

**SAFETY DATA SHEET**

**Product Name:** Aquatabs Granules  
**Revision date:** 03/09/2015  
**Supersedes:** 26/06/2014 **Revision: 7**

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

**1.1 Identification of the substance/preparation**

**Product Name** : Aquatabs Granules

**1.2 Use of the substance/preparation**

Aquatabs Granules are used for disinfection of drinking water for human consumption.

**1.3 Company/undertaking identification**

**Manufacturer** : Medentech, Clonard Road, Wexford, Ireland  
Tel: +353 53 9117900  
Fax: +353 53 9141271  
e-mail: msds@medentech.com

**2. HAZARDS IDENTIFICATION**

**2.1 Classification of the substance or mixture Classification in accordance with Regulation (EC) No 1272/2008 [CLP/GHS]**

Acute Tox. 4, H302 Harmful if swallowed  
Eye Irrit. 2 H319 Causes serious eye irritation  
STOT SE 3, H335 May cause respiratory irritation  
Aquatic Acute 1, H400 Very toxic to aquatic life  
Aquatic Chronic 1, H410 Very toxic to aquatic life with long lasting effects

**Additional information**

EUH031- Contact with acids liberates toxic gas

**Classification in accordance with Directive 67/548/EEC**

Harmful (Xn), R22: Harmful if swallowed  
Xi; R 36/37: Irritating to eyes and respiratory system.  
R31 Contact with acids liberates toxic gas.  
Dangerous for the Environment; (N) R 50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

**2.2 Label elements**

Labelling in accordance with the CLP Regulation EC (No) 1272/2008



**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** P261 - Avoid breathing dust/fumes

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P280 - Wear protective gloves/eye protection  
P273 – Avoid release to environment  
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  
P312 - Call a POISON CENTER or doctor/physician if you feel unwell  
P391 – Collect Spillage  
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.  
P501 - Dispose of contents and container in accordance with applicable local, regional, national, and/or international regulations

**2.3 Other hazards** None

**3. COMPOSITION/INFORMATION ON INGREDIENTS.**

Components	Weight %	Index No.	EC No.	EU Classification
Sodium Dichloroisocyanurate Dihydrate CAS No: 51580-86-0	90-100%	613-030-01-7	220-767-7	Acute Tox. 4 H302 Eye Irrit. 2 H319 STOT SE 3 H335 Aquatic Acute 1 H400 Aquatic Chronic 1 H410 EUH031 (In accordance with CLP 1272/2008) ----- R31 Xi; R36/37 Xn; R22 N; R50/53 (In accordance with DSD 67/548/EEC)
Sodium Chloride CAS no: 7647-14-5	0-1%		231-593-8	None

**4. FIRST AID MEASURES.**

**4.1. Description of first aid measures**

**Eye contact** Holding the eyelids apart, flush eyes promptly with copious flowing water for at least 20 minutes. Get medical attention immediately.

**Skin contact** Remove contaminated clothing. Wash skin thoroughly with mild soap and plenty of water for at least 15 minutes. Wash clothing before re-use. Get medical attention immediately.

**Inhalation** In case of dust inhalation or breathing fumes released from heated material, remove person to fresh air. Keep him quiet and warm, and in a position comfortable for breathing. Apply artificial respiration if necessary and get medical attention immediately.

**Ingestion** If swallowed, wash mouth thoroughly with plenty of water and give water to drink. Get medical attention immediately.

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NOTE: Never give an unconscious person anything to drink.

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**4.2. Most important symptoms and effects, both acute and delayed**

- **Ocular** Severe irritation and/or burns can occur following eye exposure. Contact may cause impairment of vision and corneal damage.

- **Dermal** Dermal exposure can cause severe irritation and/or burns characterized by redness, swelling and scab formation. Prolonged skin exposure may cause permanent damage.

