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

**1.1. Product identifier**

**Name of product** Monats-Set Chlor bis 10m3 (C. 1)
414918

**1.2. Relevant identified uses of the substance or mixture and uses advised against**
**Recommended intended purpose(s)**
Disinfection, oxidation, algae prevention, flocculation and hardness stabilizer of pool water

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

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

**Advice**
E-mail (competent person):
ASchwarzenboeck@bayrol.de

**1.4. Emergency telephone number**

**Emergency advice**
Giftnotruf München (oder jedes andere Giftinformationszentrum)
Phone +49 (0) 89 19240

## SECTION 2: Hazards identification

**2.1. Classification of the substance or mixture**

**Classification according to 67/548/EEC or 1999/45/EC**

Xn; R22
R31
Xi; R36/37
N; R50/53

**R-phrases**

| | |
|---|---|
| 22 | Harmful if swallowed. |
| 31 | Contact with acids liberates toxic gas. |
| 36/37 | Irritating to eyes and respiratory system. |
| 50/53 | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |

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

| Hazard classes and Hazard categories | Hazard Statements | Classification procedure |
|---|---|---|
| **Acute Tox. 4** | **H302** | |
| **Skin Irrit. 2** | **H315** | |
| **Eye Dam. 1** | **H318** | |
| **STOT SE 3** | **H335** | |
| **Aquatic Acute 1** | | |
| **Aquatic Chronic 1** | **H410** | |

**Hazard Statements**

| | |
|---|---|
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H335 | May cause respiratory irritation. |
| H410 | Very toxic to aquatic life with long lasting effects. |

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

GHS05 GHS07 GHS09

**Signal word**
Danger

**Hazard Statements**

| | |
|---|---|
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H335 | May cause respiratory irritation. |
| H410 | Very toxic to aquatic life with long lasting effects. |

**Precautionary Statements**

| | |
|---|---|
| P101 | If medical advice is needed, have product container or label at hand. |
| P102 | Keep out of reach of children. |
| P270 | Do no eat, drink or smoke when using this product. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| 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**
Pentapotassium-bis(peroxymonosulphate)-bis(sulphate), troclosene sodium, dihydrate

**Supplemental Hazard information (EU)**
Contact with acids liberates toxic gas.

**Special rules for supplemental label elements for certain mixtures**
Warning! Do not use together with other products. May release dangerous gases (chlorine).

**2.3. Other hazards**
**Results of PBT and vPvB assessment**
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

## SECTION 3: Composition/ information on ingredients

**3.1. Substances**
not applicable

**3.2. Mixtures**
**Hazardous ingredients**

**Hazardous ingredients (continued)**

| CAS No | EC No | Name | [% weight] | Classification according to 67/548/EEC |
|---|---|---|---|---|
| 51580-86-0 | 220-767-7 | troclosene sodium, dihydrate | 50 | Xn R22; R31; Xi R36/37; N R50-53 |
| 70693-62-8 | 274-778-7 | Pentapotassium-bis(peroxymonosulphate)-bis(sulphate) | 4,5 | C R34; Xn R22; R52 |

| CAS No | EC No | Name | [% weight] | Classification according to Regulation (EC) No 1272/2008 [CLP/GHS] |
|---|---|---|---|---|
| 51580-86-0 | 220-767-7 | troclosene sodium, dihydrate | 50 | Acute Tox. 4, H302 / Eye Irrit. 2, H319 / STOT SE 3, H335 / Aquatic Acute 1, H400 / Aquatic Chronic 1, H410 |
| 70693-62-8 | 274-778-7 | Pentapotassium-bis(peroxymonosulphate)-bis(sulphate) | 4,5 | Acute tox. Cat 4, H302 / Skin corr. Cat 1 B, H314 / |

**REACH**

| CAS No | Name | REACH registration number |
|---|---|---|
| 51580-86-0 | troclosene sodium, dihydrate | 01-2119489371-33-xxxx |

## 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.
Consult a doctor if skin irritation persists.

**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.

## SECTION 5: Firefighting measures

**5.1. Extinguishing media**
**Suitable extinguishing media**
Large quantities of water
Carbon dioxide
sand

**Unsuitable extinguishing media**
Small quantities of water
foam

**5.2. Special hazards arising from the substance or mixture**
In the event of fire the following can be released:
Nitrogen oxides (NOx)
Carbon monoxide (CO)
Carbon dioxide (CO2)
Chlorine (Cl2)

**5.3. Advice for firefighters**
**Special protective equipment for fire-fighters**
Use breathing apparatus with independent air supply.
Wear full protective clothing.

**Additional information**
Cool endangered containers with water spray jet.
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.
Keep away sources of ignition.
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

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**
**Advice on safe handling**
Avoid the formation and deposition of dust.
Use only in well-ventilated areas.

