SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

GHS PRODUCT IDENTIFIER

AQT137

OTHER MEANS OF IDENTIFICATION

CAS:	Mixture not listed in registry
EC:	Mixture not listed in registry
RTECS:	Mixture not listed in registry
ICSC:	Mixture not listed in registry
GESTIS DATABASE:	Mixture not listed in registry
CHEMICAL FAMILY:	Non-Oxidising Biocide
SYNONYMS:	None
PROPER SHIPPING NAME:	CORROSIVE LIQUID, TOXIC, N.O.S.
CHEMICAL FORMULA:	Mixture not determined
PRODUCT STOCK CODE/S:	AQT137A(25Kg);AQT137C(1000Kg)
SDS LINK:	http://aquatradesa.ddns.net/owncloud/index.php/s/w5gLFrNY36yTBtQ

RECOMMENDED USE	RESTRICTIONS ON USE
AQT 137 is a broad-spectrum non-oxidising biocide for use in most cooling water systems where bacteria and biofilm are present. It provides microorganism control and cleans systems. It may be used alone or in combination with other biocides on a rotation basis. **AQT 137** is Isothiazolin-based and finds its effectiveness for sulphate reducing bacteria and fungi.	Not for end user consumption. Not for food, drug, medical or household use.

SUPPLIER'S DETAILS

AQUATRADE WATER TREATMENT CHEMICALS (PTY) LTD

22 Grader Rd, Spartan
Gauteng, South Africa

PO Box 357
Isando, 1600

Tel: +27 11 394 0752
info@aquatradesa.co.za
www.aquatradesa.co.za

SDS Enquiries only
admin@aquatradesa.co.za Tel: +27 11 394 8762

EMERGENCY PHONE NUMBER		
NAME	**TEL**	**HOURS AVAILABLE**
SPECIALIST		
S. Biondi	+27 68 237 2033	Mon. – Fri. 05:00 –20:00 GMT
H. van Niekerk	+27 82 410 5540	Mon. – Fri. 05:00 –20:00 GMT
Spilltech	+27 86 100 0366	24/7
OPERATOR		
SHEQ Coordinator	+27 76 590 9559 +27 87 654 3326	24/7 Mon. – Fri. 06:00 –18:00 GMT

SECTION 2 — HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Acute toxicity, Oral (Category 5)
Acute toxicity, Inhalation (Category 4)
Skin Corrosion/Irritation, (Category 1)
Serious Eye Damage/Eye Irritation, (Category 1)
Skin Sensitiser, (Category 1)
Acute Aquatic Toxicity (Category 1)

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS LABEL ELEMENTS

GHS SIGNAL WORD

DANGER

GHS HAZARD CODES

May be harmful if swallowed.
Causes severe skin burns and eye damage.
Causes serious eye damage.
May cause an allergic skin reaction.
Harmful if inhaled.
Very toxic to aquatic life.

GHS PRECAUTIONARY CODES

Do not breathe vapours/spray.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN: Wash with plenty of water and soap.
IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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.
Specific treatment (see IF SWALLOWED, IF ON SKIN, IF INHALED, IF IN EYES on this label).
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
Collect spillage.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents and container in accordance with local, regional, national, international regulations.

PICTOGRAMS

OTHER HAZARDS WHICH DO NOT RESULT IN CLASSIFICATION

This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.

SECTION 3 — COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE	CAS	EC	MIN %	MAX %	HAZARD NOTES
Isothiazoline	2682-20-4	220-239-6	5	15	H301: Toxic if swallowed. H311: Toxic in contact with skin. H314: Causes severe skin burns and eye damage. H330: Fatal if inhaled. H317: May cause an allergic skin reaction. H410: Very toxic to aquatic life with long lasting effects.

SECTION 4 — FIRST-AID MEASURES

DESCRIPTION OF NECESSARY FIRST AID MEASURES

Call 112 or 10177 or your local emergency help number, for emergency assistance. Call the Poison Control Center at +27 21 931 6129 – Tygerberg or +27 21 658 5308 – Red Cross, Email: poisonsinformation@uct.ac.za, Website: https://www.afritox.co.za for further instructions. Provide them with information such as the compound taken, quantity and time of ingestion, age, weight, and general health status of affected individual. Carefully remove the individual from the exposure area.

