



SAFETY DATA SHEET

This SDS complies with REACH 1907/2006 and 2001/58/EC, GHS REVISION 5, OSHA 29CFR 1910.1200

Section 1: Chemical Product and Company Identification

MANUFACTURER'S NAME

HydroGro
7881 East Gray Road
Scottsdale, AZ 85260 USA

EMERGENCY TELEPHONE

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DATE PREPARED: September 13, 2015

REVISION DATE: September 24, 2015

PRODUCT NAME: **MIKROPAK**

FORMULA: Preparation/Mixture

PRODUCT USE: Supplement for professionally maintained golf courses, sport turf, lawn and landscaping

Section 2: Hazards Identification



GHS Hazard Class

Acute toxicity (oral) – Category 4
Serious eye irritation – Category 2
Skin irritation – Category 3
Specific target organ toxicity - Single Exposure – Category 3

Signal word:

Warning

Hazard Statement:

H302: Harmful if swallowed

H316: Causes mild skin irritation

H318: Causes serious eye irritation

Precautionary Statements: Prevention

371: May cause damage to organs (gastrointestinal tract)

P201: Obtain special instructions before use.

P281: Use personal protective equipment as required.

P270: Do not eat, drink or smoke when using this product.

P273: Avoid release to the environment.

Response

P308+P313: IF exposed or concerned: Get medical advice/attention

P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.

P330: Rinse mouth.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P264: Wash hands thoroughly after handling.

Storage

P391: Collect spillage.

Disposal

P405: Store locked up.

P501: Dispose of contents/container in accordance with waste disposal requirements of your country, state, or local authorities

Hazards not otherwise classified (HNOC) or not covered by GHS - None

HAZARD CLASSIFICATION:

Not classified as hazardous based on IATA, IMDG, and DOT.

FIRE AND EXPLOSION:

Not considered flammable or combustible, but this product will burn if involved in a fire.

Product emits toxic fumes when burned.

POTENTIAL HEALTH EFFECTS:

<1 % of mixture consists of ingredients of unknown acute toxicity

APPEARANCE:

Tan -Blend of crystals and powders



NFPA Rating:

Component	Health (Blue)	Flammability (Red)	Reactivity (Yellow)	Special (White)
MIKROPAK	2	0	1	----

Section 3: Composition, Information on Ingredients

PRODUCT COMPOSITION	APPROX %	CAS NO.	EC NUMBER	CANADA DSL
Non-hazardous ingredients	<80	--	--	--
Iron EDTA	<10	15708-41-5	239-802-2	Y
Manganese Sulphate	<10	10034-96-5	232-089-9	N
Magnesium Sulphate	<10	10034-99-8	31-298-2	Y
Zinc Sulfate	<5	7446-20-0	231-793-3	Y

Some items on this SDS may be designated as trade secrets (TS). Bonafide requests for disclosure of trade secret information to medical personnel must be made in accordance with the provisions contained in 29 CFR 1910.1200 I 1-13.

Section 4: First Aid Measures

Description of First Aid Measures

Inhalation	Remove to fresh air. If not breathing, provide CPR (cardio pulmonary resuscitation). Get immediate medical attention.
Skin Contact	Immediately wash skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing.
Eye Contact	Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.
Ingestion	Do not induce vomiting. Never give anything to an unconscious person. Get immediate medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms/Injuries after Inhalation	Causes respiratory tract irritation. Product is an irritant to the respiratory system and can cause metal fume fever.
Symptoms/Injuries after Skin Contact	Causes skin irritation. Symptoms may include redness, drying, defatting, and cracking of the skin.
Symptoms/Injuries after Eye Contact	Causes eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Symptoms/Injuries after Ingestion	May be harmful if swallowed. Effects may include diarrhea, bloody diarrhea, vomiting, CNS depression, lack of reflexes, hypocalcemia, hypoglycemia, lethargy, shock, increased acidity in the blood, bluish skin discoloration, fever, liver damage and possible death.

Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately.

Section 5: Fire-fighting Measures

Suitable extinguishing media	Use foam, dry chemical, carbon dioxide, or any media suitable to extinguish the surrounding fire.
Special hazards arising from the substance or mixture	Release of toxic NOx, Sox, metal oxides and NH3 gases when burned.
Protective actions fire-fighters	Wear standard protective equipment and self contained breathing apparatus for firefighting if necessary



Further information

Decomposes on heating. This produces sulfur oxides and manganese oxides.

