


Safety Data Sheet

NFPA HAZARD RATING				U.S. TRANSPORT SUMMARY	
0	Least			Not regulated by the US DOT as a hazardous chemical. See Section 14 for additional information.	
1	Slight	1	Health		
2	Moderate	0	Flammability		
3	High	0	Reactivity		
4	Severe				

SECTION 1: IDENTIFICATION	
Product Name:	Max-In® Zinc
EPA Registration #:	Exempt
Product ID/Unity #:	1544008, 1544009, 1544010
Common Name:	Micronutrient fertilizer
Chemical Description:	Liquid zinc fertilizer
Recommended Uses:	Fertilizer product – See product label for full directions for use.
Restrictions for Use:	See product label for any potential use restrictions on the use of this product.
Manufactured For: WINFIELD SOLUTIONS, LLC P. O. Box 64589 St. Paul, MN 55164-0589	MEDICAL EMERGENCY TELEPHONE NUMBER: 1-877-424-7452 (24hrs) Non-Emergency Business Inquiries: 1-855-494-6343 Mon – Fri 8am – 5pm (Central Standard Time)
FOR EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL: CHEMTREC 1-800-424-9300 (24 hours)	

SECTION 2: HAZARDS IDENTIFICATION			
EMERGENCY OVERVIEW: Amber to brown liquid, slight organic odor. May cause respiratory irritation.			
POTENTIAL HEALTH EFFECTS:			
Eyes: May cause mild but temporary irritation.			
Skin: Short-term exposure is unlikely to cause irritation. Prolonged contact may cause redness and itching.			
Inhalation: Inhalation of mist may cause irritation of the upper respiratory tract.			
Ingestion: May be harmful if swallowed.			
Preexisting Conditions: Pre-existing respiratory conditions may be aggravated by exposure to mists.			
Chronic Health Effects: None known.			
Carcinogenicity	NTP: Not listed	IARC: Not listed	OSHA: Not listed
OSHA HCS 2012 CLASSIFICATION: Specific Target Organ Toxicity – Single Exposure Category 3			
SIGNAL WORD: WARNING			
HAZARD STATEMENTS: May cause respiratory irritation.			
			
Percent of product with unknown toxicity: 0%			
PRECAUTIONARY STATEMENTS:			
Prevention:	Avoid breathing mist, spray, fumes. Use only outdoors in a well-ventilated area.		
Response:	If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison control center (1-877-424-7452) or doctor for treatment advice if you feel unwell.		
Storage:	Store in a well-ventilated place. Keep container tightly closed. Store locked up.		
Disposal	Dispose of contents/container in accordance with Federal, state and local regulations.		

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS		
Ingredient	% (wt)	CAS Reg. #
Citric acid	17.0 – 22.0%	77-92-9
Monoethanolamine	10.0 – 14.0%	141-43-5
Zinc oxide	5.0 – 10.0%	1314-13-2
*Ingredients not specifically listed are non-hazardous and/or are considered to be confidential business information under 29 CFR 1910.1200(i).		
See Section 8 for exposure limits.		

SECTION 4: FIRST AID MEASURES	
Inhalation:	Remove person from contaminated area to fresh air and assist breathing as needed. See medical attention if irritation occurs.
Ingestion:	Seek medical attention immediately or call a poison control center for treatment advice. Do not induce vomiting unless instructed to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
Eyes:	Flush eyes with clean water for at least 15 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. Seek medical attention if 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 irritation persists.

SECTION 5: FIRE FIGHTING MEASURES	
Suitable Extinguishing Media:	Use carbon dioxide or dry chemical for small fires and water fog or foam for large fires.
Unsuitable Extinguishing Media:	Water jet. Use a water jet only to cool heated containers. This product will produce foam when mixed with water.
Special Fire Fighting Procedures:	Wear NIOSH/MSHA approved self-contained breathing apparatus and full bunker gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later. Avoid breathing vapors; keep upwind.
Hazardous Combustion Products:	Toxic gases such as carbon monoxide and other asphyxiates may form as well.
Unusual Fire and Explosion Hazards:	None known.

SECTION 6: ACCIDENTAL RELEASE MEASURES	
Personal Precautions:	Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.
Environmental Precautions:	Keep spilled product and any rinse water from entering sewers or waterways.
Methods for Containment:	Contain spilled product by diking area with sand or earth.
Methods for Clean-up:	Cover contained spill with an inert absorbent material such as sand, vermiculite or other appropriate material. Do not use combustible material such as sawdust. Scoop or sweep up material and place in a container for disposal. Do not place spilled material back in original container.
Other Information:	None known

SECTION 7: HANDLING AND STORAGE	
Handling:	Ensure adequate ventilation during handling and use. Immediately clean up spills that occur during handling. Keep containers closed when not in use. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.
Storage:	Store in secure, cool, dry areas away from children, food and feed products in an area away from incompatible substances. Protect packaging from physical damage. Protect from exposure to fire. Maintain product above minimum storage temperature.
Minimum Storage Temperature:	40°F
Other Precautions:	Consult Federal, state and local laws and regulations pertaining to storage.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION			
Exposure Guidelines			
Component:	OSHA PEL	ACGIH TLV	NIOSH REL
Ethanolamine (CAS# 141-43-5)	3 ppm (TWA)	3 ppm (TWA)	3 ppm (TWA)
Zinc oxide (CAS# 1314-13-2)		2mg/m3 (TWA)	
Respiratory Protection: For most well-ventilated conditions, no respiratory protection should be needed. If used in a poorly ventilated area, use a NIOSH approved air-purifying respirator with cartridges/canisters approved for organic vapors.			
Engineering Controls: Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs or other specified exposure limits. Local exhaust ventilation is preferred.			
Protective Gloves: Wear chemically protective gloves to prevent against skin contact.			
Eye Protection: To avoid contact with eyes, wear chemical goggles or full face shield and safety glasses. Contact lenses are not protective eye devices. An emergency eyewash or water supply should be readily accessible to the work area.			
Other Protective Clothing or Equipment: Wear long-sleeve shirt, long pants and chemical resistant shoes plus socks to prevent skin contact.			
Work/Hygienic Practices: Never eat, drink, nor use tobacco in work areas. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.			