IF INHALED	Confirm that the airways are protected; also, ensure breathing and the presence of pulse. Remove to fresh air. Call a physician immediately.
IF IN CONTACT WITH EYES	If eye exposure has occurred, then wash thoroughly with copious amounts of water (for at least 15 minutes).
IF IN CONTACT WITH SKIN	**IMMEDIATELY** get under a safety shower. Remove contaminated clothing. Wash skin with plenty of water. If irritation persists, get medical attention.
IF INGESTED	Unless instructed by a healthcare professional, **DO NOT** induce vomiting in the affected individual. Following an ingestion of the substance, immediately drink a glass or two of water. In case of symptoms that indicate difficulty in swallowing including vomiting or decreased alertness, **DO NOT** give anything by way of mouth. Take individual to emergency room (ER) for further treatment. Always try to take the compound bottle/container to the ER.

MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE and DELAYED

IF INHALED **IF IN CONTACT WITH EYES** **IF IN CONTACT WITH SKIN** **IF INGESTED**	Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

INDICATION OF IMMEDIATE MEDICAL ATTENTION & SPECIAL TREATMENT NEEDED, IF NECESSARY

Notes to physician: **MATERIAL IS CORROSIVE**. It may not be advisable to induce vomiting. Possible mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock and convulsions maybe necessary.

SECTION 5 — FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA	Use extinguishing media appropriate for surrounding fire.
EXTINGUISHING MEDIA NOT SUITABLE	Extinguishing media should **NOT** contain alcohols, cyanides, iodine, strong bases, and carbonates.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL	Reaction of Chloral hydrate with hydroxylamine produces toxic hydrogen cyanide gas. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Combustion also generates toxic fumes of the following: Nitrogen oxides (NOx) sulphur oxides
SPECIAL PROTECTIVE ACTIONS FOR FIRE-FIGHTERS incl. PPE	**Fire Fighting Procedures**: Cool containers/tanks with water spray. Minimize exposure. **DO NOT** breathe fumes. Contain run-off. **Special protective equipment for firefighters:** Wear self-contained breathing apparatus and protective suit.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PPE & EMERGENCY PROCEDURES	**Advice for non-emergency personnel: DO NOT** breathe vapours, mist. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. **Advice for emergency responders**: Wear a CEN approved (or equivalent) respirator (with organic vapor/acid gas cartridge and a dust/mist filter) during spill clean-ups and deactivation of this material. **MATERIAL IS CORROSIVE**. Protective clothing, including chemical splash goggles, nitrile or butyl rubber full length gloves, rubber apron, or clothing made of nitrile or butyl rubber, and rubber overshoes must be worn during spill clean-ups and deactivation of this material. If material comes in contact with the skin during clean-up operations, **IMMEDIATELY** remove all contaminated clothing and wash exposed skin areas with soap and water. See SECTION 4, First Aid Measures, for further information.
ENVIRONMENTAL PRECAUTIONS	**DO NOT** allow material to contaminate ground water system. Prevent product from entering drains**.**
METHODS & MATERIALS FOR CONTAIMENT & CLEANING UP	**WARNING: K**eep spills and clean-up residuals out of municipal sewers and open bodies of water. Adsorb the spill with spill pillows or inert solids such as clay or vermiculite and transfer contaminated materials to suitable labelled containers for disposal. Deactivate spill area with freshly prepared solution of 5% sodium bicarbonate and 5% sodium hypochlorite in water. Apply solution to the spill area at a ratio of 10 volumes deactivation solution per estimated volume of residual spill to deactivate any residual active ingredient. Let stand for 30 minutes. Flush the spill area with copious amounts of water to chemical sewer (if in accordance with local procedures, permits and regulations). **DO NOT** add deactivation solution to the waste pail to deactivate the adsorbed material. See Section 13, "Disposal Considerations", for information regarding the disposal of contained materials.

