



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

1.1 Product identifier **Disinfectant**
Drinking water

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

1.2.1 Relevant uses **Disinfectant**

1.2.2 Uses advised against
None known.

1.3 Details of the supplier of the safety data sheet
Company **ANVERTEX Products GmbH**
Langmaar 12
41238 Mönchengladbach / Germany
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Technical information **info2@anvertex.de**
Safety Data Sheet

1.4 Emergency telephone number
Company **+49 (0) 2166 86810**

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]
Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements
The product is required to be labelled in accordance with regulation (EC) No 1272/2008 (CLP).

Hazard pictograms
Hazard statements H412 Harmful to aquatic life with long lasting effects.
Precautionary statements P273 Avoid release to the environment.
P501 Dispose of contents/container in accordance with local/national regulation.
Biocide (528/2012/CE) contains: 0,6 g/100g Active chlorine generated from sodium chloride by electrolysis
Registration: -

2.3 Other hazards
Human health dangers No particular hazards known.
Environmental hazards Does not contain any PBT or vPvB substances.


SECTION 3: Composition / Information on ingredients
Product-type:

The product is a mixture.

| Range [%] | Substance |
|-----------|--|
| < 3 | Sodium chloride CAS: 7647-14-5, EINECS/ELINCS: 231-598-3 |
| 0,1 - 0,8 | Sodium hypochlorite CAS: 7681-52-9, EINECS/ELINCS: 231-668-3, EU-INDEX: 017-011-00-1 GHS/CLP: Skin Corr. 1B: H314 - Eye Dam. 1: H318 - Aquatic Acute 1: H400 - Aquatic Chronic 1: H410, M = 10 |
| < 0,0002 | Sodium hydroxide CAS: 1310-73-2, EINECS/ELINCS: 215-185-5, EU-INDEX: 011-002-00-6 GHS/CLP: Skin Corr. 1A: H314 - Met. Corr. 1: H290 |

Comment on component parts

Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures
4.1 Description of first aid measures**General information**

Take off contaminated clothing and wash before reuse.

Inhalation

Ensure supply of fresh air.

Skin contact

When in contact with the skin, clean with soap and water.
Consult a doctor if skin irritation persists.

Eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion

Do not induce vomiting.
Rinse out mouth and give plenty of water to drink.
Get medical advice.

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

Treat symptomatically.
Forward this sheet to the doctor.

SECTION 5: Fire-fighting measures
5.1 Extinguishing media**Suitable extinguishing media**

Product itself is non-combustible. Fire extinguishing method of surrounding areas must be considered.

Extinguishing media that must not be used

Full water jet.

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.
Chlorine compounds.

5.3 Advice for firefighters

Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.


SECTION 6: Accidental release measures
6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
Use personal protective equipment.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.
Prevent spread over a wide area (e.g. by containment or oil barriers).

6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, universal absorbent, diatomaceous earth).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage
7.1 Precautions for safe handling

Use only in well-ventilated areas.
Avoid contact with eyes and skin. Use personal protective equipment.
The normal safety precautions for handling chemicals must be observed.

Do not eat or drink when working.
Remove soiled clothing.
Wash hands before breaks and after work.
Use barrier skin cream.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Prevent penetration into the ground.
Do not store together with acids.
Keep container tightly closed.
Keep container in a well-ventilated place.
Keep in a cool place.

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection
8.1 Control parameters

Ingredients with occupational
exposure limits to be monitored (GB)

| |
|--|
| Substance |
| Sodium hypochlorite |
| CAS: 7681-52-9, EINECS/ELINCS: 231-668-3, EU-INDEX: 017-011-00-1 |
| Long-term exposure: Chlorine (7782-50-5), EC |
| Short-term exposure (15-minute): 0,5 ppm, 1,5 mg/m ³ |



8.2 Exposure controls

| | |
|--|--|
| Additional advice on system design | Ensure adequate ventilation on workstation. Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances. |
| Eye protection | safety glasses (EN 166:2001) |
| Hand protection | The details concerned are recommendations. Please contact the glove supplier for further information. > 0,1 mm: butyl rubber, > 120 min (EN 374) |
| Skin protection | light protective clothing |
| Other | Avoid contact with eyes and skin. Do not inhale vapours. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier. |
| Respiratory protection | If ventilation is insufficient, wear respiratory protection. Short term: filter apparatus, filter A. (DIN EN 14387) |
| Thermal hazards | not applicable |
| Delimitation and monitoring of the environmental exposition | Comply with applicable environmental regulations limiting discharge to air, water and soil. |

