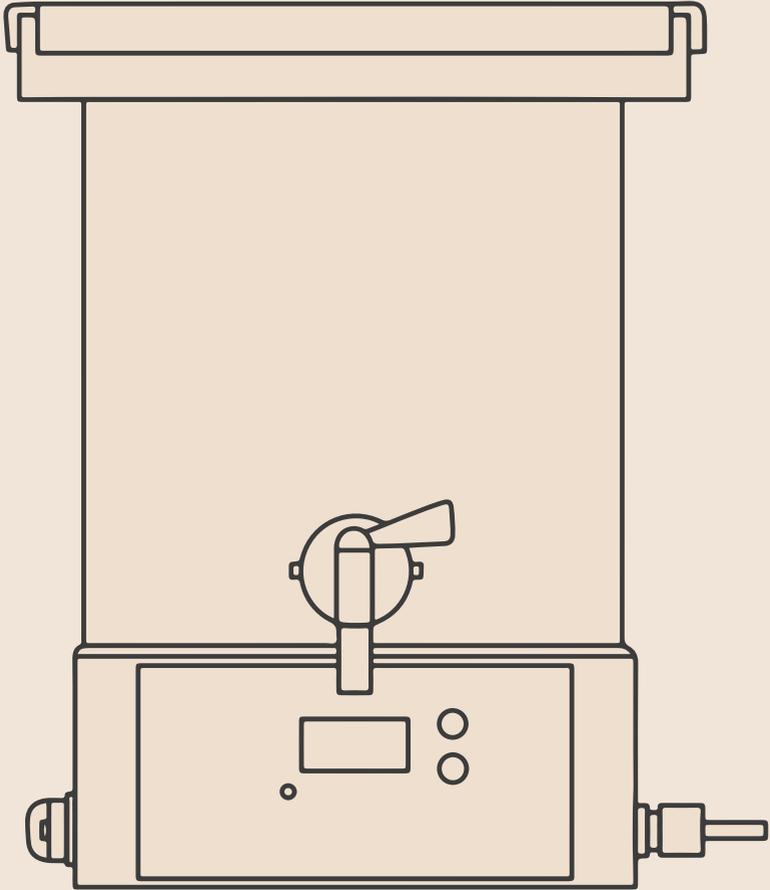


Mini



 GREENTECH GLOBAL
PURE GENIUS

AQUATECH 

Mini

"Its dead simple, we just make up the solution in the morning, bottle it up and are ready to go for the day - perfect."



"In the homes where we have replaced chemical cleaning with the AquaTeck product we have seen nearly 60% savings on our cleaning materials cost each month."

"AquaTeck spray from Greenteck is a fantastic product, it's a game changer in this industry replacing sanitiser, all-purpose cleaner, and degreaser at once with the safest liquid (drinkable water)."



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Contact



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GreenTeck Global

GreenTeck Global is an innovator in alternative green technologies; providing sustainable, energy-conscious and cost-effective solutions that make a proven difference to the environment.

