



**SOUTHERN IONICS INCORPORATED (SII)**  
**SAFETY DATA SHEET**

SDS NO. 221  
Effective Date: April 30, 2015  
Revision Date: September 25, 2020

**I. Product and Company Information**

<b>SII Product Name(s):</b>	Zirconic® HS	<b>Synonym:</b>	N/A
<b>Chemical Name:</b>	Zirconium Sulfate Solution	<b>CAS Number:</b>	14644-61-2
<b>Manufacturer's Name:</b> Southern Ionics Incorporated 579 Commerce Street West Point, MS 39773 Customer Service: 1-800-953-3585 Web Site: <a href="http://www.southernionics.com">www.southernionics.com</a>	<b>Emergency Contacts:</b> 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**

<b>OSHA HCS / GHS Classification(s):</b>	<b>Hazard Statement(s):</b>
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 Systemic Toxicity - single exposure, Category 3, Respiratory system	May cause respiratory irritation.
Acute Aquatic Hazard, Category 3	Harmful to aquatic life.
<b>Signal Word:</b> Danger	<b>Precautionary Statement(s):</b>
<b>Symbol(s):</b> 	<b>Prevention:</b>
	Wear protective gloves, clothing, eye, and face protection.
	Wash affected body part thoroughly after handling.
	Avoid breathing mist and vapors.
	Use in well-ventilated areas.
	Keep in original container.
	Avoid release to the environment.
	<b>Response:</b>
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): Immediately remove all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse.	
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 doctor/ physician.	

**III. Composition / Information on Ingredients**

<b>Chemical Name(s):</b>	<b>CAS Number(s):</b>	<b>%</b>
Zirconium Basic Sulfate	62010-10-0	40 - 60
Sulfuric Acid	7664-93-9	10 - 20
Water	7732-18-5	Balance

#### IV. First Aid Measures

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

#### V. Fire Fighting Measures

<b>NFPA Hazard Rating:</b>	Health (Blue)	Fire (Red)	Reactivity (Yellow)	Special Instructions (White)
	3	0	2	None
<b>NFPA Hazard Classification: 0 = Least 1 = Slight 2 = Moderate 3 = High 4 = Extreme</b>				
<b>Extinguishing Media:</b>	Use extinguishing media appropriate for surrounding fire.			
<b>Special Firefighting Procedure:</b>	This solution is acidic and corrosive to skin, eyes, and mucous membranes. Wear NIOSH-approved, self-contained breathing apparatus (SCBA).			

#### VI. Accidental Release Measures

<b>Precaution if Spilled or Released:</b>	Steps should be taken to contain spilled liquids and prevent discharges to streams or sewer systems.
<b>Neutralizing Chemicals:</b>	Neutralize with appropriate alkali, such as sodium hydroxide or soda ash, to a neutral pH.

#### VII. Handling and Storage

<b>Handling:</b>	Handle all chemicals with respect. Keep separated from incompatible substances. Handle only with equipment, materials, and supplies specified by their manufacturer as being compatible and appropriate for use with this product.
<b>Storage:</b>	Store at appropriate temperature to protect from freezing or crystallization. Store away from excessive heat and from reactive materials. Do not store this material near food, animal feed or drinking water. Store in well-ventilated area. Keep container tightly closed when not in use.

#### VIII. Exposure Control / Personal Protective Equipment

<b>Component Workplace Control Parameters:</b>				
<b>Components:</b>	<b>CAS Numbers</b>	<b>Value</b>	<b>Parameters</b>	<b>Basis</b>
Zirconium Sulfate	14644-61-2	TWA	5 mg/m <sup>3</sup>	OSHA as Zirconium
Sulfuric Acid	7664-93-9	TWA	1 mg/m <sup>3</sup>	OSHA
<b>Engineering Controls:</b>	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.			
<b>General Hygiene:</b>	Practice good personal hygiene after using this material, especially before eating, drinking, smoking, or using the toilet.			

## VIII. Exposure Control / Personal Protective Equipment (continued)

Personal Protection Equipment:				
<b>Eye:</b>	Use chemical splash goggles and face shield. Eye protection worn must be compatible with respiratory protection system if employed.			
<b>Skin:</b>	Chemically resistant gloves, clothing, and footwear should be worn whenever this material is handled.			
<b>Respiratory:</b>	None required under normal conditions. When conditions warrant a respirator, use NIOSH-approved respirator.			
<b>Other Protective Items:</b>	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.			
<b>HMIS Classification:</b>	Health (Blue)	Flammability (Red)	Physical Hazard (Yellow)	PPE (White)
	3	0	2	See PPE
<b>Hazard Classification: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe</b>				

