



1 Identification

GHS Product Identifier

AQT 773

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:	None
Proper Shipping Name:	Not regulated for transport
Chemical Formula:	Mixture

Recommended use of the chemical and restriction on use

AQT 773 is a specially formulated product suitable for cleaning RO membranes and other surfaces. It is used specifically for removing calcium sulphate from membranes and other surfaces. It will also remove some other deposits and foulants but it is not cost effective for these in the absence of calcium sulphate. Not for food, drug or household use.

Supplier's details

AQUATRADE WATER TREATMENT CHEMICALS (PTY) LTD

4A Spanner Road	PO Box 357
Spartan, Kempton Park	Isando
Gauteng, South Africa	Gauteng, South Africa
1619	1600
www.aquatradesa.co.za	Tel: +27 11 394 0752
sheq@aquatradesa.co.za	Tel: +27 87 654 3326 (SDS Enquiries)

Emergency phone number

+27 82 921 0643 (Available Mon - Fri, GMT 5:00 to 20:00)

2 Hazard(s) identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute toxicity, Oral (Category 3), H301
Acute toxicity, Dermal (Category 5), H313
Skin Corrosion/Irritant (Category 3), H316
Serious Eye Damage/Eye Irritation, (Category 2A), H319

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

GHS label elements

Danger



Toxic if swallowed

May be harmful in contact with skin

Causes mild skin irritation

Causes serious eye irritation

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

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

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Specific treatment (see P305+P351+P338 on this label).

Rinse mouth.

IF eye irritation persists: Get medical advice/attention.

Store locked up.

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

Other hazards which do not result in classification

None known.

3 Composition/information on ingredients

Description	CAS Number	EINECS Number	%	Note
Confidential Business Information			0	Information available to Emergency Responders

4 First-aid measures

Description of necessary first-aid measures

Eyes:

Flush eyes with large quantities of running water for a minimum of 15 minutes. If easy to do, remove contact lenses, if worn. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eye and lids with water. **DO NOT** let victim rub eye(s). **DO NOT** attempt to neutralize with chemical agents. Oils or ointments should not be used at this time. Get medical attention.

Skin:

Remove contaminated clothing, shoes and equipment. Flush skin with plenty of water for at least 5 minutes while removing contaminated clothing and shoes. Wash contaminated clothing and shoes before reuse. Get medical attention if irritation symptoms occur.

Ingestion:

Call a physician immediately. ONLY induce vomiting at the instructions of a physician. If victim is conscious, rinse mouth and give water to drink. **Never** give anything by mouth to an unconscious person.

Inhalation:

Call a physician immediately. ONLY induce vomiting at the instructions of a physician. If victim is conscious, rinse mouth and give water to drink. **Never** give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed

Eyes:

Eye contact causes moderate irritation.

Skin:

Skin contact does not cause irritation to intact skin but may cause moderate irritation to damaged skin.

Inhalation:

Exposure to an excessive concentration of vapour, mist or aerosol of the product in solution may cause respiratory tract discomfort and/or irritation.

Ingestion:

If swallowed, this product may cause irritation of the digestive tract.

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

Attending physician should treat exposed patients symptomatically.

5 Fire-fighting measures**Suitable extinguishing media**

Use water fog or spray, dry chemical, foam or carbon dioxide extinguishing agents.

Specific hazards arising from the chemical**Fire & Explosion Hazards:**

This product is not defined as flammable or combustible and should not be a fire hazard. Under fire conditions, it does not contribute any unusual hazards.

Hazardous Combustion Products:

Thermal decomposition products may release toxic and/or hazardous fumes and gases, including nitrogen oxides, carbon oxides and ammonia.

Special protective actions for fire-fighters

As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Evacuate all non-essential personnel from the fire area. Fire fighters should wear full-face, self-contained breathing apparatus and impervious protective clothing.

6 Accidental release measures**Personal precautions, protective equipment and emergency procedures**

All personnel involved in spill cleanup should follow good industrial hygiene practices and avoid skin and eye contact by wearing appropriate personal protective equipment. Refer section 8.

Environmental precautions

Low environmental toxicity.

Methods and materials for containment and cleaning up

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

7 Handling and storage**Precautions for safe handling**

Avoid inhalation and prolonged and/or repeated skin and eye contact. Wear goggles or face shield, rubber gloves, and protective clothing when handling.

