




I. Product and Company Information

SII Product Name(s):	Zirconic® OC Solution	Synonym:	N/A
Chemical Name(s):	Zirconium Oxychloride (Zirconyl Chloride)	CAS Number:	7699-43-6
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):	
Skin Corrosion, Category 1		Causes severe skin burns.	
Serious Eye Damage, Category 1		Causes serious eye damage.	
Corrosive to Metals, Category 1		May be corrosive to metals.	
Acute Aquatic Toxicity, Category 3		Harmful to aquatic life.	
Signal Word: Danger	Precautionary Statement(s):		
Symbol(s): 	Prevention:	Wear eye and face protection.	
		Wear protective gloves and clothing.	
		Wash affected body part thoroughly after handling.	
		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: Immediately remove all contaminated clothing. Rinse skin with water.	
Absorb spillage to prevent material damage. For specific treatment, see Section IV. First Aid Measures.			

III. Composition / Information on Ingredients

Chemical Name(s):	CAS Number(s):	%
Zirconium Oxychloride Crystals	7699-43-6	45 - 60
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 for at least 15 minutes. 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)
	2	0	1	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 subjected to excess heat, product releases additional hydrogen chloride fumes			
Unusual Fire & Explosion Hazards:	Material stored in an area where a fire occurs will generate hydrogen chloride fumes only if significant heating occurs.			

VI. Accidental Release Measures

Precaution if Spilled or Released:	Sweep up spilled material and dispose.
Neutralizing Chemicals:	Neutralize with appropriate alkali, such as soda ash or slaked lime.

VII. Handling and Storage

Handling:	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.
Storage:	Store in a corrosive resistant container. Store at appropriate temperature to protect from freezing or crystallization. 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 Number	Value	Parameters	Basis
Zirconium Oxychloride	7699-43-6	TWA	5 mg/m ³	OSHA (as zirconium metal)
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 should be worn whenever this material is handled.			
Respiratory:	None for handling small quantities. This material is not dusty. Use appropriate NIOSH-approved respirator if hydrogen chloride or zirconium exposure limit might be exceeded.			
Other Protective Items:	Wear impervious apron if appropriate to avoid getting material onto clothing. Ensure that eyewash stations and safety showers are proximal to the work location.			
HMIS Classification:	Health (Blue)	Flammability (Red)	Physical Hazard (Yellow)	PPE (White)
	2	0	1	See PPE
Hazard Classification: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe				

IX. Physical and Chemical Properties

Physical State:	Liquid	pH:	< 1 for 10% Solution
Appearance:	Pale yellow to colorless solution	Molecular Weight:	324
Odor:	Slight hydrochloric acid odor	Odor Threshold:	No Data Available
Specific Gravity: (H₂O=1)	1.30 - 1.37 @ 77°F / 25°C	Weight per Gallon:	10.8 - 11.4 lbs. @ 77°F / 25°C
Vapor Density: (Air=1)	Heavier than air	Vapor Pressure:	< 450 mm Hg at 86°F / 30°C
Boiling Point:	212°F / 100°C	Freezing/Melting Point:	5°F / -15°C
Lower Explosive Limit:	Not Applicable	Upper Explosive Limit:	Not Applicable
Flash Point:	Not Applicable	Autoignition Temp:	Not Applicable
Solubility in Water:	Soluble	Other:	

X. Stability and Reactivity Data

Chemical Stability:	Product is stable under normal or expected use.
Conditions to Avoid:	Exposure to heat.
Incompatible Materials:	Avoid contact with combustible materials, carbides, chlorates, nitrates, fulminates, picrates, metallic powders, sulfides, strong reducing agents, or strong alkalies.
Hazardous Products of Decomposition:	This material releases hydrogen chloride gas when heated above 770°F (410°C).

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 be harmful if dust is inhaled. May cause respiratory tract irritation.						
Carcinogenicity:	Not Listed	NPT	Not Listed	IARC	Not Listed	OSHA	Not Regulated
Ingredient Name:	Species		Test		Route		Results
Zirconium Oxychloride	Rat		3500 mg/kg		oral		LD50
Comments:	Toxicity of this compound is primarily due to its acidic behavior.						

XII. Ecological Information

Ingredient Name:	Species	Test	Period	Results
Zirconium Oxychloride ¹	Flathead minnow	14 mg/L	96 hours	LC50
Zirconium Oxychloride ²	Flathead minnow	145 mg/L	96 hours	LC50
Comments:	¹ This information was based on water hardness of 20. This result is being used for the GHS classification of this material. ² This information was based on a water hardness of 400.			

XIII. Disposal Considerations

Waste Disposal:	This material cannot be directly disposed of in a landfill. First, dissolve in water, then neutralize slowly. Neutralized slurry can be dewatered and the resulting solids may be disposed of in accordance with local, state, and federal regulations.
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XIV. Transportation Information

Proper Shipping Name:	Corrosive Liquid, Acidic Inorganic, n.o.s. (Zirconium Oxychloride Solution)				
DOT Classification:	8				
Identification Number:	3264	Packing Group:	II	Other Labels:	Corrosive
Comments:	DO NOT transport in unlined metal containers.				

XV. Regulatory Information

Inventory Status:		US Regulations:		
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)	Not Listed	
Korean KECI	Yes	RCRA 261	Not Listed	
Philippines PICCS	Yes			
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 type="checkbox"/> Reactive	
International Regulations:			Other Regulations:	
Canada WHMIS	E	Corrosive material (Corrosive to Skin)	California PROP 65	Not Listed
EINECS	231-717-9			
Comments:				

XVI. Other Information

Other:	
Revision Notes:	09.25.20 Reviewed as part of a 3-year review process. Updated logo and formatting.
MSDS Replacements:	SII MSDS 032 Zirconic® OC 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

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