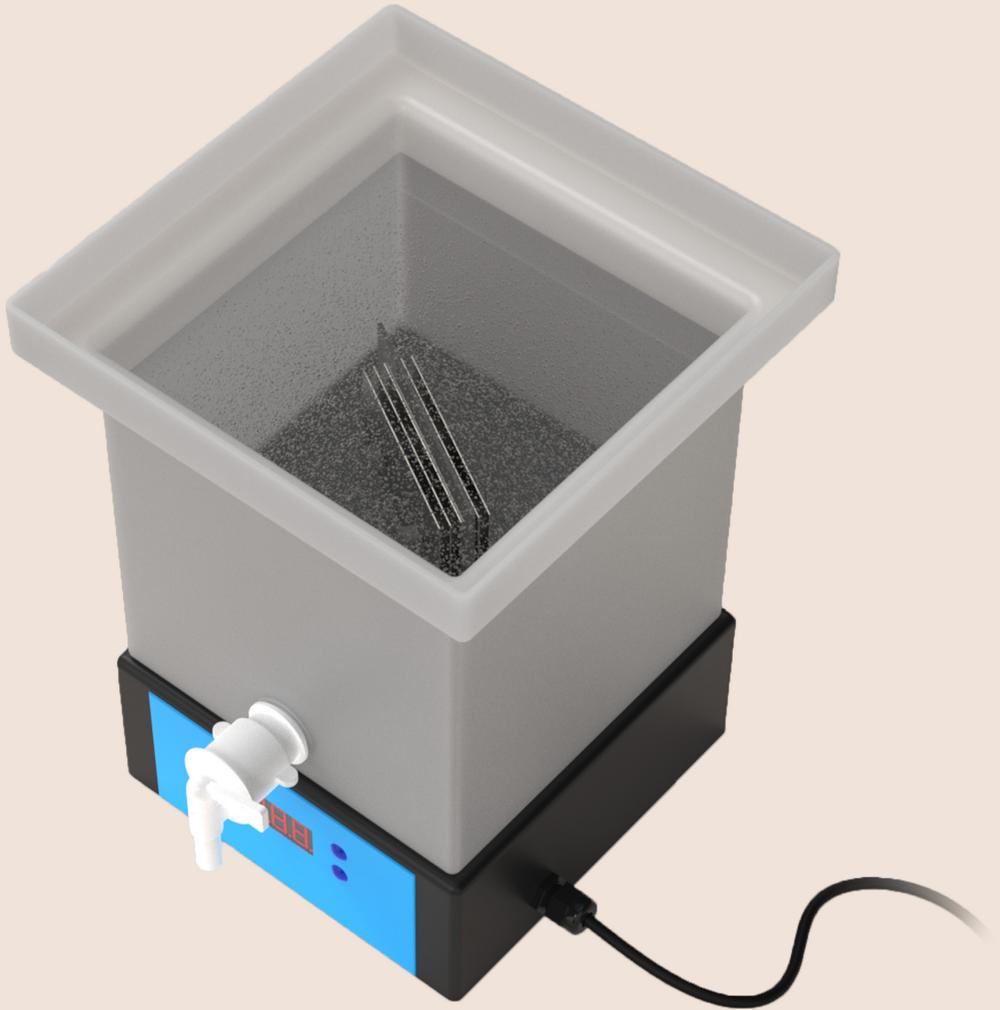
When the very future of our planet necessitates the need for cleaner air and cleaner water, GreenTeck is pioneering ways to reduce the cost and complexity of bacteria, pathogen and odour control.

Introduction

The AquaTeck Mini utilizes a combination of tap water, salt, a small dose of vinegar, and some power to create a powerful multipurpose sanitiser and cleaner. The solution produced is known as HOCL (hypochlorous acid), an extremely powerful yet natural steriliser.

The AquaTeck Mini can produce up to 7.5 litres of the HOCL solution per cycle. This can be dispensed into a vast range of cleaning equipment such as refillable bottles, mop buckets, or GreenTeck fogging and misting products.

The AquaTeck Mini benefits users with an effective and convenient cleaning solution, cutting costs by simplifying supply chains, and concurrently having a positive environmental impact by eliminating the need for both chemicals and packaging.



Product Parameters

Description

HOCL Production System

Model

AquaTeck Mini

Dimensions

300 x 254 x 330 mm

Weight

3.86 kg

Power supply

Single Phase AC, 110-240 V at 50/60 Hz, 66 W

Water capacity

7.5 litres

Water quality

Clean tap water

Operating temp - water

10 - 26 °C

pH output

5.5 - 6.5 pH

PPM output

200 or 500 ppm

Operating temp - air

7 - 46 °C

Electrolysis cell lifetime

2,000 hours

Cell at 200ppm lifetime

112,500 litres

Cell at 500ppm lifetime

45,000 litres

Components

- | | | | |
|----------|-------------------|-----------|----------------|
| 1 | 7.5 litre tank | 6 | LED display |
| 2 | Electrolysis cell | 7 | Resetable fuse |
| 3 | Tap | 8 | Power light |
| 4 | Power supply | 9 | Start button |
| 5 | Lid | 10 | Select button |

