PRODUCT NAME: GLB TLC

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Supplier
GLB
1400 Bluegrass Lakes Parkway, Alpharetta, GA, 30004
USA
Telephone: +17705215999
Telefax: +17705215959
Web: www.poolspacare.com

Manufacturer
Advantis Technologies
1200 Bluegrass Lakes Parkway
Alpharetta, GA 30004
United States of America

REVISION DATE: 02/24/2016
SUPERCEDES: 05/26/2015
MSDS Number: 000000024480
SYNONYMS: None
CHEMICAL FAMILY: None
DESCRIPTION / USE
FORMULA: Water treatment chemical
None established

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Corrosive to metals: Category 1
Acute toxicity (Inhalation): Category 4
Skin corrosion: Category 1A
Serious eye damage: Category 1
Specific target organ toxicity - single exposure: Category 3 (Respiratory system)

GHS label elements

GLB TLC
REVISION DATE: 02/24/2016
Hazard pictograms:

Signal word: Danger

Hazard statements:
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.

Precautionary statements:
Prevention:
P234 Keep only in original container.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
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/shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338 + P310 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.
P312 Call a POISON CENTER/doctor if you feel unwell.
P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage.
Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P406 Store in corrosive resistant stainless steel container with a resistant inner liner.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards
None known.
SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CAS OR CHEMICAL NAME</th>
<th>CAS #</th>
<th>% RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SULFURIC ACID</td>
<td>7664-93-9</td>
<td>10 - 16</td>
</tr>
<tr>
<td>HYDROCHLORIC ACID</td>
<td>7647-01-0</td>
<td>4 - 10</td>
</tr>
<tr>
<td>PHOSPHORIC ACID</td>
<td>7664-38-2</td>
<td>5 - 11</td>
</tr>
<tr>
<td>Polyoxyethylene octyl phenyl ether</td>
<td>9002-93-1</td>
<td>1 - 3</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

Inhalation: IF INHALED: Remove individual to fresh air. Seek medical attention if breathing becomes difficult or if respiratory irritation develops. If not breathing, give artificial respiration. Call for medical assistance.

Skin Contact: IF ON SKIN: Immediately flush skin with plenty of water for 15 minutes. If clothing comes in contact with the product, the clothing should be removed immediately and laundered before re-use. Seek medical attention if irritation develops.

Eye Contact: IF IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention immediately.

Ingestion: IF SWALLOWED: Call a physician immediately. DO NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person.

Notes to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5. FIREFIGHTING MEASURES

Flammability Summary (OSHA): Product is not known to be flammable, combustible, pyrophoric or explosive.

Flammable Properties

Fire / Explosion Hazards: Material will not ignite or burn. Reacts with most metals to form flammable hydrogen gas.

Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Fire Fighting Instructions: In case of fire, use normal fire-fighting equipment and the personal protective equipment recommended in Section 8 to include a NIOSH approved self-contained breathing apparatus. Use water spray to cool unopened containers.
Hazardous Combustion Products: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Protection for Emergency Situations: Additional protective clothing must be worn to prevent personal contact with this material. Those items include but are not limited to boots, impervious gloves, hard hat, splash-proof goggles, impervious clothing, i.e., chemically impermeable suit, self-contained breathing apparatus.

Spill Mitigation Procedures
Air Release: Keep people away from and upwind of spill/leak.
Water Release: If the product contaminates rivers and lakes or drains inform respective authorities.soluble
Land Release: Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Do not contaminate ponds, waterways or ditches with chemical or used container.

Additional Spill Information: Prevent further leakage or spillage if safe to do so. Use personal protective equipment as required. Evacuate personnel to safe areas. Remove all sources of ignition.

SECTION 7. HANDLING AND STORAGE

Handling: Do not take internally. Avoid contact with skin, eyes and clothing. If in eyes or on skin, rinse well with water. Avoid breathing vapours, mist or gas.
Storage: Store in a cool, dry and well ventilated place. Isolate from incompatible materials. Do not freeze.
Incompatible Materials for Storage: Refer to Section 10, "Incompatible Materials."
Empty Container Warning: Empty containers retain hazardous residue, dispose of accordingly.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Local exhaust ventilation or other engineering controls are normally required when handling or using this product to keep airborne exposures below the TLV, PEL or other recommended exposure limit.

Protective Equipment for Routine Use of Product
Respiratory Protection: Wear a NIOSH approved respirator if levels above the exposure limits are possible. A NIOSH approved full-face air purifying respirator with acid gas cartridge and N-95 filter. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.

Skin Protection: Avoid contact with skin. Impervious gloves, Boots, Apron. A full impervious suit is recommended if exposure is possible to a large portion of the body.

Eye Protection: Chemical resistant goggles must be worn. Face-shield

Protective Clothing Type: Neoprene, butyl-rubber, Natural Rubber

General Protective Measures: Ensure that eyewash stations and safety showers are close to the workstation location.

