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## 1. Identification of the substance and the company :

### Identification of the substance

**Trade name:** CHLORINE TABLETS

**Chemical family:** Chloroisocyanurate –  $\text{NaCl}_2 (\text{NCO})_3 \times 2\text{H}_2\text{O}$   
**Application of the substance / the preparation:** Intended for disinfectants, sanitizers, fungicides, bactericides and algacides for pools, spas, hot tubs, air washers and evaporative condensers, food contact surfaces, laundry and egg sanitizing

**Supplier:**

**ESSEF Professional Cleaning Supplies bvba**  
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 B-8880 Sint-Eloois-Winkel, Belgium  
 tel.: +32 51 30 72 72  
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[info@essef.be](mailto:info@essef.be)  
[www.essef.be](http://www.essef.be)  
 tel.emergencies: +32 70 245 245

## 2. Hazards identification :

**GHS Classification (1272/2008/EC)** Acute toxicity, Category 4

**GHS-label elements (1272/2008/EC)**



**Signal word:** Warning

**Hazard statements:**

- H302: Harmful if swallowed
- H319: Causes serious eye irritation
- H335: May cause respiratory irritation
- H410: Very toxic to aquatic life with long lasting effects
- EUH031: Contact with acids liberates toxic gas

**Precautionary statements:** P233: Keep container tightly closed

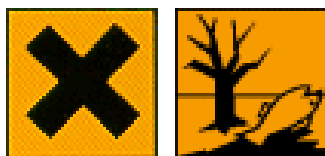
P305+ IF IN EYES:

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- P351+ Rince cautiously with water for several minutes. Get  
P313: medical advice / attention  
P301+ IF SWALLOWED:  
P330+ Rinse mouth  
P310: Immediately call a POISON CENTER or doctor /  
physician
- P402: Store in a dry place
- P404: Store in a closed container

**EU Classification (67/548/EEG,1999/45/EG)**

**Hazard description:**



**Information concerning particular hazards for human and environment:**

The product has to be labeled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- R 22** Harmful if swallowed  
**R 31** Contact with acids liberates toxic gas  
**R 36/37** Irritating to eyes and respiratory system  
**R 50/53** Very toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment
- S 2** Keep out of reach of children  
**S 8** Keep container dry  
**S 25** Avoid contact with eyes  
**S 26** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice  
**S 41** In case of fire and/or explosion do not breath fumes  
**S 46** If swallowed, seek medical advice immediately and show the container or label  
**S 61** Avoid release to the environment. Refer to special instructions/ material safety data sheet

**Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

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### 3. Composition / information on ingredients :

Components Chemical name	Weight %	CAS-Nr. EC-Nr. Einecs Nr.	GHS Classification	EU Classificati on
Sodium dichloro- isocyanurate, dihydrate	82,5	51580-86-0 613-030-01-7 220-767-7	Acute Tox. 4 H302 Eye irrit. 2 H319 STOT SE 3 H335 Aquatic chronic 1 H410 EUH031	R31 Xi; R36/37 Xn; R22 N; R50/53
Sodium chloride 7647-14-5	0,5	231-593-8	None	

### 4. First aid measures :

<b>General information:</b>	Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
<b>After inhalation:</b>	Supply fresh air and to be sure call for a doctor. In case of unconsciousness place patient stably in side position.
<b>After skin contact:</b>	Remove contaminated clothing. Wash skin thoroughly with mild soap and plenty of water. Get medical attention at continual skin irritation.
<b>After eye contact:</b>	Rinse opened eyes for several minutes under running water. If symptoms persist, consult a doctor.
<b>After swallowing:</b>	Wash mouth thoroughly with plenty of water and give water to drink. Get medical attention immediately. <b><u>NOTE: never give an unconscious person anything to drink.</u></b>

### 5. Fire-fighting measures :

<b>Suitable extinguishing media:</b>	Water in large quantities. Do not use dry chemical extinguisher containing ammonia compounds.
<b>Unusual fire and explosion hazards:</b>	When heated to decomposition, may release poisonous and corrosive fumes of nitrogen trichloride, chlorine and CO.
<b>Fire-fighting procedure :</b>	Cool containers with water spray. Fire fighters should wear full protective clothing and self-contained breathing apparatus. On small fires, use water spray or fog. On large fires, use heavy deluge or fog streams. Flooding amounts of water may be required before extinguishment can be accomplished.

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## 6. Accidental release measures :

**Personal precautions:** Avoid contact with eyes and skin. Do not breathe dust particles. Do not eat, smoke or drink during work.

**Measures for environmental protection:** Do not allow product to reach sewage system or any water course. Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water.

**Measures for cleaning / collecting:** Wipe up the spilled product and collect it in a suitable container for disposal. Always control the contaminated product on active chlorine and neutralize the pH.

## 7. Handling and storage :

### **Handling :**

#### **Information for safe handling:**

Handle and open the packaging with caution. Do not take internally.

Ensure good ventilation / exhaustion at the workplace.

Avoid contact with skin, eyes and clothing.

**Information about fire- and explosion protection:** no open fire, do not smoke.

### **Storage:**

**General measures:** store closed package in a dry, cool, well-ventilated area. Temperature may not expand 50°C. Product has an indefinite shelf-life limitation.

**Information about storage in one common storage facility:** individual storage. Product has an indefinite shelf-life limitation.

