
SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

- Product Name: ANIGENE Chlorine Disinfectant Tablets
- UFI: D6GE-XSG3-H10E-GWX9
- Product Part Number: RM205

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

- Use of the substance/mixture: Disinfectant

1.3 Details of the supplier of the safety data sheet

- Name of Supplier: Byotrol
- Address of Supplier: Building 303 (Ashton),
Thornton Science Park,
Pool Lane, Ince, Chester,
CH2 4NU
- Email: Info@byotrol.com
- Telephone: +44 (0) 1925 742 000
- Name of Supplier: (Ireland) Smart Antimicrobial Technologies Limited
- Address of Supplier: (Ireland) Trident House, Dublin Road, Naas, Kildare, Ireland

1.4 Emergency telephone number

- UK Emergency Telephone: In case of a medical emergency following exposure to a chemical, the public should call NHS Direct on 111
- Ireland Emergency Telephone: Irish National Poisons Information Centre Tel: +353 (0) 18 09 21 66. The opening times of The Irish Poisons Information Centre are 8am to 10pm.

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

- CLP: Eye Irrit. 2, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 1

2.2 Label elements**GHS07****GHS09**

- Signal Word: Warning

2.2.1 Hazard statements

- 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.



SECTION 2: Hazards identification (....)

2.2.2 Precautionary statements

P261 - Avoid breathing dust/fumes.

P271 - Use only outdoors or in a well-ventilated area.

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.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P391 - Collect spillage.

P501 Dispose of contents/container in accordance with national regulations

2.3 Other hazards

- Contains: Troclosen sodium (500g/Kg)

Supplementary precautionary statements:

P264 - Wash hands thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P273 - Avoid release to the environment.

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 - Call a POISON CENTRE/doctor if you feel unwell.

P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

P405 - Store locked up.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

| Chemical Name | CAS-No. EC-No. Index-No. REACH Reg No. | Concentration | Categories | H Statements | Specific Concentration Limits | M factor |
|------------------|--|---------------|--|--|---|----------|
| Troclosen sodium | 2893-78-9 220-767-7 613-030-00-X 01-2119489371-33 | 40-60% | Ox. Sol. 2 Acute Tox. 4 Eye Irrit.2 STOT SE 3 Aquatic Acute 1 Aquatic Chronic 1 | H272 H302 H319 H335 H400 H410 EUH031 | EUH031: C ≥ 10 % STOT SE 3 H335: C ≥ 10 % | M = 1 |
| Adipic acid | 124-04-9 204-673-3 607-144-00-9 01-2119457561-38 | 10-30% | Eye Irrit. 2 | H319 | N/A | N/A |

SECTION 4: First aid measures

4.1 Description of first aid measures

- If medical advice is needed, have product container or label at hand.

4.1.1 Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

If breathing is difficult, oxygen should be given by a trained person

4.1.2 Ingestion

Rinse mouth.

Give plenty of water to drink

Do NOT induce vomiting.



SECTION 4: First aid measures (....)

Never give anything by mouth to an unconscious person
Get medical advice/attention if you feel unwell.

4.1.3 Contact with skin

Brush off loose particles from skin.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.

4.1.4 Contact with eyes

Severely irritating to eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.

4.2 Most important symptoms and effects, both acute and delayed

4.2.1 Inhalation

May cause irritation
In cases of severe exposure, severe irritation may develop

4.2.2 Ingestion

May cause gastro-intestinal disturbances

4.2.3 Contact with skin

May cause severe irritation
Possible burning sensation of affected areas

4.2.4 Contact with eyes

Causes severe irritation
Risk of serious damage to eyes

4.3 Indication of any immediate medical attention and special treatment needed

- Treat symptomatically
 - When in doubt or symptoms persist, seek medical attention
 - Give this safety data sheet or the label from this product to medical assistance.
 - Contact with acids liberates toxic gas (chlorine – toxic if inhaled).
 - Dilution of the product with copious water will reduce its hazardous properties.
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SECTION 5: Firefighting measures

5.1 Extinguishing media

- Do not use water jets
- Do not use carbon dioxide or dry agent
- May be extinguished with water fog/spray. Use alcohol resistant foam if available

5.2 Special hazards arising from the substance or mixture

- Toxic gases and fumes may be released in a fire
 - Do not allow run-off from fire fighting to enter drains or water courses.
 - Fire will result in dense smoke. Exposure to combustion products may harm your health.
 - Closed containers, which are exposed to fire, should be cooled with water.
- If the product is exposed to temperatures above 240C, e.g. in the event of a fire, dangerous decomposition compounds are produced. These are: chlorine, nitrogen, nitrogen trichloride (explosion hazard), cyanogens chloride, oxides of carbon (CO/CO₂), phosgene
-



SECTION 5: Firefighting measures (....)

