SAFETY DATA SHEET

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

1.1 Product identifier

- Product Name: Multi-Pool Tablets
- Contains: Trichloroisocyanuric acid, aluminium sulphate, copper sulphate
- Datasheet Number: SDS 006
- UFI: 3H00-W0SW-U00D-CD76

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

- Use of the substance/mixture: Pool / spa treatment; Biocide
- Use advised against: No information available

1.3 Emergency telephone number

- Emergency Telephone: 0800 043 0891 (technical)
  0800 043 0892 (emergency)

SECTION 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
- Additional information: For full text of Hazard and EU Hazard statements: see section 16

2.2 Label elements

Signal Word: Danger

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

P102 - Keep out of reach of children.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

SECTION 2: Hazards identification (....)

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.
P501 - Dispose of contents/container to an authorised waste collection point

Supplemental Hazard information (EU)

EUH031 - Contact with acids liberates toxic gas.
EUH206 - Warning! Do not use together with other products. May release dangerous gases (chlorine).

2.3 Other hazards

- Not a PBT according to REACH Annex XIII
- Not a vPvB according to REACH Annex XIII
- Does not contain any substances with endocrine disrupting properties

SECTION 3: Composition/information on ingredients

3.1 Substances

- Not applicable

3.2 Mixtures

Chemical Name	Concentration	CAS No.	EC No.	Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]	SCL/ M-Factor/ ATE	REACH Registration Number	WEL/ OEL
Trichloroisocyanuric acid; Symclosene; Trichloro-1,3,5-triazinetrion	96.8 - 97 %	87-90-1	201-782-8	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	-	-	No
Aluminium sulphate	2 %	10043-01-3	233-135-0	Met. Corr. 1, H290 Eye Dam. 1, H318	-	-	Yes
Copper sulphate	1 %	7758-98-7	231-847-6	Acute Tox. 4, H302 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M=10	-	No
Boric acid	0.5 %	10043-35-3	233-139-2	Repr. 1B, H360FD	Repr. 1B H360FD: C ≥ 5.5 %	SVHC	No

SECTION 4: First aid measures

4.1 Description of first aid measures

- Rescuers should put on approved personal protective equipment (PPE) before administering first aid
- Rescuers should take suitable precautions to avoid becoming casualties themselves

Contact with skin

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water
Contaminated clothing should be laundered before reuse Get immediate medical advice/attention.

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

Contact with eyes

If substance has got into eyes, immediately wash out with plenty of water for at least 15 minutes
Irrigate eyes thoroughly whilst lifting eyelids
Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion

Rinse mouth with water (do not swallow)
Give plenty of water to drink Do NOT induce vomiting.
Get immediate medical advice/attention.

Inhalation

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF exposed or concerned: Get medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed

Contact with eyes

Causes severe irritation
Causes redness and swelling

Contact with skin

May cause redness and irritation

Ingestion

May cause nausea/vomiting
May cause diarrhoea
The ingestion of significant quantities may cause damage to digestive system

Inhalation

May cause delayed pulmonary oedema May cause respiratory tract irritation.
May cause shortness of breath May cause coughing

4.3 Indication of any immediate medical attention and special treatment needed

- Treat symptomatically
- Use of a glucocorticoid inhalation spray may be needed

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media: water spray; water fog
- Unsuitable extinguishing media: carbon dioxide; alcohol resistant foam; DO NOT USE dry extinguishers containing ammonium compounds such as dry powder.

5.2 Special hazards arising from the substance or mixture

- May intensify fire; oxidiser.
- Not combustible, but will contribute to the combustion of other materials. May cause violent, sometimes explosive reactions.
- In a fire or if heated, a pressure increase will occur and the container may burst - Gives off irritating or toxic fumes (or gases) in a fire.

SECTION 5: Firefighting measures (....)