Top

1

2

4

3

Front

5

6

7

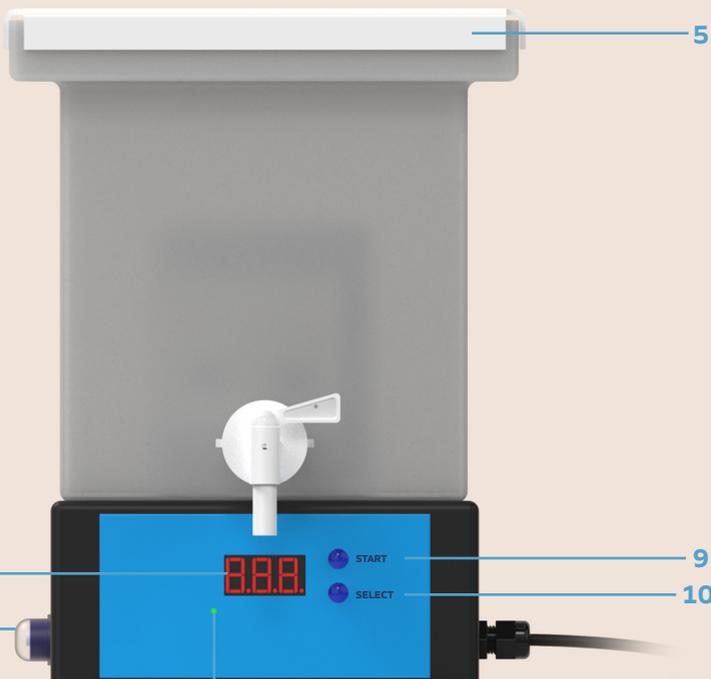
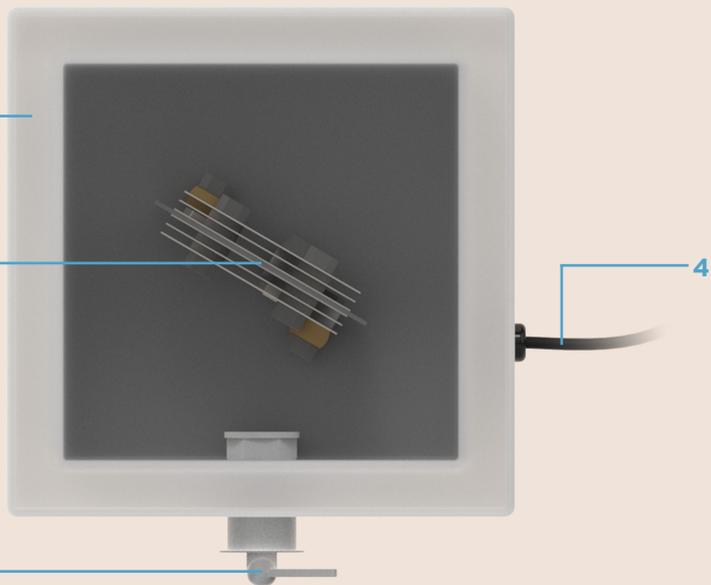
8

START

SELECT

9

10



Hypochlorous Acid (HOCl)

Chlorine and Microbes

Chlorine has been used as the basis for water treatment and disinfection due to its effectiveness and abundance all over the world, the main source being in our oceans in the form of sodium chloride (Salt).

Conventionally, sodium hypochlorite (NaOCl), the common active component in bleach is used to disinfect bacteria and viruses. However, hypochlorous acid (HOCl) is proven to be 80 to 100 times more effective as an antimicrobial compared to sodium hypochlorite (NaOCl).

