen

Tel.: +49(0)7159-1637-0, Fax:+49 (0)7159/18417

(Contd. on page 2)

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

revised on: 29.08.2023 Version number 7 (replaces version 6) Creation Date: 23.12.2015

Trade name: 1-Propanol

(Contd. of page 1)

www.thgeyer.de
sicherheitsdatenblaetter@thgeyer.de

· **Further information obtainable from:** Product management department

· **1.4 Emergency telephone number:**
National Poisons Information Service
City Hospital
Dudley Road
Birmingham B18 7QH
Tel.:Emergency: (00 44) 87 06 00 62 66
Members of the public seeking specific information on poisons should contact:
In England and Wales: NHS 111 - dial 111
In Scotland: NHS 24 - dial 111

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SECTION 2: Hazards identification

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


GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.


GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.


GHS07

Acute Tox. 4 H302 Harmful if swallowed.
STOT SE 3 H336 May cause drowsiness or dizziness.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the GB CLP regulation.
· **Hazard pictograms**


GHS02 GHS05 GHS07

· **Signal word** Danger
· **Hazard statements**
H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.
· **Precautionary statements**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

(Contd. on page 3)

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

revised on: 29.08.2023 Version number 7 (replaces version 6) Creation Date: 23.12.2015

Trade name: 1-Propanol

(Contd. of page 2)

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
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.
· **vPvB:** Not applicable.

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SECTION 3: Composition/information on ingredients

· **3.1 Substances**
· **CAS No. Description**
CAS: 71-23-8 1-propanol
· **Identification number(s)**
· **EC number:** 200-746-9
· **Index number:** 603-003-00-0

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SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:**
First aider needs to protect himself.
Immediately remove any clothing soiled by the product.
· **After inhalation:**
Supply fresh air.
Call a doctor immediately.
· **After skin contact:**
Wash with plenty of soap and water, take off soiled clothes and shoes.
After prolonged contact (accidental/forced) or any signs of skin changes (redness or other signs of inflammation), consult a doctor.
· **After eye contact:**
Rinse out opened eye for several minutes under running water.
Seek medical treatment.
Remove any contact lenses if possible.
Continue rinsing.
· **After swallowing:**
Rinse mouth thoroughly with water.
In case of vomiting, observe the risk of aspiration.
Call a doctor immediately.
· **Information for doctor:** Please observe safety data sheet/label.
· **4.2 Most important symptoms and effects, both acute and delayed**
Breathing difficulty
Headache
Dazed feeling
Cramp
Vertigo
Gastric or intestinal disorders
Disorientation
Coughing
Unconsciousness
Nausea
· **Hazards** Danger of convulsion.

(Contd. on page 4)

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

revised on: 29.08.2023 Version number 7 (replaces version 6) Creation Date: 23.12.2015

Trade name: 1-Propanol

(Contd. of page 3)

· **4.3 Indication of any immediate medical attention and special treatment needed**
In case of lung irritation, administer glucocorticoid dose aerosol.
Symptomatic treatment.
If swallowed or in case of vomiting, danger of entering the lungs.
Monitor circulation, possible shock treatment.

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SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
Water spray, powder, carbon dioxide or foam. Fight larger fires with water spray or alcohol resistant foam.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet.
· **5.2 Special hazards arising from the substance or mixture**
Combustible.
Formation of hazardous vapours possible due to ambient fire.
In case of fire, the following can be released:
Carbon oxides (CO, CO□)
Under certain fire conditions, traces of other toxic gases cannot be excluded.
Vapours are heavier than air and spread over the ground.
Heating leads to an increase in pressure and a risk of bursting.
Check for backfire.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
Do not inhale explosion gases or combustion gases.
· **Additional information**
Cool endangered receptacles with water spray.
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**
Ensure adequate ventilation.
Keep away from ignition sources.
Avoid contact with eyes and skin.
Particular danger of slipping on leaked/spilled product.
Clear the danger zone.
Wear protective equipment. Keep unprotected persons away.
· **6.2 Environmental precautions:**
The vapours of the product are heavier than air and can accumulate on the ground, in pits, sewers and cellars in higher concentrations.
Explosion hazard.
Do not allow to enter sewers/surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Cover the sewerage system.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
· **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.

