




SOUTHERN IONICS INCORPORATED (SII)
SAFETY DATA SHEET

SDS NO. 201
Effective Date: April 30, 2015
Revision Date: October 30, 2018

I. Product and Company Information

SII Product Name(s):	Acid Alum, Aqueous Solution	Synonym:	Dilute sulfuric acid
Chemical Name:	Sulfuric Acid/Aluminum Sulfate/ Sodium Sulfate Aqueous Solution	CAS Number:	Mixture
Manufacturer's Name: Southern Ionics Incorporated 579 Commerce Street West Point, MS 39773 Customer Service: 1-800-953-3585 Web Site www.southernionics.com	Emergency Contacts: Afterhours (Southern Ionics) 1-888-610-2379 For Chemical Emergency, Spill or Accident Call CHEMTREC at 1-800-424-9300 CHEMTREC CCN - 20596		

II. Hazard Identification

OSHA HCS / GHS Classification(s):		Hazard Statement(s):	
Corrosive to Metals, Category 1		May be corrosive to metals.	
Serious Eye Damage, Category 1		Causes severe eye damage.	
Skin Corrosion, Category 1		Causes severe skin burns.	
Specific Target Organ Toxicity - single exposure, Category 3, Respiratory system		May cause respiratory irritation.	
Acute Aquatic Hazard, Category 3		Harmful to aquatic life.	
Signal Word:	Precautionary Statement(s):		
Danger	Prevention:	Wear protective gloves, clothing, eye and face protection.	
Symbol(s): 		Wash affected body part thoroughly after handling.	
		Avoid breathing mist or vapors.	
		Use in well ventilated areas.	
		Keep in original container.	
		Avoid release to the environment.	
		Response:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
IF ON SKIN (or hair): Remove all contaminated clothing. Rinse skin with water.			
IF INHALED: Remove victim to fresh air and keep comfortable for breathing.			
IF SWALLOWED: Rinse mouth. Do not induce vomiting.			
Immediately call a POISON CENTER or physician.			
Wash contaminated clothing before reuse			

III. Composition / Information on Ingredients

Chemical Name:	CAS Reg #'s	%
Sulfuric Acid	7664-93-9	11.0 - 20.0
Aluminum Sulfate (Al ₂ (SO ₄) ₃ · 14 H ₂ O)	10043-01-3	0.0 - 5.50
Sodium Sulfate	7757-82-6	0.0 - 3.50
Water	7732-18-5	Balance

IV. First Aid Measures

Eyes:	Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Remove any contact lenses. Seek medical attention.
Dermal / Skin:	Remove contaminated clothing and wash exposed area thoroughly with soap and water. Seek medical attention, if you feel unwell.
Inhalation:	Move to fresh air immediately. If breathing is difficult, give oxygen. Seek medical attention, if you feel unwell.
Ingestion:	If swallowed, DO NOT induce vomiting. Rinse mouth. Seek medical attention, if you feel unwell.

V. Fire Fighting Measures

NFPA Hazard Rating:	Health (Blue)	Fire (Red)	Reactivity (Yellow)	Special Instructions (White)
	3	0	2	None
NFPA Hazard Classification: 0 = Least 1 = Slight 2 = Moderate 3 = High 4 = Extreme				
Extinguishing Media:	Use extinguishing media appropriate for surrounding fire.			
Special Firefighting Procedure:	Wear NIOSH-approved self-contained breathing apparatus (SCBA). Use water spray to keep containers cool and to knock down fumes. CAUTION: when subject to excess heat, product releases additional sulfur dioxide gas.			

VI. Accidental Release Measures

Precaution if Spilled or Released:	Steps should be taken to contain spilled liquids and prevent discharges to streams or sewer systems.
Neutralizing Chemicals:	May be neutralized with sodium hydroxide, lime, or soda ash to neutral pH.

VII. Handling and Storage

Handling:	Handle all chemicals with respect. Keep separated from incompatible substances. Use caution when combining with water. DO NOT add water to acid, ALWAYS add acid to water while stirring to prevent release of heat, steam and fumes. Handle only with equipment, materials and supplies specified by their manufacturer as being compatible and appropriate for use with this product.
Storage:	Store at appropriate temperature to protect from freezing or crystallization. Consult the appropriate SII Product Bulletin for temperature recommendations. Do not store this material near food, animal feed or drinking water. Store in well ventilated area. Store away from excessive heat and from reactive materials. Keep container tightly closed when not in use.

VIII. Exposure Control / Personal Protective Equipment

Component Workplace Control Parameters:				
Components:	CAS-No.	Value	Parameters	Basis
Sulfuric Acid	7664-93-9	TWA	1mg/m ³	NIOSH
Aluminum Sulfate	10043-01-3	TWA	5mg/m ³	OSHA, aluminum in the form of soluble salts
Engineering Controls:	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.			
General Hygiene:	Practice good personal hygiene after using this material, especially before eating, drinking, smoking or using the toilet.			
Personal Protection Equipment:				
Eye:	Use chemical splash goggles and face shield. Eye protection worn must be compatible with respiratory protection system employed.			

