WINFIELD UNITED

Safety Data Sheet

MAX-IN® Ultra ZMB®
Micronutrient Mix

SECTION 1: IDENTIFICATION

Product Name: MAX-IN® Ultra ZMB® Micronutrient Mix
Product ID/Unity #: 10136887, 10136888
Common Name: Micronutrient fertilizer
Chemical Description: Liquid fertilizer
Recommended Uses: Fertilizer product – See product label for full directions for use.
Restrictions for Use: See product label for any potential restrictions on use.

Manufactured for:	Initial Supplier:	
WINFIELD SOLUTIONS, LLC P. O. Box 64589 St. Paul, MN 55164-0589, USA	**WINFIELD UNITED CANADA, ULC** 101-302 Wellman Lane Saskatoon, Saskatchewan S7T-0J1, CANADA 1-888-975-4769	**MEDICAL EMERGENCY TELEPHONE NUMBER:** 1-877-424-7452 (24hrs)

FOR EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL:
CHEMTREC 1-800-424-9300 (24 hours)

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Clear pink to tea brown liquid with slight organic odor. Causes serious eye and skin damage. May cause burning of the esophagus.

POTENTIAL HEALTH EFFECTS:
Eyes: Causes serious eye irritation with the potential for irreversible damage.
Skin: Causes serious skin irritation with the potential for irreversible damage.
Inhalation: Inhalation of mist may cause irritation of the upper respiratory tract.
Ingestion: May cause burning of the esophagus.
Preexisting Conditions: Preexisting respiratory conditions may be aggravated by exposure to mists.
Chronic Health Effects: Boric acid is a known reproductive toxicant. Prolonged or repeated oral exposure may have a negative impact on fertility and the reproductive system. Prolonged or repeated inhalation of product may have an impact on the central nervous system and/or lungs.

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

WHMIS 2015 CLASSIFICATION: Skin Corrosion/Irritation Category 1C; Eye Damage/Irritation Category 1; Toxic to Reproduction Category 2; Specific Target Organ Toxicant – Repeated Exposure Category 2

SIGNAL WORD: DANGER

HAZARD STATEMENTS:
Causes severe skin burns and eye damage.
Suspected of damaging fertility or the unborn child if ingested.
May cause damage to central nervous system and/or lungs through prolonged or repeated inhalation.

Percent of product with unknown toxicity: 0.07%

PRECAUTIONARY STATEMENTS:

Prevention: Do not breathe mist. Wash hands thoroughly after use. Wear protective gloves, protective clothing, eye protection, and face protection. See Section 8 for additional information. Read the entire label before product use. Do not handle until all safety precautions have been read and understood.

Response: **IF IN EYES:** Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison control center (1-877-424-7452) or doctor for treatment advice. **IF ON SKIN (OR HAIR):** Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. **IF SWALLOWED:** Rinse mouth. Do NOT induce vomiting. **IF INHALED:** Remove person to fresh air and keep comfortable for breathing. Immediately call a poison control center (1-877-424-7452) or doctor for treatment advice. **If exposed or concerned or if you feel unwell:** Get medical attention.

Storage: Store in a secured, preferably locked, area.

Disposal Dispose of contents/container in accordance with Federal, provincial and local regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	% (wt)	CAS Reg. #
Zinc sulfate	11.3%	7446-19-7
Organic acid	10.0%	77-92-9
Manganese sulfate	9.4%	10034-96-5
Boric acid	<0.6%	10043-35-3
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. Seek medical attention if irritation occurs.

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

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

SECTION 5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Water spray or fog, foam, carbon dioxide, or dry chemical

Unsuitable Extinguishing Media: Water jet; Use water jet only to cool containers.

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: Carbon oxides, Sulfur oxides, and Nitrogen oxides; Toxic manganese, boron and zinc compounds may also be present upon decomposition.

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

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: Do not allow spilled product to enter sewers or waterways. Avoid release to aquatic environments. Do not pour down drains.

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. Vacuum, scoop, or sweep up material and place in a container for disposal. Do not place spilled material back in original container.

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 cool, dry areas away from children, food and feed products in an area away from incompatible substances. Ensure that storage area is secured. Protect packaging from physical damage. Protect from exposure to fire. Maintain product above minimum storage temperature. Do not store in aluminum or metal vessels.