Conditions for safe storage, including any incompatibilities

Keep containers closed and dry. This material is suitable for any general chemical storage area. Isolate from incompatible materials such as strong oxidizing agents. Store solution in PVC, PE or stainless steel tanks. **Avoid** contact with aluminum, copper, copper alloys, nickel and zinc.

Maximum Storage Temperature:

Store in sealed or original containers at temperatures between 0 and 35°C [32-95°F].

General Comments:

Containers should not be opened until ready for use. It is recommended that products be retested if stored for more than 3 years. Under ideal storage conditions, the shelf-life is almost indefinite.

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

Special ventilation is usually not required under normal use conditions. However, ensure that existing ventilation is sufficient to prevent the circulation and/or accumulation of dust in the air.

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. 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.



Eye/face protection:

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)

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

If used in a mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves.

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:

Use of respiratory protection is generally not required. Where risk assessment shows air-purifying respirators are appropriate use a moulded respirator Type FFP2 conforming to EN149:2001 as a backup to engineering controls. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Other Protection – General Hygiene Considerations:

All food and smoking materials should be kept in a separate area away from the storage/use location. Eating, drinking and smoking should be prohibited in areas where there is a potential for significant exposure to this material. Before eating, drinking and smoking, hands and face should be thoroughly washed.

9 Physical and chemical properties

Physical and chemical properties

Appearance (physical state, colour etc):	White powder
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Odour:	Ammonia odour
Odour threshold:	No test data available
pH:	6.5 - 8.5 (1% Sol.)
Melting/Freezing Point:	< 5°F (-15°C) / freezing point
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:	Not applicable
Relative density:	Not applicable
Solubility(ies):	Soluble 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:	Not applicable

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

10 Stability and reactivity

Reactivity

No known reactivity.

Chemical stability

This product is stable at ambient temperatures and atmospheric pressures. It is not self-reactive and is not sensitive to physical impact.

Possibility of hazardous reactions

Aqueous solution in contact with aluminium evolves hydrogen.

Polymerization:

Hazardous polymerization is not expected to occur under normal temperatures and pressures.

Conditions to avoid

Avoid prolonged storage at elevated temperatures.

Incompatible materials

This product is incompatible with strong oxidizers. Aqueous solution in contact with aluminium evolves hydrogen. **Avoid** contact with aluminum, zinc and other metals.

Hazardous decomposition products

Under fire conditions the product may support combustion and decomposes to give off carbon oxides fumes (CO, CO₂), nitrogen oxides, ammonia and water vapour.

11 Toxicological information

Toxicological (health) effects

INHALATION:

Acute exposure:

The acute LC₅₀ for this product is not available. There were no clinical signs of toxicity when rats were exposed for 8 hours to an atmosphere enriched with a related product. Exposure to an excessive concentration of vapor, mist or fumes may cause respiratory tract discomfort and/or mild irritation.

Chronic exposure:

No known effects.

SKIN:**Acute contact:**

Dermal toxicity (LD₅₀) for this product is >2 000mg/kg. A solution containing 47% in water was not irritating to intact rabbit skin. However, moderate irritation was observed on abraded skin after each application.

Chronic contact:

No known effects.

EYES:

Moderately irritating to rabbit eyes. Severe pain and slight conjunctivitis was reported. Conjunctival irritation subsided after 48 hours.

INGESTION:**Acute exposure:**

The oral LD₅₀ is greater than 3 600 mg/kg (rat) for a 47% solution in water and greater than 1 692 mg/kg for 100% active material.

Chronic exposure:

No other known effects for the mixture.

SENSITIZATION:

No data available for this product. However, a few dermatitis patients were reported to have had positive reactions when patch tested. But no positive reactions were reported over the course of several years when it was included as part of the North American Contact Dermatitis Group's screening tray.

CARCINOGENICITY:

IARC, NTP, ACGIH or OSHA does not classify this material as a carcinogen or suspect carcinogen. A related product was not carcinogenic to rats and mice in a 2-year diet study.

MUTAGENICITY:

Related products are not mutagenic in a series of tests, including the Ames Assay and the Mouse Lymphoma. However, a related product was found to be weakly mutagenic in microbial systems.

