SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

GHS PRODUCT IDENTIFIER

AQT 222

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
CHEMICAL FAMILY:	Mixture not determined
SYNONYMS:	INT222
PROPER SHIPPING NAME:	CORROSIVE LIQUID, N.O.S.
CHEMICAL FORMULA:	Mixture not determined
PRODUCT STOCK CODE/S:	AQT222A(25Kg),AQT222B(200Kg),INT004(1000Kg)
SDS LINK:	http://196.61.225.110/owncloud/index.php/s/EEg3fTDUkwCF8h6

RECOMMENDED USE	RESTRICTIONS ON USE
AQT 222 is a sulphite/polymer/amine blend designed to reduce corrosion, scale formation and fouling in boiler systems.	Not for end user consumption. Not for food, drug, medical or household use.

SUPPLIER'S DETAILS

AQUATRADE WATER TREATMENT CHEMICALS (PTY) LTD

12 Diesel St, Isando
Gauteng, South Africa
Tel: +27 11 394 0752
info@aquatradesa.co.za
www.aquatradesa.co.za

PO Box 357
Isando

SDS Enquiries Only
sheq@aquatradesa.co.za

EMERGENCY PHONE NUMBER		
NAME	**TEL**	**HOURS AVAILABLE**
E. le Sar	+27 82 921 0643	Mon. – Fri. 05:00 –20:00 GMT
Spilltech	+27 86 100 0366	24/7

SECTION 2 — HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Acute Toxicity, Dermal (Category 5)
Acute Toxicity, Inhalation (Category 4)
Skin Corrosion/Irritation (Category 1B)
Specific Target Organ Toxicity - Single Exposure - Drowsiness (Category 3)

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

GHS LABEL ELEMENTS

GHS HAZARD CODES

May be harmful in contact with skin.
Harmful if inhaled.

Causes severe skin burns and eye damage.
May cause respiratory irritation.
May cause drowsiness or dizziness.

GHS PRECAUTIONARY CODES

Do not breathe vapours/spray.
Wash body thoroughly after handling.
Use only outdoors or in a well-ventilated area.
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 POISON CENTER/doctor/…
Call a POISON CENTER/doctor if you feel unwell.
Specific treatment (see IF SWALLOWED, IF ON SKIN, IF INHALED, IF IN EYES on this label).
Wash contaminated clothing before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container to licenced hazardous waste agent in accordance with local, regional, national, international regulations.

SIGNAL WORD:

DANGER

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
Sodium Metabisulphite	7691-57-4	231-673-0	1	10	H302: Harmful if swallowed. H318: Causes serious eye damage.
Sodium Hydroxide	1310-73-2	215-185-5	1	10	H290: May be corrosive to metals. H314: Causes severe skin burns and eye damage.
Cyclohexylamine	108-91-8	203-629-0	1	5	H226: Flammable liquid and vapour. H361f: Suspected of damaging fertility or the unborn child. H312: Harmful in contact with skin. H302: Harmful if swallowed. H314: Causes severe skin burns and eye damage.
Acrylate Copolymer				< 5	H315: Causes skin irritation. H319: Causes serious eye irritation.
Phosphonate	2809-21-4	220-552-8		< 2	H290: May be corrosive to metals.

					H318: Causes serious eye damage. H302: Harmful if swallowed.

SECTION 4 — FIRST-AID MEASURES

DESCRIPTION OF NECESSARY FIRST AID MEASURES

Call 112 or 10177 or your local emergency help number immediately, 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	Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.
IF IN CONTACT WITH SKIN	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 give milk to drink. 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.

MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE and DELAYED

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further symptoms are possible

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

Immediate First Aid

Remove patient from contact with the material. Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR if necessary. Immediately flush contaminated eyes with gently flowing water. DO NOT induce vomiting. If vomiting occurs, lean patient forward or place on the left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention.

