1 Identification

GHS Product Identifier

AQT 253

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
Synonyms:	IKUCHEM253 NT253 AQT253 SODIUM PHOSPHATE FOR BOILER
Proper Shipping Name:	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
Chemical Formula:	Mixture

Recommended use of the chemical and restriction on use

AQT 253 is a phosphate blend designed for coordinated pH/phosphate treatment of high pressure boilers from 102 to 136 bar pressure. Industrial water treatment. Not for food, drug or household use.

Supplier's details

AQUATRADE WATER TREATMENT CHEMICALS (PTY) LTD

4A Spanner Road
Spartan, Kempton Park
Gauteng, South Africa
1619
www.aquatradesa.co.za
sheq@aquatradesa.co.za

PO Box 357
Isando
Gauteng, South Africa
1600
Tel: +27 11 394 0752
Tel: +27 87 654 3326 (SDS Enquiries)

Emergency phone number

E le Sar: +27 82 921 0643 (Available Mon - Fri, GMT 5:00 to 20:00)
Spilltech: +27 861 000 366 (Available 24/7)

2 Hazard(s) identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Corrosive to Metals (Category 1), H290
Skin Corrosion/Irritation(Category 1), H314
Serious Eye Damage/Eye Irritation (Category 1), H318

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

GHS label elements

Danger

May be corrosive to metals

Causes severe skin burns and eye damage

Causes serious eye damage

Keep only in original container.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash 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): 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.

Store locked up.

Dispose of contents and container in accordance with local, regional, national, international regulations.

Other hazards which do not result in classification

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. No other hazard known not classified.

3 Composition/information on ingredients

Description	CAS Number	EINECS Number	%	Note
Confidential Business Information			0	Information available to Emergency Responders on Tel: +27 82 921 0643

4 First-aid measures

Description of necessary first-aid measures

General

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. 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).

Inhalation

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 center or doctor/physician.

Skin contact

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 center or doctor/physician.

Eye contact

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.

Ingestion

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.

Most important symptoms/effects, acute and delayed

Symptoms/injuries after inhalation
May cause respiratory irritation. May cause burns.

Symptoms/injuries after skin contact
Causes severe skin burns and irritation. Symptoms may include redness, pain, blisters.

Symptoms/injuries after eye contact
Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. May cause burns.

Symptoms/injuries after ingestion
Harmful if swallowed. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. May cause stomach distress, nausea or vomiting.

Indication of immediate medical attention and special treatment needed, if necessary

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible). Treat symptomatically.

5 Fire-fighting measures

Suitable extinguishing media

Suitable extinguishing media
Treat for surrounding material. CO_2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Unsuitable extinguishing media
No data available.

Specific hazards arising from the chemical

Fire hazard
Products of combustion may include, and are not limited to: Oxides of Carbon (CO, CO_2) and phosphorus oxides.

Explosion hazard
Explosive decomposition on exposure to temperature rise: release of toxic gases/vapours.

Special protective actions for fire-fighters

Keep upwind of fire. Wear full fire-fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Cool closed containers exposed to fire with water spray.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions

Inform respective authorities in case of seepage into water course or sewage system. **Avoid** release into the environment.

Methods and materials for containment and cleaning up

Safely stop source of spill. Restrict non-essential personnel from area. Sweep up or vacuum powder and place in a chemical waste container for disposal according to local regulations.

7 Handling and storage

Precautions for safe handling

DO NOT mix with other chemicals. Prevent contact with skin and eyes.

Hygiene measures
Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

Additional hazards when processed

May be corrosive to metals.

Conditions for safe storage, including any incompatibilities

Technical measures
Comply with applicable regulations.

Storage conditions
Keep this product in original closed container in cool, dry area away from heat, strong acids and strong oxidising agents.

Compatible materials
Stainless steel, Polyethylene, Polypropylene, PVC.

Incompatible materials
Mild steel, Aluminium, Zinc, Copper.

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

8 Exposure controls/personal protection

Control parameters

Occupational exposure limits

Not listed

Additional exposure limits under the conditions of use

Not available.

DNEL/DMEL and PNEC-Values

Not available.

Appropriate engineering controls

Avoid spraying the product. 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. Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, etc.) below recommended exposure limits.

Individual protection measures

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.

Eye/face protection:

Face shield with safety glasses 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.

Skin 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 have to 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
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

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

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

For nuisance protection use EN 149:2001 FFP moulded particle respirators.

9 Physical and chemical properties

Physical and chemical properties

Appearance (physical state, colour etc):	Clear colourless liquid
Odour:	No test data available
Odour threshold:	No test data available
pH:	10.0 - 11.0 (1% Sol. in demin water)
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 flammable or explosive
Vapour pressure:	No test data available
Vapour density:	No test data available
Relative density @ 20°C:	1.09 - 1.11
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

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

10 Stability and reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical stability

Stable under normal storage conditions.

Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

Conditions to avoid

Direct sunlight. High temperatures.

Incompatible materials

Mild steel, Aluminium, Zinc, Copper. Strong oxidising agents.

Hazardous decomposition products

Decomposes on heating. Produces fumes that may include, and are not limited to: Oxides of Carbon (CO, CO_2) and phosphorous oxides. On contact with acid or acid fumes the product emit higly toxic fumes of Sulfonates (SO_x).

