

**SAFETY DATA SHEET**

**Product Name:** Klorkleen  
**Revision date:** 18.05.2023  
**Supersedes:** 06.01.2023

Data Sheet Ref: DS176  
**Revision: 3**

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

**1.1 Identification of the substance/preparation**

Product Name : Klorkleen White Effervescent NaDCC Tablet.  
Synonyms : None.  
UFI : 5RFF-W0GG-U002-NNGU

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

Identified Uses: Klorkleen White Effervescent NaDCC Tablets with added detergent are used for surface disinfection & cleaning.  
Uses advised against: Not available

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

Supplier: Medentech, Clonard Road, Wexford, Ireland  
Manufacturer : Medentech, Clonard Road, Wexford, Ireland  
Tel: +353 53 9117900  
e-mail: msds@medentech.com

**1.4 Emergency telephone number**

Ireland: Poisons Information for medical professionals: Telephone 01 809 2566 (8.00am – 10.00pm).

**2. HAZARDS IDENTIFICATION**

**2.1 Classification of the mixture according to regulation (EC) No. 1272/2008 (CLP/GHS):**

Contact Hazard – Eye: Category 1 – causes serious eye damage.  
Skin Irrit. –Category 2 – causes skin irritation.  
Target Organ Toxicity (single exposure): Category 3 – May cause respiratory tract irritation.  
Hazardous to Aquatic Environment - Acute Hazard: Category 1 - Very toxic to aquatic life.  
Hazardous to Aquatic Environment - Chronic Hazard: Category 1 - Very toxic to aquatic life with long lasting effects.

**Additional Information:**

EUH031 – Contact with acids liberates toxic gases.

**2.2 Label Elements**

**Labelling in accordance with regulation (EC) No. 1272/2008 (CLP/GHS):**



**Signal Word: DANGER**

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**Health Hazard Statement(s)**

H315 – Causes skin irritation.  
H318 - Causes serious eye damage.  
H335 - May cause respiratory irritation.

**Environmental Hazard Statement(s)**

H410 - Very toxic to aquatic life with long lasting effects.

**Supplemental Hazard Statement**

EUH031- Contact with acids liberates toxic gas.

**Precautionary Statement(s) - Prevention**

P261 - Avoid breathing dust/fumes.  
P273 - Avoid release to the environment.  
P280 – Wear protective gloves/ eye protection.

**Precautionary Statement(s) - Response**

P305 + P351 + P338 - IF IN EYES - Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P312 – Immediately call a POISON CENTER or doctor/physician.  
P391 - Collect spillage.

**Precautionary Statement(s) - Storage**

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

**Precautionary Statement(s) - Disposal:**

P501 - Dispose of contents and container in accordance with applicable local, regional, national, and/or international regulations.

**2.3 Other Hazard Information**

**Short-Term Exposure (Acute):**

**PBT:** The substances contained in this preparation are not identified as PBT substances.

**Endocrine disruptors:** The product does not contain any ingredient identified as having endocrine disrupting properties according to Delegated Regulation (EU) 2017/2100 or Regulation (EU) 2018/605.

**3. COMPOSITION/INFORMATION ON INGREDIENTS.**

Ingredient	Weight in Product (% w/w)	EC (EINECS) No.	EU Classification	CLP Classification
Troclosene Sodium / 1,3,5 - Triazine - 2,4,6 (1H, 3H, 5H) - trione, 1, 3 - dichloro-, sodium salt CAS No. 2893-78-9	30-60%	220-767-7	O; X <sub>n</sub> ; N R8, R22, R31, R36/37, R50/53	Danger Oxidizing Solid - Category 2; Eyes irritant Cat.2; Harmful if swallowed Cat.4; May cause respiratory tract irritation Cat.3; Very toxic to aquatic life Cat.1; H302; H319; H335; H272; H410; EUH031
Adipic Acid CAS No. 124-04-9	10-30%	204-673-3	X <sub>i</sub> , R36	Warning Eyes irritant Cat.2; H 319

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Sodium Carbonate CAS No: 497-19-8	0-8%	207-838-8	X <sub>i</sub> , R36	Warning Eyes irritant Cat.2; H 319
Surfac SDBS80	10-18%	-	X <sub>i</sub> : R38, X <sub>i</sub> : R41	Danger Causes skin irritation Cat.2; Causes serious eye damage Cat.1; Harmful to Aquatic life with long lasting effects Cat.3; H315; H318; H412

**Important Note:** the classification descriptions given in this section relate to the components in their pure form and do not correspond to the classification of this preparation (see section 16 for full description of R phrases)  
The classification of this tablet as supplied is given in Section 15.