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|---------------------------|
| Form | liquid |
| Color | yellowish |
| Odor | after chlorine |
| Odour threshold | No information available. |
| pH-value | 9,5 |
| pH-value [1%] | No information available. |
| Boiling point [°C] | No information available. |
| Flash point [°C] | not applicable |
| Flammability (solid, gas) [°C] | not applicable |
| Lower explosion limit | not applicable |
| Upper explosion limit | not applicable |
| Oxidising properties | no |
| Vapour pressure/gas pressure [kPa] | No information available. |
| Density [g/ml] | 1,027 |
| Bulk density [kg/m³] | not applicable |
| Solubility in water | soluble |
| Partition coefficient [n-octanol/water] | No information available. |
| Viscosity | No information available. |
| Relative vapour density determined in air | No information available. |
| Evaporation speed | No information available. |
| Melting point [°C] | No information available. |
| Autoignition temperature [°C] | not applicable |
| Decomposition temperature [°C] | No information available. |

9.2 Other information

Application:

For drinking water we recommend an active ingredient concentration of 0,5 ppm free chlorine. Means 0,1 liters of the concentrate per 1000 liters of drinking water.

For pools or jacuzzis we recommend 2,5 - 5 ppm free chlorine. Means 0,5 to 1,0 liters of the concentrate per 1000 liters of pool water.



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SECTION 10: Stability and reactivity
10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with oxidizing agents.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Sodium hypochlorite: Evolution of chlorine under influence of acids.

10.6 Hazardous decomposition products

Chlorine compounds.

SECTION 11: Toxicological information
11.1 Information on toxicological effects
Acute toxicity

| |
|---|
| Substance |
| Sodium chloride, CAS: 7647-14-5 |
| LD50, oral, Rat: 3000 mg/kg bw (IUCLID). |
| Sodium hydroxide, CAS: 1310-73-2 |
| LD50, oral, Rat: 2000 mg/kg (Lit.). |
| LD50, dermal, Rabbit: 1350 mg/kg (IUCLID). |
| Sodium hypochlorite, CAS: 7681-52-9 |
| LD50, dermal, Rat: > 20 g/kg bw. |
| LC50, inhalation (vapour), Rat: > 10,5 mg/L/1h. |

| | |
|---|--|
| Serious eye damage/irritation | Based on the available information, the classification criteria are not fulfilled. |
| Skin corrosion/irritation | Based on the available information, the classification criteria are not fulfilled. |
| Respiratory or skin sensitisation | Based on the available information, the classification criteria are not fulfilled. |
| Specific target organ toxicity — single exposure | Based on the available information, the classification criteria are not fulfilled. |
| Specific target organ toxicity — repeated exposure | Based on the available information, the classification criteria are not fulfilled. |
| Mutagenicity | Based on the available information, the classification criteria are not fulfilled. |
| Reproduction toxicity | Based on the available information, the classification criteria are not fulfilled. |
| Carcinogenicity | Based on the available information, the classification criteria are not fulfilled. |
| Aspiration hazard | Based on the available information, the classification criteria are not fulfilled. |
| General remarks | Toxicological data of complete product are not available. |


SECTION 12: Ecological information
12.1 Toxicity

| |
|--|
| Substance |
| Sodium chloride, CAS: 7647-14-5 |
| LC50, (96h), <i>Lepomis macrochirus</i> : 9675 mg/L (IUCLID). |
| EC50, (48h), <i>Daphnia magna</i> : 1000 mg/L (IUCLID). |
| Sodium hydroxide, CAS: 1310-73-2 |
| LC50, (96h), fish: 35 - 189 mg/l. |
| LC50, (96h), <i>Oncorhynchus mykiss</i> : 45,4 mg/l (IUCLID)(50%). |
| EC50, (24h), <i>Daphnia magna</i> : 76 mg/l (50%). |
| Sodium hypochlorite, CAS: 7681-52-9 |
| LC50, fish: 0,032 mg/L. |
| EC50, (24h), Algae: 0,05 mg/L. |
| EC50, (48h), <i>Daphnia sp.</i> : 0,026 mg/L. |
| NOEC, Algae: 0,002 mg/L. |
| NOEC, <i>Daphnia sp.</i> : 0,007 mg/L. |
| NOEC, (28d), fish: 40 µg CPO/L. |

12.2 Persistence and degradability

| | |
|--|--|
| Behaviour in environment compartments | No information available. |
| Behaviour in sewage plant | No information available. |
| Biological degradability | The methods for determining the biological degradability are not applicable to inorganic substances. |

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Other adverse effects

Ecological data of complete product are not available.
Do not discharge product unmonitored into the environment or into the drainage.



SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material c It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

For recycling, consult manufacturer.

Waste no. (recommended)

060314

Contaminated packaging

Uncontaminated packaging may be taken for recycling.
 Packaging that cannot be cleaned should be disposed of as for product.

Waste no. (recommended)

150102

SECTION 14: Transport information

14.1 UN number

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.2 UN proper shipping name

Transport by land according to ADR/RID NO DANGEROUS GOODS

Inland navigation (ADN) NO DANGEROUS GOODS

Marine transport in accordance with IMDG NOT CLASSIFIED AS "DANGEROUS GOODS"

Air transport in accordance with IATA NOT CLASSIFIED AS "DANGEROUS GOODS"

14.3 Transport hazard class(es)

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

**14.4 Packing group**

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.5 Environmental hazards

Transport by land according to ADR/RID no

Inland navigation (ADN) no

Marine transport in accordance with IMDG no

Air transport in accordance with IATA no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

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 mixture**

EEC-REGULATIONS 1991/689 (2001/118); 2010/75; 2004/42; 648/2004; 1907/2006 (REACH); 1272/2008; 75/324/EEC (2016/2037/EC); (EU) 2015/830; (EU) 2016/131; (EU) 517/2014

TRANSPORT-REGULATIONS ADR (2019); IMDG-Code (2019, 39. Amdt.); IATA-DGR (2019)

NATIONAL REGULATIONS (GB): EH40/2005 Workplace exposure limits (Second edition, published December 2011).

- Observe employment restrictions for people none

- VOC (2010/75/CE) 0 %

15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**16.1 Hazard statements (SECTION 03)**

H290 May be corrosive to metals.
 H410 Very toxic to aquatic life with long lasting effects.
 H400 Very toxic to aquatic life.
 H318 Causes serious eye damage.
 H314 Causes severe skin burns and eye damage.



16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
 RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
 ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
 ATE = acute toxicity estimate
 CAS = Chemical Abstracts Service
 CLP = Classification, Labelling and Packaging
 DMEL = Derived Minimum Effect Level
 DNEL = Derived No Effect Level
 EC50 = Median effective concentration
 ECB = European Chemicals Bureau
 EEC = European Economic Community
 EINECS = European Inventory of Existing Commercial Chemical Substances
 ELINCS = European List of Notified Chemical Substances
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
 IC50 = Inhibition concentration, 50%
 IMDG = International Maritime Code for Dangerous Goods
 IUCLID = International Uniform Chemical Information Database
 LC50 = Lethal concentration, 50%
 LD50 = Median lethal dose
 LC0 = lethal concentration, 0%
 LOAEL = lowest-observed-adverse-effect level
 MARPOL = International Convention for the Prevention of Marine Pollution from Ships
 NOAEL = No Observed Adverse Effect Level
 NOEC = No Observed Effect Concentration
 PBT = Persistent, Bioaccumulative and Toxic substance
 PNEC = Predicted No-Effect Concentration
 REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
 STP = Sewage Treatment Plant
 TLV®/TWA = Threshold limit value – time-weighted average
 TLV®/STEL = Threshold limit value – short-time exposure limit
 VOC = Volatile Organic Compounds
 vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure

Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects. (Calculation method)

Modified position

SECTION 2 been added: The product is required to be labelled in accordance with regulation (EC) No 1272/2008 (CLP).

SECTION 2 deleted: The product does not require a hazard warning label in accordance with GHS/CLP-directives.

SECTION 2 been added: P501 Dispose of contents/container in accordance with local/national regulation.

SECTION 2 been added: P273 Avoid release to the environment.

SECTION 2 been added: H412 Harmful to aquatic life with long lasting effects.

SECTION 2 been added: Aquatic Chronic 3

SECTION 2 deleted: none

SECTION 2 been added: Does not contain any PBT or vPvB substances.

SECTION 16 been added: Calculation method