All bacteria and many viruses are protected by a negatively charged membrane, therefore a negatively charged hypochlorite ion (ClO⁻) is repelled away from the microbes and unable to pass through the membrane layer.

NaOCl vs HOCl

Sodium hypochlorite (NaOCl) breaks through the membrane layer in a forceful manner. This is commonly practised by raising the pH of the hypochlorite ion to about pH 13 by adding sodium. The high pH causes the membrane to lose its structure allowing the hypochlorite ions to pass into the centre of the microbe. However, this process requires a high concentration as it must overpower and control the entire surrounding environment.

Hypochlorous acid (HOCl) is a relatively small molecule with no overall charge meaning it can easily diffuse through the membrane layer and enter the centre of the microbe. Once inside, HOCl disrupts vital processes within the microbes such as breaking down nucleic acid and halting protein production, killing them with a small but highly effective dose.



YouTube
HOCl vs NaOCl animation

Accreditations

MSL Microbiology Testing Laboratories

BS EN 14476

Certified to kill 99.994% of Coronavirus. Testing standards certify a 99.99% kill of all viruses, HOCl was tested against a COVID-19 surrogate.

ALS Testing Laboratories

BS EN 1276

Certified to kill 99.999% of all bacteria. This was tested against Staphylococcus aureus, Escherichia coli, Pseudomonas aeruginosa and Enterococcus hirae.

Modified BS EN 1276

Method modified to give a more precise kill rate. Kills 99.99999% of Salmonella enterica. Kills more than 99.99999% of Escherichia coli. Kills more than 99.99999% of Listeria monocytogenes.

BS EN 13697

Certified as an effective biocide on an array of organisms in dirty conditions
The microbial solution consisted of Staphylococcus aureus, Escherichia coli, Pseudomonas aeruginosa and Enterococcus faecalis, Saccharomyces cerevisiae and Candida albicans.

Perfectus Biomed Group

BS EN 1650:2019

Certified to kill 99.99% of all yeast and fungi. This approves HOCl for use as an effective fungicide and yeasticide for use in food, industrial, domestic and institutional areas. Over 99.99% effective against C. albicans in less than 60 seconds. Also tested against A. brasiliensis as model fungi, achieving a kill rate exceeding 99.99%.

200ppm Solution SOP

Standard Operating Procedure for producing 200ppm HOCl solution using the AquaTeck Mini unit.*

* Only trained operators should use the AquaTeck Mini. Incorrect operation may endanger yourself and others and cause material damage.

** Salt and white vinegar consumables used must be GreenTeck supplied, use of other ingredients is in breach of the SDS and will invalidate the warranty.

Ingredients:

7.5 litres of tap water
2 scoops of salt **
30ml white vinegar **

Equipment:

AquaTeck Mini
GreenTeck measuring scoop
PPM test strips
Batch record sheet

Duration: 8 minutes



YouTube
How to use your AquaTeck Mini

Instructions

- 1** Set the AquaTeck Mini on a flat, level surface. Remove the lid of the unit and make sure the tank is empty of any debris, water and/or undissolved salt crystals.
- 2** Put two level scoops (approximately 35 g) of salt crystals into the unit's tank.
- 3** Using the upper reservoir of the metering bottle, measure out 30ml of white vinegar and pour it into the unit's tank.
- 4** Fill the unit's tank with 7.5 litres of tap water.
- 5** Stir the water in the tank for 60 seconds to ensure all the salt crystals have dissolved fully.
- 6** Relace the lid back onto the AquaTeck Mini, then plug into mains power.
- 7** Press the 'Select' button until 200 is displayed on the screen of the unit.
- 8** Press the Start button to begin HOCL generation - the display will count down from eight minutes.
- 9** After the cycle has been completed, follow the 'Batch Recording' instructions (located on page 13) to correctly label and record the batch of solution produced.
- 10** Finally, decant HOCL into containers/spray bottles using the tap located on the front of the unit.