- Decomposition products may include oxygen, chlorine, nitrogen, nitrogen trichloride, cyanogen chloride, oxides of chlorine, phosgene

5.3 Advice for firefighters

- Evacuate the area and keep personnel upwind
- Keep container(s) exposed to fire cool, by spraying with water
- Collect contaminated fire extinguishing water separately. This MUST not be discharged into drains. Prevent fire extinguishing water from contaminating surface or ground water.
- Special protective equipment: Wear self-contained breathing apparatus (SCBA). Wear full protective clothing including chemical protection suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Rescuers should take suitable precautions to avoid becoming casualties themselves
- Only trained and authorised personnel should carry out emergency response
- Personal precautions for non-emergency personnel: Ensure adequate ventilation; Do not breathe dust; Wear protective clothing as per section 8; Wash thoroughly after handling.
- Personal precautions for emergency responders: Evacuate the area and keep personnel upwind; Wear self-contained breathing apparatus (SCBA); Wear suitable protective clothing, including eye/face protection and gloves (nitrile are recommended)

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

- Stop leak if safe to do so.
- Avoid formation of dust
- Do not mix with water
- If tablets are dry and uncontaminated: collect up into heavy duty plastic bag: where possible and suitable, use material as originally intended. Wash away any residues with plenty of water. If tablets are contaminated: they should be transferred to waste ground, spread thinly and covered with a thin layer of earth: a smell of chlorine will be noted until the material has degraded. Keep people, vehicles and animals away from the disposal area. If tablets become damp: they may decompose to give off chlorine fumes: transfer spillage to unsealed plastic bags avoiding any large masses of material within the bags and remove to waste ground for immediate treatment/disposal as above: avoid breathing fumes. Wash away residues with copious amounts of water. If the spillage of tablets is large: (more than 100kg) place into bins lined with polythene bags and eliminate in accordance with locally valid disposal regulations
- Seek expert advice for removal and disposal of all contaminated materials and wastes

6.4 Reference to other sections

- See Section 7, 8 & 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Use only in well ventilated areas
- Do not breathe dust
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. - Substance is hygroscopic - Protect from moisture.
- Do not add water to the product, always add the product to large quantities of water.
- Do not mix with other chemicals

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

- Avoid contact with skin and eyes
- Wear protective clothing as per section 8
- Contaminated clothing should be laundered before reuse
- Use good personal hygiene practices
- Do not eat, drink or smoke when using this product.
- Wash thoroughly after handling.
- Ensure eyewash stations and safety showers are nearby

7.2 Conditions for safe storage, including any incompatibilities

- Store in a cool, dry well-ventilated place. Keep container tightly closed.
- Do not store above 25 °C
- Substance is hygroscopic
- Protect from moisture
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Keep away from food, drink and animal feedingstuffs
- Incompatible with acids, ammonia, bases, floor sweeping compounds, calcium hypochlorite, reducing agents, organic solvents and compounds

7.3 Specific end use(s)

- Pool / spa treatment

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

- If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
  Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace exposure - Measurement of exposure by inhalation to chemical agents - Strategy for testing compliance with occupational exposure limit values). European Standard EN 14042 (Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents). European Standard EN 482 (Workplace exposure. General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- The UK HSE (EH40) recommends the following limits for dusts: 10 mg/m³ (8hr TWA) total inhalable dust; 4 mg/m³ (8hr TWA) total respirable dust

Trichloroisocyanuric acid

(EU) OELV (short term limit value) (as chlorine) 0.5 ppm 1.5 mg/m³ WEL (short term limit value) (as chlorine) 0.5 ppm 1.5 mg/m³ (UK)
DNEL (inhalational) 8.04 mg/m³ Industry, Long Term, Systemic Effects
DNEL (dermal) 2.28 mg/kg bw/day Industry, Long Term, Systemic Effects
DNEL (inhalational) 1.98 mg/m³ Consumer, Long Term, Systemic Effects
DNEL (dermal) 1.14 mg/kg bw/day Consumer, Long Term, Systemic Effects
DNEL (oral) 1.14 mg/kg bw/day Consumer, Long Term, Systemic Effects
PNEC aqua (freshwater) 170 - 12 100 000 ng/L
PNEC aqua (intermittent releases, freshwater) 1.7 - 6 550 µg/L
PNEC aqua (marine water) 1.52 mg/L
PNEC (STP) 590 - 204 100 µg/L
PNEC sediment (freshwater) 7.56 mg/kg
PNEC sediment (marine water) 756 µg/kg
PNEC terrestrial (soil) 756 µg/kg

