

Safety Data Sheet

according to ChemV 2015 – SR 813.11

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Vers.: 02

revised on / valid from: 02.04.2019

SECTION 1: Identification of the substance or preparation and of the company

1.1. Product identifier

Trade name: WATERLIQ LIVING

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

Disinfectant (biocide product) for the private and public health sectors. See also Section 7.3 - Specific end use (s).

1.3. Details of the manufacturer providing the safety data sheet

ERST Project GmbH
Aiterhofenerstr. 4

94330 Salching - Germany
Tel.: +49 (0)9426 763 30 33

<https://erst-project.de>

E-Mail (Qualified Person): erich.eibl@erst-project.de

1.4. Emergency number

Emergency telephone number:

Beratungsstelle für Vergiftungserscheinungen: + 49 30 19240 (with costs)

Emergency – Telephone of Company / Undertaking:

Telephone: + 49 9426 7633 033, mobil: + 49 171 8172675 (Mr. Erich Eibl)

SECTION 2: Potential hazards

2.1. Classification of the substance or preparation

No classification required.

2.2. Label elements

No labeling required.

2.3. Other dangers

Not PBT / vPvB according to Article 4 ChemO.

The concentrate may cause in rare cases eye irritation and mild irritation of sensitive skin or open wounds. Ingestion of the concentrated solution may cause in rare cases irritation of the pharynx and the digestive tract.

SECTION 3: Composition / information on ingredients

3.1. Ingredients

Ingredients	Identificator	Wt%
Active chlorine produced by electrolysis of sodium chloride	EC Nr. 100-100-0 BAS-Nr. 1236	0.005%
Chlorine	CAS Nr. 7782-50-5 EC Nr. 231-959-5	0.0625%
Hypochlorous acid	CAS Nr. 7790-92-3 EC Nr. 232-232-5	0.0625%
Sodium hypochlorite	CAS Nr. 7681-52-9 EC Nr. 231-668-3	0.0625%
Sodium chloride	CAS Nr. 7647-14-5 EC Nr. 231-598-3	0.0625%
Distilled Water		99.745%

The exact composition cannot be determined as this is an active product. Values in the table are only indicative.

3.2. Preparations

Contains biocidal agents.

Name	Identificator	m.% - range	Classification acc. 1272/2008/EG (100 %)
Active chlorine produced by electrolysis of sodium chloride	EC Nr. 100-100-0, BAS-Nr. 1236	0,005 (= 50 mg/L oder 50 ppm)	None (Active chlorine < 0,25 %)
with shares of			

Chlorine	CAS Nr. 7782-50-5, EC Nr. 231-959-5		Dgr, GHS03, GHS06, GHS09 Ox. Gas 1, H270 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Acute Tox. 3, H331 STOT SE 3, H335 Aquatic Acute 1, H400
Hypochlorous acid	CAS Nr. 7790-92-3, EC Nr. 232-232-5		None
Sodium hypochlorite	CAS Nr. 7681-52-9, EC Nr. 231-668-3		Dgr, GHS05, GHS09 EUH031 (Konz. \geq 5 % Aktivchlor) Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Sodium chloride	CAS Nr. 7647-14-5, EC Nr. 231-598-3	0,05 - 1,0	Wng, GHS07 Eye Irrit. 2, H319

For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

After eye contact: In rare cases of eye irritation, rinse for several minutes with running tap water or eye wash bottle / eye wash.

After skin contact: If skin irritation occurs, remove product concentrate with soap and warm water. Remove clothing soaked in the product concentrate.

After swallowing: consult a doctor. After ingestion of a small amount of product concentrate, dilution by drinking with tap water may be considered. Do not induce vomiting.

After inhalation: Supply fresh air. If symptoms persist, such as dizziness or nausea, seek medical attention.

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

Eye and skin irritation possible in rare cases after eye/skin contact (acute and delayed). In rare cases local irritation, drowsiness and nausea after inhalation or swallowing (acute and delayed).