500ppm Solution SOP

Standard Operating Procedure for producing 500ppm HOCl solution using the AquaTeck Mini unit.*

* Only trained operators should use the AquaTeck Mini. Incorrect operation may endanger yourself and others and cause material damage.

** Salt and white vinegar consumables used must be GreenTeck supplied, use of other ingredients is in breach of the SDS and will invalidate the warranty.

Ingredients:

7.5 litres of tap water
2 scoops of salt **
60ml white vinegar **

Equipment:

AquaTeck Mini
GreenTeck measuring scoop
PPM test strips
Batch record sheet

Duration: 20 minutes



YouTube
How to use your AquaTeck Mini

Instructions

- 1** Set the AquaTeck Mini on a flat, level surface. Remove the lid of the unit and make sure the tank is empty of any debris, water and/or undissolved salt crystals.
- 2** Put two level scoops (approximately 35 g) of salt crystals into the unit's tank.
- 3** Using the upper reservoir of the metering bottle, measure out two times 30ml of white vinegar and pour it into the unit's tank, to reach desired 60ml.
- 4** Fill the unit's tank with 7.5 litres of tap water.
- 5** Stir the water in the tank for 60 seconds to ensure all the salt crystals have dissolved fully.
- 6** Relace the lid back onto the AquaTeck Mini, then plug into mains power.
- 7** Press the 'Select' button until 500 is displayed on the screen of the unit.
- 8** Press the Start button to begin HOCL generation - the display will count down from 20 minutes.
- 9** After the cycle has been completed, follow the 'Batch Recording' instructions (located on page 13) to correctly label and record the batch of solution produced.
- 10** Finally, decant HOCL into containers/spray bottles using the tap located on the front of the unit.

Batch Recording SOP

It is important to log each batch of the solution produced. This provides users with an expiry date for the HOCL, and accurate traceability in the event of CQC or EHO inspection.

* Only trained operators should use the AquaTeck Mini. Incorrect operation may endanger yourself and others and cause material damage.

Equipment:

Duration: 2 minutes

PPM test strips
Batch record sheet

Instructions

- 1 Take one PPM test strip from the supplied 'Water Works' container.
- 2 Dip one test strip into the water sample for one second.
- 3 Remove the strip and shake once towards the ground, away from the eyes, to remove excess liquid.
- 4 Wait for one minute.
- 5 Match the strip to the colour chart provided on the test strip bottle. Complete colour matching within 15 seconds.
- 6 Log the data onto the Batch Record sheet and calculate the expiry date three months from the production date.
- 7 Label the relevant containers with the expiry date produced.

Batch Record Sheet

Solution Volume (litres)	PPM	Date of production	3 month expiry date	Signed

Consumable

The AquaTeck Mini's main input is normal tap water and a small amount of electricity. However, the unit does require some basic consumables to produce HOCL. If you are running low on any of the below, they can be re-ordered from: <https://greentek.store/collections/aquateck-consumables>

Salt Bag	(SB/079)	500 g	£4.99	
White Vinegar Dosing Bottle	(DB/118)	500 ml	£5.45	
White Vinegar Bag-In-Box Fill	(BF/314)	1.5 L	£11.99	
Test Strips	(TS/1373)	50 strips	£29.99	
Flairosol Bottle	(FLAIR)	300 ml	£3.99	
Spray Bottle	(WH/500)	500 ml	£1.80	
Container	(WH/100)	5 L	£2.99	



Safety Data Sheet

Key

Blue & Grey Text - Both 200 ppm and 500 ppm

Green - Reference to 200 ppm only

Red - Reference to 500 ppm only

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

1.1. Product identifier: Mixtures

Trade name

GreenTeck Pure Genius

Product Group

Disinfectants

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

Relevant identified uses

Industrial and for professional and non-professional use (surface cleaning and sanitisation)

Uses advised against

Any other use outside recommended.