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- **Inhalation** Irritating to the nose, mouth, throat and lungs. It may also cause burns to the respiratory tract with the production of lung edema that can result in shortness of breath, wheezing, choking, chest pain, and impairment of lung function. Inhalation of high concentrations can result in permanent lung damage from the corrosive action to the lung.
- **Ingestion** Irritation and/or burns can occur to the entire gastrointestinal tract, including the stomach and intestines, characterized by nausea, vomiting, diarrhea, abdominal pain, bleeding and/or tissue ulceration. Ingestion causes severe damage to the gastrointestinal tract with the potential to cause perforation.

**4.3. Indication of any immediate medical attention and special treatment needed**

No specific antidote. Treat symptomatically and supportively.  
In case of ingestion DO NOT induce vomiting.

**Medical conditions aggravated by exposure** Asthma, respiratory and cardiovascular disease.

**5. FIRE-FIGHTING MEASURES.**

**5.1. Extinguishing media**

Water

Do not use dry chemical extinguisher containing ammonia compounds.

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

When heated to decomposition, may release poisonous and corrosive fumes of nitrogen trichloride, chlorine and CO.

**5.3. Advice for fire-fighters**

Cool containers with water spray. Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) in positive pressure mode.

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.

**6. ACCIDENTAL RELEASE MEASURES.**

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

For small spills in a well-ventilated area, wear a NIOSH approved half-face or full face tight fitting respirator or a loose fitting powered air purifying respirator equipped with chlorine cartridges. Chemical goggles should be worn when using a half-face respirator. In addition to respiratory protection, wear coveralls, chemical resistant gloves, chemical resistant footwear; and chemical resistant headgear for overhead exposure.

For clean-up of large spills, or small dry spills in confined areas, wear full-face respirator with chlorine cartridges or a positive pressure supplied air respirator.

Additionally, body protection should be impervious clothing covering entire body to prevent personal contact with material.

CAUTION - Protection concerns must also address the following: If this material becomes damp/wet or contaminated in a container, the formation of nitrogen trichloride gas may occur and an explosive condition may exist.

**6.2. Environmental precautions**

Prevent entry into sewers and watercourses

**6.3. Methods and materials for containment and cleaning up**

Hazardous concentrations in air may be found in local spill area and immediately downwind. If spill material is still dry, do not put water directly on this product as a gas evolution may occur.

- **Soil** Do not contaminate spill material with any organic materials, ammonia, ammonium salts or urea.

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- Clean up all spill material with clean, dry dedicated equipment and place in a clean dry container.
- **Water** This material is heavier than and soluble in water. Stop flow of material into water as soon as possible. Begin monitoring for available chlorine and pH immediately.
  - **In air** Vapors may be suppressed by the use of water fog.

**7. HANDLING AND STORAGE.**

**7.1. Precautions for safe handling**

Avoid contact with skin, eyes, and clothing.  
 Upon contact with skin or eyes, wash off with water.  
 Wash hands thoroughly after handling.  
 Do not eat, drink or smoke when using this product  
 Use only outdoors or in a well- ventilated area

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

Store in a dry, cool, well-ventilated area, away from incompatible materials (see Section 10). Do not store at temperatures above 60°C/140°F. Store locked up.  
 Product has an indefinite shelf-life limitation.

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

Provided in sections 7.1, 7.2.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION.**

**8.1. Control parameters**

Components	Weight %	ACGIH-TLV Data	UK (WEL) - TWA	Netherlands national MAC data
Sodium Dichloroisocyanurate Dihydrate CAS No: 51580-86-0	90-100%	Not determined	Not determined	Not determined
Sodium Chloride CAS no: 7647-14-5	0-1%	Not determined	Not determined	Not determined

**8.2. Exposure controls**

**Ventilation requirements**

Use local exhaust ventilation to minimize dust and chlorine levels where industrial use occurs. Otherwise, ensure good general ventilation.

**Personal protective equipment:**

- **Respiratory protection** When dusty conditions are encountered, wear a NIOSH/OSHA full-face respirator with chlorine cartridges for protection against chlorine gas and dust/mist pre-filter.
- **Hand protection** Neoprene gloves
- **Eye protection** Use chemical safety glasses to avoid eye contact. Where industrial use occurs, chemical goggles may be required.
- **Skin and body protection** Impervious body covering clothes, boots and neoprene apron

**Hygiene measures**

Safety shower and eye bath should be provided. Do not eat, drink or smoke until after-work showering and changing clothes.

