

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

### 1.1. Product identifier

<b>Name of product</b>	Chloryte / Chloryte pastille / Chloryte Sticks 111
<b>Name of substance</b>	calcium hypochlorite
<b>Index No</b>	017-012-00-7
<b>EC No</b>	231-908-7
<b>CAS No</b>	7778-54-3

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

#### Recommended intended purpose(s)

Product for disinfection and oxidation of pool water

### 1.3. Details of the supplier of the safety data sheet

<b>Manufacturer/distributor</b>	BAYROL Deutschland GmbH Robert-Koch-Str. 4, D-82152 Planegg Phone +49 (0) 89 85701-0
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#### Advice

E-mail (competent person):  
SDS@bayrol.eu

### 1.4. Emergency telephone number

NCEC, Phone (+44)(0)1865407333

## ! SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### ! Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]

Hazard classes and Hazard categories	Hazard Statements	Classification procedure
<b>Ox. Sol. 2</b>	<b>H272</b>	
<b>Acute Tox. 4</b>	<b>H302</b>	
<b>Skin Corr. 1B</b>	<b>H314</b>	
<b>Eye Dam. 1</b>		
<b>Aquatic Acute 1</b>	<b>H400</b>	

#### Hazard Statements

H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H400	Very toxic to aquatic life.

### 2.2. Label elements

**Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]**



GHS03



GHS05



GHS07



GHS09

**! Signal word**  
Danger

**Hazard Statements**

H272 May intensify fire; oxidiser.  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H400 Very toxic to aquatic life.

**Precautionary Statements**

P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children.  
P221 Take any precaution to avoid mixing with combustibles.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves/eye protection.  
P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P302 + P352 IF ON SKIN: Wash with plenty of water.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308 + P311 IF exposed or concerned: Call a POISON CENTER/doctor.  
P405 Store locked up.  
P501 Dispose of contents/ container to an approved waste disposal plant.

**Hazardous ingredients for labeling**  
calcium hypochlorite

**Supplemental Hazard information (EU)**

EUH031 Contact with acids liberates toxic gas.

**Special rules for supplemental label elements for certain mixtures**

EUH206 Warning! Do not use together with other products. May release dangerous gases (chlorine).

**2.3. Other hazards**

**Results of PBT and vPvB assessment**

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

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

**3.1. Substances**

CAS No 7778-54-3

calcium hypochlorite

EC No 231-908-7

Index No 017-012-00-7

**3.2. Mixtures**

not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

Remove contaminated soaked clothing immediately.

Symptoms of poisoning may not occur for hours, therefore medical supervision for at least 48 hours necessary.

Adhere to personal protective measures when giving first aid.

#### In case of inhalation

Remove the casualty into fresh air and keep him immobile.

Refer for medical treatment.

#### In case of skin contact

In case of contact with skin wash off immediately with plenty of water.

Refer for medical treatment.

#### In case of eye contact

Eye rinsing with water carefully while protecting unhurt eye.

Refer to medical treatment.

#### In case of ingestion

Do not induce vomiting.

Call for a doctor immediately.

Rinse out mouth and give plenty of water to drink.

### 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

#### Treatment (Advice to doctor)

Treat symptoms.

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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media

Dry powder

Carbon dioxide

Dry sand

Water spray jet

### 5.2. Special hazards arising from the substance or mixture

In the event of fire the following can be released:

Hydrogen chloride (HCl)

Chlorine (Cl<sub>2</sub>)

### 5.3. Advice for firefighters

#### Special protective equipment for fire-fighters

Use breathing apparatus with independent air supply.

Wear full protective clothing.

#### Additional information

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

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

Ensure adequate ventilation.  
Avoid dust formation.  
Use personal protective clothing.  
Use breathing apparatus if exposed to vapours/dust/aerosol.

### 6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

### 6.3. Methods and material for containment and cleaning up

Take up mechanically and send for disposal.

