Aqua King Pool Products
Registration Holder – Hyper Pool Equipment
Po Box 32624, Fichardt Park, 9317
+27 51 432 4397 / info@hyperpoolgroup.co.za

MATERIAL SAFETY DATA SHEET (MSDS) *

Poison Centre (R.S.A.): **0860 155 5777**

SECTION 1: Identification of the substance/mixture and of the company/undertaking.

1.1 Product identifiers

- Product Name : Hydrochloric acid 30% Ultrapur.
- Commercial Name **: AQUA KING POOL ACID – 30%.**
- Product Number : 1.01514.
- Catalogue No. : 101514.
- Brand : Millipore.
- REACH No.: Not Specified.

1.2 Relevant identified uses of the substance or mixture and uses advised against

- Identified uses : Reagent for analysis, Chemical Production, and / or Balancing (reduction) of pH and / or Alkalinity levels in swimming pool water.

1.3 Details of the supplier of the safety data sheet

- Company : Merck Pty Ltd.
- 259 Davidson Road, Corner Peddie Road
- WADEVILLE, GERMISTON
- 1428
- SOUTH AFRICA
- Telephone : +27 (0) 8600 63725
- Fax : +27 (0) 860 522 329

1.4 Emergency telephone

- Emergency Phone # : 0-800-983-611 (CHEMTREC)

SECTION 2: Hazards identification.

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

- Corrosive to Metals (Category 1), H290
- Skin corrosion (Sub-category 1B), H314
- Serious eye damage (Category 1), H318
- Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335
- For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

- Pictogram –

- Signal Word – Danger.
- **Hazard statement(s):**
  - H290 May be corrosive to metals.
  - H314 Causes severe skin burns and eye damage.
  - H335 May cause respiratory irritation.
- **Precautionary statement(s):**

- P234 Keep only in original packaging.
- P261 Avoid breathing dust / fume / gas / mist / vapours / spray.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.
- Remove contact lenses, if present and easy to do. Continue rinsing.

➢ **Supplemental Hazard Statements:** None.

Reduced Labeling (<= 125 ml)

➢ Pictogram –


➢ Signal Word – Danger.

➢ **Hazard statement(s):**
- H314 Causes severe skin burns and eye damage.

➢ **Precautionary statement(s):**
- P280 Wear protective gloves / protective clothing / eye protection/ face protection.
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.
- Remove contact lenses, if present and easy to do. Continue rinsing.

➢ **Supplemental Hazard Statements:** None.

2.3 Other hazards

➢ 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.

SECTION 3: Composition/information on ingredients.

3.2 Mixtures

COMPONENT	CLASSIFICATION	CONCENTRATION
Hydrochloric Acid		
CAS-No. 7647-01-0 EC-No. 231-595-7 INEX-No. 017-002-01-X REGISTRATION-No. 01-2119484862-27-XXXX	Met. Corr. 1; Skin Corr. 1B; Eye Dam. 1; STOT SE 3; H290, H314, H318, H335 Concentration Limits: >= 0.1%: Met. Corr. 1, H290; >= 25%: Skin Corr. 1B, H314; 10 - < 25%: Skin Irrit. 2, H315;	>= 30 - < 50%

	10 - < 25%: Eye Irrit. 2, H319; >= 10%: STOT SE 3, H335;	

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

SECTION 4: First aid measures.

4.1 Description of first-aid measures

- **General advice.**
  - First aiders need to protect themselves.
- **If inhaled.**
  - After inhalation: fresh air. Call in physician.
- **In case of skin contact.**
  - In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.
- **In case of eye contact.**
  - After eye contact: rinse out with plenty of water. Immediately call in an ophthalmologist. Remove contact lenses.
- **If swallowed.**
  - After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed

- The most important known symptoms and effects are described in the labelling (see section 2.2 and / or in section 11.

4.3 Indication of any immediate medical attention and special treatment needed

- No data available.

SECTION 5: Firefighting measures.

5.1 Extinguishing media

- **Suitable extinguishing media.**
  - Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- **Unsuitable extinguishing media.**
  - For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

- Hydrogen chloride gas.
- Not combustible.

5.3 Advice for firefighters

- Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

- Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures.

6.1 Personal precautions, protective equipment, and emergency procedures

- Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
- For personal protection see section 8.

6.2 Environmental precautions

- Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

- Cover drains. Collect, bind, and pump off spills.
- Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent and neutralising material (e.g. Chemizorb® H^+, Merck Art. No. 101595).
- Dispose of properly.
- Clean up affected area.