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

Treatment of the symptoms. No antidote known. No special treatment required.

SECTION 5: Firefighting measures

5.1. Extinguishing agent

Carbon dioxide (CO₂), alcohol resistant foam, dry chemical, water spray. Extinguishing measures to suit the environment.

5.2. Special hazards arising from the substance or preparation

Non-combustible material. In case of fire, small quantities of hazardous gases are possible: chlorine, hydrogen chloride gas, chlorine oxides.

5.3. Advice for firefighters

According to general recommendations in case of fire in the event of vapors, aerosols, combustion products: Use self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For emergency responders: see section 8.

6.2. Environmental precautions

Do not allow concentrate to enter drains, surface water or soil.

6.3. Methods and material for containment and cleaning

Pick up small amounts of leaking concentrate with disposable wipes. Contain and absorb larger quantities of absorbent material (such as sand, soil, diatomaceous earth, vermiculite) and place in containers for disposal in accordance with local / national regulations (see Chapter 13). Post-cleaning (see section 7.1).

6.4. Reference to other sections

See Section 7 for safe handling information. See Section 8 for protective equipment. See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Measures to protect against fire and explosions:

Usual measures of preventive fire protection. No flammable substance.

7.2. Conditions for safe storage, including any incompatibilities

Information on storage conditions

Keep container tightly closed in a cool, dry, well-ventilated place. Protect from heat. Protect from light. Development of oxygen and chlorine possible.

Requirements for storage rooms and containers

If possible keep in closed original container. Unbreakable plastic containers are preferable to glass containers. Label contents correctly. Set fragile containers in unbreakable bowls. Do not store in food containers due to risk of confusion.

Storage class: not applicable (no hazardous material)

7.3. Specific end uses

Disinfectant of surfaces, furnishings and furniture. Walls and floors in the private as well as in the public area. Bathroom, toilets, laundry room. Further for the disinfection of equipment, container, exterior surfaces, cutlery and dishes, by wiping, spraying and misting.

Industry and sector specific guidelines: No information available.

SECTION 8: Exposure controls / personal protection

8.1. Parameters to be monitored

MAK-Wert von Chlor, CAS-Nr. 7782-50-5: 0.5 ml/m³, 1.5 mg/m³ (SUVA)

Short-term limit of chlorine: 0.5 ml/m³, 1.5 mg/m³ (SUVA)

The product does not contain any other substances with occupational exposure limit values.

DNEL (Worker) for chlorine, CAS-Nr. 7782-50-5:

DNEL acute inhalation (local and systemic): 1,5 mg/m³

DNEL Long-term inhalation (local and systemic): 0,75 mg/m³

DNEL Long term dermal (systemic): 0,5 %

DNEL (Consumer) for chlorine, CAS-Nr. 7782-50-5:

DNEL acute inhalation (local and systemic): 1,5 mg/m³

DNEL Long-term inhalation (local and systemic): 0,75 mg/m³

DNEL Long term dermal (systemic): 0,5 %

DNEL Long-term oral (repeated): 0,25 mg/kg bw/day

PNEC for chlorine, CAS-Nr. 7782-50-5:

PNEC Waters, fresh water: 0,21 µg/L

PNEC Waters, periodic release: 0,26 µg/L

PNEC sewage plant (STP): 0,03 mg/L

PNEC Secondary poisoning: 11,1 mg/kg food

PNEC Waters, seawater: 0,042 mg/L

8.2. Limitation and monitoring of exposure

8.2.1 Suitable technical protective measures

Ensure good ventilation of the working area. Provide a wash basin at the workplace, or provide an eye wash / eye wash bottle and mark it conspicuously.

8.2.2 Individual protection - personal protective equipment

General protection and hygiene measures - see section 7.1

Eye / face protection

Generally not required. Safety glasses according to DIN EN 166 can be worn.