Minimum Storage Temperature: 4°C (40°F)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines Component:	OSHA PEL	ACGIH TLV	NIOSH REL
Boric acid (CAS #10043-35-3)		2 mg/m3 (TWA); 6 mg/m3 (STEL)	
Manganese inorganic compounds	5 mg/m3 (CEIL)	0.2 mg/m3 TWA	1 mg/m3 TWA 3 mg/m3 ST

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Respiratory Protection: For most well-ventilated conditions, no respiratory protection should be needed. If airborne concentrations exceed exposure limits, use a NIOSH approved air-purifying respirator with cartridges/canisters approved for general particulates.

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: This product can cause serious skin damage. Wear chemically protective gloves to prevent exposure to skin.

Eye Protection: To avoid contact with eyes, wear chemical safety goggles or safety glasses and full face shield. 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 chemically protective boots 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 (H_2O=1):**	1.29 (typical)
Vapor Pressure (mm Hg):	Not determined	**Melting Point/Freezing Point:**	Not determined
Vapor Density (Air=1):	Not determined	**Boiling Point/Range:**	Not determined
Solubility in Water (wt %):	100%	**pH:**	<2.0
Viscosity:	Not determined	**Flash Point:**	Does not flash
Appearance and odor:	Clear pink to tea brown with slight organic odor; color darkens over time from pink to brown		

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: Excessive heat

Incompatible Materials: Avoid mixing with calcium solutions, strong reducing agents and finely powdered metals.

Hazardous Decomposition Products: During prolonged exposure to high heat or fire conditions Carbon oxides, Sulfur oxides, and Nitrogen oxides may form; Toxic manganese, boron and zinc compounds may also be present upon decomposition.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Eye Effects:	May cause serious and irreversible eye damage if exposed for more than a few minutes.
Skin Effects:	May cause serious and irreversible skin damage if exposed for more than a few minutes.
Acute Inhalation Effects:	May be harmful if inhaled.
Acute Oral Effects:	Estimated LD50 >8,000 mg/kg; May cause burning of the esophagus due to low pH of concentrate.
Specific Target Organ Toxicity:	Prolonged or repeated inhalation of product may have an impact on the central nervous system and/or lungs.

CHRONIC TOXICITY

Chronic Effects:	Prolonged or repeated inhalation of product may have an impact on the central nervous system and/or lungs.
Carcinogenicity:	No component is anticipated to have carcinogenic effects.
Mutagenicity:	No component is anticipated to have mutagenic effects.
Teratogenicity:	No component is anticipated to have teratogenic effects.
Reproductive Toxicity:	Boric acid is a known reproductive toxicant. Prolonged or repeated oral exposure may have a negative impact on fertility and the reproductive system.

POTENTIAL HEALTH EFFECTS:

Eyes: Causes serious eye irritation with the potential for irreversible damage.

Skin: Causes serious skin irritation with the potential for irreversible damage.

Inhalation: Inhalation of mist may cause irritation of the upper respiratory tract.

Ingestion: Harmful if swallowed. May cause burning of the esophagus.

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY: Not determined

ECOTOXICITY DATA:

Fish Acute and Prolonged Toxicity:	Not determined
Aquatic Invertebrate Acute Toxicity:	Not determined
Aquatic Plant Toxicity:	Not determined
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, provincial and local laws and regulations. Avoid release to aquatic environments. Do not pour down drains.
Container: Triple rinse and recycle the container or dispose of in accordance with Federal, provincial and local laws and regulations.

SECTION 14: TRANSPORT INFORMATION

DOT: (U.S.A Ground)	UN3265, Corrosive liquid, acidic, organic, n.o.s. (carboxylic acid), 8, PG III
IMDG: (Sea)	UN3265, Corrosive liquid, acidic, organic, n.o.s. (carboxylic acid), 8, PG III
IATA: (Air)	UN3265, Corrosive liquid, acidic, organic, n.o.s. (carboxylic acid), 8, PG III
TDG: (Canada)	UN3265, Corrosive liquid, acidic, organic, n.o.s. (carboxylic acid), 8, PG III

SECTION 15: REGULATORY INFORMATION

International Inventories
TSCA Inventory: All components are listed on the TSCA inventory.
Canadian Domestic Substances List: All components are listed on the DSL.

SECTION 16: OTHER INFORMATION

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

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