UNIMARINE SERVICES INC

SAFETY DATA SHEET

1 Identification of the substance / mixture and of the company / undertaking

1.1 Product identifier

Product Name: Chlorine Tablets

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

Pool / spa treatment

1.3 Details of the supplier of the safety data sheet

Company:

Unimarine Services Inc.
60 Market Square,
PO Box 364, Belize City

Contact your nearest Unimarine sales office

Email: info@unimarine-services.com

1.4 Emergency Telephone Number

Emergency Telephone: Only to be used in case of incident
Tel: 00357 96484325

2 Hazards identification

2 .1 Classification of the substance or mixture

- Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]
- Ox. Sol. 2, H272
- Acute Tox. 4, H302
- Eye Irrit. 2, H319
- STOT SE 3, H335
- Aquatic Acute 1, H400
- Aquatic Chronic 1, H410
- EUH031
- Classification (67/548/EEC, 1999/45/EC)
- O; R8
- Xn; R22
- Xi; R36/37
- R52
- N; R50/53
- Additional information: For full text of R-phrases and Hazard- and EU Hazard-statements: see section 16

2 Hazards identification

2 .2 Label elements

- Signal Word: Danger
- Symbols: GHS03, GHS07, GHS09

Hazard phrases

- May intensify fire; oxidizer.
- Harmful if swallowed.
- Causes serious eye irritation.
- May cause respiratory irritation.
- Very toxic to aquatic life with long lasting effects.
- Contact with acids liberates toxic gas.
- Warning! Do not use together with other products. May release dangerous gases (chlorine).

Precautionary Phrases

- Store locked up/Keep out of reach of children.
- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- In case of fire: Do not breathe dust/fume/gas/mist/vapours/spray.
- Dispose of contents/container in accordance with local/regional/national/international regulations.
- Avoid release to the environment.

2 .3 Other hazards

- Marine pollutant

3 Composition / information on ingredients

3.1 Substances

Chemical Name	Concentration	CAS Number	EC Number	R/H Phrases*	Symbols	Index No.
symclosene; trichloroisocyanuric acid; trichloro-1,3,5-triazinetrion	100	87-90-1	201-782-8	H272, H302, H319, H335, H400, H410, R8, R22, R31, R36/37, R50/53	GHS03, GHS07, GHS09 O, Xn, N	613-031-00-5

4 First aid measures

4 .1 Description of first aid measures

- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- If breathing is difficult, oxygen should be given by a trained person
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

4 First aid measures

- Wash with plenty of soap and water.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Get immediate medical advice/attention.
- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- Give water or milk to drink
- Do NOT induce vomiting.
- Mucosal damage may contraindicate the use of gastric lavage

4 .2 Most important symptoms and effects, both acute and delayed

- Can cause damage to the eyes
- Can cause damage to the skin
- In cases of severe exposure, breathing difficulty may develop
- In cases of severe exposure, gastro-intestinal disturbances may develop

4 .3 Indication of immediate medical attention and special treatment needed

- Treat symptomatically

5 Fire-fighting measures

5 .1 Extinguishing media

- In case of fire: use water for extinction
- DO NOT USE dry extinguishers containing ammonium compounds such as dry powder.

5 .2 Special hazards arising from the substance or mixture

- See Section 10.6
- Oxidising and Harmful

5 .3 Advice for firefighters

- Wear protective clothing as per section 8
- In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.
- Wear full protective clothing including chemical protection suit

6 Accidental release measures

6 .1 Personal precautions, protective equipment and emergency procedures

- Avoid raising dust
- Wear protective clothing as per section 8
- Contact with water may form explosive gases
- Evacuate the area and keep personnel upwind

6 .2 Environmental Precautions

- Avoid release to the environment.
- Do not allow to enter public sewers and watercourses
- If contamination of drainage systems or water courses is unavoidable, immediately inform appropriate authorities

6 .3 Methods and material for containment and cleaning up

- Collect as much as possible in clean container for reuse or disposal
- Do not absorb spillage in sawdust or other combustible material
- Seek expert advice for removal and disposal of all contaminated materials and wastes

6 Accidental release measures

6 .4 Reference to other sections

- See Section 7 & 8

7 Handling and storage

7 .1 Precautions for safe handling

- Avoid raising dust
- Ensure adequate ventilation
- Avoid contact with combustible material
- Avoid breathing dust/fume/gas/mist/vapours/spray.
- Do not eat, drink or smoke when using this product.
- Wash thoroughly after handling.

7 .2 Conditions for safe storage, including any incompatibilities

- Store away from other materials.
- Keep/Store away from clothing/.../combustible materials.
- Store in a dry place. Store in a closed container.
- Store in a well-ventilated place. Keep cool.
- Do not store above 25 °C
- Keep only in original container.

7 .3 Specific end use(s)

- No information available.

