

# SAFETY DATA SHEET

Res+ Residue Treatment  
(Res Plus or Res16)

Revision Date: 04/18/2017

Print Date: 04/18/2017

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Elemental Enzymes Res+ Residue Treatment  
**PRODUCT CODES:** G55  
**EPA REGISTRATION NO:**

**USES OF THE SUBSTANCE:** Various agricultural applications  
**RESTRICTIONS ON USE:** See product label for restrictions

**INFORMATION ON SUPPLIER**  
**SUPPLIER:** Elemental Enzymes Ag & Turf, LLC  
**ADDRESS:** 1685 Galt Industrial Blvd., Saint Louis, MO  
USA 63132

**PRODUCT INFORMATION:** 314-429-2885  
**EMERGENCY TELEPHONE NO:** 314-429-2885  
**FAX:** 314-429-2886

## SECTION 2: HAZARDS IDENTIFICATION

FOR EPA FIFRA-SPECIFIC INFORMATION SEE SECTION 15

**CLASSIFICATION:** NOT A DANGEROUS SUBSTANCE OR MIXTURE ACCORDING TO THE GLOBALLY HARMONIZED SYSTEM (GHS)

**LABEL ELEMENTS:**



**SIGNAL WORD:** Warning

**HAZARD STATEMENTS:** Causes skin irritation.  
Causes serious eye irritation.  
May cause respiratory irritation.

**PRECAUTIONARY STATEMENTS:** Wear protective gloves/protective clothing/eye protection/face protection.  
Wash skin thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Do not ingest.  
May cause nausea, vomiting, or diarrhea.  
Harmful if inhaled. May cause throat irritation and respiratory discomfort.  
Avoid breathing mist and spray.  
Use only outdoors or in a well-ventilated area.  
IF INHALED: REMOVE VICTIM to fresh air and keep at rest in a position comfortable for breathing.  
Call a POISON CENTER if you feel unwell.  
May cause mild to severe eye irritation.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical advice/attention.

**HAZARDS NOT OTHERWISE CLASSIFIED (HNOC):** Preservative component may induce skin sensitization.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

ACTIVE INGREDIENTS	HAZARD CLASSIFICATION	Concentration % by weight	CAS-NO.
<b>HAZARDOUS COMPONENTS</b>			
Ammonium sulfate	Aquatic acute/chron.3; H412	3.0-4.0%	7783-20-2
Citric acid	Eye irrit 2A; H319	1.5-2.5%	77-92-9
<b>NON-HAZARDOUS COMPONENTS AND COMPONENTS BELOW HAZARDOUS LEVELS</b>		<b>Concentration % by weight</b>	<b>CAS-NO.</b>
Nitrogen		5.5-6.5%	57-13-6
Potassium (K <sub>2</sub> O)		0.50-0.75%	7757-79-1
Magnesium		0.45-0.55%	10034-99-8

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Sodium tetraborate	0.10-0.20%	1303-96-4
Copper	0.08-0.12%	7758-99-8
Zinc	0.04-0.10%	7446-20-0
Manganese	0.04-0.10%	10034-96-5
Molybdenum	<0.01%	10102-40-6

INACTIVE INGREDIENTS:	Concentration % by weight	CAS-NO.
Other Ingredients	85-89%	N/A
Preservative	0.1%	N/A

## SECTION 4: FIRST AID MEASURES

### DESCRIPTION OF FIRST AID MEASURES:

<b>GENERAL:</b>	May aggravate pre-existing eye and skin conditions. If symptoms persist, seek medical attention. When possible, show the product label or this safety data sheet to the doctor in attendance.
<b>INHALATION:</b>	Move to fresh air. If the person is not breathing, call 911 and/or ambulance and give artificial respiration. Seek medical attention immediately. If a cough or other medical symptoms develop, contact medical personnel.
<b>EYES:</b>	May cause mild to severe irritation. Promptly rinse eyes with plenty of water for at least 15-20 minutes. Remove contact lenses if present after 5 minutes and continue rinsing eyes. If irritation persists, seek medical attention.
<b>SKIN:</b>	May cause mild to moderate skin irritation. Promptly wash off with soap and plenty of water. Remove contaminated clothing and shoes. If redness, itching, or burning sensation develops, seek medical attention.
<b>INGESTION:</b>	May cause abdominal discomfort, bloating, headache, nausea, vomiting, and diarrhea. Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

### MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

**SYMPTOMS:** Not expected to present a significant hazard under anticipated conditions of normal use. The most important known symptoms and effects are described in section 2 or section 11.

**SYMPTOMS AFTER SKIN CONTACT:** May cause irritation to the skin.

**SYMPTOMS AFTER EYE CONTACT:** May cause irritation to the eyes.

**INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:** Treat symptomatically

## SECTION 5: FIREFIGHTING MEASURES

### EXTINGUISHING MEDIA:

**SUITABLE EXTINGUISHING MEDIA:** Use extinguishing media appropriate for surrounding fire. Foam, dry powder, carbon dioxide, water spray, sand.

**UNSUITABLE EXTINGUISHING MEDIA:** None known

### SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

**EXPLOSION HAZARD:** Not applicable

**REACTIVITY:** Combustion may yield noxious or toxic fumes and gases including carbon dioxide, carbon monoxide, nitrogen oxides, sulfur oxide, boron oxide, zinc oxide, potassium oxide, magnesium oxide, or molybdenum oxide

**FLASH POINT:** No point known in liquid state

**ADVICE FOR FIREFIGHTERS:** Wear NIOSH/MSHA approved self-contained breathing apparatus pressure-demand, and full protective gear if necessary. Do not breathe fumes.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

**PRECAUTIONS:** Evacuate unnecessary personnel.

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## METHODS AND MATERIALS FOR CONTAINMENT AND CLEANUP:

**METHODS FOR CLEAN UP:** Stop the flow of material. On land, soak up spills with adsorbent or inert material such as sand, soil, or vermiculite. Collect and transfer the product to container. Rinse area with water. Dispose of in accordance with federal, state, and local regulations. In water, this material will disperse or dissolve in water. Stop the source of the release. Contain and isolate to prevent further release into soil, surface water and ground water.

**PERSONAL PRECAUTIONS:** Wear eye and respiratory equipment during cleanup. Ensure adequate ventilation.

**ENVIRONMENTAL PRECAUTIONS:** Prevent entry into waterways or wastewater canal. Keep out of sewers and drains. Do not dispose into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of National Pollution Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. For guidance, contact your State Water Board or regional EPA office.

**REFERENCE TO OTHER SECTIONS:** Information regarding safe handling, see section 7.  
Information regarding personal protective equipment, see section 8.  
Information regarding waste disposal see section 13.

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## SECTION 7: HANDLING AND STORAGE

### PRECAUTIONS FOR SAFE HANDLING AND STORAGE:

**HANDLING:** Ensure adequate ventilation. Handle container in a manner to prevent spillage. Avoid breathing vapors. Do not get in eyes or on clothing. Do not heat to >95 °F.

**HYGIENE MEASURES:** Wash hands and other exposed areas with soap and water after handling before drinking, eating, smoking, or applying cosmetics and when leaving work.

**STORAGE:** Store in a cool, dry, place away from sunlight, heat, and extreme conditions upright in original container. Keep out of reach of children and away from food and feed.