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES			
Physical State:	Liquid	Specific Gravity (H₂O=1):	1.23 (typical)
Vapor Pressure (mm Hg):	Not determined	Density (lbs/gallon):	10.25 lbs/gallon (typical)
Vapor Density (Air=1):	Not determined	Melting Point/Freezing Point:	Not determined
Solubility in Water (wt %):	Miscible	Boiling Point/Range:	Not determined
Viscosity (centistokes):	Not determined	pH:	6.0 – 7.0
Appearance and odor:	Amber to brown liquid with slight organic odor.	Flash Point:	Not determined

SECTION 10: STABILITY AND REACTIVITY	
Reactivity: None known	
Chemical Stability: Product is stable at ambient temperature and pressure, under normal storage and handling conditions.	
Possibility of Hazardous Reactions: None known.	
Conditions to Avoid: Extreme temperatures, temperatures below 40°F	
Incompatible Materials: Strong oxidizers, reducing agents strong acids, strong bases.	
Hazardous Decomposition Products: Toxic gases such as carbon oxides may be formed in a fire situation.	

SECTION 11: TOXICOLOGICAL INFORMATION	
ACUTE TOXICITY	
Eye Effects:	Causes mild eye irritation clearing in approximately 1 hour (rabbit).
Skin Effects:	Does not cause skin irritation (rabbit). Estimated LD50 = 4,623 mg/kg
Acute Inhalation Effects:	Estimated LC50 = 15 mg/L; May cause respiratory irritation.
Acute Oral Effects:	Estimated LD50 = 7,187 mg/kg
Specific Target Organ Toxicity:	Respiratory tract
CHRONIC TOXICITY	
Chronic Effects:	None known
Carcinogenicity:	None known
Mutagenicity:	None known
Teratogenicity:	None known
Reproductive Toxicity:	None known
POTENTIAL HEALTH EFFECTS:	
Eyes: May cause mild but temporary irritation.	
Skin: Short-term exposure is unlikely to cause irritation. Prolonged contact may cause redness and itching.	
Inhalation: Inhalation of mist may cause irritation of the upper respiratory tract.	
Ingestion: May be harmful if swallowed.	

SECTION 12: ECOLOGICAL INFORMATION	
ENVIRONMENTAL SUMMARY: Not determined	
ECOTOXICITY DATA:	
Fish Acute and Prolonged Toxicity:	Estimated LC50 = 1,137 mg/L (Based upon data from 63% of the composition.)
Aquatic Invertebrate Acute Toxicity:	Estimated EC50 for <i>Daphnia magna</i> = 349 mg/L (Based upon data from 63% of the composition.)
Aquatic Plant Toxicity:	Estimated EC50 = 82 mg/L (Based upon data from 63% of the composition.)
Bird Acute and Prolonged Toxicity:	Not determined
Honeybee Toxicity:	Not determined
ENVIRONMENTAL EFFECTS:	
Soil Absorption/Mobility:	Not determined
Persistence and degradability:	Not determined
Bioaccumulative Potential:	Not determined
Other adverse effects:	Not determined

SECTION 13: DISPOSAL CONSIDERATIONS	
Waste: Dispose of in accordance with applicable Federal, state and local laws and regulations.	
Container: Triple rinse and recycle the container or dispose of in accordance with Federal, state and local laws and regulations.	
RCRA Characteristics: It is the responsibility of the individual disposing of this product to determine the RCRA classification and hazard status of the waste.	

SECTION 14: TRANSPORT INFORMATION	
DOT (Ground)	This product is not regulated by the US Department of Transportation as a hazardous material for ground shipment.
IMDG (Sea)	This product is not regulated by the IMDG code as a hazardous material for shipment by sea.
IATA (Air)	This product is not regulated by the IATA as a hazardous material for air shipment.
TDG (Canada)	This product is not regulated by the TDG as a hazardous material for ground shipment.

SECTION 15: REGULATORY INFORMATION	
TSCA Inventory: All components are listed or exempt from listing on the TSCA inventory.	
SARA Title III Information:	
Section 302 - Extremely hazardous substances: None listed	
Section 311/312 – Hazard Categories: Immediate (Acute)	
Section 313 – The following chemicals are subject to the reporting requirements of Section 313 of Title III, Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372: None listed	
CERCLA – This material does not contain any substances regulated as hazardous substances under CERCLA or SARA. Zinc compounds are considered to be CERCLA hazardous substances though no RQ has been established.	
California Proposition 65: This product contains no chemicals known to the state of California to cause cancer and/or reproductive harm.	
U.S. State Worker and Community Right-To-Know (RTK) Information (CT, IL, MA, MN, NH, NJ, PA, RI):	
Chemical Name	CAS # State(s)
Monoethanolamine	141-43-5 MA, PA, NJ
Zinc oxide	1314-13-2 MA, PA, NJ
Canadian Domestic Substances List: Not determined	
WHMIS Classification: This product is not approved for use in Canada. WHMIS classification is not determined.	

SECTION 16: OTHER

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Revision Date: September 26, 2019

Supersedes document dated: March 20, 2015