SECTION 7 — HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING	This material is a irritant. For personal protection see section 8. **DO NOT** breathe vapor. **DO NOT** get this material in contact with eyes. **DO NOT** handle material near food, feed or drinking water. **DO NOT** get this material in contact with skin. **DO NOT** taste or swallow. Avoid prolonged exposure. **DO NOT** get this material on clothing. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, **DO NOT** eat, drink, or

	smoke. Wash hands thoroughly after handling. **Avoid** release to the environment. **DO NOT** empty into drains.
CONDITIONS FOR SAFE STORAGE	Keep in a well-ventilated place. **DO NOT** store this material near food, feed or drinking water. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all SDS and label warnings even after container is emptied. Expiration date based only on retention of >95% actives during storage at 20 ºC-25 ºC. **Storage stability:** Storage temperature: 1 - 55 °C **Shelf life from production date:** 12 months **Specific end use(s):** See the technical data sheet on this product for further information.
INCOMPATIBILTIES	Keep away from organic oxidizing agents, amines, reducing agents, mercaptans, alcohols, cyanides, iodine, strong bases and carbonates.
SANS 10263-0 WAREHOUSING	8.4.3.2 Where flammable or corrosive substances are stored, the floor shall slope away from the storage area (primary collection area) to a secondary catch basin or sump of capacity at least 10 % of the total available storage volume of the fire section concerned. The secondary catch basin shall be within the fire section and shall be such that it can be well ventilated. Care shall be taken in the design of such areas to prevent contamination of the soil or ground water. 9.7.2 Every type of storage area inside a warehouse shall be clearly demarcated, for example separate storage areas for poisons, flammables and corrosives shall display the relevant hazard class diamond (see table 1). The dimensions of the hazard class diamonds shall be at least 250 mm x 250 mm. 12.8.5 Storage of flammable liquids of class 3, toxic substances of division 6.1 and corrosives of class 8 Nitro-methane class 3, UN No. 1261, shall be separated from substances of class 6.1, and cyanides of division 6.1 shall be separated from acids of class 8. Concentrated acids and bases shall be segregated by at least 1 m. Packaged flammable liquids of class 3, toxic substances of division 6.1 and corrosives of class 8 that are of category 3 can be stored in the same area, provided that a. they are kept above floor level, and b. liquid dangerous goods of one class are not stored above dangerous goods of another class. 12.8.8.3 Toxic and infectious substances (see class 6 in SANS 10228) can contaminate firefighting water in the event of a fire, therefore: Toxic and infectious substances shall be separated from other flammable products and aerosols. a. Toxic and infectious substances shall be segregated from oxidizing substances, organic peroxides, and corrosives. b. Flammable toxic and infectious substances shall be segregated from non-flammable toxic and infectious substances.

12.8.8.4 Corrosives (see class 8 in SANS 10228) that leak or spill from their packaging can cause serious damage to other packages, with potentially hazardous consequences.

Corrosives shall be segregated from toxic substances, infectious substances, aerosols, flammables, oxidizing substances and organic peroxides

The provisions of above apply to the storage of the following quantities of dangerous goods.

TOXIC AND INFECTIOUS SUBSTANCES Class 6.1	
Category 1	> 5 kg
Category 2	> 50 kg
Category 3	> 500 kg
Class 6.2	
All quantities	
CORROSIVES (ACIDS AND BASES) Class 8	
Category 1	> 50 kg
Category 2	> 50 kg
Category 3	> 1 000 kg

SECTION 8 — EXPOSURE CONTROLS AND PERSONAL PROTECTION

CONTROL PARAMETERS

OCCUPATIONAL EXPOSURE LIMITS (OEL)	Not listed. **Component: Methyl-4-isothiazolin-3-one** **Regulation**: Dow IHG, Type of listing: TWA, Value/Notation: 1.5 mg/m3 **Regulation**: Dow IHG, Type of listing: STEL, Value/Notation: 4.5 mg/m3
ADDITIONAL EXPOSURE LIMITS UNDER THE CONDITIONS OF USE	Not listed.
DNEL/DMEL AND PNEC-VALUES	Not listed.

APPROPIATE ENGINEERING CONTROLS

Use local exhaust ventilation with a minimum capture velocity of 150 ft/min. (0.75 m/sec.) at the point of dust or mist evolution. Refer to SANS 10400-O and the current edition of "Industrial Ventilation: A Manual of Recommended Practice" published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems. Eye wash facilities and emergency shower must be available when handling this product.

General Hygiene: **Avoid** contact with skin, eyes, and clothing. Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Use skin cream for skin protection. Provide skin protection plan. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace.