Aluminium sulphate

WEL (long term): 2 mg/m³ (UK as aluminium; salts, soluble)
DNEL (inhalational) 3 mg/m³ Industry, Long Term, Systemic Effects
DNEL (inhalational) 2 mg/m³ Industry, Acute/Short Term, Systemic Effects
DNEL (inhalational) 3 mg/m³ Industry, Long Term, Local Effects
DNEL (inhalational) 2 mg/m³ Industry, Acute/Short Term, Local Effects

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

DNEL (dermal) 1.71 mg/kg bw/day Industry, Long Term, Systemic Effects
DNEL (dermal) 46.7 mg/kg bw/day Industry, Acute/Short Term, Systemic Effects
DNEL (dermal) 882 µg/cm² Industry, Long Term, Local Effects
DNEL (dermal) 882 µg/cm² Industry, Acute/Short Term, Local Effects
DNEL (inhalational) 1.5 mg/m³ Consumer, Long Term, Systemic Effects
DNEL (inhalational) 1 mg/m³ Consumer, Acute/Short Term, Systemic Effects
DNEL (inhalational) 1.5 mg/m³ Consumer, Long Term, Local Effects

DNEL (inhalational) 1 mg/m³ Consumer, Acute/Short Term, Local Effects
DNEL (dermal) 855 µg/kg bw/day Consumer, Long Term, Systemic Effects
DNEL (dermal) 23.35 mg/kg bw/day Consumer, Acute/Short Term, Systemic Effects
DNEL (dermal) 441 µg/cm² Consumer, Long Term, Local Effects
DNEL (dermal) 441 µg/cm² Consumer, Acute/Short Term, Local Effects
DNEL (oral) 1.9 mg/kg bw/day Consumer, Long Term, Systemic Effects
DNEL (oral) 92.4 mg/kg bw/day Consumer, Acute/Short Term, Systemic Effects
PNEC aqua (freshwater) 4.5 mg/L
PNEC aqua (intermittent releases, freshwater) 30.11 mg/L
PNEC aqua (marine water) 64 mg/L
PNEC (STP) 60.2 mg/L
PNEC sediment (freshwater) 10 mg/kg
PNEC sediment (marine water) 31.4 mg/kg
PNEC (air) 2 mg/m³
PNEC terrestrial (soil) 58 mg/kg
PNEC secondary poisoning (food) 150 mg/kg

Copper sulphate

DNEL (inhalational) 1 mg/m³ Industry, Long Term, Systemic Effects
DNEL (inhalational) 1 mg/m³ Industry, Long Term, Local Effects
DNEL (dermal) 137 mg/kg bw/day Industry, Long Term, Systemic Effects
DNEL (oral) 41 µg/kg bw/day Consumer, Long Term, Systemic Effects
DNEL (oral) 82 µg/kg bw/day Consumer, Acute/Short Term, Systemic Effects
PNEC aqua (freshwater) 7.8 µg/L
PNEC aqua (marine water) 5.2 µg/L
PNEC (STP) 230 µg/L
PNEC sediment (freshwater) 87 mg/kg
PNEC sediment (marine water) 676 mg/kg
PNEC terrestrial (soil) 65 mg/kg

Boric acid

DNEL (inhalational) 8.3 mg/m³ Industry, Long Term, Systemic Effects
DNEL (dermal) 392 mg/kg (bw/day) Industry, Long Term, Systemic Effects
DNEL (inhalational) 4.15 mg/m³ Consumer, Long Term, Systemic Effects
DNEL (dermal) 196 mg/kg bw/day Consumer, Long Term, Systemic Effects
DNEL (oral) 980 µg/kg bw/day Consumer, Long Term, Systemic Effects
DNEL (oral) 980 µg/kg bw/day Consumer, Acute/Short Term, Systemic Effects
PNEC aqua (freshwater) 2.9 mg/L
PNEC aqua (intermittent releases, freshwater) 13.7 mg/L
PNEC aqua (marine water) 2.9 mg/L PNEC
(STP) 10 mg/L
PNEC terrestrial (soil) 5.7 mg/kg

8.2 Exposure controls

- Selection and use of personal protective equipment should be based on a risk assessment of exposure potential
- Engineering controls
  Engineering controls should be provided to prevent the need for ventilation Use local exhaust ventilation and/or enclosures.
- Respiratory protection
  In case of insufficient ventilation, wear suitable respiratory equipment
  Where a reusable half mask respirator is required, use EN 140 mask and EN 143 particle filter, or EN 1827
  Where a full face mask respirator is required, use EN 136, with particle filter EN 143

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

- Eye/face protection
  Wear goggles giving complete eye protection approved to standard EN 166.
- Skin protection
  Wear protective gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and standard EN 374.

