

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

- **1.1 Product identifier**
- Trade name: **BENAMIN Aktivchlor Granulat**
- CAS Number:  
7778-54-3
- EC number:  
231-908-7
- Index number:  
017-012-00-7
- **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 Disinfectant
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
BWT AG  
Walter Simmer Straße 4  
A - 5310 Mondsee  
AUSTRIA  
Tel.: +43/6232/5011-0  
Fax: +43/6232/4058  
email: office@bwt.at
- **Further information obtainable from:**  
Abteilung F&E - Chemikalienbeauftragter  
Tel.: +43/6232/5011-1427  
email: msds-info@bwt-group.com
- **1.4 Emergency telephone number:**  
Vergiftungsinformation Wien  
Tel.: +43/1-406 43 43

 \* **SECTION 2: Hazards identification**

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



GHS03 flame over circle

Ox. Sol. 2      H272 May intensify fire; oxidiser.



GHS05 corrosion

Skin Corr. 1B      H314 Causes severe skin burns and eye damage.



GHS09 environment

Aquatic Acute 1      H400 Very toxic to aquatic life.



GHS07

Acute Tox. 4      H302 Harmful if swallowed.

STOT SE 3      H335 May cause respiratory irritation.

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

(Contd. on page 2)

**Trade name: BENAMIN Aktivchlor Granulat**

(Contd. of page 1)

 · **Hazard pictograms**


GHS03 GHS05 GHS07 GHS09

 · **Signal word** *Danger*

 · **Hazard-determining components of labelling:**
*calcium hypochlorite*

 · **Hazard statements**
*H272 May intensify fire; oxidiser.*
*H302 Harmful if swallowed.*
*H314 Causes severe skin burns and eye damage.*
*H335 May cause respiratory irritation.*
*H400 Very toxic to aquatic life.*

 · **Precautionary statements**
*P221 Take any precaution to avoid mixing with combustibles.*
*P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/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.*
*P310 Immediately call a POISON CENTER/doctor.*
*P405 Store locked up.*

 · **Additional information:**
*EUH031 Contact with acids liberates toxic gas.*

 · **2.3 Other hazards**
*The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.*

 · **Results of PBT and vPvB assessment**

 · **PBT:** Not applicable.

 · **vPvB:** Not applicable.

 \* **SECTION 3: Composition/information on ingredients**

 · **3.1 Chemical characterisation: Substances**

 · **CAS No. Description**
*7778-54-3 calcium hypochlorite*

 · **Identification number(s)**

 · **EC number:** 231-908-7

 · **Index number:** 017-012-00-7

 · **Dangerous components:** Void

 \* **SECTION 4: First aid measures**

 · **4.1 Description of first aid measures**

 · **General information:**
*Immediately remove any clothing soiled by the product.*
*Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.*

 · **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

 · **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

 · **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

 · **After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.

 · **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 3)

**Trade name: BENAMIN Aktivchlor Granulat**

(Contd. of page 2)

- **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:** Water
- **For safety reasons unsuitable extinguishing agents:**  
 Extinguishing powder  
 Carbon dioxide  
 ABC powder
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.
- **Additional information**  
 Collect contaminated fire fighting water separately. It must not enter the sewage system.

### **SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
 Ensure adequate ventilation  
 Avoid formation of dust.  
 Keep away from ignition sources.  
 Mount respiratory protective device.  
 Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  
 Do not allow to enter sewers/ surface or ground water.  
 Inform respective authorities in case of seepage into water course or sewage system.
- **6.3 Methods and material for containment and cleaning up:**  
 Use neutralising agent.  
 Dispose contaminated material as waste according to item 13.  
 Ensure adequate ventilation.
- **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**  
 Use only in well ventilated areas.  
 Thorough dedusting.
- **Information about fire - and explosion protection:** The product is not flammable.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:**  
 Store away from flammable substances.  
 Do not store together with acids.
- **Further information about storage conditions:**  
 Store receptacle in a well ventilated area.  
 Keep container tightly sealed.
- **Storage class:** 5.1A

(Contd. on page 4)

**Trade name: BENAMIN Aktivchlor Granulat**

(Contd. of page 3)

 · 7.3 *Specific end use(s)* No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

 · **Additional information about design of technical facilities:** No further data; see item 7.

 · **8.1 Control parameters**

 · **Ingredients with limit values that require monitoring at the workplace:** Not required.

 · **Additional information:** The lists valid during the making were used as basis.

 · **8.2 Exposure controls**

 · **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:**

Filter B

Filter P3

 · **Protection of hands:**


Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

 · **Material of gloves**

PVC gloves

Synthetic rubber 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.

 · **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.

 · **Eye protection:**


Tightly sealed goggles

 · **Body protection:**

Apron

Protective work clothing

**SECTION 9: Physical and chemical properties**

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

 · **General Information**

 · **Appearance:**
**Form:**

Granulate

**Colour:**

White

 · **Odour:**

Pungent

(Contd. on page 5)

**Trade name: BENAMIN Aktivchlor Granulat**

(Contd. of page 4)

