	HEALTH & SAFETY MANAGEMENT SYSTEM	Form No.	FOR041
	SHEQ AQT232_SDS	First Issue Date	2017/07/10
		Revision Date	2024/08/22
		Next Revision:	Jul-2029

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

GHS PRODUCT IDENTIFIER

AQT 232

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:	Mixture not identified
SYNONYMS:	None
PROPER SHIPPING NAME:	CORROSIVE LIQUID, N.O.S.
CHEMICAL FORMULA:	Mixture not identified
PRODUCT STOCK CODE/S:	AQT232A(25Kg), AQT232B(200Kg), AQT232C(1000Kg)
SDS LINK:	http://aquatradesa.ddns.net/owncloud/index.php/s/Dx0KKPKzJ3o5ibz

RECOMMENDED USE	RESTRICTIONS ON USE
<p>AQT 232 is a phosphate/polymer/sequestrant blend designed to reduce corrosion, scale formation and fouling in boiler systems. It has been formulated to remove existing calcium carbonate scale over a long period of time.</p> <p>AQT 232 assist with scale and corrosion prevention and sludge dispersant. Suited for soft feed water applications but can also be used with limited hardness in feed water. Includes some calcium sulphate dispersion and prevention.</p> <p>All raw materials in AQT 232 are listed in FDA CFR Title 21, CH1B, Part 173D, Section 173.310 or are listed by the FDA as GRAS (Generally Regarded as Safe) in food applications. The product may be used in boilers where the steam is in direct contact with food.</p>	<p>Not for end consumer use. Not for food, drug, or household use. Not for use by untrained persons.</p>

SUPPLIER'S DETAILS

AQUATRADE WATER TREATMENT CHEMICALS (PTY) LTD

[22 Grader Rd, Spartan](#)

Gauteng, South Africa

Tel: +27 11 394 0752

info@aquatradesa.co.za

www.aquatradesa.co.za

PO Box 357

Isando, 1600

SDS Enquiries only

SDS ENQUIRIES ONLY		
NAME	TEL	HOURS AVAILABLE
R. van Rooyen	+27 76 590 9559	SAST 08:00 – 16:00 Mon. – Fri.

EMERGENCY PHONE NUMBER		
NAME	TEL	HOURS AVAILABLE
SPECIALIST		
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

Corrosive to Metals (Category 1), H290

Serious Eye damage/Irritation (Category 1), H318

Skin Corrosion/Irritation (Category 1), H314

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

GHS LABEL ELEMENTS



SIGNAL WORD: DANGER

GHS HAZARD CODES

May be corrosive to metals.

Causes severe skin burns and eye damage.

GHS PRECAUTIONARY CODES

Keep only in original packaging.

Do not breathe spray.

Wash exposed areas [HANDS] thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

IF INHALED: Remove person to fresh air and keep 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 doctor/first aider.

Specific treatment (see IF SWALLOWED, IF ON SKIN, IF INHALED, IF IN EYES on this label).

Wash contaminated clothing before reuse.

Absorb spillage to prevent material damage.

Store locked up.

Store in a corrosion resistant/HDPE/glass container with a resistant inner liner.

Dispose of contents and container in accordance with local, regional, national, international regulations to licenced hazardous waste manager.

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
Phosphinocarboxylic acid	CBI	CBI		< 10	H290: May be corrosive to metals. H314: Causes severe skin burns and eye damage. H402: Harmful to aquatic life with long lasting effects.
Alkali	CBI	CBI		< 5	H290: May be corrosive to metals. H314: Causes severe skin burns and eye damage.
Phosphonate	CBI	CBI		< 5	H290: May be corrosive to metals. H302: Harmful if swallowed. H318: Causes serious eye damage.

Note: CBI – Information available, on request, to the regulatory authority and emergency responders.