The selection of a suitable glove depends on work conditions and whether the product is present on its own or in combination with other substances. Breakthrough time is dependent on the characteristics of the brand of glove used and the supplier should be consulted.

Glove material: Nitrile rubber

Thickness: 0.11 mm

Breakthrough time: 480 minutes

Reference: Manufacturer

Wear suitable protective clothing

Contaminated work clothing should not be allowed out of the workplace. Contaminated clothing should be laundered before reuse

- Hygiene measures

  Do not eat, drink or smoke when using this product. Use good personal hygiene practices Wash thoroughly after handling.

  Ensure eyewash stations and safety showers are nearby

- Thermal hazards

  Not applicable

- Environmental exposure controls

  Do not empty into drains

  Do not allow to penetrate the ground/soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Physical state: Solid, tablets
- Colour: White
- Odour: Smells of chlorine

  Odour threshold 1 - 3 ppm (value for chlorine)
- Melting point/freezing point: > 225 °C (decomposition)
- Flammability: Not combustible, but will contribute to the combustion of other materials. May cause violent, sometimes explosive reactions.
- Lower and upper explosion limit: Not applicable
- Flash point: Not applicable
- Auto-ignition temperature: Not applicable
- Decomposition temperature: 225 - 230 °C
- pH: 2.7 - 3.3 @ 20 °C
- Kinematic viscosity: Not applicable
- Solubility: Solubility in water: 1.2 g/100 mL
- Partition coefficient n-octanol/water (log value): Log Pow = 0.26
- Vapour pressure: 0.001 - 0.002 Pa @ 20 - 25 °C (trichloroisocyanuric acid)
- Density and/or relative density: 2.07 @ 20 °C
- Relative vapour density: No information available - Particle characteristics: No information available

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

9.2 Other information

- Oxidising properties: Category 2 (oxidising solids) based on GHS criteria
- Bulk density: (trichloroisocyanuric acid) ~ 850 kg/m³ at 20 °C

SECTION 10: Stability and reactivity

10.1 Reactivity

- May intensify fire; oxidizer
- Warning! Do not use with other products. May release dangerous gases (chlorine)

10.2 Chemical stability

- Stable under normal conditions
- May decompose on exposure to air and moisture

10.3 Possibility of hazardous reactions

- May intensify fire; oxidizer
- Heating may cause a fire or explosion.
- Do not get water inside container. Wet material may generate nitrogen trichloride, an explosion hazard - Contact with acids liberates toxic gas.

10.4 Conditions to avoid

- Avoid formation of dust
- Avoid contact with moisture
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5 Incompatible materials

- Incompatible with acids, ammonia, bases, floor sweeping compounds, calcium hypochlorite, reducing agents, organic solvents and compounds

10.6 Hazardous decomposition products

- Decomposition products may include oxygen, chlorine, nitrogen, nitrogen trichloride, cyanogen chloride, oxides of carbon, phosgene

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

- Acute Toxicity Harmful if swallowed.
  Classification based on calculation and concentration thresholds

Substances

Chemical Name	LD $_{50}$ **(oral,** rat)	LC$_{50}$ (inhalation, **rat)**	LD $_{50}$ **(dermal,** rabbit)
Symclosene	787 - 5 000 mg/kg	(4 h) 90 - 5 250 mg/m³	5 000 mg/kg
Aluminium sulphate	2 000 - 5 000 mg/kg	(4 h) 5 - 5.09 mg/L	1 167.5 - 5 000 mg/kg
Copper sulphate	481 - 482 mg/kg	No data available	2 000 mg/kg (rat)
Boric acid	2 600 - 4 080 mg/kg	(4 h) 2.12 mg/L	2 000 mg/kg

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

SECTION 11: Toxicological information (....)

Substances

Chemical Name	Irritation/corrosion
Symclosene	Adverse effect observed (corrosive)
Aluminium sulphate	No adverse effect observed (not irritating)
Copper sulphate	No data available
Boric acid	No adverse effect observed (not irritating)

- Serious eye damage/irritation Causes serious eye irritation.

