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



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Version number 8.04 (replaces version 8.03)

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

· **1.1 Product identifier**

· **Trade name: Perchloric Acid 0.1 mol/l (0.1N) in 1,4-dioxan**

· **Article number:** 1047
· **Registration number** A registration number is not available for this substance as it is a mixture.
· **UFI:** NQ31-D057-U00X-2TR7
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture** Laboratory chemicals

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
PANREAC QUIMICA S.L.U.
C/Garraf 2
Polígono Pla de la Bruguera
E-08211 Castellar del Vallès (Barcelona)
Tel. (+34) 937 489 400
Fax. (+34) 937 489 401
e-mail: product.safety@itwreagents.com

· **Further information obtainable from:** email: product.safety@panreac.com
· **1.4 Emergency telephone number:**
Single telephone number for emergency calls: 112 (EU)
Tel.: (+34) 937 489 499

## SECTION 2: Hazards identification

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

| | |
|---|---|
| Flam. Liq. 2 | H225 Highly flammable liquid and vapour. |
| Met. Corr.1 | H290 May be corrosive to metals. |
| Skin Irrit. 2 | H315 Causes skin irritation. |
| Eye Irrit. 2 | H319 Causes serious eye irritation. |
| Carc. 2 | H351 Suspected of causing cancer. |
| STOT SE 3 | H335 May cause respiratory irritation. |

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

(Contd. on page 2)

**Trade name: Perchloric Acid 0.1 mol/l (0.1N) in 1,4-dioxan**

(Contd. of page 1)

· **Hazard pictograms**



GHS02 GHS05 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labelling:**
1,4-dioxane

· **Hazard statements**
H225 Highly flammable liquid and vapour.
H290 May be corrosive to metals.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.

· **Precautionary statements**

| | |
|---|---|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection/hearing 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. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulations. |

· **Additional information:**
EUH019 May form explosive peroxides.
EUH066 Repeated exposure may cause skin dryness or cracking.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

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

(Contd. on page 3)

**Trade name: Perchloric Acid 0.1 mol/l (0.1N) in 1,4-dioxan**

(Contd. of page 2)

· **Dangerous components:**

| | | |
|---|---|---|
| CAS: 123-91-1<br>EINECS: 204-661-8<br>Index number: 603-024-00-5<br>Reg.nr.: 01-2119462837-26-XXXX | 1,4-dioxane<br>Flam. Liq. 2, H225; Carc. 1B, H350; Eye Irrit. 2, H319; STOT SE 3, H335, EUH019, EUH066 | >50-<100% |
| CAS: 7601-90-3<br>EINECS: 231-512-4<br>Index number: 017-006-00-4 | perchloric acid<br>Ox. Liq. 1, H271; Met. Corr.1, H290; Skin Corr. 1A, H314<br>Specific concentration limits:<br>Skin Corr. 1A; H314: C ≥ 50%<br>Skin Corr. 1B; H314: 10 % ≤ C < 50 %<br>Skin Irrit. 2; H315: 1 % ≤ C < 10 %<br>Eye Irrit. 2; H319: 1 % ≤ C < 10 %<br>Ox. Liq. 1; H271: C ≥ 50.0001 %<br>Ox. Liq. 2; H272: 1 % ≤ C < 50.0001 %<br>Met. Corr.1; H290: C ≥ 1 % | ≥1-≤2.5% |

· **SVHC**

| | | |
|---|---|---|
| 123-91-1 | 1,4-dioxane | 98.5% |

· **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:** Involve doctor immediately.
· **After inhalation:**
In case of unconsciousness place patient stably in side position for transportation.
If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
· **After skin contact:**
Call a doctor immediately.
Immediately wash with water and soap and rinse thoroughly.
Immediately remove any clothing soiled by the product.
· **After eye contact:** Call a doctor immediately.
· **After swallowing:**
make victim drink water (maximum of 2 drinking glasses)
Inform doctor. Do not give milk or fatty oils.
Laxative: Sodium sulfate (1 tablespoon/ 1/4 L water)
Call a doctor immediately.
· **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.
· **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide
Combustible.

(Contd. on page 4)

(Contd. of page 3)

Forms explosive mixtures with air at ambient temperatures.
Vapours ara heavier than air and may spread along floors.
Beware of backfiring.
Forms explosive mixtures with air on intense heating.

· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.
Wear fully protective suit.
· **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Contain escaping vapours with water.

## SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Keep away from ignition sources.
Avoid substance contact.
Do not inhale steams/aerosols.
· **6.2 Environmental precautions:** 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 section 13.
Ensure adequate ventilation.
Clean up affected area.
· **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**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
· **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect from heat.
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.
Provide acid-resistant floor.
· **Information about storage in one common storage facility:**
Store away from metals.
Away from sources of ignition and heat.
· **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

(Contd. on page 5)

**Trade name: Perchloric Acid 0.1 mol/l (0.1N) in 1,4-dioxan**

(Contd. of page 4)

Protect from heat and direct sunlight.
Open receptacle only under localised extractor facilities.
Store receptacle in a well ventilated area.
Store only outside or in explosion proof rooms.
Avoid contact with air / oxygen (formation of peroxide).
Store under lock and key and with access restricted to technical experts or their assistants only.

· **Recommended storage temperature:** Room Temperature
· **Storage class:** 3
· **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:** | |
|---|---|
| **123-91-1 1,4-dioxane** | |
| IOELV | Long-term value: 73 mg/m³, 20 ppm |

· **DNELs**

| **123-91-1 1,4-dioxane** | | |
|---|---|---|
| Dermal | Long-term - systemic effects, worker | 21 mg/kg |
| Inhalative | Long-term - systemic effects, worker | 73 mg/m3 |
| | Long-term - local effects, worker | 144 mg/m3 |

· **PNECs**

| **123-91-1 1,4-dioxane** | |
|---|---|
| Aquatic compartment - freshwater | 10 mg/L |
| Aquatic compartment - marine water | 0.67 mg/L |
| Aquatic compartment - water, intermittent releases | 10 mg/L |
| Aquatic compartment - sediment in freshwater | 37 mg/kg |
| Terrestrial compartment - soil | 0.153 mg/kg |
| Sewage treatment plant | 2,700 mg/L |

· **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:**
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:**
Short term filter device:
Filter ABEK
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.
Use suitable respiratory protective device only when aerosol or mist is formed.
· **Hand protection**



Protective gloves

(Contd. on page 6)

**Trade name: Perchloric Acid 0.1 mol/l (0.1N) in 1,4-dioxan**

(Contd. of page 5)

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**
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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **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.

· **For the permanent contact gloves made of the following materials are suitable:**
Butyl rubber, BR
Recommended thickness of the material: ≥ 0.7 mm
Value for the permeation: Level ≥ 480 min

· **As protection from splashes gloves made of the following materials are suitable:**
Fluorocarbon rubber (Viton)
Recommended thickness of the material: ≥ 0.7 mm
Value for the permeation: Level ≥ 120 min

· **Eye/face protection**



Tightly sealed goggles

· **Body protection:**
Use protective suit.
Acid resistant protective clothing
Flame retardant antistatic protective clothing

## SECTION 9: Physical and chemical properties

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

| | |
|---|---|
| · **Physical state** | Fluid |
| · **Colour:** | clear, colorless to yellowish |
| · **Odour:** | Characteristic |
| · **Odour threshold:** | Not determined. |
| · **Melting point/freezing point:** | Undetermined. |
| · **Boiling point or initial boiling point and boiling range** | 100-102 °C (123-91-1 1,4-dioxane) |
| · **Flammability** | Highly flammable. |
| · **Lower and upper explosion limit** | |
| · **Lower:** | 1.7 Vol % (123-91-1 1,4-dioxane) |
| · **Upper:** | 25.2 Vol % (123-91-1 1,4-dioxane) |
| · **Flash point:** | 11 °C (123-91-1 1,4-dioxane) |
| · **Auto-ignition temperature:** | 300 °C (123-91-1 1,4-dioxane) |
| · **Decomposition temperature:** | Not determined. |
| · **pH at 20 °C** | <3 |
| · **Viscosity:** | |
| · **Kinematic viscosity** | Not determined. |
| · **Dynamic:** | Not determined. |

(Contd. on page 7)

**Trade name: Perchloric Acid 0.1 mol/l (0.1N) in 1,4-dioxan**

(Contd. of page 6)

| | |
|---|---|
| · **Solubility** | |
| · **water:** | Fully miscible. |
| · **Partition coefficient n-octanol/water (log value)** | Not determined. |
| · **Vapour pressure at 20 °C:** | 41 hPa (123-91-1 1,4-dioxane) |
| · **Density and/or relative density** | |
| · **Density at 20 °C:** | 1.04 g/cm³ |
| · **Relative density** | Not determined. |
| · **Vapour density** | Not determined. |

| | |
|---|---|
| · **9.2 Other information** | |
| · **Appearance:** | |
| · **Form:** | Liquid |
| · **Important information on protection of health and environment, and on safety.** | |
| · **Ignition temperature:** | Product is not selfigniting. |
| · **Explosive properties:** | May form explosive peroxides. |
| · **Solvent content:** | |
| · **Organic solvents:** | 98.5 % |
| · **Water:** | 0.5 % |
| · **VOC (EC)** | 98.50 % |
| · **Solids content:** | 0.0 % |
| · **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** | May be corrosive to metals. |
| · **Desensitised explosives** | Void |

## SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions**
Forms explosive gas mixture with air.

(Contd. on page 8)

**Trade name: Perchloric Acid 0.1 mol/l (0.1N) in 1,4-dioxan**

(Contd. of page 7)

Forms peroxides.
Danger of explosion.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:**
strong acids
strong oxidants
hydrides
sulfoxides / copper
perchlorates
triethyl aluminium
· **10.6 Hazardous decomposition products:** Peroxides
· **Additional information:**
varous plastics
sensitive to air
Explosible with air in a vaporous/gaseous state.

## 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/LC50 values relevant for classification:**
Quantitative data on the toxicological effect of this product are not available.

| · Components | Type | Value | Species |
|---|---|---|---|
| **123-91-1 1,4-dioxane** | | | |
| Oral | LD50 | 5,170 mg/kg (rat) | |
| Dermal | LD50 | 7,855 mg/kg (rabbit) | |

· **Skin corrosion/irritation** Causes skin irritation.
· **Serious eye damage/irritation** Causes serious eye irritation.
· **After inhalation:** Irritant to skin and mucous membranes.
· **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** Suspected of causing cancer.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** May cause respiratory irritation.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **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:** No further relevant information available.

| · Type of test | Effective concentration | Method | Assessment |
|---|---|---|---|
| **123-91-1 1,4-dioxane** | | | |
| EC50/72 h | >1,000 mg/l (Aquatic plants) | | |
| EC50/48 h | >1,000 mg/l (daphnia magna) | | |
| LC0 | 38.8 mg/l (rat) | | |

(Contd. on page 9)

**Trade name: Perchloric Acid 0.1 mol/l (0.1N) in 1,4-dioxan**

(Contd. of page 8)

| | |
|---|---|
| NOEC (21 d) | 1,000 mg/l (daphnia magna) |

· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential**
Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.
-0.42 log Pow
· **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:**
Do not allow product to reach ground water, water course or sewage system.
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.

## SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Chemicals must be disposed of in compliance with the respective national regulations.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**
· **Recommendation:**
Disposal must be made according to official regulations.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

## SECTION 14: Transport information

· **14.1 UN number or ID number**
· **ADR, IMDG, IATA** UN2924

· **14.2 UN proper shipping name**
· **ADR, IMDG, IATA** FLAMMABLE LIQUID, CORROSIVE, N.O.S. (DIOXANE)

· **14.3 Transport hazard class(es)**

· **ADR**




· **Class** 3 (FC) Flammable liquids.

(Contd. on page 10)

**Trade name: Perchloric Acid 0.1 mol/l (0.1N) in 1,4-dioxan**

(Contd. of page 9)

| | |
|---|---|
| · **Label** | 3+8 |
| · **IMDG** | |
|  | |
| · **Class** | 3 Flammable liquids. |
| · **Label** | 3/8 |
| · **IATA** | |
|  | |
| · **Class** | 3 Flammable liquids. |
| · **Label** | 3 (8) |
| · **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):** | 338 |
| · **EMS Number:** | F-E,S-C |
| · **Stowage Category** | B |
| · **Stowage Code** | SW2 Clear of living quarters. |
| · **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<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 500 ml |
| · **Transport category** | 2 |
| · **Tunnel restriction code** | D/E |
| · **IMDG** | |
| · **Limited quantities (LQ)** | 1L |
| · **Excepted quantities (EQ)** | Code: E2<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 500 ml |
| · **UN "Model Regulation":** | UN 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S. (DIOXANE), 3 (8), II |

## 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.

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**Trade name: Perchloric Acid 0.1 mol/l (0.1N) in 1,4-dioxan**

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· **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

· **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.

· **National regulations:**

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

| | | |
|---|---|---|
| 123-91-1 | 1,4-dioxane | 98.5% |

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

## SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H225 Highly flammable liquid and vapour.
H271 May cause fire or explosion; strong oxidiser.
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H350 May cause cancer.
EUH019 May form explosive peroxides.
EUH066 Repeated exposure may cause skin dryness or cracking.

· **Department issuing SDS:** Dept. Compliance
· **Date of previous version:** 20.08.2021
· **Version number of previous version:** 8.03
· **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
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)

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**Trade name: Perchloric Acid 0.1 mol/l (0.1N) in 1,4-dioxan**

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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
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Ox. Liq. 1: Oxidizing liquids – Category 1
Met. Corr.1: Corrosive to metals – Category 1
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
Carc. 1B: Carcinogenicity – Category 1B
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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