SECTION 4 — FIRST-AID MEASURES

DESCRIPTION OF NECESSARY FIRST AID MEASURES

IF INHALED	Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison information centre or doctor/physician.
IF IN CONTACT WITH EYES	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison information centre or doctor/physician.
IF IN CONTACT WITH SKIN	Wash immediately with lots of water (15 minutes)/shower. DO NOT apply (chemical) neutralizing agents. Remove clothing while washing. DO NOT remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital. Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison information centre or doctor/physician.
IF INGESTED	Rinse mouth with water. Immediately after ingestion: give lots of water to drink. DO NOT induce vomiting. DO NOT give activated charcoal. DO NOT give chemical antidote. Immediately consult a doctor/medical service. Call Poison Information Centre. Take the container/vomit to the doctor/hospital. Ingestion of large quantities: immediately to hospital.
GENERAL ADVICE	<p>Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia.</p> <p>Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).</p>

MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE and DELAYED

IF INHALED	No additional information.
IF IN CONTACT WITH EYES	Corrosion of the eye tissue. Permanent eye damage. Causes serious eye damage.
IF IN CONTACT WITH SKIN	Caustic burns/corrosion of the skin. Slow-healing wounds.
IF INGESTED	Vomiting. Diarrhoea. Burns to the gastric/intestinal mucosa. Possible oesophageal perforation. Bleeding of the gastrointestinal tract. Shock. After absorption of large quantities: Disturbances of consciousness.

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

Seek medical attention if any irritation persists after contact, swallowing or inhalation of product after initial first aid measures.

SECTION 5 — FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA	<p>Small Fires: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.</p> <p>Large Fires: Water spray, fog, or regular foam.</p>
EXTINGUISHING MEDIA NOT SUITABLE	None in particular.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL	Avoid inhaling the fumes. In case of combustion the product develops CO ₂ , CO, Sodium oxide and Corrosive vapours.
SPECIAL PROTECTIVE ACTIONS FOR FIRE-FIGHTERS incl. PPE	As in any fire, wear self-contained breathing apparatus pressure-demand, SANS 50137:2011 (approved or equivalent) and full protective gear.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PPE & EMERGENCY PROCEDURES	<p>Product is a water solution and non-flammable. In a fire, this product may build up pressure and rupture a sealed container, cool exposed containers with water spray. Avoid breathing mist or spray.</p> <p>Special protective equipment for firefighters In the event of fire, wear self-contained breathing apparatus. Fire fighters must wear fire resistant personnel protective equipment.</p> <p>AQT 232 will not burn or support combustion.</p>
ENVIRONMENTAL PRECAUTIONS	Prevent further leakage or spillage if safe to do so.
METHODS & MATERIALS FOR CONTAINMENT & CLEANING UP	<p>Small spills: Wear protective clothing, neutralize with soda ash to pH between 6 and 9, then scoop up as much as possible. Wash and scrub area with plenty of water to remove any residue.</p> <p>Large spills: Stop / isolate source of leaks and prevent entry to waterways, sewers and buildings where possible. Seal off area and contain material by diking with soil or other inert material. Recover as much as possible and then apply an inert material such as sawdust to absorb the remainder. Collect in suitable containers and then wash and scrub away the residue.</p> <p>Disposal: Dispose of product and containers in accordance with SA National and / or regional Regulations refer National Environmental Management Waste Act - NEMWA, it's Regulations and local by-laws. This informs permitted Waste Facilities and Service providers see the South African Waste Information Centre (environment.gov.za)</p>

SECTION 7 — HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING	<p>Precautions for safe handling: Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Handle and open the container with care. Thoroughly clean/dry the installation before use. DO NOT discharge the waste into the drain. Keep away from naked flames/heat. Observe very strict hygiene - avoid contact. Keep container tightly closed.</p> <p>Hygiene measures: Wash exposed skin thoroughly after handling.</p>				
CONDITIONS FOR SAFE STORAGE	<p>Store in cool place out of direct sun in rubber lined, plastic or FRP Containers and avoid sources of potential contamination. Avoid temperature extremes above 40 °c and do not allow product to freeze.</p> <p>Segregation and or Separation requirements:</p> <table border="1" style="width: 100%;"> <tr> <td style="width: 33%;">Compatible</td> <td style="width: 33%;">Dangerous goods of the same Class should be compatible; consult SDS or suppliers about requirements for individual substances.</td> <td style="width: 33%;">Class 8B</td> </tr> </table>		Compatible	Dangerous goods of the same Class should be compatible; consult SDS or suppliers about requirements for individual substances.	Class 8B
Compatible	Dangerous goods of the same Class should be compatible; consult SDS or suppliers about requirements for individual substances.	Class 8B			

