

ALLIED UNIVERSAL CORPORATION

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MATERIAL SAFETY DATA SHEET

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR § 1910.1200.

TODAY'S DATE: 12/18/08

MSDS NUMBER: 0002

24HR EMERGENCY CHEMICAL SPILL/RELEASE PHONE NUMBER: **CHEMTREC 1-800-424-9300**

SECTION 1 CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Aqua Guard Pool Acid

Listed Strengths: 32% - 33%

CAS Number: 7664-93-9

Date MSDS Revised: November 2008 (previous revision 08/2007)

Product Use: Swimming pool, cleans tiles, stone & other masonry surfaces. See label for approved uses & use instructions.

SECTION 2 HAZARD INGREDIENTS/IDENTITY INFORMATION

Hazardous Ingredient(s): Hydrogen Sulfate

PEL (OSHA): 1 mg/m³

STEL (OSHA): 3 mg/m³

TLV (ACGIH): 1 mg/m³

TWA (ACGIH): 1 mg/m³

STEL (ACGIH): 1 mg/m³

Emergency Overview: Poison. Corrosive. Do not inhale, digest, get in eyes, or on skin or clothing. Can cause severe burns.

SECTION 3 PHYSICAL/CHEMICAL CHARACTERISTICS

Alternate Name(s):	Hydrogen Sulfate
Chemical Name:	Sulfuric Acid
Chemical Family:	Inorganic Acid
Molecular Formula:	H ₂ SO ₄
Form:	Liquid
Appearance:	Clear to Amber Liquid
Odor:	Odorless
pH:	1 @ 10gm/l
Vapor Pressure:	(mm Hg) <0.3 (20°C)
Vapor Density (Air=1):	<3.4
Boiling Point:	340°C, 644°F (@ 760 mm Hg)
Freezing Point:	-37 to -5°C (-35° to +23°F)
Solubility (Water):	Completely Soluble
Solubility (Other):	N/A
Density:	10.33 in pounds per gallon
Evaporation Rate:	Not Applicable
Specific Gravity:	1.2-1.24
Molecular Weight:	98.08

SECTION 4 STABILITY & REACTIVITY DATA

Chemical Stability	Stable <input checked="" type="checkbox"/> @ room temperature	Unstable <input type="checkbox"/>
Incompatibility (Conditions to Avoid): Moisture and Heat		
Incompatibility (Materials to Avoid): Water, most common metals, organic materials, strong reducing agents, combustible materials, strong carbonates, sulfides, cyanides, strong oxidizing agents and carbides.		
Hazardous Decomposition or Byproducts: Oxides of Sulfur and Hydrogen		
Hazardous Polymerization	May Occur <input type="checkbox"/>	Will Not Occur <input checked="" type="checkbox"/>

Note: Pool acid reacts violently with chlorine type bleaches or other household chemicals. May react with chemicals to produce toxic gases such as sulfur dioxide and hydrogen.

SECTION 5 POTENTIAL HEALTH EFFECTS AND FIRST AID INFORMATION

GENERAL: Corrosive - will cause severe burns to eyes and skin. May cause discoloration and erosion of teeth as well as irritation of the respiratory and digestive systems. May be fatal if swallowed or inhaled.

ROUTE(S) OF ENTRY AND POTENTIAL HEALTH EFFECTS	EMERGENCY & FIRST AIDE PROCEDURES
INHALATION: Inhalation of fumes, mist, fog, or spray will cause severe irritation of the upper respiratory tract, resulting in coughing, burning of the throat, and choking sensation. If inhaled deeply, edema and hemorrhage.	Remove to fresh air. If breathing is difficult, have trained person administer oxygen. If respiration stops, give mouth-to-mouth resuscitation. Also, observe for delayed pulmonary reaction. GET MEDICAL ATTENTION.
SKIN CONTACT: Corrosive to skin and can cause severe burns if not promptly washed off. Repeated contact of the skin may lead to the development of dermatitis.	Flush thoroughly with cool water under shower while removing any contaminated clothing and shoes. SEEK MEDICAL ATTENTION. Continue flushing until medical personnel arrive.
EYE CONTACT: This product rapidly causes severe eye irritation and burns to the eyes and eyelids. If the acid is not quickly removed through irrigation with water, there may be prolonged or permanent sight impairment, including blindness.	Immediately flush eyes for at least 15 minutes with large amounts of water by holding the lids apart. SEEK MEDICAL ATTENTION IMMEDIATELY after flushing eyes.
INGESTION: Mucous membranes of the mouth, throat, esophagus, and stomach are severely burned. Intense pain, nausea, vomiting and unconsciousness are all possible side effects. May cause death.	DO NOT INDUCE VOMITING. If swallowed, give several glasses of water or milk. Keep airway clear. DO NOT GIVE ANYTHING TO AN UNCONSCIOUS PERSON. SEEK MEDICAL ATTENTION IMMEDIATELY.

NOTE TO PHYSICIAN(S): Effects of overexposure are severe irritation or burns to the skin, eyes or respiratory system. A chronic effect of overexposure is lung damage, but damage may also occur to the eyes, skin, teeth and kidneys. Respiratory system medical conditions are aggravated by exposure.

SECTION 6 TOXICOLOGICAL DATA

SUMMARY: Strong Corrosive.

CARCINOGENICITY & REPRODUCTIVE EFFECTS: None Identified.