Classification based on calculation and concentration thresholds

Substances

Chemical Name	Irritation/corrosion
Symclosene	Adverse effect observed (irritating)
Aluminium sulphate	Adverse effect observed (irreversible damage)
Copper sulphate	No data available
Boric acid	No adverse effect observed (not irritating)

- Respiratory or skin sensitisation

  Based on available data, the classification criteria are not met

Substances

Chemical Name	Skin **sensitisation**	Respiratory **sensitisation**
Symclosene	No adverse effect observed (not sensitising)	No study available
Aluminium sulphate	No adverse effect observed (not sensitising)	Adverse effect observed (sensitising)
Copper sulphate	No data available	No data available
Boric acid	No adverse effect observed (not sensitising)	No study available

- Germ cell mutagenicity

  No evidence of mutagenic effects

Substances

Chemical Name	Toxicity - In **Vitro**	Toxicity - In **Vivo**
Symclosene	No adverse effect observed (negative)	No adverse effect observed (negative)
Aluminium sulphate	No adverse effect observed (negative)	No adverse effect observed (negative)
Copper sulphate	No data available	No data available
Boric acid	No adverse effect observed (negative)	No adverse effect observed (negative)

- Carcinogenicity

  No evidence of carcinogenic effects

Substances

Chemical Name	NOAEL **(oral,** rat)	NOAEC (inhalation, **rat)**	NOAEL (dermal, rat)
Symclosene	No data available	No data available	No data available
Aluminium sulphate	850 mg/kg bw/day (mouse)	6.1 mg/m³	6.8 mg/kg bw/day (mouse)
Copper sulphate	No data available	No data available	No data available
Boric acid	1 150 mg/kg bw/day	No data available	No data available

- Reproductive toxicity

  Boric acid is a Category 1B Reproductive Toxicant in concentrations ≥ 5.5%

  Boric acid is included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No.1907/2006 (REACH)

SECTION 11: Toxicological information (....)

Substances

Chemical Name	NOAEL **(oral,** rat)	NOAEC (inhalation,**rat)**	LOAEC (inhalation, **rat)**	NOAEL (dermal, rat)	LOAEL (dermal, **mouse)**
Symclosene	No data available	No data available	No data available	No data available	No data available
Aluminium sulphate	5.41 mg/kg bw/day (Effect on fertility) 93 mg/kg bw/day (Effect on developmental toxicity)	38.6 mg/m³ (Effect on fertility)	12 mg/m³ (Effect on developmental toxicity)	2.48 mg/kg bw/day (Effect on fertility)	2.21 mg/kg bw/day (Effect on developmental toxicity)
Copper sulphate	No data available	No data available	No data available	No data available	No data available
Boric acid	No data available	No data available	No data available	No data available	No data available

- Specific target organ toxicity (STOT) - single exposure May cause respiratory irritation.

Classification based on calculation and concentration thresholds

Substances

Chemical Name	Route	Remarks
Symclosene	Respiratory	No study available
Aluminium sulphate	Respiratory	Adverse effect observed (irritating)
Copper sulphate	Respiratory	No data available
Boric acid	Respiratory	No adverse effect observed (not irritating)

- Specific target organ toxicity (STOT) - repeated exposure
  Based on available data, the classification criteria are not met

Substances

Chemical Name	NOAEL (**oral**, **rat)**	NOAEC **(**inhalation, **rat)**	NOAEL (dermal, rat)
Symclosene	114 - 914 mg/kg bw/day	31 mg/m³	No data available
Aluminium sulphate	342 mg/kg bw/day	15 mg/m³	8.55 mg/kg bw/day
Copper sulphate	1 000 ppm	2 mg/m³	No data available
Boric acid	17.5 - 100 mg/kg bw/day	57 - 470 mg/m³	No data available

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

- Contact with eyes
  Causes severe irritation
  Causes redness and swelling

- Contact with skin
  May cause redness and irritation

- Ingestion
  May cause nausea/vomiting
  May cause diarrhoea
  The ingestion of significant quantities may cause damage to digestive system

- Inhalation
  Causes delayed pulmonary oedema
  May cause respiratory tract irritation.
  May cause shortness of breath May
  cause coughing

11.2 Information on other hazards

- Does not contain any substances with endocrine disrupting properties

SECTION 12: Ecological information

12.1 Toxicity

SECTION 12: Ecological information (....)

