



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™ MAX-IN® Ultra ZMB®
Common Name:	Micronutrient Fertilizer
Chemical Description:	Liquid Fertilizer
Manufacturer's Name: WINFIELD SOLUTIONS, LLC P. O. Box 64589 St. Paul, MN 55164-0589	Medical Emergency Telephone Number: 1-877-424-7452
MSDS Revision Date:	01/04/2010 Supersedes document dated 02/01/2008

Section 2—Hazards Identification
<p>Emergency Overview: Clear to light pink liquid, slight organic odor that can irritate the eyes or skin. May be harmful if swallowed.</p> <p>CAUTION: Keep out of reach of children.</p> <p>Route(s) of Entry: Eyes, Inhalation, Skin, and Ingestion.</p> <p>Health Hazards (Acute and Chronic):</p> <p>Inhalation: Inhalation of mist may cause irritation of the upper respiratory tract.</p> <p>Eyes: Irritation of eyes.</p> <p>Skin: Contact may cause irritation. Prolonged or repeated exposure may lead to reddening of skin, rash, dermatitis, or other skin reactions.</p> <p>Ingestion: Harmful if swallowed.</p> <p>Carcinogenicity NTP: Not available IARC: Not available OSHA: Not Available</p> <p>Medical Conditions Generally Aggravated by Exposure: None known. Preexisting respiratory conditions may be aggravated by exposure to mists.</p>

Section 3—Composition Information on Ingredients		
Ingredient	% (wt)	CAS reg. #
Boric Acid	0.60%	52869-79-1
Organic Acid	7.0-12.0%	77-92-9
Manganese Sulfate	9.40%	7785-87-7
Zinc Sulfate	11.30 %	7733-02-0

NFPA HAZARD RATING:			
0	Least		
1	Slight	2	Health
2	Moderate	0	Flammability
3	High	1	Reactivity
4	Severe		

Section 4—First Aid Measures	
Inhalation:	Remove person to fresh air and support breathing as needed. Seek medical attention if irritation persists.
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 if eye irritation persists.
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

Flash Point Non-combustible	Flammable Limits Non-combustible	LEL Not established	UEL Not established
Extinguishing Media: Materials suitable to surrounding fire. Special Fire Fighting Procedures: Wear self-contained breathing apparatus and full bunker gear. Smoke and fumes from fire may contain hazardous components. Hazardous Combustion Products: Thermal decomposition may include carbon dioxide, carbon monoxide and oxides of manganese. Airborne manganese may also be present (harmful to respiratory system.) Unusual Fire and Explosion Hazards: Closed containers may explode from vapor expansion in high heat. Contain run-off by diking to prevent contamination of water supplies.			

Section 6—Accidental Release Measures

Small Spills: Clean-up personnel should protect against mist inhalation and skin contact. Avoid generating mists. Spills when handling 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 (*Specify type*): 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 rubber or neoprene gloves.
Eye Protection: Wear protective eyeglasses or chemical safety goggles. Contact lenses or 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):	1.29
Vapor Pressure (mm Hg):	Not established	Freezing Point:	Not established
Vapor Density (Air=1):	Not established	Boiling Point:	Not established
Solubility in Water (wt %):	100%	pH:	<2
Appearance and odor:	Clear pink to tan with slight organic odor		

Section 10—Reactivity Data

Stability: Product stable at room temperature in closed containers under normal storage and handling conditions.
Chemical Incompatibilities: Avoid mixing with calcium solutions, strong reducing agents and finely powdered metals.
Conditions to Avoid: Avoid excessive heat.
Hazardous Decomposition Products: None known.
Hazardous Polymerization: Cannot occur.

Section 11—Toxicological Information

Eye Effects:	Irritation	Chronic Effects:	No unusual chronic effects
Skin Effects:	May cause irritation	Carcinogenicity:	Not determined
Acute Inhalation Effects:	Not determined	Mutagenicity:	Not determined
Acute Oral Effects:	Not determined	Teratogenicity:	Not determined

Section 12—Ecological Information

Soil Absorption/Mobility: Mobile in soil profile.

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, or puncture and dispose of in a sanitary landfill.

Section 14—Transport Information

UN3265, Corrosive liquid, acidic, organic, n.o.s. (carboxylic acid), 8, PG III

Section 15—Regulatory Information

SARA TITLE II HAZARD CATEGORY:	Immediate: Yes	Delayed: No
Sudden Release of Pressure: No	Fire: No	Reactive: No

CERCLA: Zinc sulfate RQ =1,000 lbs (obtained in 820 gallons of product)

SARA, TITLE III, SECTION 313: This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR 372): Manganese compounds 9.4 percentage by weight; Zinc sulfate 11.30 percentage by weight.

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

RCRA: pH between 1 and 2; waste code D002

Section 16—Other

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