



Material Safety Data Sheet

FOR EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL:
CHEMTREC 1-800-424-9300

Section 1—Chemical Product and Company Identification

Product Name:	AgriSolutions™ Citri-Che™ Zinc 10%
Common Name:	Liquid Fertilizer Micronutrient Compound
Chemical Description:	Liquid Fertilizer Micronutrient Compound
Manufacturer's Name: WINFIELD SOLUTIONS, LLC P. O. Box 64589 St. Paul, MN 55164-0589	Medical Emergency Telephone Number: 1-877-424-7452
MSDS Preparation Date:	04/09/2010

Section 2—Hazards Identification

Emergency Overview: A light tan liquid with slight ammonia odor that may cause irritation to the skin, eyes and respiratory tract. Avoid breathing vapors and mists, harmful if swallowed. See health effects below.

CAUTION: Keep out of reach of children.

Route(s) of Entry: Eyes, Inhalation, Skin, and Ingestion.

Health Hazards (Acute and Chronic):

Inhalation: May cause irritation of the nasal membranes and upper respiratory tract. Severe overexposure to ammonia and/or zinc chloride may result in fluid in the lungs (pulmonary edema).

Eyes: Contact may cause eye injury.

Skin: Can cause irritation.

Ingestion: May irritate or cause burns to digestive tract. Significant exposures may cause effects such as fever, nausea, vomiting, diarrhea, stomach pain, blood in the stool, inability to urinate, low blood pressure, kidney damage, liver damage and convulsions.

Medical Conditions Generally Aggravated by Exposure: None known.

Long-Term and/or Delayed Effects: Continued and prolonged overexposure may result in digestive disorders, kidney and/or liver damage. Significant overexposures may result in lung damage.

Section 3—Composition Information on Ingredients

Ingredient	% (wt)	CAS reg. #
Zinc Ammonium Citrate, EDTA Complex	28.0%	proprietary
Zinc Ammonium Chloride	24.0%	14639-97-5

NFPA HAZARD RATING:

0	Least		
1	Slight	2	Health
2	Moderate	0	Flammability
3	High	0	Reactivity
4	Severe		

Section 4—First Aid Measures

Inhalation: Remove person to fresh air and support breathing as needed. Seek medical attention for irritation or any other symptom.

Ingestion: Seek medical attention or call a poison control center immediately.

Eyes: Flush with clean water for at least 15 minutes. Lift eyelids to facilitate irrigation. Seek medical attention immediately.

Skin: Remove contaminated clothing and wash before re-using. Flush skin with water, and then wash with soap and water. Seek medical attention if skin becomes irritated.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Section 5—Fire and Explosion Hazard Data

Extinguishing Media: Materials suitable to surrounding fire.

Special Fire Fighting Procedures: Wear self-contained breathing apparatus and full bunker gear. Move product from fire area if you can without risk. Avoid breathing vapors; keep upwind. Dike area to prevent runoff and contamination of water sources.

Hazardous Combustion Products: Thermal decomposition may include toxic and hazardous ammonia, chlorine and oxides of zinc and sulfur.

Unusual Fire and Explosion Hazards: No additional hazards other than decomposition products if solutions are evaporated to dryness.

Section 6—Accidental Release Measures

Small Spills: Clean-up personnel should protect against mist inhalation and skin contact. Avoid generating mists. Spills should be cleaned up immediately to prevent spreading.

Large Spills: Clean-up personnel should protect against mist inhalation and skin contact. Avoid generating mist.

Containment: Do not release into sewers or waterways. Dike spills to prevent contamination to water supplies. Contain spills and absorb liquids by covering with clay or other absorbent material. Vacuum, scoop, or sweep up waste and place in a container for disposal.

Section 7—Precautions for Safe Handling and Use

Precautions to Be Taken in Handling and Storage: Store in cool, dry areas away from children, feed and food products and sources of heat. Immediately clean up spills that occur during handling or storage. Protect from freezing. Keep containers closed when not in use. Do not store in aluminum or metal vessels.