Skin protection

For sensitive skin, work with gloves. Preventive skin protection recommended.

Gloves

Protective gloves according to DIN EN 374. Suitable glove material also on prolonged, direct contact: polyvinyl chloride (PVC), nitrile rubber, chloroprene rubber (CR), butyl rubber, fluoroelastomer (FKM). Breakthrough time (maximum wearing time): > 480 min. The gloves must be checked for leaks before use. The breakthrough time may vary depending on the design and application conditions. The information provided by the manufacturer of the protective gloves for permeability and breakthrough times must be obtained.

Respiratory protection

If used as intended, no respiratory protection is required.

8.2.3 Limitation and monitoring of environmental exposure

Avoid release to the environment. Do not empty into drains.

SECTION 9: Physical and Chemical Properties

9.1. Information on the technical and chemical properties

Appearance: Clear, colorless liquid

Odor: slight smell of chlorine

Odor threshold: from a concentration of 0.06 - 0.2 ppm active chlorine

pH value: 7.3 - 7.4

Melting point / freezing point: approx. 0 ° C

Initial boiling point and boiling range: approx. 100 ° C

Flash point: Not applicable

Evaporation rate: not determined

Flammability (solid, gas): not flammable

Upper / lower flammability or explosive limits: none

Vapor pressure: 23 hPa at 20 ° C

Vapor density: not determined

Relative density: approx. 1.02 g / cm³

Solubility (ies): completely soluble in water

Partition coefficient: n-octanol / water: not determined

Auto-ignition temperature: none

Decomposition temperature: none

Viscosity: not determined

Explosive properties: none

Oxidizing properties: slightly oxidizing

9.2. Other Information

No further relevant information available.

SECTION 10: Stability and Reactivity

10.1. Reactivity

See section "Possibility of hazardous reactions".

10.2. Chemical stability

Stable under recommended conditions for use and storage (See section 7).

10.3. Possibility of dangerous reactions

There are no known dangerous reactions of the product. The ingredient chlorine can react violently with flammable substances and reducing agents, violently oxidizes organic substances, causes rapid corrosion of some metals with water. At elevated temperature ($> 120^{\circ}\text{C}$), chlorine reacts spontaneously with iron (chlorine-iron fire). Chlorine can react with aluminum, alcohols and numerous chemical compounds. The ingredients sodium hypochlorite can react with acids and oxidizing agents exothermic reactions.

10.4. Conditions to avoid

Heating, heating, sunlight.

10.5. Incompatible materials

No further relevant information available.

10.6. Hazardous decomposition products

Not known. Possible decomposition products of the components Chlorine and sodium hypochlorite are hydrogen chloride and chlorine oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: no data available

Skin corrosion / irritation: Product may be slightly irritating. Experiences from rare known cases in practice.

Serious eye damage / irritation: Product may be irritating. Experiences from rare known cases practice.

Respiratory or skin sensitization: no data available.

Germ cell mutagenicity: no data available.

Carcinogenicity: no data available.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: no data available.

Specific target organ toxicity - repeated exposure: no data available.

Aspiration hazard: Irritation of the respiratory tract possible during aspiration.

Toxicological data for the ingredient Chlorine, CAS-Nr. 7782-50-5:

LD₅₀ Acute oral (rat): 1100 mg / kg body weight (data from sodium hypochlorite, read-across)

LD₅₀ Acute Dermal (rabbit): > 20 g / kg body weight (data from sodium hypochlorite, Read-across)

LC₅₀ Acute inhalation (0.5 h, rat, OECD 403): 1,462 mg/L

Irritability skin: irritant. Experiences from practice.

Irritability eye: irritant - Risk of serious damage to eyes. Experiences from practice.

Skin sensitization (guinea pig, OECD 406): not sensitizing.

Respiratory sensitization: test not necessary for scientific reasons.

Chronic toxicity (90 d, Rat, OECD 413): NOAEL Inhaled 0.5 ppm. No systemic Effects observed, irritation of the respiratory system.