· <b>Odour threshold:</b>	<i>Not determined.</i>
· <b>pH-value (10 g/l) at 25 °C:</b>	<i>11,5</i>
· <b>Change in condition</b> <b>Melting point/freezing point:</b>	<i>100 (Zers.) °C</i>
<b>Initial boiling point and boiling range:</b>	<i>Undetermined.</i>
· <b>Flash point:</b>	<i>Not applicable.</i>
· <b>Flammability (solid, gas):</b>	<i>Contact with combustible material may cause fire.</i>
· <b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	<i>177 °C</i>
· <b>Auto-ignition temperature:</b>	<i>Not determined.</i>
· <b>Explosive properties:</b>	<i>Product does not present an explosion hazard.</i>
· <b>Explosion limits:</b>	
<b>Lower:</b>	<i>Not determined.</i>
<b>Upper:</b>	<i>Not determined.</i>
· <b>Vapour pressure:</b>	<i>Not applicable.</i>
· <b>Density at 20 °C:</b>	<i>2,35 g/cm<sup>3</sup></i>
· <b>Relative density</b>	<i>Not determined.</i>
· <b>Vapour density</b>	<i>Not applicable.</i>
· <b>Evaporation rate</b>	<i>Not applicable.</i>
· <b>Solubility in / Miscibility with water at 20 °C:</b>	<i>217 g/l</i>
· <b>Partition coefficient: n-octanol/water:</b>	<i>Not determined.</i>
· <b>Viscosity:</b>	
<b>Dynamic:</b>	<i>Not applicable.</i>
<b>Kinematic:</b>	<i>Not applicable.</i>
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	<i>0,0 %</i>
<b>VOC (EC)</b>	<i>0.00 %</i>
<b>Solids content:</b>	<i>100,0 %</i>
· <b>9.2 Other information</b>	<i>No further relevant information available.</i>

## 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**  
*Flammable.*  
*Reacts with flammable substances.*  
*Reacts with acids.*  
*Reacts with organic substances.*  
*Contact with acids releases toxic gases.*
- **10.4 Conditions to avoid** *No further relevant information available.*
- **10.5 Incompatible materials:** *No further relevant information available.*
- **10.6 Hazardous decomposition products:** *Chlorine*

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(Contd. on page 6)

**Trade name: BENAMIN Aktivchlor Granulat**

(Contd. of page 5)

### SECTION 11: Toxicological information

#### · 11.1 Information on toxicological effects

##### · Acute toxicity

Harmful if swallowed.

##### · LD/LC50 values relevant for classification:

7778-54-3 calcium hypochlorite

Oral	LD50	850 mg/kg (rat)
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##### · Primary irritant effect:

##### · Skin corrosion/irritation

Causes severe skin burns and eye damage.

##### · Serious eye damage/irritation

Causes severe skin burns and eye damage.

##### · Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

##### · CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

##### · Germ cell mutagenicity Based on available data, the classification criteria are not met.

##### · Carcinogenicity Based on available data, the classification criteria are not met.

##### · 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.

### SECTION 12: Ecological information

#### · 12.1 Toxicity

· **Aquatic toxicity:** No further relevant information available.

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

##### · Ecotoxicological effects:

· **Remark:** Very toxic for fish

##### · Additional ecological information:

##### · General notes:

Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Danger to drinking water if even small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

##### · 12.5 Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

#### · 13.1 Waste treatment methods

##### · Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

##### · European waste catalogue

16 09 04*	oxidising substances, not otherwise specified
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(Contd. on page 7)

**Trade name: BENAMIN Aktivchlor Granulat**

(Contd. of page 6)

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

**SECTION 14: Transport information**

- **14.1 UN-Number**
- **ADR, IMDG, IATA** UN3487

- **14.2 UN proper shipping name**
- **ADR** 3487 CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE, ENVIRONMENTALLY HAZARDOUS
- **IMDG** CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE, MARINE POLLUTANT
- **IATA** CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE

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

- **ADR**



- **Class** 5.1 Oxidising substances.
- **Label** 5.1 + 8

- **IMDG**



- **Class** 5.1 Oxidising substances.
- **Label** 5.1/8

- **IATA**



- **Class** 5.1 Oxidising substances.
- **Label** 5.1 (8)

- **14.4 Packing group**

- **ADR, IMDG, IATA** II

- **14.5 Environmental hazards:**

- **Marine pollutant:** Yes
- **Special marking (ADR):** Symbol (fish and tree)

- **14.6 Special precautions for user** Warning: Oxidising substances.
- **Danger code (Kemler):** 58
- **EMS Number:** F-H,S-Q

- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

(Contd. on page 8)

**Trade name: BENAMIN Aktivchlor Granulat**

(Contd. of page 7)

**· Transport/Additional information:**
**· ADR**

- **Limited quantities (LQ)** 1 kg
- **Excepted quantities (EQ)** Code: E2  
Maximum net quantity per inner packaging: 30 g  
Maximum net quantity per outer packaging: 500 g
- **Transport category** 2
- **Tunnel restriction code** E

**· IMDG**

- **Limited quantities (LQ)** 1 kg
- **Excepted quantities (EQ)** Code: E2  
Maximum net quantity per inner packaging: 30 g  
Maximum net quantity per outer packaging: 500 g

- **UN "Model Regulation":** UN3487, CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE, ENVIRONMENTALLY HAZARDOUS, 5.1 (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 Substance is not listed.**
- **Seveso category**  
P8 OXIDISING LIQUIDS AND SOLIDS  
E1 Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t**
- **Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t**
- **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.

**· Abbreviations and acronyms:**

- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- ICAO: International Civil Aviation Organisation
- ADR: Accord européen sur le transport 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)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Ox. Sol. 2: Oxidizing solids – Category 2
- Acute Tox. 4: Acute toxicity – Category 4
- Skin Corr. 1B: Skin corrosion/irritation – Category 1B
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

- **\* Data compared to the previous version altered.**