Other Precautions: Consult Local, State, and Federal regulations pertaining to storage and disposal.

Section 8—Control Measures/Personal Protection

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear an MSHA/NIOSH-approved respirator.

Ventilation: **Local Exhaust:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs. Local exhaust ventilation is preferred.

Protective Gloves: Wear chemically protective gloves.

Eye Protection: Wear protective eyeglasses or chemical safety goggles. Contact lenses are not eye protective devices.

Other Protective Clothing or Equipment: Wear chemically protective boots, aprons, and gauntlets to prevent prolonged or repeated skin contact.

Work/Hygienic Practices: Never eat, drink, nor smoke in work areas. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9—Physical/Chemical Characteristics

Physical State:	Liquid	Specific Gravity (H₂O=1):	1.24
Vapor Pressure (mm Hg):	Not determined	Freezing Point:	Not determined
Vapor Density (Air=1):	Not determined	Boiling Point:	Not determined
Solubility in Water (wt %):	Miscible	pH:	8.0 – 8.7
Appearance and odor:	Light tan liquid with slight ammonia odor	Flash Point:	None

Section 10—Reactivity Data

Stability: Product stable at room temperature in closed containers under normal storage and handling conditions.

Chemical Incompatibilities: Strong oxidizers, strong acids

Conditions to Avoid: Avoid contact with strong oxidizers, strong acids and/or excessive heat.

Hazardous Decomposition Products: Thermal decomposition products may include toxic fumes containing ammonia, nitrogen oxides, sulfur oxides, chlorine compounds, and oxides of zinc. Ammonia vapors in the range of 15 – 28% can explode in contact with a source of ignition. Use of welding or flame cutting equipment close to these materials is not recommended.

Hazardous Polymerization: Has not been reported to occur under normal temperatures and pressures.

Section 11—Toxicological Information

Eye Effects: Irritation
Skin Effects: May cause irritation
Acute Inhalation Effects: Not determined
Acute Oral Effects: Not determined
Chronic Effects: Not determined
Mutagenicity: Not determined
Teratogenicity: Not determined

Carcinogenicity: NTP: Not listed IARC: Not listed OSHA: Not listed

Section 12—Ecological Information

Soil Absorption/Mobility: Mobile in soil profile.
Zinc compounds are toxic to fish and aquatic organisms. Do not let product contaminate water supplies.

Section 13—Disposal Considerations

Waste: Dispose of in accordance with applicable Federal, state and local laws and regulations.
Container: Triple rinse (or equivalent) the empty containers. Then offer for recycling or reconditioning.

Section 14—Transport Information

This product is not regulated in transportation in non-bulk quantities.

The information below is for shipments exceeding 4,161 pounds (408 gallons) in a single package, container, truck or railcar.
UN3082, Environmentally hazardous substances, liquid, n.o.s. (contains zinc ammonium chloride), 9, PG III, RQ

Section 15—Regulatory Information

TSCA Inventory: All ingredients are listed on the TSCA Inventory of Chemical Substances
SARA Title III, Section 302: None listed

SARA Title III, Section 311/312:	Immediate:	Yes	Delayed:	No	
Sudden Release of Pressure:	No	Fire:	No	Reactive:	No

SARA Title III, Section 313: This product contains the following substance subject to the reporting requirements of Section 313 of Title III of 49 CFR 372 of the Emergency Planning and Community Right-To-Know Act.
Zinc ammonium chloride (CAS No. 14639-97-5) 24.0%

CERCLA: Zinc ammonium chloride has an RQ of 1,000 lbs (met with 408 gallons of product)

PROPOSITION 65: WARNING: This product may contain chemicals known to the State of California to cause cancer and birth defects or reproductive harm.

RCRA Classification: Not determined

Section 16—Other

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