(Contd. on page 5)

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

revised on: 29.08.2023 Version number 7 (replaces version 6) Creation Date: 23.12.2015

Trade name: 1-Propanol

(Contd. of page 4)

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SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Store in cool, dry place in tightly closed receptacles.
Keep away from heat and direct sunlight.
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· **Information about fire - and explosion protection:**
Traces of flammable substances may collect in the steam chamber of enclosed systems. Keep clear ofignition sources.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Store only in the original receptacle.
· **Information about storage in one common storage facility:** Store away from flammable substances.
· **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· **Storage class:** 3
· **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:**	
CAS: 71-23-8 1-propanol	
WEL	Short-term value: 625 mg/m³, 250 ppm Long-term value: 500 mg/m³, 200 ppm Sk

· **PNECs**
PNEC 10 mg/l freshwater short-term (single instance)
PNEC 1 mg/l marine water short-term (single instance)
PNEC 96 mg/l sewage treatment plant (STP) short-term (single instance)
PNEC 22,8 mg/kg freshwater sediment short-term (single instance)
PNEC 2,28 mg/kg marine sediment short-term (single instance)
PNEC 2,2 mg/kg soil short-term (single instance)
· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Appropriate engineering controls** No further data; see section 7.
· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures:**
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
· **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.If air-purifying respiratory protection is required according to the risk assessment, wear a respirator with full-face mask with combination filter (US) or with filter type ABEK (EN 14387) filter cartridge. If the respirator is the only protective measure, an ambient air self-contained breathing apparatus with afull face mask must be worn. Respirators and components must be approved to appropriate government standards (for example, NIOSH (US) or CEN (EU)).Translated with www.DeepL.com/Translator (free version)

(Contd. on page 6)

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

revised on: 29.08.2023 Version number 7 (replaces version 6) Creation Date: 23.12.2015

Trade name: 1-Propanol

(Contd. of page 5)

· **Hand protection**

Protective gloves

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

· **Material of gloves**
Butyl rubber, BR
Material thickness > 0.7 mm
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 exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Level 6 for applications > 480 min

· **Eye/face protection**

Tightly sealed goggles

· **Body protection:**

Protective work clothing (e. g. safety shoes EN ISO 20345, long-sleeved protective working garments).

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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:**	Colourless
· **Odour:**	Alcohol-like
· **Melting point/freezing point:**	-127 °C
· **Boiling point or initial boiling point and boiling range**	96–98 °C
· **Flammability**	Highly flammable.
· **Lower and upper explosion limit**	
· **Lower:**	2.1 Vol %
· **Upper:**	13.5 Vol %
· **Flash point:**	24 °C
· **Auto-ignition temperature:**	360 °C
· **Decomposition temperature:**	Not determined.
· **pH**	7
· **Viscosity:**	
· **Kinematic viscosity**	Not determined.
· **Dynamic at 20 °C:**	2.3 mPas
· **Solubility**	
· **water at 20 °C:**	1 g/l
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Vapour pressure at 20 °C:**	19 hPa
· **Vapour pressure at 50 °C:**	117 hPa

(Contd. on page 7)

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

revised on: 29.08.2023 Version number 7 (replaces version 6) Creation Date: 23.12.2015

Trade name: 1-Propanol

(Contd. of page 6)