**INCOMPATIBLE MATERIALS:** Acids, bases, oxidizing agents, reducing agents and disinfectants may inactivate.

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**COMPONENT EXPOSURE LIMITS:** None expected under normal use conditions. OSHA, ACGIH, and/or NIOSH have developed the following exposure limits for product's following components:

Component	OSHA	ACGIH	NIOSH
Cupric sulfate	—	TWA: 1 mg/m <sup>3</sup>	IDLH: 100 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>
Manganese sulfate	(vacated) ceiling: 5 mg/m <sup>3</sup> ceiling: 5 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup>	IDLH: 500 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>
Glycerol	TWA: 15 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	—
Sodium molybdate	TWA: 5 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup>	—
Sodium tetraborate	(vacated) TWA: 10 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup> STEL: 6 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>

**Legend:** ACGIH – American Conference of Governmental Industrial Hygienists  
NIOSH – The National Institute for Occupational Safety and Health  
OSHA – Occupational Safety and Health Administration

**ENGINEERING CONTROLS:** Ensure adequate ventilation and maintain good industrial hygiene and safety practices.

**RESPIRATORY PROTECTION:** None is needed under adequate ventilation conditions.

**EYE PROTECTION:** Wear approved safety glasses with side shields.

**SKIN PROTECTION:** Wear suitable protective clothing, including long sleeves, long pants, socks, and shoes. Wear nitrile, neoprene, or rubber protective gloves. Wash hands after use.

**OTHER INFORMATION:** Follow manufacturer's instructions for cleaning/maintaining PPE. Wear clothing appropriate to for all working conditions and all chemicals being handled. Do not eat, drink or smoke during use.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE:** Clear blue liquid  
**ODOR:** Minimal, earthy  
**ODOR THRESHOLD:** No data available

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**PHYSICAL STATE:** Liquid  
**pH AS SUPPLIED:** 5.0-7.0  
**BOILING POINT:** No data available  
**MELTING POINT:** No data available  
**FREEZING POINT:** No data available  
**VAPOR PRESSURE (mmHg):** No data available  
**SPECIFIC GRAVITY (H<sub>2</sub>O = 1):** 1.08  
**EVAPORATION RATE:** No data available  
**SOLUBILITY IN WATER:** Dispersible in water  
**DECOMPOSITION TEMPERATURE:** No data available  
**DENSITY:** 8.97 lbs/gal (Bottle Method)  
**PERCENT VOLATILE:** <1%  
**VISCOSITY:** No data available  
**FLASH POINT:** No data available  
**AUTO-IGNITION TEMPERATURE:** No data available  
**LOWER EXPLOSION LIMIT:** No data available  
**UPPER EXPLOSION LIMIT:** No data available  
**EXPLOSIVITY:** No data available

**OTHER INFORMATION:** Further safety related physical-chemical data are not known.

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## SECTION 10: STABILITY AND REACTIVITY

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**REACTIVITY:** None under normal conditions.  
**STABILITY:** Stable under normal conditions, susceptible to extreme conditions and prolonged or excessive heat.  
**CONDITIONS TO AVOID:** Prolonged or excessive heat and open flame  
**INCOMPATIBILITY (MATERIAL/CONDITIONS TO AVOID):** Strong oxidizing agents, strong reducing agents, acids, bases, organic materials, and powdered metals  
**POSSIBILITY OF HAZARDOUS REACTIONS:** None expected under normal conditions  
**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** No decomposition products expected under normal conditions of use. Under extreme conditions, irritating or toxic gases may form.

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## SECTION 11: TOXOLOGICAL INFORMATION

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**ACUTE TOXICITY:** No data available  
**SKIN CORROSION/IRRITATION:** No data available  
**EYE IRRITATION:** No data available  
**SKIN SENSITIZATION:** No data available  
**RESPIRATORY SENSITIZATION:** No data available

### INFORMATION ON TOXICOLOGICAL EFFECTS:

**GERM CELL MUTAGENICITY:** No data available  
**REPRODUCTIVE TOXICITY:** No data available  
**SPECIFIC ORGAN TOXICITY:**  
**SINGLE EXPOSURE:** No data available  
**REPEATED EXPOSURE:** No data available  
**ASPIRATION HAZARD:** No data available