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components (CAS-No.)</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis (Update)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SULFURIC ACID (7664-93-9)</td>
<td>TWA</td>
<td>0.2 mg/m³</td>
<td>ACGIH (02 2014)</td>
</tr>
<tr>
<td>HYDROCHLORIC ACID (7647-01-0)</td>
<td>2 ppm</td>
<td></td>
<td>ACGIH (02 2014)</td>
</tr>
<tr>
<td>PHOSPHORIC ACID (7664-38-2)</td>
<td>TWA</td>
<td>1 mg/m³</td>
<td>ACGIH (02 2014)</td>
</tr>
<tr>
<td>STEL</td>
<td>3 mg/m³</td>
<td></td>
<td>ACGIH (02 2014)</td>
</tr>
</tbody>
</table>

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: liquid
Form: liquid
Color: amber
Odor: mild
Molecular Weight: None established
pH: (0.0 - 2.0)
Boiling Point: 212 °F (100 °C)
Melting point/freezing point: no data available
Density: no data available
Bulk Density: ()
Vapor Pressure: no data available
Vapor Density: > 1
Viscosity: no data available
Solubility in Water: soluble in cold water
Partition coefficient n-octanol/water: no data available
Evaporation Rate: no data available
Oxidizing: None established
Volatile, % by vol.: no data available
VOC Content
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489). This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.
HAP Content
no data available

SECTION 10. STABILITY AND REACTIVITY
Stability and Reactivity Summary: Stable under normal conditions.
Conditions to Avoid: Heat, flames and sparks.
Chemical Incompatibility: Strong oxidizing agents, Bases, Amines, Metals, Alkalis
Hazardous Decomposition Products: Hydrogen chloride
Decomposition Temperature: No data

SECTION 11. TOXICOLOGICAL INFORMATION
Component Animal Toxicology
Oral LD50 value:
SULFURIC ACID LD50 = 2,140 mg/kg Rat
HYDROCHLORIC ACID LD50 900 mg/kg Rabbit
PHOSPHORIC ACID LD50 = 1,530 mg/kg Rat
Polyoxyethylene octyl phenyl ether LD50 = 4,500 mg/kg Rat

Component Animal Toxicology
Dermal LD50 value:
SULFURIC ACID LD50 > 2,000 mg/kg Rabbit
HYDROCHLORIC ACID no data available
PHOSPHORIC ACID LD50 = 2,740 mg/kg Rabbit
Polyoxyethylene octyl phenyl ether no data available

Component Animal Toxicology
Inhalation LC50 value:
SULFURIC ACID LC50 1 h (aerosol) = 1.02 mg/l Rat
HYDROCHLORIC ACID Inhalation LC50 1 h 3124 ppm Rat
PHOSPHORIC ACID Inhalation LC50 1 h > 0.850 mg/l Rat
Polyoxyethylene octyl phenyl ether no data available
Product Animal Toxicity

Oral LD50 value: LD50 Believed to be approximately 4,800 mg/kg Rat
Dermal LD50 value: LD50 Believed to be > 2,000 mg/kg Rabbit
Inhalation LC50 value: no data available

Skin Irritation: Corrosive to skin
Eye Irritation: Corrosive to eyes
Skin Sensitization: This material is not known or reported to be a skin or respiratory sensitizer.

Acute Toxicity: This product is corrosive to all tissues contacted and upon inhalation, may cause irritation to mucous membranes and respiratory tract.
Subchronic / Chronic Toxicity: There are no known or reported effects from repeated exposure except those secondary to burns.

Reproductive and Developmental Toxicity: Not known or reported to cause reproductive or developmental toxicity.

SULFURIC ACID: This product did not cause reproductive or developmental effects in a study with laboratory animals.

PHOSPHORIC ACID: This material has been tested and was found not to cause reproductive toxicity in laboratory animals.

Mutagenicity: Not known or reported to be mutagenic.

SULFURIC ACID: This product has been tested for mutagenicity. Tests revealed both positive and negative results. Based on the weight of evidence, we judge this product NOT to be a mutagenic hazard.

HYDROCHLORIC ACID: This chemical has been shown to be non-mutagenic based on a battery of assays.

PHOSPHORIC ACID: This product was determined to be non-mutagenic in the Ames assay.

Carcinogenicity: This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA. The International Agency for Research on Cancer (IARC) has determined that there is sufficient evidence that occupational exposure to strong inorganic acid mists containing sulfuric acid is carcinogenic (Group I carcinogen). The following data is available for sulfuric acid:

SULFURIC ACID: This chemical is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP, or EPA. IARC evaluated several epidemiology studies where workers from a variety of industries had been exposed to a mixture of strong inorganic acid mists. IARC has concluded that there is sufficient evidence that occupational exposure to a mixture of strong inorganic-acid mists containing sulfuric acid is carcinogenic to humans (Group I carcinogen). Because cancer has not been observed in animals when they are exposed only to sulfuric acid mists, exposure to sulfuric acid by itself was not determined to be carcinogenic to humans.
HYDROCHLORIC ACID  
The International Agency for Research on Cancer (IARC) has classified this product or a component of this product as a Group 3 substance, Unclassifiable as to Its Carcinogenicity to Humans.