8 Exposure controls/personal protection

8 .1 Control parameters

symclosene;trichloroisocyanuric acid;trichloro-1,3,5-triazinetrion

- WEL (long term) 0.5 ppm
- WEL (long term) 1.5 mg/m3
- WEL (short term) 1 ppm
- WEL (short term) 2.9 mg/m3

8 .2 Exposure controls

- Engineering controls should be provided which maintain airborne concentrations below the relevant guidelines

Occupational exposure controls

- In case of inadequate ventilation wear respiratory protection.
- Wear suitable protective clothing, including eye/face protection and gloves (butyl rubber are recommended)
- When handling this substance, e.g. sampling, wear goggles giving complete eye protection


Respirator


Goggles


Gloves


Suit

9 Physical and chemical properties

9 .1 Information on basic physical and chemical properties

- Odour: chlorine
- Appearance: Solid, white, tablets
- pH 2.7 - 3.3 at 1 % concentration
- Boiling point - not applicable
- Vapour pressure - not applicable
- Vapour density - not applicable
- Melting point 225-230 deg C with decomposition
- Water solubility 12 g/l
- Specific gravity 2.19 g/cm3
- Not flammable but will support combustion
- Oxidising
- Partition coefficient : n-Octanol/water - not known
- Evaporation rate - not known
- Viscosity - not applicable

9 .2 Other information

- Molecular weight 232.5

10 Stability and reactivity

10 .1 Reactivity

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

10 .2 Chemical stability

- Decomposes above 200 °C

10 .3 Possibility of hazardous reactions

- Contact with acids liberates toxic gas.

10 .4 Conditions to avoid

- Avoid contact with acids and alkalis
- Avoid contact with combustible material
- Avoid contact with foodstuffs
- Avoid contact with reducing agents
- Keep away from heat and sources of ignition

10 .5 Incompatible materials

- Incompatible with acids and alkalis
- Incompatible with reducing agents
- Contact with water may form explosive gases
- Contact with acids liberates toxic gas.

10 .6 Hazardous Decomposition Products

- Decomposition products may include carbon oxides
- Decomposition products include chlorine.
- Decomposition products may include phosgene

11 Toxicological information

11 .1 Information on toxicological effects

- LD50 (oral,rat) 809 mg/kg
- LD50 (skin,rabbit) 7600 mg/kg
- Irritation to eyes (rabbit) : Corrosive
- Irritation to skin (rabbit) : Moderate

Inhalation

- May cause dizziness
- Causes coughing
- Can cause damage to the mucous membranes
- In cases of severe exposure, burning sensation may develop
- In cases of severe exposure, delayed pulmonary oedema may develop

Contact with skin

- May cause irritation
- In cases of severe exposure, burning sensation may develop
- In cases of severe exposure, dermatitis may develop

Contact with eyes

- Causes severe irritation
- Can cause damage to the eyes

Ingestion

- The ingestion of significant quantities may cause damage to digestive system
- The ingestion of significant quantities may cause burning sensation

Carcinogenicity

- No evidence of carcinogenic effects

Teratogenicity

- No information available

Mutagenicity

- No information available

12 Ecological information

12 .1 Toxicity

- Very toxic to aquatic life with long lasting effects.
- LC50 (bluegill sunfish) 0.20-0.40 mg/l (96 hr)
- LC50 (rainbow trout) 0.08-0.37 mg/l (96 hr)
- IC50 (algae) <0.5 mg/l (3 hr)

12 .2 Persistence and degradability

- Biodegradable
- Degrades by hydrolysis
- Half life under acidic conditions is 8 hours

12 .3 Bioaccumulation Potential

- Bioaccumulation is insignificant

12 Ecological information

12 .4 Mobility in soil

- Decomposes in water
- Large volumes may penetrate soil and contaminate groundwater
- Marine pollutant
- Water solubility 12 g/l

12 .5 Results of PBT and vPvB assessment

- Not a PBT according to REACH Annex XIII

12 .6 Other Adverse Effects

- No information available

13 Disposal considerations

13 .1 Waste treatment methods

- Disposal should be in accordance with local, state or national legislation
- Do not reuse empty containers
- Uncontaminated material may be returnable. Contact supplier

Classification

- The waste must be identified according to the List of Wastes (2000/532/EC)

14 Transport information

Oxidizing Agent


Marine Pollutant

14.1 UN Number
2468

14.2 UN Proper Shipping Name
Trichloroisocyanuric acid, dry

14.3 Transport hazard class(es)
5.1

14.4 Packing group
II

14 .5 Environmental hazards

- Marine pollutant

14 .6 Special precautions for user

- See Section 7

14 .7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code

- Not applicable

Other information

14 Transport information

Road/Rail (ADR/RID)

Proper Shipping Name:	Trichloroisocyanuric acid, dry		
ADR UN No.:	2468		
ADR Hazard Class:	5.1	ADR Packing Group:	II
Tunnel Code:	E		

Sea (IMDG)

Proper Shipping Name:	Trichloroisocyanuric acid, dry		
IMDG UN No.:	2468		
IMDG Hazard Class.:	5.1	IMDG Pack Group.:	II

Air (ICAO/IATA)

Proper Shipping Name:	Trichloroisocyanuric acid, dry		
ICAO Un No.:	2468		
ICAO Hazard Class.:	5.1	ICAO Packing Group.:	II

15 Regulatory information

15 .1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- Refer to current ADR Regulations
- Refer to current CPL Regulations
- Refer to current EC Directive 82/501/EEC (the Seveso Directive)
- The List of Wastes (England) Regulations 2005 apply in the UK

15 .2 Chemical Safety Assessment

16 Other information

The information contained herein relates only to the specific material identified. Unimarine Services Inc. Believes that such information is accurate and reliable as of the date of this material safety data sheet, but no representation, guarantee or warranty, express or implied, is made as to the accuracy, reliability, or completeness of the information. Unimarine Services Inc. urges persons receiving this information to make their own determination as to the information’s suitability and completeness for their particular application.