

Section 1: Chemical Product and Company Identification

PRODUCT NAME: GRAVITY® S Micro Guard

FORMULA: Preparation/Mixture

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

DISTRIBUTED BY:
Heritage Landscape Supply Group
7440 TX-121
McKinney, TX 75070

Non-Emergency 1-855-565-1507
Business Inquiries: Mon-Fri 8am – 5pm (Central Standard Time)

EMERGENCY PHONE NUMBERS(S)

Medical Emergencies: 1-866-767-5042 (24 hrs)

For Chemical Emergency, Spill, Leak, Fire, Exposure or Accident, Call: CHEMTREC 1-800-424-9300 (24 hrs)

Section 2: Hazards Identification

Appearance: Tan - Blend of crystals and powders

GHS Hazard Classifications: Serious eye damage/irritation – Category 2A
Acute toxicity (oral) – Category 4
Skin Corrosion/Irritation – Category 2
Reproductive Toxicity – Category 2
<1.0% of mixture consists of ingredients of unknown acute toxicity.

Pictograms:



Signal Word: WARNING

Hazard Statements: Harmful if swallowed.
Causes serious eye irritation.
Causes skin irritation.
Suspected of damaging fertility or the unborn child.

Precautionary Statements:

Prevention	Obtain special instructions before use. Do not handle unless all safety precautions have been read and understood. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves, protective clothing, eye protection and face protection.
Response	IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. IF SWALLOWED: Rinse mouth. Call a poison control center or doctor for treatment advice if you feel unwell. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse. If Exposed or Concerned: Get medical attention.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with Federal, state and local regulations.

Hazards Not Otherwise Classified (HNOC) None

Transportation 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.

NFPA Rating:

Component	Health (Blue)	Flammability (Red)	Reactivity (Yellow)	Special (White)
Gravity S Micro Guard	1	1	0	----

Section 3: Composition, Information on Ingredients

PRODUCT COMPOSITION	APPROX %	CAS NO.	EC NUMBER
Zinc EDTA	<8	14025-21-9	237-865-0
Manganese EDTA	<32	15375-84-5	239-407-5
Magnesium EDTA	<12	14402-88-1	238-371-3
Iron EDTA	<32	15708-41-5	239-802-2
Magnesium Sulphate	<20	7487-88-9	242-691-3
Copper EDTA	<2	14025-15-1	237-864-5
Boric Acid	<2	10043-35-3	233-13902
Sodium Molybdate	<1	10102-40-6	--
Non-hazardous	<2	--	--

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 person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation occurs.
- Skin Contact** Immediately wash skin with plenty of soap and water for at least 15 minutes. If skin irritation occurs get medical attention. Remove contaminated clothing and wash it before reuse.
- Eye Contact** Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation persists.
- Ingestion** Rinse mouth. Do not induce vomiting unless told to do so by a poison control center or doctor. Never give anything to an unconscious person. Get medical attention if you feel unwell.

Most important symptoms and effects, both acute and delayed

- Symptoms/Injuries after Inhalation May cause respiratory tract irritation.
- 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

Harmful if swallowed. Effects may include diarrhea, vomiting.

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 mixture

Release of toxic gases at elevated temperatures

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 face, hands and any exposed skin thoroughly after handling.

A plastic container should be used for disposal.

For additional 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 oxide, amines, and 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	OSH A	NIOSH REL
Manganese EDTA	--	--	--
Iron EDTA	--	--	--
Magnesium Sulphate	--	--	--
Magnesium EDTA	--	--	--
Zinc EDTA	--	--	--
Copper EDTA	--	--	--
Boric Acid	--	--	--
Sodium Molybdate	--	--	--
Non-hazardous Materials	--	--	--

NIOSH–No Occupational exposure values

Exposure controls

VENTILATION:	Always provide good general, mechanical room ventilation where this chemical/material is used.
SPECIAL VENTILATION CONTROLS:	None
RESPIRATORY PROTECTION:	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.
PROTECTIVE GLOVES:	Neoprene, butyl, or nitrile rubber gloves are recommended.
EYE PROTECTION:	Wear chemical goggles or safety glasses. Contact lenses are not eye protective devices.
SKIN PROTECTION:	Suitable protective clothing to prevent skin contact.
WORK/HYGIENE PRACTICES:	Avoid breathing dust. Avoid contact with eyes. Wash face, hands and exposed skin thoroughly after handling. Remove and wash contaminated clothes separately before re-use. Do not eat, drink or smoke when using this product.
OTHER EQUIPMENT:	Make safety shower, eyewash stations, and hand washing equipment available in the work area.