	Keep Apart	Dangerous goods of these Classes should be kept apart by at least 3m. Consult the SDS or supplier.	Class 2.1, 2.2, 2.3, 3, 4.1, 4.2, and 4.3.
	Segregate From	These combinations of dangerous goods should segregate by at least 5 m and kept in separate compounds or building compartments.	Class 1, 5.1, 6.1, 6.2 and 7
	Segregation may be Necessary	Segregation of these Classes may be necessary. Consult the SDS or supplier.	N/A
	Isolate	This requirement applies to organic peroxides, for which dedicated stores or storage cabinets are recommended. Adequate separation from other buildings and boundaries is required.	Class 5.2
	Dangerous goods of the same class could be incompatible or react dangerously; Consult SDS or suppliers about requirements for individual substances.		Class 8A
<p>NOTES:</p> <ol style="list-style-type: none"> 1. In all cases, the SDS or supplier of the goods should ALWAYS be consulted. 2. Non-dangerous goods may be kept in segregation spaces, if they will not react dangerously with any of the dangerous goods being kept. 3. Non-dangerous goods that are combustible (excluding combustible liquids) may be kept in such spaces, provided that. <ol style="list-style-type: none"> a) hazard assessment, including an assessment of the additional fire load, has been carried out; and b) any necessary additional fire protection is provided. <p>The volume of any non-dangerous goods kept in the segregation spaces needs to be considered when calculating the volume of the spillage containment for the store.</p>			
UN Packaging Codes			
	Stock Code	Pack Size	UN Code
	AQT232A	25 Kg	Jerrican Plastics Non-Removable Head UN3H1/Y
	AQT232B	200 Kg	Drum Plastics Non-Removable Head UN1H1/Y
	AQT232C	1 000 Kg	Composite IBC Plastic Receptacle & Steel Cage UN31HA1/Y
	<p>Suitable storage materials: PVC – Poly Vinyl Chloride, HDPE – High Density Polyethylene, PP – Polypropylene, SS – Stainless Steel, PTFE - Polytetrafluoroethylene, and most rubbers.</p> <p>Unsuitable storage materials: Mild steel, iron, copper, aluminium and alloys.</p> <p>Shelf Life: 12 Months</p>		
INCOMPATIBILITIES	<p>Incompatible Products: Strong bases. Strong acids.</p> <p>Incompatible Conditions: Direct sunlight. Poor ventilation.</p>		
SANS 10263-0 WAREHOUSING	<p>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.</p>		

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:

- a) Toxic and infectious substances shall be separated from other flammable products and aerosols.
- b) Toxic and infectious substances shall be segregated from oxidizing substances, organic peroxides, and **corrosives**.
- c) Flammable toxic and infectious substances shall be separated from non-flammable toxic and infectious substances (see 12.8.8.1).

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.

CORROSIVES (ACIDS AND BASES CLASS 8	
Category 1	> 50 Kg
Category 2	> 200 Kg
Category 3	> 1 000 Kg

SECTION 8 — EXPOSURE CONTROLS AND PERSONAL PROTECTION CONTROL PARAMETERS






OCCUPATIONAL EXPOSURE LIMITS (OEL)	<p>Contains no substances with maximum occupational exposure limit values.</p> <p>SOUTH AFRICA: HCA REG, 2021 (Recommended OEL) Sodium Hydroxide: 1310-73-2: NaOH OEL-STEL/C 4 mg/m³</p> <p>INTERNATIONAL OSHA: PEL (TWA) (mg/m³) 2 mg/m³ IDLH: (mg/m³) 10 mg/m³ NIOSH: REL (ceiling) (mg/m³) 2 mg/m</p>
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ADDITIONAL EXPOSURE LIMITS UNDER THE CONDITIONS OF USE	Contains no substances with biological exposure indices.
DNEL/DMEL AND PNEC-VALUES	Not available.

APPROPRIATE ENGINEERING CONTROLS

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide adequate general and local exhaust ventilation.