#### Additional Information

Neutralize active chlorine with suitable materials (Sulphite, Thiosulphate or hydrogen peroxide aqueous solution)

### 6.4. Reference to other sections

Safe handling: see section 7  
Disposal: see section 13  
Personal protection equipment: see section 8  
Emergency telephone number: see section 1

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## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Advice on safe handling

Use only in well-ventilated areas.

#### General protective measures

Avoid contact with eyes and skin  
Do not inhale dust.

#### Hygiene measures

At work do not eat, drink and smoke.  
Keep away from food and drink.  
Wash hands before breaks and after work.

#### Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking  
Keep at distance of acids, reducing agents and organic substances (e.g. wood, paper, fat).  
Avoid entering of water in shortage.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Requirements for storage rooms and vessels

Keep only in original container.

#### Advice on storage compatibility

Do not store with combustible materials.  
Do not store together with food.  
Do not store together with acids.

#### Further information on storage conditions

Keep container tightly closed.  
Storage: cool and dry

#### Information on storage stability

Storage time: 5 years.

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**Storage group** 5.1B

**7.3. Specific end use(s)**

**Recommendation(s) for intended use**

See section 1.2

## ! SECTION 8: Exposure controls/personal protection

**8.1. Control parameters**

**8.2. Exposure controls**

**Respiratory protection**

Dust mask

Short term: filter apparatus, Filter P2

**Hand protection**

chemical-resistant gloves

Suitable materials (recommended: protection index 6, >480 minutes permeation time according to EN 374)

Nitrile-butadiene rubber (NBR) - 0.4 mm layer thickness

Butyl rubber (butyl) - 0.7mm layer thickness

In view of the many different types, the manufacturers' directions for use must be followed

**Eye protection**

tightly fitting goggles

## SECTION 9: Physical and chemical properties

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

**Appearance**

solid in various forms

**Colour**

white

**Odour**

typical, pungent

**Odour threshold**

not determined

**Important health, safety and environmental information**

	Value	Temperature	at	Method	Remark
<b>pH value</b>	10,5 - 11,5	20 °C	10 g/l		
<b>Boiling temperature / boiling range</b>	not determined				
<b>decomposition point</b>	> 175 °C				
<b>Flash point</b>	not applicable				
<b>Vapourisation rate</b>	not determined				
<b>Flammable (solid)</b>	not determined				
<b>Flammability (gas)</b>	not determined				
<b>Ignition temperature</b>	not determined				

	Value	Temperature	at	Method	Remark
<b>Self ignition temperature</b>	not determined				
<b>Lower explosion limit</b>	not determined				
<b>Upper explosion limit</b>	not determined				
<b>Vapour pressure</b>	not determined				
<b>Relative density</b>	not determined				
<b>Bulk density</b>	ca. 0,9 kg/m <sup>3</sup>				
<b>Vapour density</b>	not determined				
<b>Solubility in water</b>	200 g/l	25 °C			
<b>Solubility/other</b>	not determined				
<b>Partition coefficient n-octanol/water (log P O/W)</b>	not determined				
<b>Decomposition temperature</b>	not determined				
<b>Viscosity</b>	not determined				
<b>Oxidising properties</b> No information available.					
<b>Explosive properties</b> No information available.					
<b>9.2. Other information</b> No information available.					

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Thermal decomposition can lead to the escape of irritating gases and vapours.

### 10.2. Chemical stability

Decomposition takes place from temperatures above:  
>175°C

### 10.3. Possibility of hazardous reactions

Contact with acids liberates toxic gases.

### 10.4. Conditions to avoid

Reactions with combustible substances.  
Reactions with acids.  
Reactions with impurities.  
Reactions with organic substances.  
Reactions with water.

**10.5. Incompatible materials****Substances to avoid**

Oil  
Acid  
Water

**10.6. Hazardous decomposition products**

Hydrogen chloride (HCl)  
Chlorine

**Thermal decomposition**

Remark No decomposition if used as directed.