- Very toxic to aquatic life with long lasting effects.
- Classification based on calculation and concentration thresholds

Substances

Chemical Name	LC_{50} (fish)	EC_{50} (aquatic invertebrates)	EC_{50} (aquatic algae)
Symclosene	(4 days) 230 - 8 000 000 µg/L	(48 h) 170 µg/L	(72 h) 100 mg/L
Aluminium sulphate	(8 days) 122.17 - 161.4 mg/L	(48 h) 1.4 - 200 mg/L	(72 h) 40 - 100 000 µg/L
Copper sulphate	(4 days) 2.8 - 9 150 µg/L	(48 h) 1 - 1 213 µg/L	(72 h) 16.5 - 987 µg/L
Boric acid	(4 days) 74 - 79.7 mg/L	LC_{50} (48 h) 91 - 165 mg/L	(72 h) 40.2 - 66 mg/L

12.2 Persistence and degradability

- Some ingredients are biodegradable

Substances

Chemical Name	Biodegradation
Symclosene	Inherently biodegradable in water (100%)
Aluminium sulphate	Under test conditions no biodegradation observed (100%)
Copper sulphate	Not applicable, inorganic
Boric acid	Not applicable, inorganic

12.3 Bioaccumulative potential

- Low bioaccumulation potential

Substances

Chemical Name	Bioconcentration **Factor (BCF)**	Log Kow
Symclosene	Low potential for bioaccumulation (Log Kow < 3)	-1.31 @ 25 °C
Aluminium sulphate	362 L/kg ww	Log Pow -5.08 - -0.12 @ 20 °C
Copper sulphate	Bioaccumulation is not expected	Not applicable, inorganic
Boric acid	Bioaccumulation is not expected	Not applicable, inorganic

12.4 Mobility in soil

- Large volumes may penetrate soil and contaminate groundwater

Substances

Chemical Name	Adsorption/desorption	Mobility
Symclosene	Koc = 51 @ 20 °C	Cyanuric acid is weakly adsorbed and highly mobile in all soils
Aluminium sulphate	Koc = 31.82 - 75.41 @ 20 °C	No data available
Copper sulphate	No data available	Soluble in water
Boric acid	No data available	Boric acid is considered to be relatively mobile in the environment

12.5 Results of PBT and vPvB assessment

- Not a PBT according to REACH Annex XIII
- Not a vPvB according to REACH Annex XIII

12.6 Endocrine disrupting properties

- Does not contain any substances with endocrine disrupting properties

12.7 Other adverse effects

- Do not empty into drains

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Disposal should be in accordance with local, state or national legislation

SECTION 13: Disposal considerations (....)

- Do not discharge into drains or the environment, dispose to an authorised waste collection point
- Do not reuse empty containers without commercial cleaning or reconditioning

13.2 Classification

- The waste must be identified according to the List of Wastes (2000/532/EC)
- Hazardous Property Code(s): HP 2 Oxidising; HP 4 Irritant; HP 6 Acute Toxicity; HP 14 Ecotoxic

SECTION 14: Transport information

14.1 UN number or ID number

- UN No.: 2468

14.2 UN proper shipping name

- Proper Shipping Name: TRICHLOROISOCYANURIC ACID, DRY, MIXTURE

14.3 Transport hazard class(es)

- Hazard Class: 5.1

14.4 Packing group

- Packing Group: II

14.5 Environmental hazards

- Marine pollutant

14.6 Special precautions for user

- Keep away from heat and direct sunlight.
- Ensure adequate ventilation

14.7 Maritime transport in bulk according to IMO instruments

- Not applicable

14.8 Road/Rail (ADR/RID)

- ADR UN No.: 2468
- Proper Shipping Name: TRICHLOROISOCYANURIC ACID, DRY, MIXTURE
- ADR Hazard Class: 5.1
- ADR Packing Group: II
- Tunnel Code: (E)

14.9 Sea (IMDG)

- IMDG UN No.: 2468
- Proper Shipping Name: TRICHLOROISOCYANURIC ACID, DRY, MIXTURE
- IMDG Hazard Class: 5.1
- IMDG Packing Group: II