INDIVIDUAL PROTECTION MEASURES

EYE PROTECTION		Safety glasses with side-shields or safety goggles Use equipment for eye protection tested and approved under appropriate government standards such as SANS 50166:2018. Contact lenses should not be worn as they may contribute to severe eye injury.
FACE PROTECTION		If the face is at risk a protective shield must also be worn tested and approved under appropriate government standards such as SANS 1400:2010.
HAND PROTECTION		Use protective gloves. The glove material must be sufficiently impermeable and resistant to the substance. Check the tightness before wear. Gloves should be well cleaned before being removed, then stored in a well-ventilated location. Pay attention to skin care. Skin protection cremes do not protect sufficiently against the substance. Textile or leather gloves are completely unsuitable. Currently there is no information available regarding suitable glove materials. Ask the manufacturer for suitable materials. Suggested material: Neoprene, Nitrile, Rubber or PVC Gloves If used in solution, or mixed with other substances, and under conditions which differ from SANS 416:2021 or SANS 1228:2012, contact the supplier of the CE approved gloves.
BODY PROTECTION		Complete suit protecting against chemicals tested and approved under appropriate government standards such as SANS 54325:2019. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. For entry into a situation where the spilled material and its characteristics are unknown a totally encapsulated chemical suit should be worn.
RESPIRATORY PROTECTION		Where risk assessment shows air-purifying respirators are appropriate use an elastomeric half-face particle respirator with type ABEK1P3, SANS 50141:2003 combination respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use an elastomeric full-face respirator. Use respirators and components tested and approved under appropriate government standards such as SANS 50136:1998, SANS 50137:2011, SANS 50140:1998. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacture. **Respirator Recommendations** **Up to 50 ppm** (APF = 10) Any chemical cartridge respirator with cartridge(s) providing protection against the compound of concern* (APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted canister providing protection against the compound of concern. (APF = 25) Any powered, air-purifying respirator with cartridge(s) providing protection against the compound of concern*. (APF = 10) Any supplied-air respirator*. (APF = 50) Any self-contained breathing apparatus with a full facepiece. **Emergency or planned entry into unknown concentrations or IDLH conditions**

		(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode. (APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus. **Escape** (APF = 50) Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted acid gas canister. Any appropriate escape-type, self-contained breathing apparatus.

NOTE: The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors. Recommendations above is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE (PHYSICAL STATE, COLOUR ETC):	Colorless liquid
ODOUR:	Aromatic
ODOUR THRESHOLD:	No test data available
pH:	2.5 – 5.0
MELTING/FREEZING POINT:	No test data available
INITIAL BOILING POINT AND BOILING RANGE:	No test data available
FLASH POINT:	Do not flash
EVAPORATION RATE:	No test data available
FLAMMABILITY (SOLID, GAS):	Not flammable
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:	Not explosive
VAPOUR PRESSURE:	No test data available
VAPOUR DENSITY:	No test data available
RELATIVE DENSITY:	1.02 – 1.03
SOLUBILITY(IES):	Miscible in water
PARTITION COEFFICIENT: N-OCTANOL/WATER:	No test data available
AUTO-IGNITION TEMPERATURE:	No test data available
DECOMPOSITION TEMPERATURE:	No test data available
VISCOSITY:	No test data available
OXIDIZING PROPERTIES:	No test data available

NOTE: The physical data presented above are typical values and should not be construed as a specification

SECTION 10 — STABILITY AND REACTIVITY

REACTIVITY	No known dangers resulting from a reactivity of the mixture have been identified.
CHEMICAL STABILTY	Stable under normal handling, storage, and transport conditions.
POSSIBILTY of HAZARDOUS REACTIONS	None known. Hazardous polymerisation will not occur under normal conditions.
CONDITIONS TO AVOID	High temperature. Poor ventilation.
INCOMPATIBLE MATERIALS	**Avoid** contact with organic oxidizing agents, amines, reducing agents, mercaptans, alcohols, cyanides, iodine, strong bases and carbonates. **Corrosivity:** Corrosive to stainless steel, zinc, and aluminium.
HAZARDOUS DECOMPOSITION PRODUCTS	Nitrogen Oxides (NOx), Sulphur Oxides and Hydrogen Chloride, Chlorine, Carbon Monoxide, Carbon Dioxide, Chloroform.

