

## 1. Product and Company Identification

<b>Product Code:</b>	0003439	
<b>Product Name:</b>	Sulfuric Acid 4%	
<b>Company Name:</b>	Alpha-Tec Systems, Inc. 1311 SE Cardinal Ct Suite 170 Vancouver, WA 98683	<b>Phone Number:</b> 1 (360)260-2779
<b>Web site address:</b>	Alphatecsystems.com	
<b>Email address:</b>	Regulatory@Alphatecsystems.com	
<b>Emergency Contact:</b>	INFOTRAC International	00-1- (352)323-3500
<b>Information:</b>	North America	1 (800)535-5053
<b>Intended Use:</b>	For Laboratory Use Only	
<b>Product List</b>	N/A Single Product Code.	

## 2. Hazards Identification

### Skin Corrosion/Irritation, Category 2



<b>GHS Signal Word:</b>	<b>Warning</b>
<b>GHS Hazard Phrases:</b>	H315 - Causes skin irritation.
<b>GHS Precaution Phrases:</b>	P264 - Wash hands thoroughly after handling. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P362+364 - Take off contaminated clothing and wash it before reuse.
<b>GHS Response Phrases:</b>	P302+352 - IF ON SKIN: Wash with plenty of soap and water. P321 - Specific treatment see ... on this label. P332+313 - If skin irritation occurs, get medical advice/attention.
<b>GHS Storage and Disposal Phrases:</b>	No phrases apply.
<b>Potential Health Effects (Acute and Chronic):</b>	Chronic: Prolonged or repeated skin contact may cause dermatitis. Prolonged or repeated inhalation may cause nosebleeds, nasal congestion, erosion of the teeth, perforation of the nasal septum, chest pain and bronchitis. Prolonged or repeated eye contact may cause conjunctivitis. Effects may be delayed. Workers chronically exposed to sulfuric acid mists may show various lesions of the skin, tracheobronchitis, stomatitis, conjunctivitis, or gastritis. Occupational exposure to strong inorganic acid mists containing sulfuric acid is carcinogenic to humans.
<b>Inhalation:</b>	May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. Causes chemical burns to the respiratory tract. Inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Because its vapor pressure is negligible, it exists in the air only as a mist or spray. Exposure may impair lung function and cause mucostasis (reduced mucous clearance).
<b>Skin Contact:</b>	Causes skin burns. The severity of injury depends on the concentration of the solution and the duration of exposure.
<b>Eye Contact:</b>	Causes severe eye burns. May cause irreversible eye injury. May cause blindness. May cause permanent corneal opacification. The severity of injury depends on the concentration of the solution and the duration of exposure.
<b>Ingestion:</b>	May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns.

### 3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration	RTECS #
7664-93-9	Sulfuric acid {Sulphuric Acid; Hydrogen sulfate; Oil of vitriol}	3.9 -4.1 %	WS5600000

### 4. First Aid Measures

**Emergency and First Aid**
**Procedures:**

<b>In Case of Inhalation:</b>	POISON material. If inhaled, get medical aid immediately. Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
<b>In Case of Skin Contact:</b>	Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.
<b>In Case of Eye Contact:</b>	In case of contact, immediately flush eyes with plenty of water for a t least 15 minutes.
<b>In Case of Ingestion:</b>	If swallowed, do NOT induce vomiting. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.
<b>Note to Physician:</b>	Monitor arterial blood gases, chest x-ray, and pulmonary function tests if respiratory tract irritation or respiratory depression is evident. Treat dermal irritation or burns with standard topical therapy. Effects may be delayed. Do NOT use sodium bicarbonate in an attempt to neutralize the acid.

### 5. Fire Fighting Measures

<b>Flash Pt:</b>	NP Method Used: Estimate
<b>Explosive Limits:</b>	LEL: No data. UEL: No data.
<b>Autoignition Pt:</b>	NA
<b>Suitable Extinguishing Media:</b>	Use extinguishing media appropriate to surrounding fire conditions. Do NOT get water inside containers.
<b>Fire Fighting Instructions:</b>	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Use water spray to keep fire-exposed containers cool. Substance is noncombustible. Contact with water can cause violent liberation of heat and splattering of the material. Contact with metals may evolve flammable hydrogen gas. Runoff from fire control or dilution water may cause pollution. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Strong dehydrating agent which may cause ignition of finely divided materials on contact.
<b>Flammable Properties and Hazards:</b>	No data available.
<b>Hazardous Combustion Products:</b>	No data available.

### 6. Accidental Release Measures

**Steps To Be Taken In Case Material Is Released Or Spilled:** Use proper personal protective equipment as indicated in Section 8.  
 Spills/Leaks: Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Carefully scoop up and place into appropriate disposal container. Provide ventilation. Do not get water inside containers. Cover with dry earth, dry sand, or other non-combustible material followed with plastic sheet to minimize spreading and contact with water.

### 7. Handling and Storage

**Precautions To Be Taken in Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Do not allow water to get into the container because of violent reaction. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Discard contaminated shoes. Use only with adequate ventilation. Do not breathe spray or mist. Do not use with metal spatula or other metal items. Inform laundry personnel of contaminant's hazards.