14.10 Air (ICAO/IATA)

- ICAO UN No.: 2468
- Proper Shipping Name: TRICHLOROISOCYANURIC ACID, DRY, MIXTURE
- ICAO Hazard Class: 8 - ICAO Packing Group: II

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 REACH Regulation (EC) No 1907/2006 (as amended by Regulation (EU) 2020/878) and UK REACH
- The GB Classification, Labelling and Packaging Regulation (GB CLP) applies in Great Britain
- Regulation (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) applies in Europe
- CAS 87-90-1 is listed in Annex III of REACH as # Suspected acutely toxic via the oral route: The Danish QSAR database contains information indicating that the substance is predicted as toxic via the oral route. # Harmonised classification for acute toxicity: The substance has the following harmonised classification in Annex VI of CLP:

Acute Tox. 4 # Harmonised classification for aquatic toxicity: The substance has the following harmonised classification in Annex VI of CLP: Aquatic Acute 1; The substance has the following harmonised classification in Annex VI of CLP: Aquatic Chronic 1 # Harmonised classification for eye irritation: The substance has the following harmonised classification in Annex VI of CLP: Eye Irrit. 2 # Harmonised classification for specific target organ toxicity: The substance has the following harmonised classification in Annex VI of CLP: STOT SE 3 # Suspected hazardous to the aquatic environment: The Danish QSAR database contains information indicating that the substance has a 96h LC50 to fish of <1 mg/L; The Danish QSAR database contains information indicating that the substance has a 48h EC50 to Daphnia of <1 mg/L # Suspected persistent in the environment: The Danish QSAR database contains information indicating that the substance is predicted as non readily biodegradable # Suspected respiratory sensitiser: The Toolbox profiler 'Respiratory sensitisation' gives an alert for respiratory sensitisation # Suspected skin irritant: The Danish QSAR database contains information indicating that the substance is predicted as skin irritant

- This product is covered by the GB Biocidal Products Regulation (GB BPR)
- This product is covered by EU Directive 2012/18/EU (the Seveso III Directive)

15.2 Chemical safety assessment

- A REACH chemical safety assessment has not been carried out

SECTION 16: Other information

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 our knowledge and belief, accurate, and reliable as of the date of authorisation of this safety data sheet. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to be satisfied as to the suitability and completeness of such information for the product as used. Sources of data: Information from published literature and supplier safety data sheets

Revision No. 4.0.0. Revised June 2022.
Changes made: Updated to conform to latest version of REACH

Training advice

- Workers must be informed of the presence of hazardous ingredients and trained in the proper use and handling of this product as required under applicable regulations

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

- Ox. Sol. 2, H272: Classification based on known experience
- Acute Tox. 4, H302: Classification based on calculation and concentration thresholds
- Eye Irrit. 2, H319: Classification based on calculation and concentration thresholds
- STOT SE 3, H335: Classification based on calculation and concentration thresholds
- Aquatic Acute 1, H400: Classification based on calculation and concentration thresholds
- Aquatic Chronic 1, H410: Classification based on calculation and concentration thresholds

Text not given with phrase codes where they are used elsewhere in this safety data sheet:

SECTION 16: Other information (....)

- H272: May intensify fire; oxidizer
- H290: May be corrosive to metals
- H302: Harmful if swallowed
- H318: Causes serious eye damage
- 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
- EUH031: Contact with acids liberates toxic gas

Acronyms

- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstracts Service
- DNEL: Derived No-Effect Level
- EC: European Community
- EC_{50}: Effective Concentration, 50%
- GHS: Globally Harmonised System
- LOAEC: Lowest observed adverse effect concentration
- LOAEL: Lowest Observed Adverse Effect Level
- LC_{50}: Lethal Concentration, 50%
- LD_{50}: Lethal Dose, 50%
- NOAEC: No observed adverse effect concentration
- NOAEL: No observed adverse effect level
- OEL: Occupational Exposure Limit
- PBT: Persistent, Bioaccumulative and Toxic
- PNEC: Predicted No-Effect Concentration
- REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
- SCL: Specific Concentration Limit
- SVHC: Substances of Very High Concern
- vPvB: very Persistent and very Bioaccumulative
- WEL: Workplace Exposure Limit

--- end of safety datasheet ---