Skin:	Chemically-resistant gloves/ clothing and footwear should be worn whenever this material is handled. Replaced PPE immediately if there is any indication of degradation or chemical breakthrough.			
Respiratory:	None required under normal conditions. When conditions warrant a respirator, use NIOSH approved respirator.			
Other Protective Items:	Where splash is possible, full chemically-resistant protective clothing and boots are required. Ensure that eyewash stations and safety showers are proximal to the work location.			
HMIS Classification:	Health (Blue)	Flammability (Red)	Physical Hazard (Yellow)	PPE (White)
	3	0	2	See PPE
Hazard Classification: 0 = Minimal 1= Slight 2 = Moderate 3 = Serious 4 = Severe				

IX. Physical and Chemical Properties

Physical State:	Liquid	pH:	Less than 1.0
Appearance:	Clear, colorless to amber liquid	Molecular Weight:	Mixture
Odor:	Slight acidic	Odor Threshold:	Data Not Available
Specific Gravity:(H₂O=1)	1.1 - 1.2 @ 77°F/25°C	Weight per Gallon:	9.3 - 10.0 @ 77°F/25°C
Vapor Density: (Air=1)	Heavier than air	Vapor Pressure:	15-20 mm Hg @ 77°F/25°C
Boiling Point:	217°F/103°C	Freezing/Melting Point:	10°F /12°C
Lower Explosive Limit:	Not Applicable	Upper Explosive Limit:	Not Applicable
Flash Point:	Not Applicable	Autoignition Temp:	Not Applicable
Solubility in Water:	Dilutable	:	
Other:			

X. Stability and Reactivity Data

Chemical Stability:	Product is stable under normal or expected use
Conditions To Avoid:	Avoid exposure to excessive heat.
Incompatible Materials:	Avoid contact with the following: acids and oxidizing agents
Hazardous Products of Decomposition:	Thermal decomposition may yield the following: toxic oxides of sulfur.

XI. Toxicological Information

Routes of Entry:	<input checked="" type="checkbox"/> Eyes <input checked="" type="checkbox"/> Skin <input checked="" type="checkbox"/> Ingestion <input checked="" type="checkbox"/> Inhalation						
Sign and Symptoms of Exposure:	May cause irritation to eyes, skin and respiratory passages						
Eye Contact:	Causes severe eye damage.						
Ingestion:	May be harmful if swallowed.						
Skin Contact:	Causes severe skin burns.						
Inhalation:	May cause respiratory irritation.						
Carcinogenicity: Sulfuric Acid (mist)¹	IARC	Group 1	NPT	Known	OSHA	No	
Ingredient Name:	Species	Test	Route	Results			
Sulfuric acid	Rat	2140 mg/kg	oral	LD50			
Aluminum Sulfate	Rat	2000 mg/kg	oral	LD50			
Comments:	¹ An increased risk of cancer in humans has been shown in work-place based studies. This hazard is related to exposure to strong inorganic acid mist and not the acid solution.						

XII. Ecological Information

Ingredient Name:	Species	Test	Period	Results
Sulfuric Acid	Bluegill Sunfish	>16 <28 mg/L	48 hrs	LC50
Aluminum Sulfate	Mosquito Fish	235 ppm	96 hrs	LC50
Comments:				

XIII. Disposal Considerations

Waste Disposal: Always dispose of material in accordance with local, state, and federal regulations.

XIV. Transportation Information

Proper Shipping Name: Sulfuric Acid with not more than 51% acid.
DOT Classification: 8
Identification Number: 2796 **Packing Group:** II **Other Labels:** Corrosive
Comments: Not Available

XV. Regulatory Information Based on Component(s)

Inventory Status:		US Regulations:	
U. S. TSCA	Yes	SARA 302 TPQ	1,000 lbs as Sulfuric Acid
Europe EINECS	Yes	SARA 304 RQ	1000 lbs as Sulfuric Acid
Canadian DSL	Yes	SARA 313 List	Sulfuric Acid is listed in aerosol form only
Japan ENCS	Yes	CERCLA (RQ)	1,000 lbs as Sulfuric Acid
Korean KECI	Yes	RCRA 261.33	Not Listed
Philippines PICCS	Yes	CERCLA (RQ)	5,000 lbs as Aluminum Sulfate
Australian AICS	Yes		
		SARA 311/312	<input checked="" type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Fire <input type="checkbox"/> Release of Pressure <input checked="" type="checkbox"/> Reactive
International Regulations:		Other Regulations:	
Canada WHMIS	D-2B	Material causing other toxic effects	California PROP 65 Not Listed
Canada WHMIS	E	Corrosive	
Comments:	Canada WHMIS is based on Aluminum Sulfate as WHMIS only classified Sulfuric Acid at greater than 51%		

XVI. Other Information

NSF Certification: _____
Other: _____
Revision Notes: 10.30.18: Revised wording in the appearance section of Physical & Chemical Properties.
MSDS Replacements SII MSDS 023 Acid Alum, Aqueous Solution, SII MSDS 022 Sulfuric Acid/Dilute Aqueous Solution and SII MSDS 066 Custom Sulfuric Acid Solution.

SALES OFFICE

For Product Information:
TEL: 662-494-3055
FAX: 662-494-2828

Post Office Drawer 1217
West Point, MS 39773

To Place An Order:
TEL: 800-953-3585
FAX: 800-953-3588

IMPORTANT

Although the information contained is offered in good faith, SUCH INFORMATION IS EXPRESSLY GIVEN WITHOUT ANY WARRANTY (EXPRESS OR IMPLIED) OR ANY GUARANTEE OF ITS ACCURACY OR SUFFICIENCY and is taken at the user's sole risk. User is solely responsible for determining the suitability of use in each particular situation. SII specifically DISCLAIMS ANY LIABILITY WHATSOEVER FOR THE USE OF SUCH INFORMATION, including without limitation any recommendation which user may construe and attempt to apply which may infringe or violate valid patents, licenses, and/or copyright.