**4. FIRST AID MEASURES.**

**4.1 Description of first aid measures**

**Inhalation:** Move person to fresh air. Keep person at rest in a position comfortable for breathing. Keep at rest in a position comfortable for breathing. If breathing is difficult have trained person administer oxygen. If respiration stops, have a trained person administer artificial respiration. Get medical attention immediately.

**Skin contact:** Immediately brush off excess chemical and wash with plenty of soap and water. Remove contaminated clothing. Wash clothing before reuse. If signs of irritation or discomfort, seek medical advice/attention.

**Eye contact:** Immediately flush eyes with a directed stream of water for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and tissue. Remove contact lens, if present, after first 5 minutes, then continue rinsing eye. Obtain medical advice.

**Ingestion:** Never give anything by mouth to an unconscious person. If swallowed do not induce vomiting. Give large quantities of water. (If available give several glasses of milk) If vomiting occurs spontaneously keep airway clear and give more water. Get medical attention if there are signs of discomfort or ill health.

**Note to Physician:** Probable mucosal damage may contraindicate the use of gastric lavage.

**4.2 Most important symptoms and effects, both acute and delayed**

Causes severe skin burns and eye damage. May cause respiratory irritation. Harmful if swallowed.

**4.3 Indication of any immediate medical attention and special treatment needed**

Treat symptoms as they occur.

Contact with acids liberates toxic gas (chlorine – toxic if inhaled).

Dilution of the product with copious water will reduce its hazardous properties.

**5. FIRE-FIGHTING MEASURES.**

**5.1 Extinguishing media**

**Suitable:** Small fire: water spray, foam.  
Large fire: water spray, foam.

Use extinguishing media appropriate to cause of the fire, and the surroundings.

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**Unsuitable:** Dry chemicals, carbon dioxide, or halogenated agents.

**5.2 Special hazards arising from the substance or mixture**

Negligible fire hazard. If heated by outside source to temperatures above 240°C (464°F), this product will undergo decomposition with the evolution of noxious gases but no visible flame. Wet material may generate nitrogen trichloride, an explosion hazard.

Thermal decomposition or combustion products: chlorine, nitrogen, nitrogen trichloride, cyanogens chloride, oxides of carbon, phosgene

**5.3 Advice for firefighters**

Fire-fighters should wear full protective clothing and a self-contained breathing apparatus. Using a 10% solution of sodium carbonate, thoroughly decontaminate fire-fighting equipment including all fire-fighting wearing apparel after the incident

**6. ACCIDENTAL RELEASE MEASURES.**

**6.1 Personal Precautions, protective equipment and emergency procedures**

Avoid contact with skin and eyes. Wear chemical safety goggles and chemical resistant gloves. Handle product in a well-ventilated area.

**6.2 Environmental Precautions**

Do not release into the environment.  
Prevent flow of material into water source and begin monitoring available chlorine and pH immediately.  
Notify all downstream users of possible contamination.

**6.3 Methods and materials for containment and cleaning up**

Contain spilled material. Any spillage should be cleaned up as soon as possible. Do not add water to spilled material. Using clean dedicated equipment, sweep and scoop all spilled material, contaminated soil, and other contaminated material and place into clean, dry containers for disposal. Do not close drums containing wet or damp material. Do not transport wet or damp material.

**6.4 Reference to other sections**

For recommended personal protective equipment, see Section 8.  
For disposal considerations, see Section 13.

**7. HANDLING AND STORAGE.**

**7.1 Precautions for safe handling**

Do not get in eyes, on skin or on clothing.  
Avoid breathing airborne particulates; wear respiratory protection when exposure is possible  
Wear goggles or face shield and rubber gloves when handling.  
Wash hands thoroughly with soap and water after handling.  
Wash contaminated clothing before use.  
Use only outdoors or in a well-ventilated area.

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Vapour space in a closed container may contain a slight amount of chlorine gas and compounds from decomposition of the product.

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

Store in original container and in a cool dry area where temperatures do not exceed 25°C. Keep container tightly closed and store away from incompatible materials (refer to section 10 for list of incompatible materials).

Contact with acid liberates toxic gases.

Do not allow water to get into the container. Keep out of reach of children. Store locked up.

