SAFETY DATA SHEET
Revision 11

Multifunctional Chlorine Tablets 20g /200g

1. Identification of the substance/preparation and of the company/undertaking

1.1 Product Identifier — trichloroisocyanuric acid / symclosene

1.2 Relevant Identified uses and restrictions of the substance or mixture
Uses: For disinfection of pool and spa water.

1.3 Details of the supplier of the safety data sheet
Company: Maclin Sourcing Solutions Ltd
Unit A3
Risby Business Park
Newmarket Road
Risby, Suffolk
IP28 6RD

Telephone: +44 (0) 1284 810887
E-mail: info@maclingroup.co.uk

1.4 Emergency Telephone
Telephone: +44 (0) 1284 810887 (office hours)

2. Hazard Identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008

Hazard Class	Hazard Statements
Ox. Sol. 3	H272
Acute Tox. 4 *	H302
Eye Irrit. 2	H319
STOT SE 3	H335
Aquatic Acute 1	H400
Aquatic Chronic1	H410

Most important adverse effects

Human Health:	See section 11 for toxicological information
Physical & Chemical Hazards:	See section 9 for physicochemical information
Potential environmental effects:	See section 12 for environmental information

2.2 Label elements
The product is classified and labelled according to the CLP regulation

Hazard symbols:

GHS03 GHS09 GHS07

Signal word: Warning

Hazard-determining components of labelling: trichloroisocyanuric acid

Hazard statements	H272	May intensify fire; oxidiser
	H302	Harmful if swallowed.
	H319	Causes serious eye irritation
	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
	P201	Obtain special instructions before use
	P221	Take any precaution to avoid mixing with combustibles

2. Hazard Identification

P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P 308 + P313	IF exposed or concerned: Get medical advice / attention.
P402	Store in a dry place.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information: EUH031 Contact with acids liberates toxic gas.

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

2.3 Other Hazards

PBT and vPvB assessment: PBT: Not applicable.
vPvB: Not applicable.

3. Composition/information on ingredients

3.2 Mixture

CAS-No.	EINECS	Index-No.	%	
trichloroisocyanuric acid				
87-90-1	201-782-8	613-031-00-5	75 - 100%	Ox. Sol. 2, H272; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Eye Irrit. 2, H319; STOT SE 3, H335
Boric Acid				
10043-35-3	233-139-2	005-007-00-2	0.5- 1%	Repr. 1B, H360FD
copper(II) sulfate, pentahydrate				
7758-99-8	231-847-6		0.5 - 1%	Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302
Aluminium sulfate octadecahydrate				
7784-31-8	233-135-0		0.5 - 1%	Eye Dam. 1, H318

SVHC
10043-35-3 boric acid
Additional information: For the wording of the listed hazard phrases refer to section 16.

4. First Aid measures

4.1 Description of first aid measures

General Advice:	Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident
After inhalation:	Supply fresh air; consult doctor in case of complaints.
After skin contact:	Seek medical treatment.
After eye contact:	Call a doctor immediately. Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing:	Rinse out mouth and then drink plenty of water. Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed
Symptoms and effects: No relevant information available.

4.3 Indication of immediate medical attention and special treatment needed
Treatment: No relevant information available.

5. Fire fighting measures

5.1 Extinguishing media:

Suitable extinguishing media: Water, water spray, carbon dioxide.

Unsuitable extinguishing media: Extinguishing powder, foam, water with full jet.

5.2 Special hazards arising from the substance or mixture

Specific Hazards during fire fighting: Formation of toxic gases is possible during heating or in case of fire. In case of fire, the following can be released:
Nitrogen oxides (NOx); Hydrogen chloride (HCl)

5.3 Advice for fire-fighters

Special protective equipment: Wear self-contained respiratory protective device.
Wear fully protective suit.
Mouth respiratory protective device.

Additional information: Cool endangered receptacles with water spray.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

6. Accidental release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions: Avoid formation of dust.
Ensure adequate ventilation
Mount respiratory protective device.