Basic Treatment

Establish a patent airway (oropharyngeal or nasopharyngeal airway, if needed). Suction if necessary. Watch for signs of respiratory insufficiency and assist ventilations if necessary. Administer oxygen by nonrebreather mask at 6 to 12 L/min. Monitor for pulmonary oedema and treat if necessary. Monitor for shock and treat if necessary. For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with 0.9% saline (NS) during transport. DO NOT use emetics. For ingestion, rinse mouth and administer 5 ml/kg up to 200 ml of water for dilution if the patent can swallow, has a strong gag reflex, and does not drool. DO NOT attempt to neutralize. Cover skin burns with dry sterile dressings after decontamination.

Advanced Treatment

Consider orotracheal or nasotracheal intubation for airway control in the patient who is unconscious, has severe pulmonary oedema, or is in severe respiratory distress. Early intubation, at the first signs of upper airway obstruction, may be necessary. Positive-pressure ventilation techniques with a bag valve mask device may be beneficial. Consider drug therapy for pulmonary oedema. Monitor cardiac rhythm and treat arrhythmias, as necessary. Start IV administration of D5W /SRP: "To keep open", minimal flow rate/. Use 0.9% saline (NS) or lactated Ringer's (LR) if signs of hypovolemia are present. For hypotension with signs of hypovolemia, administer fluid cautiously. Consider

vasopressors if patient is hypotensive with a normal fluid volume. Watch for signs of fluid overload. Use proparacaine hydrochloride to assist eye irrigation.

Medical Surveillance

The skin, eyes, and respiratory tract should receive special attention in any placement or periodic examination.

SECTION 5 — FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA	·Dry chemical, CO2, or water spray.
EXTINGUISHING MEDIA NOT SUITABLE	None indicated.
SPECIFIC HAZARDS ARISING FROM THE CHEMICAL	The product is not flammable. Not combustible.
SPECIAL PROTECTIVE ACTIONS FOR FIRE-FIGHTERS incl. PPE	Wear self-contained breathing apparatus and chemical-protective clothing. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PPE & EMERGENCY PROCEDURES	As an immediate precautionary measure, isolate spill, or leak area in all directions for at least 50 meters (150 feet). **DO NOT** breathe vapours, mist. **Avoid** substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
ENVIRONMENTAL PRECAUTIONS	**Avoid** release to the environment. Prevent product from entering open water sources and municipal drains.
METHODS & MATERIALS FOR CONTAIMENT & CLEANING UP	**Small spill** Isolate the spilled material with dry earth, sand or other non-combustible material and transfer to labelled containers. Dilute with plenty of water and rinse to drain. Rinse contaminated area. **Large spill** Isolate the area of the spill. Prevent flames and sparks. Prevent contact with organic material using sand or other inert material. Recover as much as possible into suitable labelled containers. Rinse contaminated area to drain system.

SECTION 7 — HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING	Ensure thorough ventilation of stores and work areas. **DO NOT** mix with other chemicals. Prevent contact with skin and eyes.
CONDITIONS FOR SAFE STORAGE	Keep cool. Store in accordance with local/regional/national/international regulations. Store in a dry place. Store in original closed container. Store in a well-ventilated place. Store away from oxidizing agents. **DO NOT** store in mild steel containers unless suitably lined. **Storage duration**: 12 Months From the data on storage duration in this safety data sheet no agreed statement regarding the warrantee of application properties can be deduced.
INCOMPATIBILTIES	**Conditions to avoid: H**eat, Direct Sunlight. **Substances to avoid:** Strong Oxidizing agents.
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:

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 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.

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)	**SOUTH AFRICA: HCA REG,2021**: Sulphur dioxide: 7446-09-5: SO2: "OEL-STEL/C 0.5 ppm" **INTERNATIONAL**: Occupational exposure limit value (sulphur dioxide - 7446-09-5): - AGW (Germany): 0.5 ppm; 1.3 mg/m³ (long term).