6.4 Reference to other sections

- For disposal see section 13.

SECTION 7: Handling and storage.

7.1 Precautions for safe handling

- **Advice on safe handling.**
  - Observe label precautions.
- **Hygiene measures.**
  - Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.
  - For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

- **Storage conditions.**
  - No metal containers.
  - Tightly closed.
  - Recommended storage temperature see product label.
- **Storage class.**
  - Storage class (TRGS 510): 8B: Non-combustible, corrosive hazardous materials.

7.3 Specific end use(s)

- Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection.

8.1 Control parameters

- Ingredients with workplace control parameters.

8.2 Exposure controls

- **Personal protective equipment –**
  - **Eye/face protection**

- Tightly fitting safety goggles
  - **Skin protection**

- This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use.

When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

- Full contact:

- Material: Nitrile rubber
- Minimum layer thickness: 0,11 mm
- Break through time: 480 min
- Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

- Splash contact:

- Material: Latex gloves
- Minimum layer thickness: 0,6 mm
- Break through time: 120 min
- Material tested:Lapren® (KCL 706 / Aldrich Z677558, Size M)

- **Body Protection**

- Acid-resistant protective clothing

- **Respiratory protection**

- Recommended Filter type: filter E-(P2)
- The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.
- These measures have to be properly documented.

- **Control of environmental exposure**

- Do not let product enter drains.

SECTION 9: Physical and chemical properties.

9.1 Information on basic physical and chemical properties

a) Physical state: Liquid.
b) Colour: Light Yellow.
c) Odour: Stinging.
d) Melting point / freezing point: Melting point: - 50 °C.
e) Initial boiling point and boiling range: 85 °C at 1.013 hPa.
f) Flammability (solid,gas): No data available.
g) Upper / lower flammability or explosive limits: No data available.
h) Flash point: Not applicable.
i) Autoignition temperature: No data available.
j) Decomposition temperature: No data available.
k) pH: < 1 at 300 g/l at 20 °C.
l) Viscosity: Viscosity, kinematic: No data available. / Viscosity, dynamic: 1,74 mPa.s.
m) Water solubility at 20 °C: Soluble.
n) Partition coefficient: n-octanol/water: Not applicable.
o) Vapor pressure: 21,8 hPa at 20 °C.
p) Density: 1,15 g/cm3 at 20 °C. / Relative density: No data available.
q) Relative vapor density: No data available
r) Particle characteristics: No data available

s) Explosive properties: Not classified as explosive.
t) Oxidizing properties: None.

9.2 Other safety information

- No data available.

SECTION 10: Stability and reactivity.

10.1 Reactivity

- Corrosive in contact with metals.

10.2 Chemical stability

- The product is chemically stable under standard ambient conditions (room-temperature).

10.3 Possibility of hazardous reactions

- **Exothermic reaction with:**
  - Amines.
  - Potassium Permanganate.
  - Salts of Oxyhalogenic Acids.
  - Semimetallic Oxides.
  - Semimetallic Hydrogen Compounds.
  - Aldehydes
  - Vinylmethyl Ether.
- **Risk of ignition or formation of inflammable gases or vapours with:**
  - Carbides.
  - Lithium Ailicide.
  - Fluorine.
- **Generates dangerous gases or fumes in contact with:**
  - Aluminium.
  - Hydrides.
  - Formaldehyde.
  - Metals.
  - Strong Alkalis.
  - Sulphides.
- **Risk of explosion with:**
  - Alkali Metals.
  - Conc. Sulfuric Acid.

10.4 Conditions to avoid

- Heating.

10.5 Incompatible materials

- Metals, metal alloys. Gives off hydrogen by reaction with metals.

10.6 Hazardous decomposition products

- In the event of fire: see section 5.

SECTION 11: Toxicological information.

11.1 Information on toxicological effects

- **Mixture –**
- **Acute toxicity.**
  - Oral: No data available.
  - Inhalation: No data available.

- Dermal: No data available.
- **Skin Corrosion / Irritation.**
- Remarks: Mixture causes burns.
- **Serious Eye Damage / Eye Irritation.**
- Remarks: Mixture causes serious eye damage.
- Risk of blindness!
- **Respiratory or Skin Sensitization.**
- No data available.
- **Germ Cell Mutagenicity.**
- No data available.
- **Carcinogenicity.**
- No data available.
- **Reproductive Toxicity.**
- No data available.
- **Specific Target Organ Toxicity – Single Exposure.**
- Mixture may cause respiratory irritation.
- Respiratory system.
- **Specific Target Organ Toxicity - Repeated Exposure.**
- No data available.
- **Aspiration Hazard.**
- No data available.