INDIVIDUAL PROTECTION MEASURES

EYE PROTECTION		Wear tight fitting safety goggles or safety glasses with side shields. 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		<p>Use protective gloves. 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.</p> <p>Suggested material: Rating: 1 – Not Recommended, 2 – Good, 3 – Fair, 4 – Excellent</p> <table border="1"> <thead> <tr> <th>Material Type</th> <th>Rating</th> <th>Expected Breakthrough</th> </tr> </thead> <tbody> <tr> <td>Butyl</td> <td>4</td> <td>> 8 Hrs</td> </tr> <tr> <td>Neoprene</td> <td>4</td> <td>> 8 Hrs</td> </tr> <tr> <td>PVC (Polyvinylchloride)</td> <td>4</td> <td>> 8 Hrs</td> </tr> <tr> <td>Viton</td> <td>4</td> <td>> 8 Hrs</td> </tr> <tr> <td>Nitrile (Acrylonitrile Butadiene Rubber)</td> <td>3</td> <td>> 4 Hr</td> </tr> <tr> <td>Natural Rubber (Latex)</td> <td>1</td> <td>< 1 Hr</td> </tr> <tr> <td>Synthetic Fibre/Fibreglass</td> <td>1</td> <td>< 1 Hr</td> </tr> </tbody> </table> <p>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.</p>	Material Type	Rating	Expected Breakthrough	Butyl	4	> 8 Hrs	Neoprene	4	> 8 Hrs	PVC (Polyvinylchloride)	4	> 8 Hrs	Viton	4	> 8 Hrs	Nitrile (Acrylonitrile Butadiene Rubber)	3	> 4 Hr	Natural Rubber (Latex)	1	< 1 Hr	Synthetic Fibre/Fibreglass	1	< 1 Hr
Material Type	Rating	Expected Breakthrough																								
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Natural Rubber (Latex)	1	< 1 Hr																								
Synthetic Fibre/Fibreglass	1	< 1 Hr																								
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.																								
RESPIRATORY PROTECTION		<p>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. Use respirators and components tested and approved under appropriate government standards such as SANS 50136:1998, SANS 50137:2011, SANS 50140:1998.</p> <p>Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacture.</p>																								

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.

Occupational hygiene: Foods, beverages and other articles of consumption must not be consumed at the work areas. Suitable areas are to be designated for these purposes. Avoid contact with skin. Avoid contact with eyes. Avoid inhalation of dust. Avoid contact with clothing. Contaminated clothes must be exchanged and cleaned carefully. Provide washrooms with showers and if possible, rooms with separate storage for street clothing and work clothing. The skin must be washed with soap and water before breaks and at the end of work. Apply fatty skin-care products after washing. Take care of personal hygiene.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE (PHYSICAL STATE, COLOUR ETC):	Clear colourless to yellow liquid
ODOUR:	No recognizable odour
ODOUR THRESHOLD:	No additional data available.
pH:	10.0 - 11.0 (1% Aq. Sol.)
MELTING/FREEZING POINT:	No additional data available.
INITIAL BOILING POINT AND BOILING RANGE:	No additional data available.
FLASH POINT:	Do not flash.
EVAPORATION RATE:	No additional data available.
FLAMMABILITY (SOLID, GAS):	Not flammable.
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:	Not explosive
VAPOUR PRESSURE:	No additional data available.
VAPOUR DENSITY:	No additional data available.
RELATIVE DENSITY:	1.10 – 1.12
SOLUBILITY(IES):	Miscible in water
PARTITION COEFFICIENT: N-OCTANOL/WATER:	No additional data available.
AUTO-IGNITION TEMPERATURE:	No additional data available.
DECOMPOSITION TEMPERATURE:	No additional data available.
VISCOSITY:	No additional data available.
OXIDIZING PROPERTIES:	No additional 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 reactivity profile.
CHEMICAL STABILITY	Stable under normal conditions of storage, handling, and transport.
POSSIBILITY of HAZARDOUS REACTIONS	Hazardous polymerisation will not occur under normal conditions.
CONDITIONS TO AVOID	Avoid high temperatures. Poor ventilation.
INCOMPATIBLE MATERIALS	Avoid contact with strong oxidising and reducing agents. Avoid contact with all other chemicals.
HAZARDOUS DECOMPOSITION PRODUCTS	No additional data available. In case of combustion the product develops oxides of Nitrogen (NOx) and Carbon (Cox).

SECTION 11 — TOXICOLOGICAL INFORMATION

TOXICOLOGICAL (HEALTH) EFFECTS

ACUTE TOXICITY	Not classified as per GHS guidelines.
SKIN CORROSION/IRRITATION	Causes severe skin burns. pH 10.0 - 11.0 (1% Aq. Sol.)
SERIOUS EYE DAMAGE/EYE IRRITATION	Causes serious eye damage. pH 10.0 - 11.0 (1% Aq. Sol.)
RESPIRATORY OR SKIN SENSITIZATION	Not classified as per GHS guidelines.
GERM CELL MUTAGENICITY	Not classified as per GHS guidelines.