11 Toxicological information

Toxicological (health) effects

Ingestion
Not classified.

Skin corrosion/irritation
Alkalies penetrate skin slowly. Extent of damage therefore depends on duration of contact. Chronic poisoning (from skin contact). Chronic dermatitis may follow repeated contact. Causing burns and irritation. ph >10.

Serious eye damage/irritation
Eye contact with concentrated alkali causes conjunctival edema & corneal destruction. Causes serious eye damage and irritation. ph >10.

Inhalation

Irritating to throat.

Respiratory or skin sensitization
Not classified.

Germ cell mutagenicity
Not classified.

Carcinogenicity
Not classified

Reproductive toxicity
Not classified.

STOT-single exposure
Not classified.

STOT-repeated exposure
Not classified.

Aspiration hazard
Not classified.

Information on the likely routes of exposure

Skin and eye contact - YES (Vapours/Mist)
Inhalation - YES (Vapours/Mist)
Ingestion - YES (Unhygienic practices)

Symptoms related to the physical, chemical and toxicological characteristics

Ingestion
Cough. Sore throat. Abdominal pain. Burning sensation. Shock or collapse. Vomiting.

Skin
Skin burns. Pain. Redness.

Eyes
Redness. Pain. Severe deep burns. Redness. Tearing.

Inhalation
Cough. Sore throat. Dyspnea, pulmonary sensitization. Burning sensation. Shortness of breath.

Delayed and immediate effects and also chronic effects from short and long term exposure

Refer section "Symptoms related to the ..." for immediate effects. No chronic effect data available but not expected to cause long term effects.

Numerical measures of toxicity (such as acute toxicity estimates)

Acute toxicity		Category
LD_{50} Oral Rat	No data	
LD_{50} Dermal	No data	
LC_{50} Inhalation	No data	

Interactive effects

No data available.

Where specific chemical data are not available

No data available.

Mixtures

No data available.

Mixture versus ingredient information

No data available.

Other information

None.

12 Ecological information

Toxicity

Acute toxicity		Category
EC_{50} Fish	No data	
EC_{50} Daphnia	>100 mg/l	Not classifiable
EC_{50} Algae	>100 mg/l	Not classifiable
EC_{50} Microorganism	>100 mg/l	Not classifiable

Persistence and degradability

Not established.

Bioaccumulative potential

Not established.

Mobility in soil

No additional information available.

Other adverse effects

No additional information available.

13 Disposal considerations

Disposal methods

Waste disposal recommendations
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. **Avoid** discharge into drains or the environment.

Ecology - waste materials
Avoid release to the environment.

Empty Container
Avoid reuse of container. Consider refilling. Rinse/Decontaminate thoroughly before discarding in trash or return to supplier.

14 Transport information

UN Number

UN3266 Class 8 PG III Exempt 200 F: 5

UN Proper Shipping Name

CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.

Transport hazard class(es)

Packing group, if applicable

III **Exempt quantity** 200Kg **Factor** 5

Environmental hazards

Low toxicity not classified towards the environment. **Avoid** discharge into the environment.

Special precautions for user

DO NOT load with Class 1.
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.

P, B, L and O provisions as per SANS 10231:2006
None

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

15 Regulatory information

Safety, health and environmental regulations specific for the product in question

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.

16 Other information

Other information

Full text of H & P - Statements referred to under section 2
Hazard statements

H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

Precautionary statements

P234	Keep only in original container.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash 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): 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.
P405	Store locked up.
P501	Dispose of contents and container in accordance with local, regional, national, international regulations.

Labelling REGULATION (EC) No 1272/2008

Signal Word

Danger

Pictograms Hazard to Human

GHS05	Corrosive Hazard

Pictogram Hazard during Transport

Class 8	Corrosive substance

Acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service
EC	Effective Concentration
EINECS	European Inventory of Existing Commercial Chemical Substances
ICSC	International Chemical Safety Cards
LC	Lethal Concentration
LD	Lethal Dose
NFPA	National Fire Protection Agency (USA)
NIOSH	National Institute for Occupational Safety and Health (USA)
OSHA	Occupational Safety and Health Administration (USA)
PEL	Permissible Exposure Limit
REL	Recommended Exposure Limit
RTECS	Registry of Toxic Effects of Chemical Substances
TWA	Time-Weighted Average

Training advice

Provide adequate information, instruction and training for operators.

Compiled by Aquatrade Water Treatment Chemicals (Pty) Ltd, R. van Rooyen, SHEQ Co-ordinator and E. Le Sar, Director.

MANUFACTURER/SUPPLIER DISCLAIMER:

IMPORTANT: This information is given without a warranty or guarantee. No suggestions for use are intended or shall be construed as a recommendation to infringe any existing patents or violate any national or local laws. Safe handling and use is the responsibility of the customer. Read the label before using this product. This information is true and accurate to the best of our knowledge.

Revision History

Revision	Date	Change
1.0	2018/12/27	Preparation of the safety data sheet according to Regulation (EC) No 1907/2006 of the European Parliament and of the Council
2.0	2019/04/02	Sections 7.2 & 8.3.