SECTION 11 — TOXICOLOGICAL INFORMATION

TOXICOLOGICAL (HEALTH) EFFECTS

COMPONENTS INFLUENCING TOXICOLOGY:

Mixture of 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2Hisothiazol-3-one [EC no. 220-239-6] (3:1)

ACUTE TOXICITY	Product test data not available. Refer to component data. LC50, Rat, 4 Hour, dust/mist, 0.33 mg/l
SKIN CORROSION/IRRITATION	Product test data not available. Refer to component data. A skin irritation/corrosion study was conducted according to OECD 404, EU Method B.4 and US EPA 40 CFR Part 158; Guideline 81 -3 and in accordance with the Principles of Good Laboratory Practice (GLP) in groups of New Zealand White rabbits under semi occlusive conditions for 1 and 4 hours and under open conditions over a 3-minute exposure period. Under the conditions of the study, the material was classified as corrosive (Category 1B, H314 causes severe skin burns and eye damage) following a 4-hour exposure period (i.e., evidence of irreversible destruction of dermal tissue).
SERIOUS EYE DAMAGE/EYE IRRITATION	Product test data not available. Refer to component data. Based on the results of the skin irritation/corrosion study, it is assumed that the test substance will produce similar effects in the eyes.
RESPIRATORY OR SKIN SENSITIZATION	Product test data not available. Refer to component data. The material would be classified as Skin sensitizer, Category 1, H317 adverse effect observed (sensitising)
GERM CELL MUTAGENICITY	Product test data not available. Refer to component data. In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects.
CARCINOGENICITY	Product test data not available. Refer to component data. Did not cause cancer in laboratory animals.
REPRODUCTIVE TOXICITY	Product test data not available. Refer to component data. In animal studies, did not interfere with reproduction.
SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE	Product test data not available. Refer to component data. Evaluation of available data suggests that this material is not an STOT-SE toxicant.
SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE	Product test data not available. Refer to component data. Excessive exposure may cause irritation to upper respiratory tract (nose and throat).
ASPIRATION HAZARD	Product test data not available. Refer to component data. Aspiration into the lungs may occur during ingestion or vomiting, causing tissue damage or lung injury.

LIKELY SOURCES OF EXPOSURE

INHALATION	EYES	SKIN	INGESTION
Likely	Likely	Likely	Rare
During unpacking and decanting	During unpacking and decanting	During unpacking and decanting	Unhygienic processes

SYMPTOMS RELATED TO PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS

Refer "Toxicological (health) effects" above.

DELAYED/IMMEDIATE/CHRONIC EFFECTS FROM LONG/SHORT TERM EXPOSURE

Refer "Toxicological (health) effects" above.

NUMERICAL MEASURES OF TOXICITY (SUCH AS ATE)

TEST	ROUTE	SPECIES	VALUE	EFFECTS
LD50	Oral	Rat	4 570 mg/Kg bw	Calculation based on GHS additivity formula.
LD50	Dermal	Rabbit	> 5 000 mg/Kg bw	Calculation based on GHS additivity formula.
LC50	Inhalation Dust/Mist	No data	3.3 mg/Kg	Calculation based on GHS additivity formula.

INTERACTIVE EFFECTS
No additional data available.

WHERE SPECIFIC CHEMICAL DATA IS NOT AVAILABLE
No additional data available.

MIXTURES
No additional data available.

MIXTURES VS INGREDIENTS INFORMATION
No additional data available.

OTHER INFORMATION
No additional data available.

SECTION 12 — ECOLOGICAL INFORMATION
TOXICITY

TEST	SPECIES	VALUE
48Hr EC50	Fish	1.9 mg/L
48Hr EC50	Crustacea	0.03 mg/L
48Hr EC50	Algea	1.6 mg/L

PERSISTANCE AND DEGRADEBILITY

OECD Test Guideline 301 (A-F)	
BOD_5	No additional data available.
COD	No additional data available.

For active ingredient (≤ 15% of mixture) refer below data.
Mixture of 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2Hisothiazol-3-one [EC no. 220-239-6] (3:1)
Biodegradability
Considered to be rapidly degradable. Material is not readily biodegradable according to OECD/EEC guidelines.
Biodegradation
< 50 % Exposure time: 10 d Photodegradation Atmospheric half-life: 0.38 - 1.3 d.

BIOACCUMULATIVE POTENTIAL

PARTITION COEFFICIENT: N-OCTANOL/WATER	
LOG-K_{OW}	No additional data available.
BIOCONCENTRATION FACTOR	
BCF	No additional data available.