1.3. Details of the supplier of the safety data sheet: Supplier

Name: GreenTeck Global Ltd.

Address: 2 Moses Winter Way

Wallingford

Oxfordshire

UK

OX10 9FE

E-Mail: will@greenteckglobal.com

1.4. EMERGENCY TELEPHONE NUMBER:

THE NATIONAL FOCUS FOR CHEMICAL INCIDENTS: +44 029 2041 6388

NATIONAL CHEMICAL EMERGENCY CENTRE: +44 01235 463060

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture:

Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS] : Not classified

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS] : No labelling applicable

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.1. Substances

200 ppm solution

Hypochlorous acid: 0.015% to 0.025%
CAS No: 7790-92-3

(Active Chlorine released from hypochlorous acid)

Sodium Chloride: 0.46% to 0.48%
CAS No: 7647-14-5

Acetic Acid: 0.019% to 0.021%
CAS No: 64-19-7

Water: >99.474%
CAS No: 7732-18-5

500 ppm solution

Hypochlorous acid: 0.045% to 0.055%
CAS No: 7790-92-3

(Active Chlorine released from hypochlorous acid)

Sodium Chloride: 0.46% to 0.48%
CAS No: 7647-14-5

Acetic Acid: 0.0139% to 0.041%
CAS No: 64-19-7

Water: >99.424%
CAS No: 7732-18-5

3.2. Mixtures

Description of the mixture

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH annex II

Hazardous ingredients

None

SECTION 4: First aid measures

4.1. Description of first aid measures

Following inhalation

If discomfort develops, remove from further exposure and allow to breathe fresh air. Obtain medical attention if any discomfort continues.

Following skin contact

None required. Non-sensitising.

Following eye contact

If discomfort develops, flush eyes with plenty of water and remove contact lenses. Obtain medical attention if irritation continues.

Following ingestion

None required.

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

No information available.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2. Special hazards arising from the substance or mixture

Not flammable or explosive.

5.3. Advice for fire-fighters

No additional information available.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate non-emergency personnel.

6.2. Environmental precautions

If allowed by the local environmental regulatory, spills can be washed to sewer with plenty of water.

6.3. Methods and material for containment and cleaning up

Mop up / absorb with inert material (cloth, paper towel, etc.). Cleaning materials may be disposed of as normal refuse.

6.4. Reference to other sections

See also section 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

None required. Wear protective gloves if desired. Wash hands after working with product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a closed, opaque container. Keep in a cool, well ventilated place, keep the container closed when not in use. The product is designed for immediate usage or short term storage under specific conditions based on user instructions. Prolonged storage reduces the cleaning and disinfection abilities.

Incompatible products : Strong acids or products containing ammonia (development of hazardous gases), hydrogen peroxide.

Incompatible materials : Direct sunlight, UV light, heat.

Storage temperature : 5-30°C.

7.3. Specific end uses

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No occupational exposure limit available.

8.2. Exposure controls

Eye/Face protection : Not needed for normal use.

Wear protective goggles if desired.

Skin protection : Not needed for normal use. Use protective rubber or nitrile gloves if desired.

Respiratory protection : None.

Thermal hazards : None.

Environmental exposure controls : None.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Appearance:	Clear Solution
Colour:	Colourless
Odour:	Slight chlorine odour
Odour threshold:	Not available
pH:	5,5 – 7.0
Melting point/freezing point:	0° C / - 2° C
Initial boiling point and boiling range:	100° C
Solid/gas flammability:	Not applicable
Upper/lower flammability or explosive limits:	Not applicable
Vapour density:	Not available
Flash point:	Not applicable
Evaporation rate:	Not available
Vapour pressure:	20 - 25 hPa (20° C)
Relative density:	1.0 – 1.01 g/mL
Solubility in water:	Completely soluble
Solubility in oil:	Not soluble
Partition coefficient (n-octanol/water):	Not available
Auto-ignition temperature:	Not applicable
Viscosity:	Not available
Ignition temperature:	Not applicable

9.2. Other information

No additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions. See section 10.3.