## IX. Physical and Chemical Properties

<b>Physical State:</b>	Liquid	<b>pH:</b>	< 1.0
<b>Appearance:</b>	Clear	<b>Molecular Weight:</b>	Not Determined
<b>Odor:</b>	Slightly acidic	<b>Odor Threshold:</b>	Not Available
<b>Specific Gravity: (H<sub>2</sub>O=1)</b>	1.40 - 1.60 @ 60°F / 15.6°C	<b>Weight per Gallon:</b>	11.6 - 13.4 lbs. @ 60°F / 15.6°C
<b>Vapor Density: (Air=1)</b>	Heavier than air	<b>Vapor Pressure:</b>	Less than 450 mm Hg @ 86°F / 30°C
<b>Boiling Point:</b>	213.8°F / 101°C	<b>Freezing/Melting Point:</b>	5°F / -20°C
<b>Lower Explosive Limit:</b>	Not Applicable	<b>Upper Explosive Limit:</b>	Not Applicable
<b>Flash Point:</b>	Not Applicable	<b>Autoignition Temp:</b>	Not Applicable
<b>Solubility in Water:</b>	Miscible in water	<b>Other:</b>	

## X. Stability and Reactivity Data

<b>Chemical Stability:</b>	Product is stable under normal or expected use.
<b>Conditions to Avoid:</b>	Avoid exposure to excessive heat. Heating will liberate sulfuric acid mist and sulfur dioxide gas.
<b>Incompatible Materials:</b>	Avoid contact with combustible materials, carbides, chlorates, nitrates, fulminates, picrates, metallic powders, sulfides, strong reducing agents, or strong alkalies.
<b>Hazardous Products of Decomposition:</b>	Thermal decomposition may yield Sulfur Trioxide.

## XI. Toxicological Information

<b>Routes of Entry:</b>	<input checked="" type="checkbox"/> Eyes <input checked="" type="checkbox"/> Skin <input checked="" type="checkbox"/> Ingestion <input checked="" type="checkbox"/> Inhalation
<b>Sign and Symptoms of Exposure:</b>	May cause irritation to eyes, skin, and respiratory passages.
<b>Eye Contact:</b>	Causes severe eye damage.
<b>Ingestion:</b>	May be harmful if swallowed.
<b>Skin Contact:</b>	Causes severe skin burns.
<b>Inhalation:</b>	May be harmful if inhaled. May cause respiratory tract irritation.

### XI. Toxicological Information (continued)

<b>Carcinogenicity:</b> Sulfuric Acid (mist) <sup>1</sup>	NPT	Known	IARC	Group 1	OSHA	Not Listed
<b>Ingredient Name:</b>	<b>Species</b>	<b>Test</b>	<b>Route</b>		<b>Results</b>	
Sulfuric acid	Rat	2140 mg/kg	Oral		LD50	
Zirconium Sulfate	Rat	3500 mg/kg	Oral		LD50	
<b>Comments:</b>	<sup>1</sup> 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

<b>Ingredient Name:</b>	<b>Species</b>	<b>Test</b>	<b>Period</b>	<b>Results</b>
Sulfuric Acid	Daphnia magna	16 - 28 mg/L	48 hours	LC50
Zirconium Sulfate <sup>2</sup>	Flathead minnow	14 mg/L	96 hours	LC50
Zirconium Sulfate <sup>3</sup>	Flathead minnow	145 mg/L	96 hours	LC50
<b>Comments:</b>	<sup>2</sup> This information was based on a water hardness of 20. This result is being used for the GHS classification of this material.			
	<sup>3</sup> This information was based on a water hardness of 400.			

### XIII. Disposal Considerations

<b>Waste Disposal:</b>	Always dispose of material in accordance with local, state, and federal regulations.
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### XIV. Transportation Information

<b>Proper Shipping Name:</b>	Corrosive Liquid, Acidic, Inorganic, n.o.s. (Zirconium Sulfate Solution)				
<b>DOT Classification:</b>	8				
<b>Identification Number:</b>	3264	<b>Packing Group:</b>	II	<b>Other Labels:</b>	Corrosive
<b>Comments:</b>					

### XV. Regulatory Information

<b>Inventory Status:</b>		<b>US Regulations:</b>	
U. S. TSCA	Yes	SARA 302 TPQ	Not Listed
Europe EINECS	Yes	SARA 304 RQ	Not Listed
Canadian DSL	Yes	SARA 313 List	Not Listed
Japan ENCS	Yes	CERCLA (RQ)	5,000 lbs
Korean KECI	Yes	RCRA 261.33	Not Listed
Philippines PICCS	Yes		
Australian AICS	Yes		
China IECSC	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
<b>International Regulations:</b>			<b>Other Regulations:</b>
Canada WHMIS	Not Listed		California PROP 65
EINECS	238-694-4		Yes (Acid mist)
<b>Comments:</b>			

## XVI. Other Information

<b>Other:</b>	
<b>Revision Notes:</b>	09.25.20 Reviewed as part of a 3-year review process. Updated logo and formatting.
<b>MSDS Replacements</b>	SII MSDS 019 Zirconic® HS

### 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

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