Mutagenicity: (OECD 471): Data not unique.

Reproductive toxicity (oral, rat, OECD 415): No evidence of reproductive toxicity.

Carcinogenicity (inhalation, rat): No evidence of carcinogenic effects from long-term studies.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicological data for the product are not available.

Ecotoxicological data of the ingredient chlorine, CAS-Nr. 7782-50-5:

Fish LC₅₀ (96 h, rainbow trout): 0.06 mg / L (data from sodium hypochlorite, read-across)

Daphnie EC₅₀ (48 h, Daphnia magna): 0.141 mg / L (data from sodium hypochlorite, read-across)

Alge EC₅₀ (48 h, Chlorella sp.): 0.023 mg / L (data from sodium hypochlorite, Read-across)

Bacteria EC₅₀ (3 h, activated sludge): 3 mg/L

12.2. Persistence and degradability

The physicochemical degradability of the ingredient chlorine was not determined. The ingredient sodium hypochlorite can be broken down by chemical or photolytic processes. Decay by hydrolysis. Aquatic half-life <1 day.

Biodegradability

The methods for determining biodegradability are not applicable to inorganic substances.

12.3. Bioaccumulative

No bioaccumulation potential. Log Kow of Chlorine = 0.85, Log Kow of Hypochlorous Acid = -0.87, Log Kow of Sodium Hypochlorite = -3.42 (KOWWIN v1.67 Estimates)

12.4. Mobility in the soil

High mobility. Adsorption in the soil is not expected.

12.5. Results of PBT and vPvB assessment

The PBT or vPvB criteria of Annex XIII of the REACH Regulation do not apply to inorganic substances.

12.6. Other adverse effects

Do not discharge product into the environment. The product must not be released into groundwater or surface waters. The active substance active chlorine contained above a concentration of 5 mg / L can reduce the efficiency of the active sludge in sewage treatment plants.

SECTION 13: Disposal considerations

13.1. Waste treatment method

Waste code according to Annex 1 of the Waste Catalog in accordance with Article 2 VeVA, SR 814.600: 06 13 01 (Inorganic pesticides, wood preservatives and other biocides)

Dispose of completely emptied and cleaned containers with municipal waste. Recommended cleaning agent: Water, if necessary with the addition of cleaning agents. Return partially empty containers to the point of sale or hand them over to the collection point for special waste. Disposal according to official regulations.

SECTION 14: Transport information

Regulations according to ADR, RID, ADN, IMDG, ICAO: not applicable

14.1. UN-Number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class

Not applicable

14.4. Packaging group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for the user

Not applicable

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

BAUA No: N-89628

Product type 2 and 4, commercial and private users

Water hazard class according to GSchV, SR 814.201: Class B

15.2. Chemical Safety Assessment

A Chemical Safety Assessment has not been prepared.

SECTION 16: Other information

Full text of the hazard statements in sections 2 and 3:

H270: May cause or intensify fire; Oxidant.
H314: Causes severe skin burns and eye damage.
H315: Causes skin irritation.
H318: Causes serious eye damage.
H319: Causes serious eye irritation.
H331: Toxic if inhaled.
H335: May cause respiratory irritation.
H400 Very toxic to aquatic organisms.
H410: Very toxic to aquatic life with long lasting effects.
EUH031: In contact with acid releases toxic gas.

Abbreviations:

DNEL: Derived concentration without effect
Dng: danger
EC50: Effective concentration, 50 percent
LC50: lethal concentration, 50 percent
LD50: lethal dose, 50 percent
MAK: Maximum workplace concentration
PBT: persistent, bioaccumulating and toxic
PNEC: estimated concentration without effect
STOT SE: Specific target organ toxicity after single exposure
vPvB: very persistent and very bioaccumulative
Wng: Warning

The current version 2 of the safety data sheet has been revised in all sections.