10.2. Chemical stability

Stable under normal conditions. Sunlight and high temperatures degrade the active chlorine content. Product label contains shelf life information.

10.3. Possibility of hazardous reactions

Do not mix with strong acids or strong bases. Chlorine gas may be released in the presence of strong acid. Chloramine gas may be released in the presence of ammonia.

10.4. Conditions to avoid

Direct sunlight, extremely high and low temperatures.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Sodium chloride – CAS: 7647-14-5

Term	Endpoint	Value	Species	Reference
Accute oral toxicity	LD50	3550mg/kg	Rat	ECHA
Acute dermal toxicity	LD50	>10000mg/kg	Rabbit	ECHA
Acuteinhalative toxicity	LD50	>42mg/L/1h	Rat	ECHA

Skin irritation rabbit result: Slightly to not irritant (ECHA).

Eye irritation result: No data available.

Sensitisation mouse test: Not sensitizing (ECHA).

Human experience result: Negative (ECHA).

Germ cell mutagenicity: Genotoxicity in vitro Ames test. Result: negative (ECHA).

SECTION 12: Ecological information

12.1. Toxicity

No additional information available.

12.2. Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

No additional information available.

12.4. Mobility in soil

Hypochlorite as an inorganic substance with an infinite water solubility and very low partitioning coefficients should be considered to be mobile in soil and sediment.

12.5. Results of PBT and vPvB assessment Sodium chloride is an inorganic salt, which will dissociate into its respective ionic species for which no further biological oxidation is possible.

Hypochlorous acid will partially dissociate into its respective ionic species for which no further biological oxidation is possible. Therefore neither of the substances are PBT / vPvB.

12.6. Other adverse effects:

None.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose in a safe manner in accordance with local and national regulations. All packaging may be recycled.

SECTION 14: Transport information

14.1. In accordance with ADR / RID / IMDG / IATA / ADN

UN number: N/A

UN proper shipping name: N/A

Transport hazard class(es): N/A

Packing group: N/A

Environmental hazards: N/A

14.2. Special precautions from user

Overland transport: N/A

Transport by sea: N/A

Air transport: N/A

Inland waterway transport: N/A

Rail transport: N/A

SECTION 15: Regulatory information

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

The product is not classified as dangerous according to EU-directive 1272/2008.

Regulation (EC) No 648/2004 on detergents

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer – classified as not ozone-depleting.

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of $\geq 0.1\%$ (w/w).

Occupational restrictions

Take note of Dir 94/33/EC and 92/85/EEC on the protection of young people and pregnant workers.

15.2. Chemical Safety Assessment

For this substance a chemical safety assessment was not carried out.

SECTION 16: Other information

16.1. Abbreviations and acronyms

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

16.2. Key literature references and sources for data

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

ECHA – European Chemicals Agency

ECOTOX Knowledge Base

16.3. Relevant R-, H- and EUH-phrases

None.

16.4. Training advice

Provide adequate information, instruction and training for operators.

16.5. Further information

The product contains no volatile organic compounds.

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product. It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

Contact



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“GreenTeck Global were outstanding in supporting the training of GFSL employees on how to use the device and conducted training to the highest standard. GreenTeck Global has increased innovation in self delivery in specialist cleaning understanding of the customer base improving customer experience.”



**Gov Facility
Services Limited**



**EYRES MONSELL
PRIMARY SCHOOL**

“Using the AquaTeck makes it as strong as a hospital sanitiser but its water, safe to use. Quick fine mist so you’re not intricately scrubbing anything anymore so it saves a lot more time in sanitising ourselves and everything around us.”



AquaTeck Mini User Manual
GreenTeck Global Limited
Version 1.2 NOV 2022