**Precautions To Be Taken in Storing:** Do not store near combustible materials. Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Do not store near alkaline substances. Store protected from moisture. Ideally, sulfuric acid should be stored in isolation from all other chemicals in an approved acid or corrosives safety cabinet.

### 8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
7664-93-9	Sulfuric acid {Sulphuric Acid; Hydrogen sulfate; Oil of vitriol}	PEL: 1 mg/m3	TLV: (1 mg/m3) STEL: (3 mg/m3)	No data.

**Respiratory Equipment (Specify Type):** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Eye Protection:** Wear chemical splash goggles and face shield.

**Protective Gloves:** Wear neoprene gloves, apron, and/or clothing. Viton gloves are recommended.

**Other Protective Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Engineering Controls (Ventilation etc.):** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use a corrosion-resistant ventilation system.

### 9. Physical and Chemical Properties

**Physical States:** [ ] Gas [X] Liquid [ ] Solid

**Appearance and Odor:** Colorless/Clear.  
Odorless.

**pH:** No data.

**Melting Point:** No data.

**Boiling Point:** No data.

**Flash Pt:** NP Method Used: Estimate

**Evaporation Rate:** No data.

**Flammability (solid, gas):** No data available.

**Explosive Limits:** LEL: No data. UEL: No data.

**Vapor Pressure (vs. Air or mm Hg):** No data.

**Vapor Density (vs. Air = 1):** No data.

**Specific Gravity (Water = 1):** 1.03  
**Solubility in Water:** No data.  
**Octanol/Water Partition Coefficient:** No data.  
**Percent Volatile:** N.D.  
**Autoignition Pt:** NA  
**Decomposition Temperature:** No data.  
**Viscosity:** No data.

### 10. Stability and Reactivity

**Stability:** Unstable [  ] Stable [  ]

**Conditions To Avoid - Instability:** Excess heat, Exposure to moist air or water, Note: Use great caution in mixing with water due to heat evolution that causes explosive spattering. Always add the acid to water, never the reverse.

**Incompatibility - Materials To Avoid:** Metals. Oxidizing agents, Reducing agents, Bases, acrylonitrile, chlorates, Finely powdered metals, nitrates, perchlorates, permanganates, epichlorohydrin, aniline, carbides, fulminates, picrates, Organic materials.

**Hazardous Decomposition or Byproducts:** oxides of sulfur.

**Possibility of Hazardous Reactions:** Will occur [  ] Will not occur [  ]

**Conditions To Avoid - Hazardous Reactions:** No data available.

### 11. Toxicological Information

**Toxicological Information:** No data available.

**Carcinogenicity/Other Information:** CAS# 7664-93-9: ACGIH: A2 - Suspected Human Carcinogen. California: carcinogen, initial date 3/14/03 (listed as Strong inorganic acid mists containing sulfur. NTP: Known carcinogen (listed as Strong inorganic acid mists containing s).

### 12. Ecological Information

No data available.

### 13. Disposal Considerations

**Waste Disposal Method:** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.  
 RCRA P-Series: None listed.  
 RCRA U-Series: None listed.

### 14. Transport Information

**GHS Classification:** Skin Corrosion/Irritation, Category 2 - Warning! Causes skin irritation

**LAND TRANSPORT (US DOT):**

**DOT Proper Shipping Name:** Sulfuric acid [with not more than 51% acid]  
**DOT Hazard Class:** 8 CORROSIVE  
**UN/NA Number:** UN2796 **Packing Group:** II



**LAND TRANSPORT (Canadian TDG):**

**TDG Shipping Name:** Sulfuric acid [with not more than 51% acid]  
**UN Number:** 2796 **Packing Group:** II  
**Hazard Class:** 8 - CORROSIVE **TDG Classification:**

**LAND TRANSPORT (European ADR/RID):**

**ADR/RID Shipping Name:** Sulfuric acid [with not more than 51% acid]  
**UN Number:** 2796 **Packing Group:** II  
**Hazard Class:** 8 - CORROSIVE

**AIR TRANSPORT (ICAO/IATA):**

**ICAO/IATA Shipping Name:** Sulfuric acid [with not more than 51% acid]

**15. Regulatory Information**

**EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists**

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
7664-93-9	Sulfuric acid {Sulphuric Acid; Hydrogen sulfate; Oil of vitriol}	Yes 1000 LB	Yes 1000 LB	Yes

**This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:**

Yes  No Acute (immediate) Health Hazard  
 Yes  No Chronic (delayed) Health Hazard  
 Yes  No Fire Hazard  
 Yes  No Sudden Release of Pressure Hazard  
 Yes  No Reactive Hazard

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
7664-93-9	Sulfuric acid {Sulphuric Acid; Hydrogen sulfate; Oil of vitriol}	CA PROP.65: No; MA Oil/HazMat: Yes; NJ EHS: Yes - 1761; PA HSL: Yes - E

**16. Other Information**

**Revision Date:** 12/28/2016

**Additional Information About This Product:** No data available.

**Document & Change Control Number** SDS0192.C CC16-312.

**Company Policy or Disclaimer:**

Disclaimer  
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.