For active ingredient (≤ 15% of mixture) refer below data.
Mixture of 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2Hisothiazol-3-one [EC no. 220-239-6] (3:1)
Bioaccumulation
5-Chloro-2-methyl-4-isothiazolin-3-one (CMIT): 2-Methyl-4-isothiazolin-3- one (MIT):
Partition coefficient n-octanol/water (log Pow)

0.401
Measured Partition coefficient: n-octanol/water (log Pow)
-0.486 Measured

MOBILITY IN SOIL

For active ingredient (≤ 15% of mixture) refer below data.

Mixture of 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2Hisothiazol-3-one [EC no. 220-239-6] (3:1)

Potential for mobility in soil is very high (Koc between 0 and 50). Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Partition coefficient (Koc)

28 Estimated.

OTHER ADVERSE EFFECTS

For active ingredient (≤ 15% of mixture) refer below data.

Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.

Mixture of 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2Hisothiazol-3-one [EC no. 220-239-6] (3:1)

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL RECOMMENDATION

Dispose of waste and container in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport, or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse. Remove for physico-chemical/biological treatment. **DO NOT** discharge into drains or the environment.

ECOLOGY – WASTE MATERIAL

DO NOT release to the environment

EMPTY CONTAINER

DO NOT reuse container for other storage purposes. Consider re-filling. Rinse thoroughly before re-filling, discarding in chemical waste or return to supplier. Puncture container before discarding as waste.

SECTION 14 — TRANSPORT INFORMATION

TRANSPORTATION CLASSIFICATION	ADR/RID	ADN(R)	IMDG	ICAO/IATA
UN NUMBER	2922			
PROPER SHIPPING NAME	CORROSIVE LIQUID, TOXIC, N.O.S.			
HAZARD CLASS(ES)	8.1 / 6.1 			
PACKING GROUP	III			
MARINE POLLUTANT	Yes. Marine Pollutant			
EMERGENCY RESPONSE	ERG 2016 154	-	EMS GUIDE F-A; S-B	ERG DRILL GUIDE 8P

EXEMPT / QUANTITY LIMITATIONS KG	Exempt / Factor	Passenger rail	N/A	Passenger aircraft	Cargo aircraft
	50 / 20	5 L		5 L	60 L
P, B, L & O Provisions SANS 10231	L13, L28	N/A	N/A	N/A	
Vessel Stowage	N/A	N/A	**10A –** A **10B –** 40	N/A	
NEMA Reportable Quantity	Not listed				

Vessel Stowage:
Stowage category "B" means

i. The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and
ii. "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

Stowage category "40" means: 40 Stow "clear of living quarters"

DO NOT load with Classes 1, 2.3, 4.1, 4.2, 4.3, 5.1, 5.2 and 7.
May be loaded with Classes 2.1, 2.2, 6.1, 6.2 and 8B if kept at least 1 metre apart.
DO NOT transport Nitromethane (UN1261) with toxics (Class 6.1).
DO NOT load with foodstuffs or stockfeed.
Cyanides must not be transported with acid.
Can be loaded with all other classes.
Goods of different classes must be segregated by an air space of at least 100mm or by an approved segregation device or non-dangerous goods.

P, B, L and O provisions as per SANS 10231:2006
L13 - If any substance has leaked and spilt in a vehicle or container, the vehicle or container may not be re-used until after it has been thoroughly cleaned and, if necessary, disinfected or decontaminated. Any other goods and articles carried in the same vehicle or container shall be examined for possible contamination.
L28 - Packages shall not be loaded together with packages known to contain foodstuffs, other articles of consumption or animal feeds.

TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE
Not applicable.

SECTION 15 — REGULATORY INFORMATION
SA NATIONAL LEGISLATION
Hazardous Substances Act 15 of 1973 and Regulations.
Occupational Health and Safety Act 85 of 1993 and Regulations.

SA NATIONAL STANDARDS
SANS 10228: 2006: Identification and Classification of Dangerous Goods for Transport by Road and Rail.
SANS 10231: 2018: Transport of dangerous goods - Operational requirements for road vehicles.
SANS 10234: 2008: Globally Harmonized System of classification and labelling of chemicals (GHS).
SANS 11014: 2010: Safety Data Sheets for chemical Products.

REACH Regulation (EC) No 1907/2006

This product contains only components that have been either pre-registered, registered, are exempt from registration, are regarded as registered or are not subject to registration according to Regulation (EC) No. 1907/2006 (REACH)., The aforementioned indications of the REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. It is the buyer´s/user´s responsibility to ensure that his/her understanding of the regulatory status of this product is correct.