5.3 Advice for firefighters

- Wear self contained breathing apparatus and protective clothing to prevent contact.
- Using a 10% solution of sodium carbonate, thoroughly decontaminate fire-fighting equipment including all fire-fighting wearing apparel after the incident.
- Upon direct exposure contact The National Poisons Information Service (dial 111, 24h service) in order to obtain further advice. Hazchem code: 2Z

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Wear protective clothing as per Section 8 of this safety data sheet.
- Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron as appropriate.
- Ensure respiratory protection is worn during the removal of spillages in confined areas.
- Avoid inhalation of dust and contact with skin and eyes,
- Wash thoroughly after dealing with a spillage.
- Handle product in a well-ventilated area.

6.2 Environmental precautions

- Avoid release to the environment.
- Do not discharge into drains or the environment, dispose to an authorised waste collection point
- If polluted water reaches drainage systems or water courses, immediately inform appropriate authorities
- Prevent flow of material into water source and begin monitoring available chlorine and pH immediately.

6.3 Methods and material for containment and cleaning up

- Limit spillage and collect using granular absorbant or similar material, and dispose of it in accordance with the regulations on dangerous waste.
- Collection and disposal of the material shall be done with minimum creation of dust. Sweep and collect. Spilt material should be contained in a suitable clean, dry and tightly closed disposal containers. Do not close drums containing wet or damp material. Do not transport wet or damp material.
- Wherever possible cleaning should be performed with normal cleaning agents. Avoid the use of solvents.

6.4 Reference to other sections

- For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Do not eat, drink or smoke when using this product.
- Avoid breathing dust/fume/gas/mist/vapours/spray.
- Avoid contact with skin and eyes
- Use personal protective equipment as required.
- Wash hands thoroughly after using this substance
- Wash contaminated clothing before reuse.
- Use only outdoors or in a well-ventilated area.
- Vapour space in a closed container may contain a slight amount of chlorine gas and compounds from decomposition of the product.

7.2 Conditions for safe storage, including any incompatibilities

SECTION 7: Handling and storage (....)

- Protect from frost
- Do not store above 25 °C
- Store in a dry place. Store in a closed container.
- Keep in a cool, well ventilated place
- Keep away from moisture
- Incompatibility with other materials: Acids
Alkalis
Moisture
Organic nitro compounds
Amines
Oxidising agents
Reducing agents
Peroxides
- Contact with acids liberates toxic gas
- Stable under normal ambient conditions and when used as recommended
- Keep out of reach of children
- Store locked up.

7.3 Specific end use(s)

- See Section 1.2
- Mix only with water.
- Do not mix this product with remnants of any other products. Such uses may cause a violent reaction leading to fire or explosion.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Substances

| Chemical Name | WEL (short term) | WEL (inhalable dust) (long term) | WEL (respirable dust) (long term) |
|--------------------------|--|----------------------------------|-----------------------------------|
| Chlorine (CAS 7782-50-5) | 1.5 mg/m ³ (UK) 1.5 mg/m ³ (EU) 1.5 mg/m ³ (IE) | 10 mg/m ³ (UK) | 4 mg/m ³ (UK) |

Substances

| Chemical Name | DNEL (Consumer; dermal, long term systemic effects) | DNEL (Industry; dermal, long term systemic effects) | DNEL (Consumer; inhalational, long term systemic effects) | DNEL (Industry; inhalational, long term systemic effects) | DNEL (Consumer; oral, long term systemic effects) |
|-------------------|---|---|---|---|---|
| Troclosene sodium | 1.15 mg/kg bw/day | 2.3 mg/kg bw/day | 1.99 mg/m ³ | 8.11 mg/m ³ | 1.15 mg/kg bw/day |
| Adipic acid | 7.5 mg/kg bw/day | 21 mg/kg bw/day | 13 mg/m ³ | 74.1 mg/m ³ | 7.5 mg/kg bw/day |

Substances

| Chemical Name | Route of exposure | Duration of exposure | PNEC |
|-------------------|-----------------------------------|----------------------|------------|
| Adipic acid | Freshwater | Continuous | 126 µg/L |
| Adipic acid | Freshwater sediment | Continuous | 474 µg/Kg |
| Adipic acid | Intermittent release (freshwater) | Continuous | 460 µg/L |
| Adipic acid | Marine water | Continuous | 12.6 µg/L |
| Adipic acid | Marine water sediment | Continuous | 47.4 µg/Kg |
| Adipic acid | Soil | Continuous | 20.8 µg/Kg |
| Troclosene sodium | Freshwater | Continuous | 170 ng/L |
| Troclosene sodium | Freshwater sediment | Continuous | 7.56 mg/kg |