CARCINOGENICITY	Not classified as per GHS guidelines.
REPRODUCTIVE TOXICITY	Not classified as per GHS guidelines.
SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE	Not classified as per GHS guidelines.
SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE	Not classified as per GHS guidelines.
ASPIRATION HAZARD	Not classified as per GHS guidelines.

LIKELY SOURCES OF EXPOSURE

INHALATION	EYES	SKIN	INGESTION
Rare	Unlikely	Likely	Rare
Possible exposure during mixing.	Possible exposure during mixing.	Possible exposure during mixing.	Possible exposure in case of unhygienic practices.

SYMPTOMS RELATED TO PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS

Symptoms/effects after inhalation: Exposure to high concentrations: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Following symptoms may appear later: Possible laryngeal spasm/oedema. Risk of lung oedema. Respiratory difficulties.

Symptoms/effects after skin contact: Caustic burns/corrosion of the skin. Slow-healing wounds.

Symptoms/effects after eye contact: Corrosion of the eye tissue. Permanent eye damage. Causes serious eye damage.

Symptoms/effects after ingestion: Vomiting. Diarrhoea. Burns to the gastric/intestinal mucosa. Possible oesophageal perforation. Bleeding of the gastrointestinal tract. Shock. After absorption of large quantities: Disturbances of consciousness.

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

On continuous/repeated exposure/contact: Dry skin. Skin rash/inflammation. Possible inflammation of the respiratory tract.

NUMERICAL MEASURES OF TOXICITY (SUCH AS ATE)

Values calculated using GHS additivity formula.

TEST	ROUTE	SPECIES	VALUE	EFFECTS
LD50	Oral	Rat	> 5 000 mg/kg bw	Refer above section 11.1
LD50	Dermal	Rat	> 5 000 mg/kg bw	Refer above section 11.1

INTERACTIVE EFFECTS

No additional information available.

WHERE SPECIFIC CHEMICAL DATA IS NOT AVAILABLE

No additional information available.

MIXTURES

No additional information available.

MIXTURES VS INGREDIENTS INFORMATION

No additional information available.

OTHER INFORMATION

No additional information available.

SECTION 12 — ECOLOGICAL INFORMATION TOXICITY

Values calculated using GHS additivity formula.

TEST	SPECIES	VALUE
48Hr EC50	Fish	> 100 mg/L
48Hr EC50	Crustacea	> 100 mg/L
48Hr EC50	Algea	> 100 mg/L

PERSISTENCE AND DEGRADABILITY

OECD Test Guideline 301 (A-F)	
BOD ₅	No additional data available.
COD	No additional data available.

BIOACCUMULATIVE POTENTIAL

PARTITION COEFFICIENT: N-OCTANOL/WATER	
LOG-K _{ow}	No additional data available.
BIOCONCENTRATION FACTOR	
BCF	No additional data available.

Ecological injuries are not known or expected under normal use.

MOBILITY IN SOIL

No additional data available.

OTHER ADVERSE EFFECTS

This product is toxic to algae. DO NOT discharge effluent containing this product into bodies of water unless in accordance with international, national and/or provincial law.

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 with other waste. Different types of hazardous waste shall not be mixed 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


Packaging's and containers, even those that have been emptied, will retain product residue and vapours, handle empty containers as if they were full. Remove all possible traces of product and wash prior to disposal of packaging and containers. Dispose in compliance with Regulations – see above and Industry Best Practice. Avoid reuse of empty container for other storage purposes.

Recycling Information

Packaging Type	Description	UN Code	Portion & Material	Symbol
Jerrican	Plastics Non-Removable Head	UN3H1/Y	Body & Enclosure (HDPE)	
Drums	Plastics Non-Removable Head	UN1H1/Y	Body & Enclosure (HDPE)	

Composite IBC	Plastic Receptacle Steel Cage	UN31HA1/Y	Body & Enclosure (HDPE) Cage (Steel)	
Labels	Product Label and Pictograms	N/A	Polyethylene Terephthalate	