PHOSPHORIC ACID  
This chemical is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP, or EPA.

SECTION 12. ECOLOGICAL INFORMATION

Overview: Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems. No data for product. Individual constituents are as follows:

Ecological Toxicity Values for: SULFURIC ACID
- Mosquito fish - (nominal, static). 96 h LC50 42 mg/l
- Bluegill sunfish - 96 h LC50 10.5 mg/l
- Common shrimp (Crangon crangon) - (nominal, renewal). 48 h LC50 70-80 mg/l
- Daphnia magna, - 24 h EC50 29 mg/l

Ecological Toxicity Values for: HYDROCHLORIC ACID
- Mosquito fish - 96 h LC50 = 282 mg/l
- Bluegill - 48 h LC50 = 3.6 mg/l
- Pimephales promelas (fathead minnow) - 96 h LC50 = 21.9 mg/l
- Common shrimp (Crangon crangon) - (nominal, renewal). 48 h LC50= 260 mg/l
- Daphnia magna, - 48 h EC50= 0.492 mg/l

Ecological Toxicity Values for: PHOSPHORIC ACID
- Mosquito fish - 96 h LC50 138 mg/l

SECTION 13. DISPOSAL CONSIDERATIONS
CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THE MATERIAL. THE USER OF THE MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.

Waste Disposal Summary: If this product becomes a waste, it meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following EPA hazardous waste number: D002. As a hazardous liquid waste it must be disposed of in accordance with local, state and federal regulations.

SECTION 14. TRANSPORT INFORMATION

DOT
UN number: 1760
Description of the goods: Corrosive liquids, n.o.s.
: (Sulphuric acid, hydrochloric acid)
Class: 8
Packing group: II
Labels: 8
Emergency Response Guidebook Number: 154

TDG
UN number: 1760
Description of the goods: CORROSIVE LIQUID, N.O.S.
: (Sulphuric acid, hydrochloric acid)
Class: 8
Packing group: II
Labels: 8

IATA
UN number: 1760
Description of the goods: Corrosive liquid, n.o.s.
: (Sulphuric acid, hydrochloric acid)
Class: 8
Packing group: II
Labels: 8
Packing instruction (cargo aircraft): 855
Packing instruction (passenger aircraft): 851
Packing instruction (passenger aircraft): Y840

IMDG-CODE
UN number: 1760
Description of the goods : CORROSIVE LIQUID, N.O.S.  
(Sulphuric acid)

Class : 8
Packing group : II
Labels : 8
EmS Number 1 : F-A
EmS Number 2 : S-B

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulphuric acid</td>
<td>7664-93-9</td>
<td>1000</td>
<td>*</td>
</tr>
</tbody>
</table>

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 302
The following components are subject to reporting levels established by SARA Title III, Section 302:

Sulphuric acid 7664-93-9  
hydrochloric acid 7647-01-0

SARA 313
The following components are subject to reporting levels established by SARA Title III, Section 313:

Sulphuric acid 7664-93-9  
hydrochloric acid 7647-01-0

Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

hydrochloric acid 7647-01-0

The following chemical(s) are listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F):

Sulphuric acid 7664-93-9  
hydrochloric acid 7647-01-0
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC’s (40 CFR 60.489).

**Clean Water Act**

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

- Sulphuric acid: 7664-93-9
- Hydrochloric acid: 7647-01-0
- Phosphoric acid: 7664-38-2

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

- Sulphuric acid: 7664-93-9
- Hydrochloric acid: 7647-01-0
- Phosphoric acid: 7664-38-2

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

**US State Regulations**

**Massachusetts Right To Know**

- Sulphuric acid: 7664-93-9
- Phosphoric acid: 7664-38-2
- Hydrochloric acid: 7647-01-0

**Pennsylvania Right To Know**

- Sulphuric acid: 7664-93-9
- Phosphoric acid: 7664-38-2
- Hydrochloric acid: 7647-01-0

**New Jersey Right To Know**

- Sulphuric acid: 7664-93-9
- Phosphoric acid: 7664-38-2
- Hydrochloric acid: 7647-01-0
- Polyoxyethylene octyl phenyl ether: 9002-93-1

**California Prop 65**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**The components of this product are reported in the following inventories:**

- **TSCA**: The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.

**Inventories**
SECTION 16. OTHER INFORMATION

SECTIONS REVISED: First formulated version in SAP.
Major References: Available upon request.

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. ARCH CHEMICALS BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION BUT, MAKES NO WARRANTY THAT IT IS. ADDITIONALLY, IF THIS MSDS IS MORE THAN THREE YEARS OLD, YOU SHOULD CONTACT ARCH CHEMICALS MSDS CONTROL AT THE PHONE NUMBER ON THE FRONT PAGE TO MAKE CERTAIN THAT THIS DOCUMENT IS CURRENT.