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	5.9 – 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

Reactivity:	Reacts with strong acids and strong oxidizers.
Chemical Stability:	Stable under recommended conditions.
Possibility of Hazardous Reactions:	Will not occur under normal temperatures and pressures.
Conditions to Avoid:	High temperatures, high pressure, increasing the pH, and incompatible materials.
Incompatibility (Materials to avoid):	Oxidizing agents, metals, lead, calcium, strontium salts, borax, hydroxides, silver proteins, tannins, ethoxy ethyl alcohols, arsenates, phosphates, tartrates, barium, and powdered metals.
Hazardous Decomposition Products:	Decomposition products include NO _x , SO _x , metals oxides and NH ₃ .

Section 11: Toxicological Information

GHS Required Criteria	Toxicity Criteria	Toxicity Information	Comments	Chemical Constituent
Acute Toxicity	LD50 (Oral/Rat)	>2000mg/kg		Zn EDTA
	LD50 (Dermal/Rat)	>2000mg/kg		Magnesium Sulphate
	LD50 (Oral/rat)	2660mg/kg		Magnesium Sulphate
Skin Corrosion/Irritation	Causes skin irritation	Category 2		Boric Acid
Serious Eye Damage / Eye Irritation	Causes serious eye irritation	Category 2		
Respiratory or Skin		Data not available		
Germ Cell Mutagenicity	No Data available			
Carcinogenicity	NTP	Not listed		
	IARC	Not listed		
	OSHA	Not listed		
Reproductive Toxicity	Animal feeding studies indicate that boric acid, at high doses, has demonstrated effects on fertility and testes and has demonstrated developmental effects on the fetus including weight loss and minor skeletal variations. The doses administered were many times in excess of those which humans would normally be exposed to. A human epidemiology study under the conditions of normal occupational exposure to borate dusts indicated no effect on fertility.			
STOT – Single Exposure	No data available			
STOT – Repeated Exposure	No data available			
Aspiration Hazard		Data not available		

STOT = Specific Target Organ Toxicity

Section 12: Ecological Information

		Chemical Constituent
	LC50 Bluegill > 1000mg/l 96hr	Zinc EDTA
	LC50 Fish (Pimephales promelas) 680mg/l	Magnesium sulphate
	EC50 Daphnia (daphnia magna) 720mg/l 96hr	Magnesium sulphate
	LC50 Bluegill 1000mg/l 96hr	Manganese EDTA
	Toxicity to fish 555mg/l Method: OECD Test guideline 203	Copper EDTA
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 storm water 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: EDTA, Copper-Disodium Complex

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: Copper EDTA

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

Massachusetts	Not listed
New Jersey	Zinc EDTA, Manganese EDTA, Copper EDTA
Pennsylvania	Zinc EDTA, Manganese EDTA, Copper EDTA

Section 16: Other Information

Initial issue date: January 09, 2018
Revision Number: 1, 16
Revision explanation: Update Section 1
Information Sources: RTECS, ECHA, REACH, OSHA 29CFR 1910.1200

“Disclaimer: This document is generated to distribute health, safety and environmental data. It is not a specification sheet and none of the displayed data should be construed as a specification. Information on this SDS sheet was obtained from sources which we believe are reliable, and we believe that the information is complete and accurate. However, the information is provided without any warranty, express or implied, regarding its correctness. Some of the information presented and conclusions drawn are from sources other than direct test data of the substance. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may also be beyond our knowledge. It is the user’s responsibility to determine the suitability of any material for a specific purpose and to adopt such safety precautions as may be necessary. If the product is used as a component in another product, this SDS information may not be applicable. For these reasons, we do not assume any responsibility and expressly disclaim liability for any loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.”