**7.3 Specific End Uses**

Mix only with water. Use clean dry utensils. Do not mix this product with remnants of any other products. Such uses may cause a violent reaction leading to fire or explosion.

Contamination with moisture, organic matter or other chemicals may start a chemical reaction with generation of heat, liberation of hazardous gases, and possible generation of fire and explosion.

Vapour space in a closed container may contain a slight amount of chlorine gas and other chlorine containing compounds from decomposition of the product. Exposure to chlorine gas may cause burning of the eyes, burning of the nose and mouth and irritation of the linings of the respiratory tract with coughing, a choking sensation, substernal pain, vomiting, nausea, headache, dizziness and fainting.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION.**

**8.1 Control parameters**

All mixture ingredients were considered when identifying workplace exposure limits. Unless otherwise stated, DNEL and PNEC values for the declared ingredients were disseminated by the European Chemicals Agency (ECHA) following REACH registration of the chemical substance.

EU limit values	Chlorine (CAS 7782-50-5) IOELV: short-term exposure limit (15 min) 1.5 mg/m <sup>3</sup> (0.5 ppm).
National limit values	UK: Chlorine (CAS 7782-50-5) WEL: short-term exposure limit (15 min) 1.5 mg/m <sup>3</sup> (0.5 ppm). Inhalable dust: long-term exposure limit (8-hour TWA) 10 mg/m <sup>3</sup> . Respirable dust: long-term exposure limit (8-hour TWA) 4 mg/m <sup>3</sup> .  Ireland: Chlorine (CAS 7782-50-5) WEL: short-term exposure limit (15 min) 1.5 mg/m <sup>3</sup> (0.5 ppm).
Monitoring procedure	BS EN 14042:2003; Workplace Atmospheres; Guide for the Application and Use of Procedures for the Assessment of Exposure to Chemical and Biological Agents, or national equivalent.
Other: human health (DNELs, DMELs)	NaDCC: DNELs: workers, long-term exposure, systemic effects, inhalation, 8.11 mg/m <sup>3</sup> ; workers, long-term exposure, systemic effects, dermal, 2.3 mg/kg/day.
Other: environmental (PNEC)	NaDCC: PNECs: freshwater, 0 mg/L; marine water, 1.52 mg/L, intermittent release, 0.002 mg/L; sewage treatment plant, 0.59 mg/L; freshwater sediment, 7.56 mg/kg dry sediment; soil, 0.756 mg/kg dry soil.

**8.2 Exposure control**

**Engineering controls:**

Use only in well-ventilated areas. Provide local exhaust ventilation where dust or mist may be generated. Ensure compliance with applicable exposure limits.

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**Individual Personal Protective Equipment:**

The need for personal protective equipment should be based on a workplace risk assessment for the particular use.

**Eye Protection:** Wear chemical safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**Skin and Body Protection:** Wear protective clothing to minimize skin contact. When potential for contact with dry material exists, wear disposable coveralls suitable for dust exposure, such as Tyvek®. Contaminated clothing should be removed and laundered before reuse.

**Hand Protection:** Wear appropriate chemical resistant gloves.

**Protective Material Types:** Butyl rubber, Natural rubber, Neoprene, Nitrile, Polyvinyl chloride (PVC), Tyvek®

**Respiratory Protection:** An approved respirator with EN140 (chlorine) cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. The added protection of a full face piece respirator is required when visible dusty conditions are encountered and eye irritation may occur. A respiratory protection program that meets applicable regulatory requirements must be followed whenever workplace conditions warrant use of a respirator.

**Environmental exposure controls**

Measures based on adequate handling practices and facilities, containment and filtered extraction intended to minimise exposure to the material should also minimise release of it to the environment. See also Section 6.2.

**9. Physical and Chemical Properties.**

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

(a) Physical state	Solid tablets
(b) Colour	White/off white tablet
(c) Odour	Slight chlorine odour.
(d) Melting/freezing point	Not applicable (solid)
(e) Boiling point or initial boiling point and boiling range	Not applicable (solid)
(f) Flammability	Not flammable
(g) Lower and upper explosion limit	Not available
(h) Flash point	Not applicable (solid)
(i) Auto-ignition temp.	Not available
(j) Decomposition temp.	225 to 250°C
(k) pH	5 – 6
(l) Kinematic viscosity	Not applicable to solid
(m) Solubility	Completely Soluble in Water
(n) Partition coeff. n-octanol/water (log value)	Log Kow = 0
(o) Vapour pressure	Not applicable (not volatile)
(p) Density or rel. density	Not available.
(q) Relative vapour density	Not applicable to solid

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(r) Particle characteristics Not available

**9.2 Other information**

No relevant data

**10. STABILITY AND REACTIVITY.**

**10.1 Reactivity**

On contact with moisture, NaDCC readily decomposes to chlorine, hypochlorous acid and cyanuric acid.