Section 6: Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures

Wear proper personal protective equipment. Avoid breathing dust.

Environmental precautions

Prevent further spillage if safe to do so. Prevent spills or contaminated rinse water from entering sewers or watercourses.

Methods and materials for containment and cleaning up

In case of small spills, use appropriate tools to put the spilled material in a plastic container. Dispose of according to the requirements of your country, state, or local authorities.

In case of large spills, use a shovel to put the material into a plastic container. Dispose of according to the requirements of your country, state, or local authorities.

Reference to other Sections For personal protection reference section 8. For disposal reference section 13.

Section 7: Handling and Storage

Precautions for safe handling

Use only with adequate ventilation.

Do not inhale dust.

Keep out of reach of children.

Wear proper protective equipment when handling this material.

Avoid contact with skin, eyes, or clothing.

Wash hands and face after handling this material.

A plastic container should be used for disposal.

For precautions see section 2.

Conditions for safe storage, including any incompatibilities

Store upright in a cool, dry place.

Keep container closed when not in use.

Keep away from heat, sparks, flame, direct sunlight, and other possible sources of ignition.

Do not store with acid, metallic oxides, amines, or combustible materials.

Utilize chemical segregation.

Follow all applicable local regulations for handling and storage.

Specific uses

This product is intended to be used as a supplement for professionally maintained golf courses, sport turf, landscaping and specialty crops.

Section 8: Exposure Controls/Personal Protection

Control Parameters

PRODUCT COMPOSITION	ACGIH TLV	OSHA PEL	NIOSH REL
Iron Glycinate EDTA	--	--	--
Manganese Sulphate (Mn compounds)	5 mg/m ³	5 mg/m ³	--
Magnesium Sulphate	--	--	--
Zinc Sulphate	--	--	--

NIOSH-- No Occupational exposure values

Exposure controls



<p>VENTILATION:</p> <p>SPECIAL VENTILATION CONTROLS:</p> <p>RESPIRATORY PROTECTION:</p> <p>PROTECTIVE GLOVES:</p> <p>EYE PROTECTION:</p> <p>SKIN PROTECTION:</p> <p>WORK/HYGIENE PRACTICES:</p> <p>OTHER EQUIPMENT:</p>	<p>Always provide good general, mechanical room ventilation where this chemical/material is used.</p> <p>None</p> <p>Follow the OSHA respirator regulations found in 29 CFR 1910.134 or the CEN European Standards (EU). Use a NIOSH/MSHA or European Standard (EN) approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.</p> <p>Neoprene, butyl, or nitrile rubber gloves are recommended.</p> <p>Recommend eye protection using safety glasses or goggles.</p> <p>Suitable protective clothing to prevent skin contact</p> <p>Avoid breathing dust. Avoid contact with eyes. Wash hands after handling.</p> <p>Make safety shower, eyewash stations, and hand washing equipment available in the work area.</p>
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Section 9: Physical and Chemical Properties

	PRODUCT CRITERIA
APPEARANCE - COLOR:	Tan
PHYSICAL STATE:	Blend of crystals and powders
ODOR:	None
ODOR THRESHOLD	No data available
PH	4.4 – when mixed with water
MELTING POINT/FREEZING POINT:	No data available
INITIAL BOILING POINT AND BOILING RANGE:	No data available
FLASH POINT:	No data available
EVAPORATION RATE:	No data available
FLAMMABILITY (Solid, gas)	Not flammable
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	Not Measured
VAPOR PRESSURE	No data available
VAPOR DENSITY (AIR = 1)	No data available
RELATIVE DENSITY (@25 °C):	1.0-1.2 g/ml (tapped 1.14 g/ml)
SOLUBILITY(IES)	Soluble in water
OXIDIZING PROPERTIES	Not an oxidizer
PARTITION COEFFICIENT: n-octanol/water	No data available
AUTO IGNITION TEMPERATURE	No data available
DECOMPOSITION TEMPERATURE	No data available
VISCOSITY	No data available