**Further information about storage conditions:** keep container tightly sealed.

## 8. Exposure controls / personal protection :

### **Additional information about design of technical facilities:**

No further data, see item 7.

### **Ingredients with limit values that require monitoring at the workplace:**

Sodium dichloroisocyanurate, dihydrate : not determined

Sodium chloride (7647-14-5) : not determined

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

### **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:** avoid inhalation of dust. When dusty conditions are encountered,

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wear a NIOSH/OSHA full-face respirator with chlorine cartridges, for protection against chlorine gas, and dust/mist pre-filter.

**Protection of hands:**



Protective neoprene gloves

The glove material has to be impermeable and resistant for the product / the substance / the preparation. Use only neoprene gloves.

**Material of gloves:**

The selection of suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can't be calculated in advance and has therefore to be checked prior to the application.

**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:**

Safety goggles



Use chemical safety glasses where industrial use tightly sealed chemical goggles

**9. Physical and chemical properties :**

<b>General information:</b>	
<b>Form:</b>	Granular or tablet-form product
<b>Colour:</b>	white
<b>Odour:</b>	Mild chlorine-like
<b>Flashpoint:</b>	Not applicable
<b>Boiling point:</b>	Not applicable
<b>Auto-ignition temperature :</b>	Not applicable
<b>Explosive properties :</b>	Not available
<b>Vapour density (hPa) :</b>	Not applicable under standard conditions
<b>Decomposition temperature :</b>	Begins to lose 1 mole water at approximately 50°C; second mole water at 95°C; decomposes at 240-250°C.
<b>Solubility in water :</b>	25 g/100ml (30°C)

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### 10. Stability and reactivity :

**Stability:** stable under normal conditions. Do not package in paper or cardboard. Begins to lose one mole of water at approximately 50° C.

**Conditions to avoid:** heating above decomposition temperature.

**Materials to avoid :** Organic materials, reducing agents, nitrogen containing materials, oxidizers, acids, bases, oils, grease, sawdust, dry fire extinguishers containing mono-ammonium compounds.

**Hazardous decomposition products:** nitrogen trichloride, chlorine, carbon monoxide.

### 11. Toxicological information :

**Acute toxicity :**

**-Rat, oral LD50** 1671 mg/kg  
**-Rat dermal LD50** >5000 mg/kg

**Eye irritation** Severe irritant  
**Dermal irritation** Severe irritant

**Immediately Dangerous to Life or Health (IDLH)** No level has been established for the components or the product itself.

**Mutagenicity** Not mutagenic in five salmonella strains with or without metabolic activation.

**Carcinogenity** Not classified by IARC, OSHA, EPA  
 Not included in NTP11 Report on Carcinogens

**Reproductive toxicity** Sodium dichloroisocyanurate acid when given orally to pregnant mice from day 6 to day 15 of gestation, did not induce any significant teratogenic effects.

**Chronic toxicity** Chronic inhalation exposure may cause impairment of lung function and permanent lung damage. In the experiment with drinking water from 28 days, extended to 59 days (rat: NOAEL = 115 mg/kg lich.day)

### 12. Ecological information :

**Ecotoxicological effects**

**Aquatic toxicity:**

**-96hour LC50 fish** 0,22 mg/l (rainbow trout)  
 0,28 mg/l (bluegill sunfish)  
**-48 hour LC50 Daphnia Magna** 0,2 mg/l

**Avian toxicity:**

**-Bobwhite quail, oral LD50** 730 mg/kg  
**-Mallard duck oral LD50** 3300 mg/kg  
**-Bobwhite quail, dietary LC50** >10.000 ppm  
**-Mallard duck, dietary LC50** >10.000 ppm

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**Persistence / degradability** Not good biodegradable. Hydrolyses quickly to cyanuric acid in water.

**Bioaccumulatif potentiel** They are expecting no bioaccumulation

**Mobility in the soil** Cyanuric acid is easily soluble and very mobile in every soil.

### 13. Disposal considerations :

**Product:** Must not be disposed together with household garbage. Do not allow product to reach sewage system. Care must be taken to prevent environmental contamination from the use of this material.

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

### 14. Transportation information :

**UN-number :** 3077

**Proper shipping name UN:** Environmentally hazardous substance, solid, n.o.s. (sodium dichloroisocyanurate dihydrate)

**Class:** 9 – miscellaneous dangerous substances and articles

### 15. Regulatory information :

#### Labelling according to EU guidelines:

Identification of danger : reported in EINECS  
A chemical safety assessment according to the REACH regulation is carried out.

### 16. Other information :

#### Listed H (physical hazards) phrases refer to sections 2 and 3

**H302** Harmful if swallowed

**H319** Causes serious eye irritation

**H335** May cause respiratory irritation

**H410** Very toxic to aquatic life with long lasting effects

**EUH031** Contact with acids liberates toxic gas

#### Listed R (risk) phrases refer to sections 2 and 3

**R22** Harmful if swallowed

**R31** Contact with acids liberates toxic gas

**R36/37** Irritating to eyes and respiratory system

**R50/53** Very toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment

The information in the material safety data sheet should be provided to all who will use, handle, store, transport, or otherwise be exposed to this product. Information is supplied upon the condition that the persons receiving same will make their own determination as to its safety and suitability for their purpose prior to use. The information and recommendations set forth herein are presented in good faith and believed to be correct as of the date of publication.