SECTION 14 — TRANSPORT INFORMATION

TRANSPORTATION CLASSIFICATION	ADR/RID	ADN(R)	IMDG	ICAO/IATA	
UN NUMBER	1760				
PROPER SHIPPING NAME	CORROSIVE LIQUID, N.O.S.				
HAZARD CLASS(ES)	8B 				
PACKING GROUP	III				
MARINE POLLUTANT	No				
EMERGENCY RESPONSE	ERG 2020 154	-	EMS GUIDE F-A; S-B	ERG DRILL GUIDE 8L - Corrosive, Other	
EXEMPT / QUANTITY LIMITATIONS KG	Exempt / Factor	Passenger rail	N/A	Passenger aircraft	Cargo aircraft
	200 / 5	5 Kg		5 Kg	60 Kg
P, B, L & O Provisions SANS 10231	B9b	N/A	N/A	N/A	
Vessel Stowage	N/A	N/A	10A - A	N/A	
			10B - 40		
NEMA Reportable Quantity	Not Listed Supplier Quantity (5 000Kg)				

SPECIAL INSTRUCTIONS FOR USER

Vessel Stowage:

Stowage category "A" means the material may be stowed "on deck" or "under deck" on a cargo vessel or on a passenger vessel.

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

Special precautions for user:

DO NOT load with Class 1 and 7.

Keep aluminium gas cylinders apart from caustic bases.

Concentrated acids and bases must be kept at least 1 metre apart.

Goods of Classes 2.1, 2.2, 3, 4.1, 5.1, 5.2, 6.1, 6.2, 8B, and 9 must be segregated by an air space of at least 100mm or by an approved segregation device or non-dangerous goods.

SANS 10231 Provisions:

B9b: Carriage in bulk of full loads (if class 8, only for wastes) is permitted in closed containers or in sheeted large containers with complete walls. For wastes of class 8, containers shall be equipped with a suitable and sufficiently stout inner lining.

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.
 National Environmental Management Act 107 of 1998 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: 2019: Globally Harmonized System of Classification and Labelling of Chemicals (GHS).
 SANS 11014: 2010: Safety Data Sheets for Chemical Products.
 SANS 10263-0: 2017: The Warehousing of Dangerous Goods. General Requirements
 SANS 10263-5: 2015: The Warehousing of Dangerous Goods. The Storage and Handling of Oxidizing Substances
 SANS 10263-8: 2012 The Warehousing of Dangerous Goods. The Storage and Handling of Corrosive Substances.

Chemical safety assessment

Not assessed.

SECTION 16 — OTHER INFORMATION



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

HAZARD STATEMENTS	PRECAUTIONARY STATEMENTS
H290: May be corrosive to metals. H314: Causes severe skin burns and eye damage.	P234: Keep only in original packaging. P260: Do not breathe spray. P264: Wash exposed areas [HANDS] thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection. P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P304+P340: IF INHALED: Remove person to fresh air and keep 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 doctor/first aider. P321: Specific treatment (see IF SWALLOWED, IF ON SKIN, IF INHALED, IF IN EYES on this label). P363: Wash contaminated clothing before reuse. P390: Absorb spillage to prevent material damage. P405: Store locked up. P406: Store in a corrosion resistant/HDPE/glass container with a resistant inner liner. P501: Dispose of contents and container in accordance with local, regional, national, international regulations to licenced hazardous waste manager

LABELLING SANS 10234:2008

SIGNAL WORD: DANGER

PICTOGRAMS & PLACARDS

PHYSICAL & HEALTH HAZARD		ENVIRONMENTAL HAZARD	TRANSPORT	
GHS05	Corrosive Hazard	N/A	8B	Corrosive Alkaline
				

LEGEND TO ABBREVIATIONS & ACRONYMS

ABEK: Organic gases and vapours (BP>65°C); 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

CBI: Confidential Business Information

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

STP: Standard Temperature and Pressure

vPvB: Very Persistent Very Bio Accumulative

KEY LITERATURE REFERENCES AND SOURCES

Source	Hyperlink
GESTIS DATABASE	CBI
ECHA (European Chemicals Agency)	CBI
PUBCHEM DATA	CBI
ICSC	CBI
CAMEO CHEMICALS	CBI
USCG CHRIS Code	CBI
RTK Hazardous Substance Fact Sheet	Not Listed
NIOSH POCKET GUIDE	Not Listed
RTECS - NIOSH"	Not Listed
USA EPA COMPTOX	CBI

Note: CBI – Information available, on request, to the regulatory authority and emergency responders.

TRAINING ADVICE

Ensure SDS is always available to users. Provide adequate information, instruction, and training for operators.

COMPILED BY: [CST Comp: R. van Rooyen.](#)

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28 December 2020	0	1	10 July 2017
10 July 2017	0	0	Original (MSDS)

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