	- AGW (Germany): 0.5 ppm (STV 15 minutes average value; a momentary value of 1 mL/m³ (2.7 mg/m³) should not be exceeded); 1.3 mg/m³ (short term). - Belgium and Spain: 2 ppm; 5.3 mg/m³ (long term). - Belgium and Spain: 5 ppm; 13 mg/m³ (short term). - France: 2 ppm; 5 mg/m³ (long term). - France: 5 ppm; 10 mg/m³ (short term). - Netherlands: 0.7 mg/m³ (short term). - United States: 5 ppm; 13 mg/m³ (long term). **SOUTH AFRICA: HCA REG,2021**: Sodium Hydroxide: 1310-73-2: NaOH: OEL-STEL/C 4 mg/m3 **INTERNATIONAL**: **OSHA**: OSHA PEL (TWA) (mg/m³) 2 mg/m³ **IDLH**: US IDLH (mg/m³) 10 mg/m³ **NIOSH**: NIOSH REL (ceiling) (mg/m³) 2 mg/m **SOUTH AFRICA: HCA REG, 2021**: Cyclohexylamine: 108-91-8: C6H11NH2: "OEL eight- hour TWA 20 ppm" **INTERNATIONAL**: **OSHA**: REL-TWA (Time Weighted Average) 10 ppm (40 mg/m³) **NIOSH**: TWA 10 ppm (40 mg/m3) **OSHA**: CAPEL-TWA: Permissible Exposure Limit (PEL) 10 ppm (40 mg/m³) **NIOSH**: See Appendix G **ACGIH**: HSDB: Threshold Limit Values (TLV) 8 hr Time Weighted Avg (TWA): 10 ppm. Excursion Limit Recommendation: Excursions in worker exposure levels may exceed 3 times the TLV-TWA for no more than a total of 30 minutes during a workday, and under no circumstances should they exceed 5 times the TLV-TWA, provided that the TLV-TWA is not exceeded. **ACGIH**: A4: Not classifiable as a human carcinogen. **ICSC**: 10 ppm as TWA; A4 (not classifiable as a human carcinogen). ICSC: 8.2 mg/m3, 2 ppm; peak limitation category: I(2); pregnancy risk group: C **OSHA**: TLV-TWA (Time Weighted Average) 10 ppm
ADDITIONAL EXPOSURE LIMITS UNDER THE CONDITIONS OF USE	Contains no substances with biological exposure limit values.
DNEL/DMEL AND PNEC-VALUES	No additional data

APPROPIATE ENGINEERING CONTROLS

Avoid spraying the material. Supply safety shower and eyewash in immediate vicinity of exposure area. **Avoid** contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling the product. Apply barrier cream after washing. Have skin protection plan.

Protective measures

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

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 NIOSH (US) or EN 166(EU). Contact lenses should not be worn; they may contribute to severe eye injury.
FACE PROTECTION		Clear Face shield. **WARNING** – A face shield shall not be worn during the application of dangerous substances that emit toxic vapours or low boiling-point organic solutions.
HAND PROTECTION		Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves must satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. **Full contact** Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min **Splash contact** Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation 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.
BODY PROTECTION		Body protection must be chosen depending on activity and possible exposure, e.g., apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).
RESPIRATORY PROTECTION		Respiratory aid not required. Always use respiratory protection as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). For nuisance protection use a type FFP1 EN 149:2001 particle respirator as a backup to engineering controls.

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.

General safety and hygiene measures

DO NOT breathe vapour/spray. **Avoid** contact with the skin, eyes, and clothing. Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE (PHYSICAL STATE, COLOUR ETC):	Brown liquid
ODOUR:	Sweet Sharp Odour
ODOUR THRESHOLD:	No test data available
pH:	11.0 – 12.2 (1% Aq. Sol.) / > 13 (Raw)
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:	1.12 – 1.14
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:	Non-Oxidizing

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

SECTION 10 — STABILITY AND REACTIVITY

REACTIVITY	No hazardous reactions if stored and handled as prescribed/indicated. **Corrosion to metals**: Corrosive effect on metals. **Remarks**: Forms no flammable gases in the presence of water.
CHEMICAL STABILTY	The product is stable if stored and handled as prescribed/indicated.
POSSIBILTY of HAZARDOUS REACTIONS	Reacts with acids. Exothermic reaction. Hazardous polymerisation will not occur under normal conditions.
CONDITIONS TO AVOID	High temperature. Poor ventilation. See SDS section 7 - Handling and storage.
INCOMPATIBLE MATERIALS	**Avoid** contact with organic materials and reducing agents. **Avoid** contact with all other chemicals. **Corrosivity** Corrosive to stainless steel, zinc, and aluminium.
HAZARDOUS DECOMPOSITION PRODUCTS	**Thermal decomposition products**: Carbon Monoxide, Carbon Dioxide. If some impurities are added to the product, they will speed up the product decomposition process. Should this happen, it will be evidenced by swelling of the drums. This product should therefore be stored and used on a first in first out basis and should never be mixed with any other chemicals.