**10.2 Chemical stability**

The mixture is thought to be stable

**10.3 Possibility of Hazardous reactions**

The presence of troclosene sodium has the potential to cause a violent reaction or ignition on exposure to metals, combustible or organic materials

**10.4. Conditions to avoid**

Avoid storage at high temperatures, or in direct sunlight, or in high humidity.

The active ingredient in this preparation is a strong oxidising agent. The preparation of concentrated solutions or slurries is not recommended. Avoid contact with water on concentrated material in the container.

**10.5 Incompatible materials**

Strong acids and/or alkalines. Reducing agents. Combustible material. Also avoid contact with easily oxidisable organic material: ammonia, urea or similar nitrogen containing compounds; inorganic reducing compounds; floor sweeping compounds; calcium hypochlorite and alkalis.

**10.6 Hazardous Decomposition Products**

Chlorine, Nitrogen trichloride, Cyanogen chloride, Oxides of carbon, Phosgene.

**Polymerisation - Avoid:** Hazardous Polymerisation will not occur

**Oxidising Properties:** Testing was carried out by TNO laboratories, The Hague, Netherlands to assess the Oxidizing properties of NaDCC tablets in April 2020. Testing was performed in accordance with the method and criteria as described in the United Nations Manual of Tests and Criteria, seventh revised edition, test O.1, the so-called conical pile test.

The test results showed that the test sample tablets had no oxidizing properties in the sense of the criteria of the United Nations Manual of Tests and Criteria, test O.1. This conclusion applied to all NaDCC tablets containing 62.5% or less of NaDCC with no other oxidizing substances present.

**11. TOXICOLOGICAL INFORMATION.**

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

(a) Acute toxicity Based on available data, the classification criteria are not met.  
NaDCC: LD<sub>50</sub> (oral, rat) 1436, 1823 mg/kg; LD<sub>50</sub> (dermal, rat) > 5000 mg/kg bw; LC<sub>50</sub> (inhalation) 0.27 to 1.17 mg/L.  
Exposure to chlorine gas caused by decomposition of the product may cause burning of the eyes, nose and mouth, and irritation of the respiratory tract with

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- coughing, a choking sensation, chest pain, vomiting, nausea, headache, dizziness and fainting.
- (b) Skin corrosion/irritation Based on available data, the classification criteria are met for Category 1 (causes severe skin burns).  
NaDCC: corrosive to skin (rabbit test).
  - (c) Serious eye damage/irritation Based on available data, the classification criteria are met for Category 1 (causes serious eye damage).  
NaDCC: corrosive to eyes.
  - (d) Respiratory or skin sensitisation Respiratory sensitisation: not classified due to lack of data.  
Skin sensitisation: based on available data, the classification criteria are not met.
  - (e) Germ cell mutagenicity Based on available data, the classification criteria are not met.  
NaDCC: not mutagenic in bacterial test with salmonella and *E. coli*.
  - (f) Carcinogenicity Based on available data, the classification criteria are not met.  
NaDCC: not classified as carcinogenic by NTP, IARC or OSHA.
  - (g) Reproductive toxicity Based on available data, the classification criteria are not met.  
NaDCC: no known effects on reproductive function or foetal development.
  - (h) STOT-single exposure Based on available data, the classification criteria are met for Category 3 (may cause respiratory irritation).  
NaDCC and citric acid: may cause respiratory irritation.
  - (i) STOT-repeated exposure Based on available data, the classification criteria are not met.  
No relevant ingredient has been classified for this effect.
  - (j) Aspiration hazard Based on available data, the classification criteria are not met.  
No relevant ingredient has been classified for this effect.

**11.2 Information on other**

Not available

**12. ECOLOGICAL INFORMATION.**

**12.1 Toxicity**

**The information below relates to Sodium Dichloroisocyanurate in its pure form.**

This preparation contains 1,3,5 - Triazine - 2,4,6 (1H, 3H, 5H) - trione, 1, 3 - dichloro-, sodium salt (sodium dichloroisocyanuric acid) at levels that may produce a biological effect.