**General protective measures**
Do not inhale dust.
Avoid contact with the eyes.

**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 together with food.

**Further information on storage conditions**
Keep container tightly closed.
Storage: cool and dry

**Information on storage stability**
Storage time: 5 years.

**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**
In case of dust formation wear micro dust mask.

**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**
Safety goggles

## SECTION 9: Physical and chemical properties

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

**Appearance**
granules

**Colour**
white

**Odour**
typical, pungent

**Odour threshold**
not determined

**Important health, safety and environmental information**

| | Value | Temperature | at | Method | Remark |
|---|---|---|---|---|---|
| **pH value** | ca. 4 - 6 | 20 °C | 10 g/l | | |
| **Boiling temperature / boiling range** | not determined | | | | |
| **decomposition point** | 240 - 250 °C | | | | |
| **Flash point** | not determined | | | | |
| **Vapourisation rate** | not determined | | | | |
| **Flammable (solid)** | not determined | | | | |
| **Flammability (gas)** | not determined | | | | |
| **Ignition temperature** | not determined | | | | |
| **Self ignition temperature** | not determined | | | | |
| **Lower explosion limit** | not determined | | | | |
| **Upper explosion limit** | not determined | | | | |
| **Vapour pressure** | not determined | | | | |
| **Relative density** | not determined | | | | |
| **Bulk density** | 1210 kg/m3 | | | | |
| **Vapour density** | not determined | | | | |
| **Solubility in water** | 250 g/l | 25 °C | | | |
| **Solubility/other** | not determined | | | | |
| **Partition coefficient n-octanol/water (log P O/W)** | not determined | | | | |
| **Decomposition temperature** | not determined | | | | |
| **Viscosity** | not determined | | | | |

**Oxidising properties**
No information available.

**Explosive properties**
No information available.

**9.2. Other information**
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 temperature:
240°C - 250°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 fats and oils.
Reactions with impurities.
Reactions with organic substances.

**10.5. Incompatible materials**
**Materials to avoid**
Oil
Acid

**10.6. Hazardous decomposition products**
Nitrogen trichloride
Nitrous oxides (NOx)
Chlorine

**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/Irritability/Sensitization**

| | Value/Validation | Species | Method | Remark |
|---|---|---|---|---|
| **LD50 acute oral** | ca. 500 mg/kg | rat | | Information concerns to main component. |
| **Irritability skin** | irritant | | | |
| **Irritability eye** | risk of strong eye injuries | | | |

**Experiences made from practice**
Irritates respiratory tract.
Irritates mucous membranes.

**Additional information**
The product has not been tested. The information is derived from the properties of the individual components.

## SECTION 12: Ecological information

**12.1. Toxicity**

**Ecotoxicological effects**

| | Value | Species | Method | Validation |
|---|---|---|---|---|
| **Fish** | LC50 < 1 mg/l (96 h) | Lepomis macrochirus | | |
| **Daphnia** | EC50 < 1 mg/l (48 h) | Daphnia magna | | |

**12.2. Persistence and degradability**
No information available.

**12.3. Bioaccumulative potential**
No information available.

**12.4. Mobility in soil**
No information available.

**12.5. Results of PBT and vPvB assessment**
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

**12.6. Other adverse effects**
**General regulation**
Product is not allowed to be discharged into aquatic environment, drains or sewage treatment plants.

## SECTION 13: Disposal considerations

**13.1. Waste treatment methods**
**Recommendations for the product**
Remove in accordance with local official regulations.
There are no harmonised regulations on the disposal of chemicals in the member states of the EU. In Germany the Recycling and Waste Management Act (KrWG) stipulates recycling as a requirement.

**Recommendations for packaging**
Uncontaminated packaging may be taken for recycling.

**Recommended cleansing agent**
Water

## SECTION 14: Transport information

| | ADR/RID | IMDG | IATA-DGR |
|---|---|---|---|
| **14.1. UN number** | 3077 | 3077 | 3077 |

| | ADR/RID | IMDG | IATA-DGR |
|---|---|---|---|
| **14.2. UN proper shipping name** | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N. O.S. (troclosene sodium, dihydrate) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (troclosene sodium, dihydrate) | Environmentally hazardous substance, solid, n.o.s. (troclosene sodium, dihydrate) |
| **14.3. Transport hazard class(es)** | 9 | 9 | 9 |
| **14.4. Packing group** | III | III | III |
| **14.5. Environmental hazards** | 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) 9
tunnel restriction code E
Classification code M7

**Marine transport IMDG**
MARINE POLLUTANT

## SECTION 15: Regulatory information

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
**Other regulations (EU)**
Please note:
Observe regulation 98/24/EC for employee health protection against the threat of chemical substances in the workplace.
Biocide directive (98/8/EC).

**15.2. Chemical Safety Assessment**
Chemical safety assessments for substances in this mixture were not carried out.

## 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: 1.7
**Sources of key data used**
Results of own researches and examinations
Literature informations
Toxicity studies, NIOSH-Tox-Data
National legislation and regulation

**Wording of the R/H-phrases specified in chapter 3 (not the classification of the mixture!)**

R 22 Harmful if swallowed.
R 31 Contact with acids liberates toxic gas.
R 34 Causes burns.
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.
R 52 Harmful to aquatic organisms.

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.