SECTION 8: Exposure controls/personal protection (....)

| | | | |
|-------------------|-----------------------------------|------------|-----------|
| Troclosene sodium | Intermittent release (freshwater) | Continuous | 1.7 µg/L |
| Troclosene sodium | Marine water | Continuous | 1.52 mg/l |
| Troclosene sodium | Sewage treatment plant | Continuous | 590 µg/L |
| Troclosene sodium | Soil | Continuous | 756 µg/Kg |

8.2 Exposure controls



Gloves



Goggles



Suit

- Wear safety glasses with side-shields conforming to EN166
- Avoid contact with skin
- Chemical-resistant protective gloves (EN 374) (Verify instructions regarding permeability and breakthrough time, as provided by the gloves supplier).
- Chemical-resistant clothing and boots in case direct dermal exposure and/or splashes occur.
- Wash hands at the end of each work shift and before eating, smoking and using the toilet.
- Wash contaminated clothing before reuse.
- Use outdoors or only in well-ventilated areas.
- Respiratory protection may be required under exceptional circumstances when excessive air contamination exists
- An approved respirator with EN140 (chlorine) cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. The added protection of a full face piece respirator is required when visible dusty conditions are encountered and eye irritation may occur. A respiratory protection program that meets applicable regulatory requirements must be followed whenever workplace conditions warrant use of a respirator.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Physical state: Solid
 - Colour: Off-white
 - Odour: Chlorine
 - Melting point/Range: Not applicable*
 - Boiling Point/Range: Not applicable*
 - Flammability: Not flammable
 - Explosive Properties: Not available
 - pH: 5.0-6.0 at 1 % concentration
 - Flashpoint: Not applicable*
 - Autoignition Temperature: Not available
 - Decomposition temperature: 225 to 250°C
 - Kinematic viscosity: Not applicable*
 - Solubility in water: Completely soluble in water
 - Partition Coefficient (n-Octanol/Water): Log Kow = 0
 - Vapour pressure - not known
 - Density: 1.4 g/cm³ at 20 °C
 - Relative vapour density: Not applicable*
 - Particle characteristics: Not available
- * Not relevant due to the nature of the product



SECTION 9: Physical and chemical properties (....)

9.2 Other information

- No information available
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SECTION 10: Stability and reactivity

10.1 Reactivity

- Contact with acids liberates toxic gas.
- Warning! Do not use together with other products. May release dangerous gases (chlorine).
- On contact with moisture, NaDCC readily decomposes to chlorine, hypochlorous acid and cyanuric acid.

10.2 Chemical stability

- Stable under normal ambient conditions and when used as recommended

10.3 Possibility of hazardous reactions

- Contact with acids liberates toxic gas
- The following materials may react with the product:
 - Acids
 - Alkalis
 - Organic nitro compounds
 - Amines
 - Oxidising agents
 - Reducing agents
 - Moisture
 - Peroxides
 - Metals
- The presence of troclosene sodium has the potential to cause a violent reaction or ignition on exposure to metals, combustible or organic materials

10.4 Conditions to avoid

- Keep away from heat and sources of ignition
- Conditions to avoid: High temperatures
 - Direct sunlight
 - Moisture
- The active ingredient in this preparation is a strong oxidising agent. The preparation of concentrated solutions or slurries is not recommended. Avoid contact with water on concentrated material in the container.

10.5 Incompatible materials

- Contact with acids liberates toxic gas
- Incompatibility with other materials: Flammable/combustible materials
 - Moisture
 - Acids
 - Alkalis
 - Strong oxidising agents
 - Strong reducing agents
 - Hydrocarbons
 - Inorganic nitrates
 - Organic compounds

10.6 Hazardous decomposition products

- Chlorine, Nitrogen trichloride, Cyanogen chloride, Oxides of carbon, Phosgene.

Oxidising Properties: Testing was carried out by TNO laboratories, The Hague, Netherlands to assess the Oxidizing properties of NaDCC tablets in April 2020. Testing was performed in

SECTION 10: Stability and reactivity (....)

accordance with the method and criteria as described in the United Nations Manual of Tests and Criteria, seventh revised edition, test O.1, the so-called conical pile test.

The test results showed that the test sample tablets had no oxidizing properties in the sense of the criteria of the United Nations Manual of Tests and Criteria, test O.1. This conclusion applied to all NaDCC tablets containing 62.5% or less of NaDCC with no other oxidizing substances present.

SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****11.1.1 Acute toxicity**

Based on the available data, the classification criteria are not met

NaDCC: LD50 (oral, rat) 1436, 1823 mg/kg; LD50 (dermal, rat) > 5000 mg/kg bw; LC50 (inhalation) 0.27 to 1.17 mg/L.

Exposure to chlorine gas caused by decomposition of the product may cause burning of the eyes, nose and mouth, and irritation of the respiratory tract with coughing, a choking sensation, chest pain, vomiting, nausea, headache, dizziness and fainting.

11.1.2 Skin corrosion/irritation

- Based on available data, the classification criteria are not met for this product.
- NaDCC: Category 1 corrosive to skin (rabbit test)

11.1.3 Serious eye damage/irritation

Causes severe irritation

11.1.4 Respiratory or skin sensitisation

No experimental data available

11.1.5 Germ cell mutagenicity

No evidence of mutagenic effects

11.1.6 Carcinogenicity

No evidence of carcinogenic effects

11.1.7 Reproductive toxicity

No evidence of reproductive effects

11.1.8 STOT (specific target organ toxicity) - single exposure

May cause respiratory irritation.

11.1.9 STOT (specific target organ toxicity) - repeated exposure

No experimental data available

11.1.10 Aspiration hazard

No aspiration toxicity classification

11.2 Information on other hazards

- Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eye and lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

SECTION 12: Ecological information

12.1 Toxicity

- Contains ingredients that are dangerous for the environment (see section 3 & 8.1)

12.2 Persistence and degradability

The materials used in this preparation will not persist in the environment.

The free available chlorine from Sodium dichloroisocyanurate is rapidly consumed by reaction with organic and inorganic materials to produce chloride ion. The stable degradation products are chloride ion and cyanuric acid.

Sodium Dichloroisocyanurate is subject to hydrolysis. Cyanuric acid produced by hydrolysis is biodegradable.

12.3 Bioaccumulative potential

Trichloroisocyanuric acid hydrolyses in water liberating chlorine and cyanuric acid. These products are not bioaccumulative.

12.4 Mobility in soil

Rapidly degrades in soil. The breakdown product, cyanuric acid, is weakly absorbed and highly mobile in soils and sediments.

12.5 Results of PBT and vPvB assessment

- This product does not contain any substances classified as PBT or vPvB

12.6 Endocrine disrupting properties

- Product does not contain any substances known to be endocrine disruptors

12.7 Other adverse effects

- No information available
-

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product is covered by the regulations on hazardous waste.

HP 4 - Irritant (skin irritation and eye damage)

HP 5 - Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

HP 6 - Acute Toxicity

HP 12 - Release of an acute toxic gas

HP 14 - Ecotoxic

Dispose of contents/container to an approved waste disposal plant.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

EWC code:

16 09 04* Oxidising substances, not otherwise specified

Contaminated packing:

Packaging containing residues of the product should be disposed of similarly to the product.

SECTION 14: Transport information

SECTION 14: Transport information (....)
**Dangerous Substance****ENVIRONMENTALLY HAZARDOUS****14.1 UN number or ID number**

- UN No.: 3077

14.2 UN proper shipping name

- Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

14.3 Transport hazard class(es)

- Hazard Class: 9

14.4 Packing group

- Packing Group: III

14.5 Environmental hazards

- Hazardous to the environment
- Marine pollutant

14.6 Special precautions for user

- Contains: Troclosen sodium

14.7 Maritime transport in bulk according to IMO instruments

- Not applicable

14.8 Transport Regulations

ADR/IATA: When packed in inner or single packs ≤ 5 kg, Special Provision 375 of 2015 UN Model Regulations for the transportation of dangerous goods (IATA Special Provision A197) exempts this product from the labelling and documentation provisions of Dangerous Goods Regulations.

IMDG: IMDG 2014 (2.10.2.7)

Marine pollutants packaged in single or combination packagings containing a net quantity per single or inner packaging having a net mass per single or inner packaging of 5 kg or less for solids are not subject to any other provisions of this Code relevant to marine pollutants provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8

SECTION 15: Regulatory information
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- This Safety Data Sheet is provided in compliance with the EC Regulations 1907/2006, 1272/2008, 2015/830 and 2020/878
- Refer to current CLP Regulations
- Refer to current ADR Regulations
- Refer to current BPR regulations
- Refer to current COSHH Regulations
- Restricted for use to professional users.

15.2 Chemical safety assessment

- This product is either exempt from REACH or does not meet the minimum volume threshold for a chemical safety assessment (CSA)



SECTION 15: Regulatory information (....)

- This Safety Data Sheet does not constitute a workplace risk assessment
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SECTION 16: Other information

Text not given with phrase codes where they are used elsewhere in this safety data sheet:-
H319: Causes serious eye irritation.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.