SECTION 11 — TOXICOLOGICAL INFORMATION

TOXICOLOGICAL (HEALTH) EFFECTS

ACUTE TOXICITY	Based on available data, the classification criteria are not met.
SKIN CORROSION/IRRITATION	Causes severe skin burns and eye damage.
SERIOUS EYE DAMAGE/EYE IRRITATION	Causes serious eye damage.
RESPIRATORY OR SKIN SENSITIZATION	Based on available data, the classification criteria are not met.

GERM CELL MUTAGENICITY	Based on available data, the classification criteria are not met.
CARCINOGENICITY	Based on available data, the classification criteria are not met.
REPRODUCTIVE TOXICITY	**For the mixture**. Based on available data, the classification criteria are not met **For the active ingredient above cut-off level**. The available generation studies are only of limited validity and do not allow final evaluation. Cyclohexylamine caused testes effects in studies with repeated applications. These effects on testes occur only at clear systemic toxic doses. From the generation studies of limited validity there are only questionable indications on impairment of gestation rate. Therefore, according to the EU classification criteria 67/548/EWG Annex 1 the compound is classified with R62 rep. cat 3 and according to EU regulation no. 790/2009 (GHS) Annex 1 Repr. cat 2.
SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE	Based on available data, the classification criteria are not met.
SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE	Based on available data, the classification criteria are not met.
ASPIRATION HAZARD	Based on available data, the classification criteria are not met.

LIKELY SOURCES OF EXPOSURE

INHALATION	EYES	SKIN	INGESTION
Unlikely	Likely	Likely	Rare
Unpacking or decanting of product.	Unpacking or decanting of product.	Unpacking or decanting of product.	Unpacking or decanting of product.

SYMPTOMS RELATED TO PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS

If in contact with skin

Severe skin irritation and burns (perforations on the skin may be observed). Slow healing wounds.

If in contact with eyes

Severe burns of the eyes with permanent damage. Loss of vision.

If Inhaled

Breathing difficulties if fumes of the solution or chemical powders are inhaled. Due to this, the eyes, nose, and ears may be affected. Sneezing. Severe burning and associated pain in the mouth, throat, and food-pipe (even the stomach may be burnt); drooling from the mouth. Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes.
Possible laryngeal spasm/oedema. Risk of lung oedema.

If ingested

Speaking and swallowing difficulties due to swelling of tongue and throat. Vomiting. Diarrhoea. Burns to the gastric/intestinal mucosa. Possible oesophageal perforation. Bleeding of the gastrointestinal tract. Shock. Disturbances of consciousness. Severe stomach pain. Blood in stool and vomit. Sudden decrease in blood pressure (hypotension). Severe changes in blood pH value affecting many parts of the body and organs.

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

No additional test data available.

NUMERICAL MEASURES OF TOXICITY (SUCH AS ATE)

TEST	ROUTE	SPECIES	VALUE	EFFECTS
LD50	Oral	Rat (OECD 401)	> 5 000 mg/kg bw	Calculation based on GHS additivity formula
LD50	Dermal	Rabbit (OECD 402)	4 098.4 mg/kg bw	Calculation based on GHS additivity formula
LC50	Inhalation	Rat	14.01 mg/Kg bw	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

Aquatic Toxicity (Calculation based on GHS additivity formula)		
TEST	**SPECIES**	**VALUE**
48Hr EC50	Fish	> 100 mg/l
48Hr EC50	Daphnia	> 100 mg/l
48Hr EC50	Algae	> 100 mg/l
48Hr EC50	Micro-organism	> 100 mg/l

PERSISTANCE AND DEGRADEBILITY
No known toxic degradation products. No additional data available.

BIOACCUMULATIVE POTENTIAL

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

Not expected to accumulate. No additional data available.

MOBILITY IN SOIL
No additional test data available.