Section 10: Stability and Reactivity

<p>Reactivity:</p> <p>Chemical Stability:</p> <p>Possibility of Hazardous Reactions:</p> <p>Conditions to Avoid:</p> <p>Incompatibility (Materials to avoid):</p> <p>Hazardous Decomposition Products:</p>	<p>Reacts with strong acids and strong oxidizers.</p> <p>Stable under recommended conditions.</p> <p>Will not occur under normal temperatures and pressures.</p> <p>High temperatures, high pressure, increasing the pH, and incompatible materials.</p> <p>Oxidizing agents, metals, lead, calcium, strontium salts borax, hydroxides, silver proteins, tannins, ethoxy ethyl alcohols, arsenates, phosphates, tartrates, barium, and powdered metals.</p> <p>Decomposition products include NOx, SOx, metals oxides and NH3.</p>
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Section 11: Toxicological Information

GHS Required Criteria	Toxicity Criteria	Toxicity Information	Comments	Chemical Constituent
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	LD50(Oral/Rat):	5 g/kg		Iron EDTA
	LD50(Oral/Rat):	>3000 mg/kg		Magnesium Sulphate
	LD50(Oral/Rat):	2150 mg/kg		Zinc Sulphate
Skin Corrosion/Irritation	May cause mild skin irritation			Zinc Sulphate
Serious Eye Damage / Eye Irritation	Causes serious eye irritation			Zinc Sulphate
Respiratory or Skin Sensitization	Data not available			
Germ Cell Mutagenicity	Data not available			
Carcinogenicity	NTP	Not listed		
	IARC	Not listed		
	OSHA	Not listed		
Reproductive Toxicity	No data available			
STOT -- Single Exposure	May cause damage to organs (gastrointestinal tract)		Category 2	Zinc Sulphate
STOT – Repeated Exposure	No data available			
Aspiration Hazard		Data not available		

STOT = Specific Target Organ Toxicity

Section 12: Ecological Information

		Chemical Constituent
Toxicity:	LC50 Fish (Lepomis macrochirus) 41mg/l, 96hr.	Iron Glycinate EDTA
	LC50 Crustacean (Ceriodaphnia) 0.095 mg/l, 48hr	Zinc Sulphate
	Hazardous to the aquatic environment, long-term hazard	Manganese Sulphate
Persistence and degradability:	No information is available.	
Bioaccumulative potential	No information is available.	
Mobility in soil:	No information is available.	
PBT and vPvB assessment:	PBT/vPvB assessment not available as chemical assessment not required/not conducted	
Other adverse effects:	No information is available.	

Section 13: Disposal Considerations

Waste from residues/unused products: Follow the waste disposal requirements of your country, state, or local authorities.

Contaminated packaging: Contaminated packaging material should be disposed of as stated above for residues and unused product.

Rinsate: Do not dispose of rinse water containing product in a sanitary sewer system or stormwater drainage system.

Section 14: Transport Information

DOT TRANSPORT: Not Regulated

ADR = International Carriage of Dangerous Goods by Road Not Regulated

RAIL TRANSPORT: Not Regulated

SEA TRANSPORT: IMDG Not Regulated

AIR TRANSPORT: IATA/ICAO Not Regulated

Section 15: Regulatory Information



TOXIC SUBSTANCE CONTROL ACT (TSCA) STATUS:

This product is in compliance with rules, regulations, and orders of TSCA. All components are either listed on the TSCA inventory or are considered exempt.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III SECTION 313 SUPPLIER NOTIFICATION:

This regulation requires submission of annual reports of toxic chemical(s) that appear in section 313 of the Emergency Planning and Community Right To Know Act of 1986 and 40 CFR 372. This information must be included in all SDS's that are copied and distributed for the material.

The Section 313 toxic chemicals contained in this product are: None

CALIFORNIA PROPOSITION 65:

This regulation requires a warning for California Proposition 65 chemical(s) under the statute.

The California proposition 65 chemical(s) contained in this product are: None

STATE RIGHT-TO-KNOW TOXIC SUBSTANCE OR HAZARDOUS SUBSTANCE LIST:

Massachusetts's hazardous substance(s):	Not listed
New Jersey	Not listed
Pennsylvania	Not listed

WHMIS-2015: This SDS is in compliance with WHMIS 2015 (HPR / new HPA).

EUROPEAN UNION:

This product has been reviewed for compliance with the following European Community Directives: REACH 1907/2006; Regulation (EC) No 1272/2008 on classification, labeling, and packaging (CLP) of substances and mixtures.

Section 16: Other Information

Initial issue date:	September 13, 2015
Final revision date:	September 24, 2015
Revision Number:	0
Revision explanation	Initial version
Information Sources:	RTECS, ECHA, REACH, OSHA 29CFR 1910.1200

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