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**9. PHYSICAL AND CHEMICAL PROPERTIES.**

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

<b>Appearance</b>	White granules or tablet-form product
<b>Odour</b>	Mild chlorine-like
<b>pH</b>	Not available
<b>Melting point/range</b>	Not applicable
<b>Boiling point/range</b>	Not applicable
<b>Evaporation rate (ether=1)</b>	Not applicable under standard conditions
<b>Vapour pressure</b>	Not applicable under standard conditions
<b>Vapor density</b>	Not applicable under standard conditions
<b>Flash point</b>	Not applicable
<b>Density</b>	Tap density = 0.974 g/mL pour density = 1.083 g/mL kg/L
<b>Solubility:</b>	
- Solubility in water	24-25 g/100g
<b>Partition coefficient (n-octanol/water)</b>	Log Pow - -0.0056 (estimated)
<b>Auto-ignition temperature</b>	Not self-ignitable
<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>Viscosity</b>	Not applicable
<b>Explosive properties</b>	Not available
<b>Oxidising properties</b>	Not oxidizing
<b>Particle size:</b>	Non- inhalable

**10. STABILITY AND REACTIVITY.**

- 10.1 Reactivity:** Begins to lose one mole of water at approximately 50°C
- 10.2 Chemical stability:** Stable under normal conditions
- 10.3 Possibility of hazardous reactions:** If this material becomes damp/wet or contaminated in a container, the formation of nitrogen trichloride gas may occur and an explosive condition may exist.
- 10.4 Conditions to avoid:** Do not package in paper or cardboard. Heating above 240 °C
- 10.5 Incompatible materials:** Organic materials, reducing agents, nitrogen containing materials, other oxidizers, acids, bases, oils, grease, sawdust, dry fire extinguishers containing monoammonium compounds.
- 10.6 Hazardous decomposition products:** Nitrogen trichloride, chlorine, carbon monoxide

**11. TOXICOLOGICAL INFORMATION.**

**11.1 Information on toxicological effects**

<b>Acute toxicity:</b>	
- Rat oral LD50	1671 mg/kg
- Rat dermal LD50	>5000 mg/kg
<b>Serious eye damage/ irritation</b>	Corrosive
<b>Skin corrosion/irritation</b>	Corrosive
<b>Respiratory or skin sensitisation</b>	Not a sensitizer
<b>Immediately Dangerous to Life or Health (IDLH)</b>	
No level has been established for the components or the product itself.	

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**Mutagenicity** Not mutagenic in five Salmonella strains with or without metabolic activation.  
**Carcinogenicity** Not classified by IARC, OSHA, EPA.  
 Not included in NTP 11th Report on Carcinogens  
**Reproductive toxicity** Sodium dichloroisocyanuric acid when given orally to pregnant mice from day 6 to day 15 of gestation, did not induce any significant teratogenic effects.

**Specific Target Organ Toxicity (STOT) - Repeat exposure:**  
 Chronic inhalation exposure may cause impairment of lung function and permanent lung damage.  
 In the 28 day extended to 59 day study drinking water study (rat): NOAEL= 115mg/kg bw/day

**Medical conditions aggravated by exposure:** Asthma, respiratory and cardiovascular disease.

**12. ECOLOGICAL INFORMATION.**

**12.1 Toxicity**

**Aquatic toxicity:**

- **96 Hour-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:**

- **Oral LD50, Bobwhite quail** 730 mg/kg
- **Oral LD50, Mallard duck** 3300 mg/kg
- **Dietary LC50, Mallard duck** >10,000 ppm
- **Dietary LC50, Bobwhite quail** >10,000 ppm