6.2 Environmental precautions

Environmental precautions: Keep contaminated washing water and dispose of appropriately.
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.

6.3 Methods and materials for containment and cleaning up

Cleaning up: Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

6.4 Reference to other sections

Other Sections: See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment
See Section 13 for disposal information.

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling: Store in cool, dry place in tightly closed receptacles.
Provide suction extractors if dust is formed.
Restrict the quantity stored at the work place.
Do not refill residue into storage receptacles.

7.2 Conditions for safe storage, including any incompatibilities.

Requirements for storage areas: Store only in the original receptacle.

Common storage facility: Do not store together with acids.

Further information on storage: Protect from humidity and water.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

Storage class: 5.1B

7.3 Specific end uses

Specific use(s): No relevant information available.

8. Exposure control/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Additional information: The lists valid during the making were used as basis

8.2 Exposure controls

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.
Avoid contact with the eyes and skin.

Respiratory protection: Use suitable respiratory protective device when high concentrations are present.
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use selfcontained respiratory protective device.

Protection of hands: Wear suitable chemical resistant gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Material of gloves
The selection of the 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 not be calculated in advance and has therefore to be checked prior to the application.
Penetration time of glove material
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
For the permanent contact gloves made of the following materials are suitable:
Nitrile rubber, NBR
Chloroprene rubber, CR
Butyl rubber, BR

Eye protection: Tightly sealed goggles

Body protection: Protective work clothing, Boots, Apron

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:	
Form	Tablets
Colour:	Blue
Odour:	Like chlorine
Odour threshold:	Not determined.
pH-value (10 g/l) at 20 °C: "	2.0-2.7
Change in condition:	
Melting point/Melting range:	225-240 °C
Boiling point/Boiling range:	Undetermined.
Flash point:	Not applicable.
Flammability (solid	gaseous): "
Decomposition temperature:	225 °C
Self-igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Explosion limits:	Lower:	Not determined.
	Upper:	Not determined.
Vapour pressure:		Not applicable.
Density at 20 °C:		ca. 2.5 g/cm³
Relative density		Not determined.
Vapour density		Not applicable.
Evaporation rate		Not applicable.
Solubility in / Miscibility with water at 25 °C:		12 g/l
Partition coefficient (n-octanol/water):		Not determined.
Dynamic viscosity:		Not applicable.
Kinematic viscosity:		Not applicable.
Solvent content:		0.00%
Solids content:		100.00%

9.2 Other Information

Other information: No further relevant information available.

10. Stability and reactivity

10.1 Reactivity

Reactivity: No further relevant information available.

10.2 Chemical stability

Chemical stability: No further relevant information available.

10.3 Possibility of hazardous reactions

Hazardous reactions: Reacts with oxidising agents.
Reacts with strong alkali.
Reacts with amines.
Strong exothermic reaction with acids.
Reacts with flammable substances.
Reacts with acids releasing chlorine.
Reacts with reducing agents.

10.4 Conditions to avoid

Conditions to avoid: No further relevant information available.

10.5 Incompatible materials

Materials to avoid: No further relevant information available.

10.6 Hazardous decomposition products

Haz. Decomp. products: Hydrogen chloride (HCl), Chlorine, Nitrogen oxides (NOx)

11. Toxilogical Information

11.1 Information on toxilogical effects

Toxicity Values

trichloroisocyanuric acid				*87-90-1*
Route	Species	Test	Value	Units
Oral	Rat	LD50	406	mg/kg
boric acid				*10043-35-3*
Oral	Rat	LD50	2660	mg/kg

11. Toxilogical Information

11.1 Information on toxilogical effects

Primary Irritant effect:

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/irritation: Causes serious eye irritation.

Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.

CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity : Based on available data, the classification criteria are not met.

STOT-single exposure: May cause respiratory irritation.

