




I. Product and Company Information

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| SII Product Name(s): | Zirconic® OC Solution | Synonym: | |
| Chemical Name: | 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

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|----------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--|
| 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: | Precautionary Statement(s): | | |
| Danger | Prevention: | Wear eye and face protection. | |
| Symbol(s):  | | 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: Take off immediately all contaminated clothing. Rinse skin with water. | |
| Absorb spillage to prevent material damage. For specific treatment: See First Aid section IV. | | | |

III. Composition / Information on Ingredients

| Chemical Name: | CAS Reg #'s | % |
|--------------------------------|--------------------|----------|
| Zirconium Oxychloride Crystals | 7699-43-6 | 45 - 60 |
| Water | 7732-18-5 | Balance |

IV. First Aid Measures

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| 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

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| 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 subject 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

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| 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

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| 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. 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

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| Component Workplace Control Parameters: | | | | |
| Components: | CAS-No. | 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-station 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

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| 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 lbs. - 11.4 lbs. @77°F (25°C) |
| Vapor Density: (Air=1) | Heavier than air | Vapor Pressure: | Less than 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

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| 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 alkalis. |
| Hazardous Products of Decomposition: | This material releases hydrogen chloride gas when heated above 770°F (410°C). |

XI. Toxicological Information

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| 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: | NPT | Not Listed | IARC | Not Listed | OSHA | Not Regulated |
| Ingredient Name: | Species | | Test | | Route | Results |
| Zirconium Oxychloride | Rat | | 3500 mg/kg | | oral | LD 50 |
| 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 | LC 50 |
| Zirconium Oxychloride ² | Flathead minnow | 145 mg/L | 96 hours | LC 50 |
| 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

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| 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

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| 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 KECL | 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 | | |

XVI. Other Information

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| NSF Certification: | |
| Other: | _____ |
| Revision Notes: | _____ |
| MSDS Replacements | <u>SII MSDS 032 Zirconic® OC Solution</u> |

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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