

SAFETY DATA SHEET

This SDS with complies OSHA 29CFR 1910.1200

Section 1: Chemical Product and Company Identification

PRODUCT NAME: GRAVITY® S Micro Surge

FORMULA: Preparation/Mixture

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

DISTRIBUTED BY:
Winfield Solutions, LLC
P.O. Box 64589
St. Paul, MN 55164-0589

Non-Emergency 1-855-494-6343
Business Inquiries: Mon-Fri 8am – 5pm (Central Standard Time)

EMERGENCY PHONE NUMBERS(S)

Medical Emergencies: 1-877-424-7452 (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 1
Acute toxicity (oral) – Category 4
Skin Corrosion/Irritation – Category 2
<1.0% of mixture consists of ingredients of unknown acute toxicity.

Pictograms:



Signal Word: Danger

Hazard Statements: Causes serious eye damage.
Harmful if swallowed.
Causes skin irritation.

Precautionary Statements:

- Prevention 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. Immediately call a poison control center or doctor for treatment advice.
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.
- Storage See section 7 for information on storage.
- Disposal Dispose of contents/container in accordance with Federal, state and local regulations.

Hazards Not Otherwise Classified (HNOC) None

Other Information: Very toxic to aquatic life with long lasting effects.

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 Surge	1	0	1	----

Section 3: Composition, Information on Ingredients

PRODUCT COMPOSITION	APPROX %	CAS NO.	EC NUMBER
Non-hazardous ingredients	<10	--	--
Iron Glycinate	<30	20150-34-9	--
Manganese Glycinate	<20	6912-28-3	--
Zinc Glycinate	<5	14281-83-5	238-173-1
Iron EDTA	<30	15708-41-5	239-802-2
Magnesium Sulfate	<15	7487-88-9	242-691-3

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 immediate medical attention.

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 serious eye damage. 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	OSHA PEL	NIOSH REL
Iron Glycinate	--	--	--
Iron EDTA	--	--	--
Magnesium Sulfate	--	--	--
Manganese Glycinate (Mn compounds)	5 mg/m ³	5 mg/m ³	--
Zinc Glycinate	--	--	--

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	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

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):	5 g/kg	Category 4	Iron Glycinate
Skin Corrosion/Irritation	Causes skin irritation		Category 2	Iron Glycinate
Serious Eye Damage / Eye Irritation	Causes serious eye irritation		Category 2	Iron Glycinate

	Causes serious eye damage	Category 1	Zinc Glycinate
Respiratory or Skin Sensitization		Data not available	
Germ Cell Mutagenicity	No Data available		
Carcinogenicity	NTP	Not listed	
	IARC	Not listed	
	OSHA	Not listed	
Reproductive Toxicity	No data available		
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
Toxicity:	LC50 Fish (<i>Lepomis macrochirus</i>) 41mg/l, 96hr.	Iron Glycinate
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: 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	Not listed
New Jersey	Not listed
Pennsylvania	Not listed

Section 16: Other Information

Initial issue date:	January 09, 2018
Revision Number:	0
Revision explanation	Initial release
Information Sources:	RTECS, ECHA, REACH, OSHA 29CFR 1910.1200

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