OTHER ADVERSE EFFECTS
No additional test data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL RECOMMENDATION

At the time of review, criteria for land treatment or burial (sanitary landfill) disposal practices are subject to significant revision. Prior to implementing land disposal of waste residue (including waste sludge), consult with environmental regulatory agencies for guidance on acceptable disposal practices.
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

Avoid release to the environment.

EMPTY CONTAINER

Avoid reuse of empty container for other storage. Consider refilling. Rinse/decontaminate thoroughly before re-filling, discarding in waste or return to supplier. Puncture container before discarding as waste.

SECTION 14 — TRANSPORT INFORMATION

<table>
<tr><th>TRANSPORTATION CLASSIFICATION</th><th>ADR/RID</th><th>ADN(R)</th><th>IMDG</th><th colspan="2">ICAO/IATA</th></tr>
<tr><td>UN NUMBER</td><td colspan="5">1760</td></tr>
<tr><td>PROPER SHIPPING NAME</td><td colspan="5">CORROSIVE LIQUID, N.O.S.</td></tr>
<tr><td>HAZARD CLASS(ES)</td><td colspan="5">8.2
  </td></tr>
<tr><td>PACKING GROUP</td><td colspan="5">III</td></tr>
<tr><td>MARINE POLLUTANT</td><td colspan="5">No</td></tr>
<tr><td>EMERGENCY RESPONSE</td><td>ERG 2020
154</td><td>-</td><td>EMS GUIDE
F-A; S-B</td><td colspan="2">ERG DRILL GUIDE
8L</td></tr>
<tr><td rowspan="2">EXEMPT / QUANTITY LIMITATIONS KG</td><td>Exempt / Factor</td><td>Passenger rail</td><td rowspan="2">N/A</td><td>Passenger aircraft</td><td>Cargo aircraft</td></tr>
<tr><td>200 / 5</td><td>5 L</td><td>5 L</td><td>60 L</td></tr>
<tr><td>P, B, L & O Provisions SANS 10231</td><td>B9b</td><td>N/A</td><td>N/A</td><td colspan="2">N/A</td></tr>
<tr><td rowspan="2">Vessel Stowage</td><td colspan="5">10A - A</td></tr>
<tr><td colspan="5">10B – 40</td></tr>
</table>

Vessel Stowage

Stowage category 10(A) “A” means the material may be stowed “on deck” or “under deck” on a cargo vessel or on a passenger vessel.
Stowage category 10(B) “40” means stow “clear of living quarters”.

DO NOT load with Class 1 and 7.
Keep aluminium gas cylinders apart from caustic bases.
May be loaded with Class 8A if kept at least 1 metre apart.
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.

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
H313: May be harmful in contact with skin H314: Causes severe skin burns and eye damage. H332: Harmful if inhaled. H335: May cause respiratory irritation. H336: May cause drowsiness or dizziness.	P260: Do not breathe vapours/spray. P264: Wash body thoroughly after handling. P271: Use only outdoors or in a well-ventilated area. 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 POISON CENTER/doctor. P312: Call a POISON CENTER/doctor if you feel unwell. P321: Specific treatment (see IF SWALLOWED, IF ON SKIN, IF INHALED, IF IN EYES on this label). P363: Wash contaminated clothing before reuse. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P405: Store locked up. P501: Dispose of contents/container to licenced hazardous waste agent 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	N/A	N/A	Class 8.2	Corrosive Alkaline
					

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
ECHA – European Chemical Agency
Sodium Hydroxide
https://echa.europa.eu/de/registration-dossier/-/registered-dossier/15566/1
Phosphonate
https://echa.europa.eu/de/registration-dossier/-/registered-dossier/16011/1
Sodium Tripolyphosphate
https://echa.europa.eu/de/registration-dossier/-/registered-dossier/15386/1
Sodium Metabisulphite
https://echa.europa.eu/de/registration-dossier/-/registered-dossier/14958/2/1
Cyclohexylamine
https://echa.europa.eu/de/registration-dossier/-/registered-dossier/13348/1

TRAINING ADVICE

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

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04 April 2022	1	2	28 December 2020
20 December 2020	1	1	21 August 2018
21 August 2018	1	0	Original

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