STOT-repeated exposure: Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

12. Ecological Information

12.1 Toxicity

Acute Toxicity

trichloroisocyanuric acid			*87-90-1*	
Species	Test	Value	Units	
Daphnia	EC50	0.2	mg / l	(Modified method based on the ASTM method E645-85)
(Selenastrum capricornutum	EC50	0.5	mg / l	
(Danio rerio (Zebrabärbling)	LC50	0.3	mg / l	
boric acid			*10043-35-3*	
(Chlorella pyrenoidosa)	NOEC	10	mg / l	
Daphnia	LC50	133	mg / l	(ASTM Standard E 729-80)

12.2 Persistence and degradability

Persistence and degradability No further relevant information available.

12.3 Bioaccumlative potential

Bioaccumlative potential No further relevant information available.

12.4 Mobility in soil

Mobility in soil No further relevant information available.

Ecotoxical effects: Remark: Very toxic for fish

Behaviour in sewage processing plants

10043-35-3 boric acid

NOEC 180 mg/l (Activated sludge) (OECD "Chironomid testing using spiked sediment")

Additional ecological information:

General notes:

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

12.5 Results of PBT and PvB assessment

Results of PBT and PvB Not applicable

12.6 Other adverse effects

Other adverse effects No further relevant information available.

13. Disposal Considerations

13.1 Waste treatment methods

Must be specially treated adhering to official regulations.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging:
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

Recommended cleansing agents:
Water, if necessary together with cleansing agents.

14. Transport Information

14.1 UN Number: UN1479

14.2 UN proper shipping name

ADR: 1479 OXIDIZING SOLID, N.O.S. (TRICHLOROISOCYANURIC ACID), ENVIRONMENTALLY HAZARDOUS
IMDG: OXIDIZING SOLID, N.O.S. (TRICHLOROISOCYANURIC ACID), MARINE POLLUTANT
IATA: OXIDIZING SOLID, N.O.S. (TRICHLOROISOCYANURIC ACID)

14.3 Transport hazard class(es)

ADR / IMDG


Class: 5.1 Oxidising substances.
Label: 5.1

IATA:

Class: 5.1 Oxidising substances.
Label: 5.1

14.4 Packaging Group

ADR / IMDG / IATA: III

14.5 Environmental hazards

Marine pollutant: Yes — Yes
Special marking (ADR): Symbol (fish and tree)
Symbol (fish and tree)

14.6 Special precautions for user

Special precautions: Warning: Oxidising substances.
Danger code (Kemler): 50
EMS Number: F-A,S-Q
Stowage Category: B
Segregation Code: SG38 Stow "separated from" ammonium compounds.
SG49 Stow "separated from" cyanides
SG60 Stow "separated from" peroxides
SG61 Stow "separated from" powdered metals

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

Transport/Additional information:
ADR
Excepted quantities (EQ): E1
Limited quantities (LQ): 5 kg
Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 g
Maximum net quantity per outer packaging: 1000 g

14. Transport Information

Transport/Additional information:

ADR

Excepted quantities (EQ):	E1
Limited quantities (LQ)	5 kg
Excepted quantities (EQ) Code:	E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
Transport category	3
Tunnel restriction code	E

IMDG

Limited quantities (LQ)	5 kg
Excepted quantities (EQ) Code:	E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
UN "Model Regulation":	UN1479 OXIDIZING SOLID, N.O.S. (TRICHLOROISOCYANURIC ACID), 5.1, III, ENVIRONMENTALLY HAZARDOUS

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for this substance or mixture.

Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients is listed.

Seveso category

P8	OXIDISING LIQUIDS AND SOLIDS
E1	Hazardous to the Aquatic Environment

Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t

Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 30

National regulations:

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Articles 57

10043-35-3 boric acid

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out.

16. Other information

Full text of H-statements referred to under sections 2 and 3

H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H360FD	May damage fertility. May damage the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

16. Other information

Further information
Restricted to professional users. Attention - Avoid exposure- obtain special instructions before use

This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty or merchantability, or fitness for any particular use, or any other warranty, express or implied, with respect to this information, and we assume no liability resulting from use of this information Users should make their own investigations to determine the suitability of the information for their particular needs and uses.

Indicates updated section