· **Density and/or relative density**	
· **Density at 20 °C:**	~803 g/cm³ Not determined.
· **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.**	
· **Ignition temperature:**	Not determined.
· **Explosive properties:**	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· **Molecular weight**	60.1 g/mol
· **Change in condition**	
· **Evaporation rate**	Not determined.
· **Information with regard to physical hazard classes**	
· **Explosives**	Void
· **Flammable gases**	Void
· **Aerosols**	Void
· **Oxidising gases**	Void
· **Gases under pressure**	Void
· **Flammable liquids**	Highly flammable liquid and vapour.
· **Flammable solids**	Void
· **Self-reactive substances and mixtures**	Void
· **Pyrophoric liquids**	Void
· **Pyrophoric solids**	Void
· **Self-heating substances and mixtures**	Void
· **Substances and mixtures, which emit flammable gases in contact with water**	Void
· **Oxidising liquids**	Void
· **Oxidising solids**	Void
· **Organic peroxides**	Void
· **Corrosive to metals**	Void
· **Desensitised explosives**	Void

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SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability** Stable when stored and handled properly.
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions**
Danger of explosion.
Reacts with strong oxidising agents.
· **10.4 Conditions to avoid**
Direct sunlight.
Heat, flames and sparks.
Vapours form explosive mixtures with air.
· **10.5 Incompatible materials:** Avoid contact with other chemicals.
· **10.6 Hazardous decomposition products:** In case of fire: see section 5.

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(Contd. on page 8)

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

revised on: 29.08.2023 Version number 7 (replaces version 6) Creation Date: 23.12.2015

Trade name: 1-Propanol

(Contd. of page 7)

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SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity** Harmful if swallowed.

· **LD/LC50 values relevant for classification:**		
Oral	LD50	1,870 mg/kg (rat)
Dermal	LD50	5,040 mg/kg (rabbit)

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **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** May cause drowsiness or dizziness.
· **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** Substance is not listed.

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SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** Easily biodegradable
· **12.3 Bioaccumulative potential**
Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.
· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
· **12.7 Other adverse effects**
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
Observe local (country-specific) regulations and laws.
This product and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Chemicals must be disposed of in accordance with the respective national regulations.

· **European waste catalogue**	
14 00 00	WASTE ORGANIC SOLVENTS, REFRIGERANTS AND PROPELLANTS (EXCEPT 07 AND 08)
14 06 00	waste organic solvents, refrigerants and foam/aerosol propellants
14 06 03*	other solvents and solvent mixtures
HP3	Flammable

(Contd. on page 9)

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

revised on: 29.08.2023 Version number 7 (replaces version 6) Creation Date: 23.12.2015

Trade name: 1-Propanol

(Contd. of page 8)

HP4	Irritant - skin irritation and eye damage
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP6	Acute Toxicity

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

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SECTION 14: Transport information

· **14.1 UN number or ID number**
· **ADR, IMDG, IATA** UN1274

· **14.2 UN proper shipping name**
· **ADR** 1274 n-PROPANOL (PROPYL ALCOHOL, NORMAL)
· **IMDG, IATA** n-PROPANOL (PROPYL ALCOHOL, NORMAL)

· **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):** 30
· **EMS Number:** F-E,S-D
· **Stowage Category** B

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

· **Transport/Additional information:**

· **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** D/E

(Contd. on page 10)

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

revised on: 29.08.2023 Version number 7 (replaces version 6) Creation Date: 23.12.2015

Trade name: 1-Propanol

(Contd. of page 9)

· **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
· **UN "Model Regulation":**	UN 1274 N-PROPANOL (PROPYL ALCOHOL, NORMAL), 3, II

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SECTION 15: Regulatory information

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

· **Inventory of Hazardous Chemicals**	
CAS: 71-23-8	1-propanol

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** Substance is not 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, 40, 75
· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
Substance is not listed.
· **REGULATION (EU) 2019/1148**
· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**
Substance is not listed.
· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.
· **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.
· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
Substance is not listed.

· **National regulations:**

· **Information about limitation of use:**
Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women 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.
The application, use and processing of our products are beyond our control and are therefore exclusively your responsibility.

· **Department issuing SDS:** Product management
· **Contact:** Product management
· **Version number of previous version:** 6
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals

(Contd. on page 11)

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

revised on: 29.08.2023 Version number 7 (replaces version 6) Creation Date: 23.12.2015

Trade name: 1-Propanol

(Contd. of page 10)

EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
PNEC: Predicted No-Effect Concentration (UK 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
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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