**12.2 Persistence and degradability**

Not readily biodegradable  
 Rapidly hydrolyses in water into Cyanuric acid

**12.3 Bioaccumulative potential:** Not expected to bioaccumulate

**12.4 Mobility in soil:** The degradation product, Cyanuric acid, is weakly adsorbed to and highly mobile in all soils

**12.5 Results of PBT and vPvB assessment:** Does not meet the criteria for PBT or vPvB assessment

**12.6 Other adverse effects:** None known

**13. DISPOSAL CONSIDERATIONS.**

**13.1 Waste treatment methods**

**Waste disposal** Care must be taken to prevent environmental contamination from the use of this material. Dispose of in a safe manner in accordance with local/national regulations.

**14. TRANSPORT INFORMATION.**

**ADR/IMDG/IATA:**

Can be shipped as a limited quantity when packed in inner or single packs ≤ 5 kg.

**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.

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**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.

**ADR/RID** UN No. 3077  
 Proper shipping name: Environmentally hazardous substance, solid, n.o.s (Sodium Dichloroisocyanurate,dihydrate)  
 Class: 9 - Miscellaneous Dangerous Substances and Articles  
 Classification Code: M7  
 Hazard identification No. 90  
 Packing group: III  
 Marking: Environmentally hazardous substance

**IMO** UN No. 3077  
 Proper shipping name: Environmentally hazardous substance, solid, n.o.s (Sodium Dichloroisocyanurate,dihydrate)  
 Class: 9 - Miscellaneous Dangerous Substances and articles  
 Label: 9  
 Mark: MARINE POLLUTANT  
 Packing Group: III

**ICAO/IATA** UN No. 3077  
 Proper shipping name: Environmentally hazardous substance, solid, n.o.s (Sodium Dichloroisocyanurate,dihydrate)  
 Class: 9  
 Hazard label(s): Miscellaneous  
 Packing group: III  
 Marking: Environmentally hazardous substance

**15. REGULATORY INFORMATION.**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

<b>EU</b>	Sodium dichloroisocyanurate,dihydrate reported in EINECS
<b>USA</b>	All the components of this substance are listed on or are exempt from the inventory
<b>Australia</b>	Sodium dichloroisocyanurate,dihydrate listed in AICS
<b>China inventory</b>	Sodium dichloroisocyanurate,dihydrate listed
<b>Japan</b>	Sodium dichloroisocyanurate,dihydrate ENCS No. 5-1043X, 1-236
<b>New Zealand Inventory</b>	Sodium dichloroisocyanurate,dihydrate listed in NZIoC
<b>Philippines</b>	Sodium dichloroisocyanurate,dihydrate listed in PICCS

**15.2 Chemical Safety Assessment:** A Chemical Safety Assessment has been carried out on Sodium dichloroisocyanurate,dihydrate under the REACH Regulation.

**16. OTHER INFORMATION.**

The above information is intended to give general guidance as to health and safety. Whilst it is correct to the best of our knowledge and belief, no warranty can be given or implied that it will be adequate or applicable for all cases nor that the product will be suitable for any particular purpose since conditions of use are outside our control.

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R phrases and Symbols used in Section 3

Xn Harmful	R22 Harmful if swallowed
	R31 Contact with acid liberates toxic gases
Xi Irritant	R36/37 Irritating to Eyes and Respiratory System
N Dangerous for the Environment	R50/53 Very toxic to Aquatic Organisms. May cause long term effects in the aquatic environment.

GHS Classification used in Section 3

H302 - Harmful if swallowed  
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  
EUH031- Contact with acids liberates toxic gas

The inclusion of these phrases in Section 3 is mandatory according to Directive EC 1907/2006

REVISION NO: 7	DATE 03.09.2015
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REVISION HISTORY:

Revision No. 7 – Updated to include SP from IMDG in Transport section  
Revision No. 6 – Transport information updated  
Revision No. 5 – P phrases updated for CLP requirements  
Revision No. 4 – Updated to include additional transport information  
Revision No. 3 – Updated in accordance with Regulation (EC) No 1272/2008 [CLP/GHS]