11.2 Additional Information

➢ **Endocrine disrupting properties –**

- **Product:**
- Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
- **Irritation and corrosion:**
- Cough.
- Shortness of breath.
- Cardiovascular disorders.
- Risk of blindness!
- **After a latency period:**
- Cardiovascular disorders.
- Other dangerous properties cannot be excluded.
- Handle in accordance with good industrial hygiene and safety practice.

➢ **Components –**

- **Hydrochloric Acid (Acute toxicity) –**
- **Oral:**
- No data available.
- **Inhalation:**
- Cough / Difficulty in breathing.
- **Inhalation: absorption:**
- Symptoms: Mucosal irritations, Cough, Shortness of breath, Inhalation may lead to the formation of oedemas in the respiratory tract.
- Possible damages: damage of respiratory tract, tissue damage.
- Dermal: No data available.
- **Skin corrosion/irritation:**
- Skin - reconstructed human epidermis (RhE).

- Result: Corrosive (OECD Test Guideline 431).
- **Serious eye damage/eye irritation:**
- Eyes - Bovine cornea.
- Result: Corrosive (OECD Test Guideline 437).
- **Respiratory or skin sensitization**
- Maximization Test - Guinea pig.
- Result: Negative (OECD Test Guideline 406).
- **Germ cell mutagenicity:**
- Test Type: Chromosome aberration test in vitro.
- Test system: Chinese hamster ovary cells.
- Result: Conflicting results have been seen in different studies.
- **Carcinogenicity:**
- Carcinogenicity - Did not show carcinogenic effects in animal experiments. (IUCLID).
- **Reproductive toxicity:**
- No data available.
- **Specific target organ toxicity - single exposure:**
- May cause respiratory irritation.
- The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.
- Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Inhalation may lead to the formation of oedemas in the respiratory tract.
- Possible damages: Damage of respiratory tract, tissue damage.
- **Specific target organ toxicity - repeated exposure:**
- The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
- **Aspiration hazard:**
- No aspiration toxicity classification.

SECTION 12: Ecological information.

12.1 Toxicity

- **Mixture –**
- No data available.

12.2 Persistence and degradability

- No data available.

12.3 Bioaccumulative potential

- No data available.

12.4 Mobility in soil

- No data available.

12.5 Results of PBT and vPvB assessment

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

12.6 Endocrine disrupting properties

- **Product –**
- **Assessment:**
- The substance / mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

- Forms corrosive mixtures with water even if diluted.
- Harmful effect due to pH shift.
- Discharge into the environment must be avoided.
- No data available
- **Components –**

- **Hydrochloric Acid:**

- No data available.
- Toxicity to fish LC50 - Gambusia affinis (Mosquito fish) - 282 mg/l - 96 h.
- Remarks: (IUCLID).

SECTION 13: Disposal considerations.

13.1 Waste treatment methods

- **Product –**

- See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information.

14.1 UN number

- ADR/RID: 1789 IMDG: 1789 IATA: 1789.

14.2 UN proper shipping name

- ADR/RID: HYDROCHLORIC ACID.
- IMDG: HYDROCHLORIC ACID.
- IATA: Hydrochloric acid.

14.3 Transport hazard class(es)

- ADR/RID: 8 IMDG: 8 IATA: 8.

14.4 Packaging group

- ADR/RID: II IMDG: II IATA: II.

14.5 Environmental hazards

- ADR/RID: no IMDG Marine pollutant: no IATA: no.

14.6 Special precautions for user

- Tunnel restriction code : (E).
- Further information : No data available.

SECTION 15: Regulatory information.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical Safety Assessment

- A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information.

- **Full text of H-Statements referred to under sections 2 and 3 –**

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

- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.

➢ **Full text of other abbreviations –**

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative.

➢ **Classification of the mixture Classification procedure –**

CLASSIFICATION OF MIXTURE:	CLASSIFICATION PROCEDURE:
Met. Corr.1 / H290	Based on product data or assessment
Skin. Corr.1B / H314	Calculation Method
Eye. Dam.1 / H318	Calculation Method
STOT SE3 / H335	Calculation Method

- **Further information –**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regards to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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