**Additional information**

Product may cause bleaching textiles, liners, paintings etc. Chlorine gas may decompose metals and is corrosive.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Acute toxicity/Irritation/Sensitization**

	Value/Validation	Species	Method	Remark
<b>LD50 acute oral</b>	850 mg/kg	rat		
<b>Skin irritation</b>	corrosive			
<b>Eye irritation</b>	strong corrosive			

**Subacute Toxicity - Carcinogenicity**

	Value	Species	Method	Validation
<b>Mutagenicity</b>	No data available			
<b>Reproduction-Toxicity</b>	No data available			
<b>Carcinogenicity</b>	No data available			

**Experiences made from practice**

After swallowing: burns in mouth, throat, oesophagus and gastrointestinal tract. Risk of perforation in the oesophagus and stomach.  
Irritates respiratory tract.  
Irritates mucous membranes.

**SECTION 12: Ecological information****12.1. Toxicity****Ecotoxicological effects**

	Value	Species	Method	Validation
<b>Fish</b>	LC50 0,049 - 0,16 mg/l (96 h)	Lepomis macrochirus		M = 10
<b>Daphnia</b>	EC50 0,41 mg/l (48 h)	Daphnia magna		M = 1
<b>12.2. Persistence and degradability</b> No information available.				
<b>12.3. Bioaccumulative potential</b> No information available.				
<b>12.4. Mobility in soil</b> No information available.				
<b>12.5. Results of PBT and vPvB assessment</b> This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.				
<b>12.6. Other adverse effects</b> <b>General regulation</b> Product is not allowed to be discharged into aquatic environment, drains or sewage treatment plants.				

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Waste code No.

16 05 09

#### Name of waste

discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

#### Recommendations for the product

Remove in accordance with local official regulations.

Dispose of as hazardous waste.

The product should not be allowed to enter drains, water courses or the soil.

#### Recommendations for packaging

Uncontaminated packaging may be taken for recycling.

#### Recommended cleansing agent

Water

## SECTION 14: Transport information

	ADR/RID	IMDG	IATA-DGR
<b>14.1. UN number</b>	3487	3487	3487
<b>14.2. UN proper shipping name</b>	CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE	CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE	Calcium hypochlorite, hydrated, corrosive
<b>14.3. Transport hazard class(es)</b>	5.1 (8)	5.1 (8)	5.1 (8)
<b>14.4. Packing group</b>	II	II	II
<b>14.5. Environmental hazards</b>	Yes	Yes	Yes



**14.6. Special precautions for user**

No information available.

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

No information available.

**Land and inland navigation transport ADR/RID**

Hazard label(s) 5.1+8

tunnel restriction code E

Classification code OC2

**Marine transport IMDG**

MARINE POLLUTANT

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**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Authorizations****Other regulations (EU)**

Regulation (EU) 1272/2008 (CLP), Regulation (EU) 1907/2006 (REACH), DECISION 2000/532/EG (list of wastes)

Regulation (EU) 528/2012 (BPR)

**National regulations****Restriction of occupation**

Observe employment restrictions for young people.

Observe employment restrictions for mothers-to-be and nursing mothers.

**Other regulations, restrictions and prohibition regulations**

ZH 1/81 "Data Sheet for hazardous chemical substances"

ZH 1/124 "Plant instructions for working with hazardous substances (A 010)"

ZH 1/132 "Data Sheet: Skin protection (M 042)"

ZH 1/175 "Data Sheet for First Aid due to influence of hazardous chemical substances"

ZH 1/192 "Data Sheet for eye protection"

ZH 1/129 "Data Sheet: Irritating substances / corrosive substances (M 004)"

**Water hazard class**

2

**15.2. Chemical Safety Assessment**

For this substance a chemical safety assessment has not been carried out.

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**SECTION 16: Other information****Recommended uses and restrictions**

National and local regulations concerning chemicals shall be observed.

**Further information**

Refer to product information paper.

The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Indication of changes: "!" = Data changed compared with the previous version. Previous version: 3.9

**Sources of key data used**

Results of own researches and examinations

Literature informations

Toxicity studies, NIOSH-Tox-Data

National legislation and regulation