Ecotoxicity: This preparation is likely to be highly toxic to aquatic life. No specific ecotoxicological information is available for this preparation.

**Weight of Sodium Dichloroisocyanurate acid in this preparation product (% w/w): 30-60%**

<b>Fish Toxicity</b>	<b>Sodium Dichloroisocyanurate acid</b>
Bluegill Sunfish	0.25-1.0 mg/L 96 hours LC <sub>50</sub>
Rainbow Trout	0.13-0.36 mg/L 96 hours LC <sub>50</sub>
Inland Silverside	1.21 mg/L 96 hours LC <sub>50</sub>
<b>Invertebrate Toxicity</b>	<b>Sodium Dichloroisocyanurate acid</b>
Water flea	0.196 mg/L 48 hours LC <sub>50</sub>
Mysid Shrimp	1.65 mg/L 96 hours LC <sub>50</sub>



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Other Toxicity	Sodium Dichloroisocyanurate acid
Mallard Duck	Oral LD <sub>50</sub> : 1916mg/Kg
Mallard Duck	LC <sub>50</sub> : >10,000ppm diet
Bobwhite Quail	Oral LD <sub>50</sub> : 1732 mg/kg
Bobwhite Quail	LD <sub>50</sub> 10000 ppm diet

**12.2 Persistence & Biodegradability:**

The materials used in this preparation will not persist in the environment. The free available chlorine from Sodium dishloroisocyanurate is rapidly consumed by reaction with organic and inorganic materials to produce chloride ion. The stable degradation products are chloride ion and cyanuric acid. Sodium Dichloroisocyanurate is subject to hydrolysis. Cyanuric acid produces by hydrolysis is biodegradable.

**12.3 Bioaccumulative Potential:**

Trichloroisocyanuric acid hydrolyses in water liberating chlorine and cyanuric acid. These products are not bioaccumulative.

**12.4 Mobility in soil**

Rapidly degrades in soil. The breakdown product, cyanuric acid, is weakly absorbed and highly mobile in soils and sediments.

**12.5 Results of PBT and vPvB Assessment**

The substances contained in this preparation are not identified as PBT substances.

**12.6 Endocrine disrupting properties**

Not available

**12.7 Other adverse effects**

The mixture is not classified as hazardous to the ozone layer.

**13. DISPOSAL CONSIDERATIONS.**

**13.1 Waste treatment methods**

**13.1.1 Product Disposal**

Do not put product, spilled product, partially filled containers into the waste compactor. Contact with incompatible materials could cause a reaction and fire. Do not transport damp or wet material. Neutralise materials to a non-oxidising state for safe disposal.

Clean Container and dispose of according to local and national regulations.

**14. TRANSPORT INFORMATION.**

**14.1 UN Number** 3077

**14.2 UN proper shipping name** Environmentally hazardous substance, solid, NOS (contains troclosene sodium)

**14.3 Transport hazard class(es)** 9

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**14.4 Packing group** III  
**14.5 Environmental hazards** Classified as marine pollutant/environmentally hazardous.  
**14.6 Special precautions for user** Not available.  
**14.7 Maritime transport in bulk according to IMO instruments** Not applicable.

**14.8 Special Provisions:** ADR/IATA: When packed in inner or single packs  $\leq 5$  kg, Special Provision 375 of 2015 UN Model Regulations for the transportation of dangerous goods (IATA Special Provision A197) exempts this product from the labelling and documentation provisions of Dangerous Goods Regulations.

IMDG: IMDG 2014 (2.10.2.7)  
Marine pollutants packaged in single or combination packagings containing a net quantity per single or inner packaging having a net mass per single or inner packaging of 5 kg or less for solids are not subject to any other provisions of this Code relevant to marine pollutants provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8

**15. REGULATORY INFORMATION.****15.1 Safety, health and environmental regulations/legislation specific for the mixture**

EU: Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (as amended).

Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on Personal Protective Equipment.

EU Indicative Occupational Exposure Limit Values (IOELVs): Commission Directive 2000/39/EC (as amended).

The active substance is listed in the following chemical inventories:

- Australian Chemical Inventory (AICS) – Listed
- Canadian Chemical Inventory (DSL) – Listed
- China Chemical Inventory (IECS) – Listed
- European Union Inventory (EINECS) – No: 220 – 767 -7
- Japan Chemical Inventory (ENCS) – No. 5- 1043
- Korean Chemical Inventory (KECL) – No. KE10215
- New Zealand Chemical Inventory (NZIOC) – Listed
- Philippines Priority Chemical List (PICCS) – Listed
- US Inventory Status (TSCA) – Listed

The mixture is generally classified and registered as a disinfectant, biocide, or pesticide. As such, it is notified to the Pesticide Control Service, Department of Agriculture, Food and the Marine in Ireland under its appropriate trade name.