SECTION 7 FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/A	Flammable Limits (Lower): N/A	
Flammable Limits (Upper): N/A	Auto Ignition Temperature: N/A	
Decomposition Temperature: Decomposes at a high temperature.	Rate of Burning: N/A	
Explosive Power: N/A	Sensitivity to Mechanical Impact: None Identified	Sensitivity to Static Discharge: None Identified
Fire and Explosion Hazards: This product is nonflammable and nonexplosive under normal conditions of use. At high temperatures, this product can decompose to give off toxic and irritating gases. If storage containers are exposed to excessive heat, over-pressurization of the containers can result. Addition of water to the product may cause violent reaction. Explosive hydrogen may be present above the liquid level in containers.	Extinguishing Media: This product is non-combustible. Use dry chemical or carbon dioxide. Do not use water.	
Fire Fighting Procedures: Use water on combustibles burning in vicinity of this material but use care as water applied directly to this acid results in evolution of heat and causes splattering. Full acid -proof protective clothing and pressure-demand, SCBA should be provided for fire fighters in buildings or confined areas where this product is stored. Cool fire-exposed containers with water, but DO NOT get water into containers.	Fire Fighting Protective Equipment: NIOSH/MSHA approved respirator, face shield or chemical goggles, impervious gloves and boots, and a full acid proof suit.	

SECTION 8 ECOLOGICAL INFORMATION

Steps must be taken to contain liquids & prevent discharges. Do not contaminate water supplies, lakes, streams, ponds, rivers or sewer systems.

SECTION 9 DISPOSAL CONSIDERATIONS

Dispose of waste in accordance with all federal, state and local regulations regarding health and pollution. This material is a RCRA Hazardous Waste D002, corrosive.

SECTION 10 TRANSPORT INFORMATION

U.S. DOT Basic Shipping Description: Sulfuric Acid (w/less than 51% acid), 8, UN2796, II

U.S. DOT Hazardous Substance: Yes, RQ 1000- pounds (Sulfuric Acid)

U.S. DOT Marine Pollutant: No

U.S. DOT Required Label: Corrosive (see column 6, 49 CFR §172.101)

U.S. DOT Packaging Exception: Yes, if package meets the criteria of a limited quantity or consumer commodity as defined by 49 CFR §171.8, §173.144 and .154, and §172.312 and .316

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Transportation Emergency Phone Numbers: CHEMTREC 1-800-424-9300

SECTION 11 PRECAUTIONS FOR SAFE HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Protect against physical damage to containers. Keep separated from carbides, chlorates, fulminates, nitrates, picrates, powdered metals, combustible materials, and other flammable and incompatible substances. Keep away from heat, sparks, pilot lights, welding operations and open flames as toxic, corrosive, and explosive gases may be formed. Store in a cool, dry, well-ventilated area, away from incompatibles (minimum distance of 20-25 feet per NFPA Code 1) and direct sunlight. Solution corrosive to steel and other metals.

PROCESS HAZARDS: N/A

STORAGE TEMPERATURE: Store in cool, dry, ventilated area.

OTHER PRECAUTIONS: Keep containers tightly closed and stored in a corrosion-proof area. Open containers carefully to avoid spurting. Keep out of reach of children.

SECTION 12 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use specified engineering controls to transfer and process. Use local exhaust ventilation where mist or spray may be generated.

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: Face shield/w/ hard hat or ratchet and chemical goggles.

Skin Protection: Impervious gloves, boots and a full acid proof apron or suit. Contaminated clothing is to be washed with soap and water and dried before reuse. Discard contaminated shoes.

Respiratory Protection (Specify Type): Use NIOSH/MSHA approved respirator following manufacturer's recommendation where mist, spray, or decomposition products may be generated.

SECTION 13 ACCIDENTAL RELEASE MEASURES

Wear full protective equipment. Neutralize and flush area with water, taking care to properly contain and dispose of the wash water. Avoid discharges to sewers and streams. Notify applicable government authority if release is reportable or could adversely affect the environment. Please follow all Local, State and Federal Laws for clean-up and disposal of all contaminated material. **Deactivating/Neutralizing Chemicals:** Soda Ash or Lime

SECTION 14 REGULATORY INFORMATION

OSHA CLASSIFICATION, 29 CFR §1900-1910: Physical: Corrosive, Health: Burns, Corrosive.

Target Organ(s): Respiratory System, Lungs, Eyes, Skin, Teeth and Kidneys.

CERCLA AND SARA REGULATIONS, 40 CFR §300-373:

Superfund Reportable Discharge: 1,000 lb., as Sulfuric Acid

Title III Hazard Classifications: Acute- yes, Chronic - yes, Fire - no, Reactivity - yes & Pressure - no.

SARA Extremely Hazardous Substance: No

CERCLA Hazardous Material: Yes

EPA "CLEAN WATER ACT": Lists Hydrogen Sulfate as a hazardous substance which, if discharged to the water, may require immediate response to mitigate dangers to human health and the environment.

NFPA RATING:	HEALTH: 3	NPCA-HMIS RATING:	HEALTH: 3
	FLAMMABILITY: 0:		FLAMMABILITY: 0
	REACTIVITY: 2		REACTIVITY: 2
	SPECIAL HAZARDS: ACID		

SECTION 15 REFERENCES

The Merck Index, 11th ed., Merck and Co., Inc., Rahway, New Jersey, 1989.

Other Technical Documentation

CI Pamphlets

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