### FUTHER INFORMATION:

**CARCINOGENICITY:** No ingredients in this product are listed as a carcinogen by IARC, ACGIH, NTP, or OSHA.

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## SECTION 12: ECOLOGICAL INFORMATION

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**ECOLOGICAL INFORMATION:** Do not empty into drains.  
**AQUATIC TOXICITY:** Likely to be toxic to fish, aquatic invertebrates and plants when concentrated.  
**PERSISTENCE AND DEGRADABILITY:** No additional information available  
**BIOACCUMALITIVE POTENTIAL:** No additional information available  
**MOBILITY IN SOIL:** Likely to be mobile in the environment due to solubility in water  
**OTHER ADVERSE EFFECTS:** No additional information available

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## SECTION 13: DISPOSAL CONSIDERATIONS

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**WASTE DISPOSAL METHOD:** Dispose of in accordance with Federal, State, and local regulations.  
**ECOLOGY WASTE MATERIALS:** Avoid release into the environment.

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## SECTION 14: TRANSPORT INFORMATION

This product is not believed to be hazardous or dangerous to transport, but several component materials are listed as hazardous or dangerous to transport. See chart below for listed materials and contact your local transport authority for more information.

Component	US DOT	Canada TDG	IMDG	IATA
Manganese Sulfate	X	X	X	X
Copper Sulfate	X	X	X	X
Zinc Sulfate	X		X	X
Potassium Nitrate	X	X	X	X

**Legend:** X = listed as dangerous, environmental, hazardous, or toxic

DOT – Department of Transportation

TDG – Transport of Dangerous Goods

IMDG – International Maritime Organization

IATA – International Air Transport Association

## SECTION 15: REGULATORY INFORMATION

### U.S. FEDERAL REGULATIONS:

- SARA 302:** No components of this mixture are subject to the reporting requirements of SARA Title III, Section 302
- SARA 312/313:** No components of this mixture with known CAS numbers are present in concentration exceeding the threshold subject to the reporting requirements of SARA Title III, Section 313
- EPA:** Hazardous Substance: Not applicable  
Reportable Quantity: Not applicable
- CLEAN WATER ACT:** Not applicable
- CLEAN AIR ACT:** Not applicable
- OSHA:** Not applicable
- CERCLA:** Not applicable
- US DPT OF HOMELAND SECURITY:** No components of this mixture are above the Screening Threshold Quantity of the DH Chemical Facility Anti-Terrorism Standard.
- CALIFORNIA PROPOSITION 65:** No components of this mixture are known to the State of California to cause cancer, birth defects, or any other reproductive harm.

### INTERNATIONAL REGULATIONS:

**CANADA CONTROLLED PRODUCTS REGULATIONS:** The following components are listed as TOXIC MATERIALS according to the Canadian Workplace Hazardous Materials Information System (WHMIS):

Component	CAS
Manganese Sulfate	10034-99-8
Copper Sulfate	7758-99-8
Urea	57-13-6
Sodium tetraborate	1303-96-4

## SECTION 16: OTHER INFORMATION

**ABBREVIATIONS AND ACRONYMS:** CAS – Chemical Abstracts Service. GHS – Globally Harmonized System. HCS – Hazard Communication Standard. OSHA – Occupational Safety and Health Administration. EPA – Environmental Protection Act. CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act

**HMIS CLASSIFICATION:** Health = 1 Flammability = 0 Reactivity = 0 Personal Protection = B

**DISCLAIMER:** Read and follow all label directions and precautions before using the product. These products are intended for agricultural use only. NOT FOR HOUSEHOLD USE OR RESALE. KEEP OUT OF REACH OF CHILDREN. While we believe that the data contained herein is factual and the opinions expressed are those of qualified experts, the data are not to be taken as a warranty or representation for which the company assumes any legal responsibility. They are offered solely for your consideration, investigation, and verification. Any use of the data and information must be determined by the user to be in accordance with the applicable Federal, State, and local laws and regulation.