**15.2 Chemical Safety Assessment**

No data available.

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**16. OTHER INFORMATION.**

The above information is intended to give general guidance as to health and safety. Whilst it is correct to the best of our knowledge and belief, no warranty can be given or implied that it will be adequate or applicable for all cases nor that the product will be suitable for any particular purpose since conditions of use are outside our control.

A UN 6(c) bonfire test conducted on plastic and fibreboard drums of Troclosen Sodium (CAS No. 2893-78-9) showed no evidence of explosive properties. Therefore, per Note T in the 30th ATP to Directive 67/548/EEC, this substance is not labeled as explosive when packaged in plastic or fibreboard containers or in bulk bags.

CLP Classification used in Section 3

Physical Hazard(s): Oxidizing Solid - Category 2.

Contact Hazard - Respiratory: Category 1 - Causes respiratory sensitisation.  
 - Eye: Category 1 - Causes serious eye damage.  
 - Eye: Category 2 - Causes serious eye irritation.  
 - Skin: Category 2 - Causes skin irritation.

Acute Toxicity - Oral: Category 4 - Harmful if swallowed.

Target Organ Toxicity (Single Exposure): Category 3 - May cause respiratory tract irritation.

Hazardous to Aquatic Environment - Acute Hazard: Category 1 - Very toxic to aquatic life.

Hazardous to Aquatic Environment - Chronic Hazard: Category 1 - Very toxic to aquatic life with long lasting effects.

Health Hazard Statement(s):  
 H302 - Harmful if swallowed.  
 H315 - Causes skin irritation.  
 H318 - Causes serious eye damage.  
 H319 - Causes serious eye irritation.  
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H335 - May cause respiratory irritation.

Physical Hazard Statement(s):  
 H272 - May intensify fire; oxidizer.

Environmental Hazard Statement(s):  
 H410 - Very toxic to aquatic life with long lasting effects.

Supplemental Hazard Statement:  
 EUH031- Contact with acids liberates toxic gas.

**Abbreviations used in this Safety Data Sheet**

ATE	Acute Toxicity Estimate
CLP	Classification, Labelling and Packaging Regulation
DNEL	Derived No Effect Level
EC <sub>50</sub>	Effective concentration that causes 50% of the maximum response
IACR	International Agency for Research on Cancer
LC <sub>50</sub>	Lethal concentration required to kill 50% of test population
LD <sub>50</sub>	Lethal dose at which 50% of test population is killed within a certain time
NTP	US National Toxicology Program
OSHA	US Occupational Safety and Health Administration
PBT	Persistent, bioaccumulative and toxic
PNEC	Predicted No Effect Concentration
STOT SE	Specific Target Organ Toxicity, single exposure
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals (Regulation (EC) No 1907/2006)
UN	United Nations Model Regulations on the Transport of Dangerous Goods
vPvB	Very persistent and very bioaccumulative

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**Main data sources used/checked for this Safety Data Sheet:**

- Safety Data Sheets provided by ingredient suppliers.
- CLP Classification & Labelling Inventory.
- ECHA registered substances dissemination portal (for additional information relevant to mixture classification).
- [UK] Health and Safety Executive EH40/2005 Workplace exposure limits (Fourth edition; 2020) [online]. Available from <https://www.hse.gov.uk/pubns/priced/eh40.pdf> [accessed 10 March 2022].
- [Ireland] Health and Safety Authority Code of Practice (2020) [online]. Available from [https://www.hsa.ie/eng/Publications and Forms/Publications/Latest Publications/chemical agents code of practice 2020.87509.shortcut.html](https://www.hsa.ie/eng/Publications_and_Forms/Publications/Latest_Publications/chemical_agents_code_of_practice_2020.87509.shortcut.html) [accessed 10 March 2022].
- UK Health and Safety Executive (HSE) guidance on selection/use of personal/respiratory protection

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**REVISION HISTORY:**

Revision No. 3 – Amended to reflect full product tradename

Revision No. 2 – Updated to new EU required format

Revision No. 1 – Revision needed with 2021 date

Revision No. 0 – New SDS required for individual products / Created due to request for individual SDS.