REPRODUCTIVE TOXICITY:

Related salts have been reported, in some studies, to cause birth defects in laboratory animals only at exaggerated doses that were toxic to the mother. These effects are likely associated with zinc deficiency due to chelation. Exposures having no effect on the mother should have no effect on the fetus. The following data is available for a related product: It is not teratogenic under conditions of the test [Pregnant female rats were administered 1374mg /kg/day on gestation days 7 to 14 in half the dose, twice daily. Clinical signs of maternal toxicity included diarrhea, reduced weight gain and depressed activity.]

CYTOTOXICITY:

A related salt did not damage normal rat kidney cells at doses of 0.1 to 20 µM. Long term exposure to 0.1 or 5.0 µM was not toxic and did not inhibit DNA synthesis.

OTHER TOXICOLOGICAL EFFECTS:

A related salt administered to mice in drinking water at a dose of 25mM, caused a reduction of calcium in bone, liver and muscle. Zinc was reduced in kidneys, muscle and liver. Magnesium was reduced in bones and liver but was increased in the kidneys.

TARGET ORGANS:

Eyes and reproductive system (in presence of maternal toxicity).

There are extensive toxicity data available on related salts. An adequate representation of all the data is beyond the scope of this document.

Information on the likely routes of exposure

Skin and eye contact - YES (Dust)

Inhalation - YES (Dust)

Ingestion - YES (Unhygienic practices)

Symptoms related to the physical, chemical and toxicological characteristics

Refer "Toxicological (health) effects".

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

Refer "Toxicological (health) effects".

Numerical measures of toxicity (such as acute toxicity estimates)

Acute toxicity:		Category:
LD ₅₀ Oral	1 692.59 mg/kg	3
LD ₅₀ Dermal	>2 000 mg/kg	5
LC ₅₀ Inhalation	No data	

Interactive effects

None known.

Where specific chemical data are not available

No additional data available.

Mixtures

No additional data available.

Mixture versus ingredient information

No additional data available.

Other information

None.

12 Ecological information

Toxicity

Acute toxicity:		Category:
EC ₅₀ Fish	>200 mg/l	Not classifiable
EC ₅₀ Daphnia	>200 mg/l	Not classifiable
EC ₅₀ Algae	>200 mg/l	Not classifiable
EC ₅₀ Microorganism	No data	

Persistence and degradability

Not biodegradable (BOD/TOD test).

Bioaccumulative potential

Bioaccumulation in fish or other aquatic species is not expected due to the high water solubility. LogPOW = - 3.86 (derived from EPIWIN/KOWWIN model).

Mobility in soil

Not expected to undergo hydrolysis. The substance is not expected to enter the atmosphere significantly due to its high water solubility.

Other adverse effects

None known.

13 Disposal considerations

Disposal methods

Waste disposal recommendations:

The characteristic of corrosivity per RCRA would be exhibited by unused product if it becomes a waste material. It is the responsibility of the waste generator to evaluate whether his wastes are hazardous by characteristic or listing. 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.

14 Transport information

UN Number

NOT REGULATED FOR TRANSPORT

UN Proper Shipping Name

NOT REGULATED FOR TRANSPORT

Transport hazard class(es)

Not regulated for transport.

Packing group, if applicable

Not regulated for transport.

Environmental hazards

None known. Low toxicity to the environment.

Special precautions for user

None except those in sections 4 to 8.

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.

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

H301	Toxic if swallowed.
H313	May be harmful in contact with skin.
H316	Causes mild skin irritation.
H319	Causes serious eye irritation.

Precautionary statements

P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	IF eye irritation persists: Get medical advice/attention.
P321	Specific treatment (see P330 on this label).
P330	Rinse mouth.
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

GHS06 Acute Toxicity

Training advice

Provide adequate information, instruction and training for operators.

Compiled by Aquatrade Water Treatment CHemicals (Pty) Ltd, R. van Rooyen, SHEQ 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	2018/04/19	Preparation of the safety data sheet according to Regulation (EC) No 1907/2006 of the European Parliament and of the Council
2.0	2018/07/20	Changes to sections 1, 2, 8, 11, 14 & 16. Classification adjustment.
3.0	2019/02/08	Precautionary statements edited.