Seveso III: Directive 2012/18/EU

Listed in Regulation: Not applicable

Chemical safety assessment

Not assessed.

SECTION 16 — OTHER INFORMATION

FULL TEXT OF H & P - STATEMENTS REFERRED TO UNDER SECTION 2

HAZARD STATEMENTS	PRECAUTIONARY STATEMENTS
H303: May be harmful if swallowed. H314: Causes severe skin burns and eye damage. H317: May cause an allergic skin reaction. H318: Causes serious eye damage. H332: Harmful if inhaled. H400: Very toxic to aquatic life.	P260: Do not breathe vapours/spray. P264: Wash thoroughly after handling. P271: Use only outdoors or in a well-ventilated area. P272: Contaminated work clothing should not be allowed out of the workplace. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection. P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P302+P352: IF ON SKIN: Wash with plenty of water and soap. P303+P361+P353: IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower. P304+P340: IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310: Immediately call a POISON CENTER or doctor/physician. P321: Specific treatment (see IF SWALLOWED, IF ON SKIN, IF INHALED, IF IN EYES on this label). P333+P313: If skin irritation or rash occurs: Get medical advice/attention. P363: Wash contaminated clothing before reuse. P391: Collect spillage. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P405: Store locked up. P501: Dispose of contents and container in accordance with local, regional, national, international regulations.

LABELLING SANS 10234:2008
SIGNAL WORD: DANGER

PICTOGRAMS

PHYSICAL & HEALTH HAZARD		ENVIRONMENTAL HAZARD		TRANSPORT	
GHS05 GHS07	Corrosive Substance Health Hazard Substance	GHS09	Environmental Toxic Substance	Class 6.1 Class 8.1 Class 9	Toxic Corrosive Acidic Environmentally Toxic
					

LEGEND TO ABBREVIATIONS & ACRONYMS

ABEK: Organic gases and vapours (BP>65ºC); Inorganic gases and vapours; Sulphur dioxide and other acid gases and vapours; Ammonia and organic ammonia derivatives
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
BCF: Bioconcentration Factor
BOD5: Biological Oxygen Demand in 5
CAS: Chemical Abstracts Service
CEN: European Committee for Standardization
COD: Chemical Oxygen Demand
DMEL: Derived Minimal Effect Level
DNEL: Derived No Effect Level
EC: European Commission
EC50: Half Maximal Effective Concentration
EMS: Emergency Medical Services
ERG: Emergency Response Guidelines
EU: European Union
GHS: Globally Harmonized System
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
ICSC: International Chemical Safety Cards
IMDG: International Maritime Dangerous Goods
LC50: Lethal Concentration 50 (concentration in water having 50% chance of causing death to aquatic life)
LD50: Lethal Dose 50 (median concentration of a toxicant that will kill 50% of the test animals within a designated period)
LOG-KOW: Logarithm - Octanol - Water Partition Coefficient
NIOSH: National Institute for Occupational Safety and Health (US CDC)
NTP: National Toxicology Program
OEL: Occupational Exposure Limit
OSHA: Occupational Safety and Health Administration
P, B, L & O: Packaging, Bulk Transport, Loading Operation & Transport Operation
PBT: Persistent, Bio accumulative, and Toxic
PNEC: Predicted No-Effect Concentration
PPE: Personal Protection Equipment
RID: European Agreements Concerning the International Carriage of Dangerous Goods by Rail
RTECS: Registry of Toxic Effects of Chemical Substances
SANS: South African National Standard
vPvB: Very Persistent Very Bio Accumulative

KEY LITERATURE REFERENCES AND SOURCES

GESTIS Databae
https://gestis-database.dguv.de/data?name=531348

ECHA – European Chemical Agency
https://echa.europa.eu/de/registration-dossier/-/registered-dossier/23870

PUBCHEM DATA
https://pubchem.ncbi.nlm.nih.gov/compound/5-Chloro-2-methyl-4-isothiazolin-3-one

USA EPA COMPTOX
https://comptox.epa.gov/dashboard/chemical/details/DTXSID4044246

TRAINING ADVICE

Ensure SDS is always available and provide adequate information, instruction, and training for operators.

COMPILED BY: Aquatrade Water Treatment Chemicals (Pty) Ltd, R. van Rooyen SHEQ Coordinator.

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28 December 2020	0	0	Original

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