



# Safety Data Sheet

Preparation Date 07-Jun-2022

Revision date 07-Jun-2022

Revision Number: 1

## 1. Identification of the Substance/Preparation and of the Company/Undertaking

### Identification of the product

Product Description RIO

### Other means of identification

Internal SDS code 12-0496  
Synonyms Biozyme  
Registration number(s) 70506-496

### Recommended use of the chemical and restrictions on use

Recommended use Foliar spray.  
Uses advised against Non labeled activities

### Details of the Supplier of the Safety Data Sheet

#### Supplier Address

UPL NA Inc.  
630 Freedom Business Center  
Suite 402  
King of Prussia, PA 19406

### Emergency telephone number

Company Phone Number 1-800-438-6071  
Emergency telephone number Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887  
Medical: Rocky Mountain Poison and Drug Safety (866) 673-6671 (24hrs)

## 2. Hazards Identification

### Classification

#### OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2A
Reproductive Toxicity	Category 1B

### Label elements

#### EMERGENCY OVERVIEW

**DANGER**

#### Hazard Statements

Causes serious eye irritation  
May damage fertility or the unborn child



The product contains no substances which at their given concentration, are considered to be hazardous to health under the OSHA

2012 HazCom

**Appearance** Turbid **Physical state** Liquid **Odor** Mild characteristic**Precautionary Statements - Prevention**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Wash hands thoroughly after handling  
Wear eye/face protection

IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If eye irritation persists: Get medical advice/attention

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container in accordance with local/national regulations

**Hazards Not Otherwise Classified (HNOC)****OTHER INFORMATION**

- No information available

**3. Composition/information on Ingredients**

**Synonyms** Biozyme.

Chemical name	CAS No	Weight-%
Ferrous sulfate heptahydrate	7782-63-0	1-3
Disodium octaborate tetrahydrate	12280-03-4	1-3
Zinc sulfate heptahydrate	7446-20-0	1-3
Gibberellic acid	77-06-5	0.0033
cytokinin	6046-79-3	0.0033
Indole Acetic acid	87-51-4	0.0033

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

**4. First aid measures****FIRST AID MEASURES**

**Eye contact** Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. If symptoms persist, call a physician.

**Skin contact** Rinse skin immediately with plenty of water for 15-20 minutes. If skin irritation persists, call a physician.

**Inhalation** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

**Ingestion** Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice.

**Most Important Symptoms and Effects, Both Acute and Delayed**

**Most Important Symptoms and Effects** Suspected of damaging fertility or unborn child.

**Indication of Any Immediate Medical Attention and Special Treatment Needed**

**Notes to physician** Treat symptomatically.

**5. Fire-fighting measures****Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** no data available.

**Specific hazards arising from the chemical**

No information available.

**Hazardous combustion products** Thermal decomposition may release toxic fumes.

**Explosion data****Protective equipment and precautions for firefighters**

Use personal protective equipment. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. Accidental release measures****Personal precautions, protective equipment and emergency procedures**

**Personal Precautions** Use personal protective equipment. Avoid contact with skin, eyes and clothing.

**Environmental Precautions**

**Environmental precautions** Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

**Methods and material for containment and cleaning up**

**Methods for Clean-Up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.

**7. Handling and Storage****Precautions for safe handling**

**Handling** Avoid contact with skin, eyes and clothing. Wear personal protective equipment.

**Conditions for safe storage, including any incompatibilities**

**Storage** Store in an area where cross-contamination with pesticides, fertilizers, food or feed could not occur. Store in a dry place and/or in closed container. Keep containers tightly closed in a cool, well-ventilated place.

**incompatible materials** Strong acids. Strong oxidizing agents. Strong bases.

**8. Exposure Controls/Personal Protection****Exposure guidelines**

Chemical name	ACGIH TLV	OSHA PEL
Ferrous sulfate heptahydrate	TWA: 1 mg/m <sup>3</sup> Fe	
Disodium octaborate tetrahydrate	STEL: 6 mg/m <sup>3</sup> inhalable	

	particulate matter TWA: 2 mg/m <sup>3</sup> inhalable particulate matter	
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**Engineering controls** Investigate engineering techniques to reduce exposures. Local mechanical exhaust ventilation is preferred. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems. PESTICIDE APPLICATORS & WORKERS. THESE WORKERS MUST REFER TO PRODUCT LABELING AND DIRECTIONS FOR USE IN ACCORDANCE WITH EPA WORKER PROTECTION STANDARD 40 CFR PART 170.

**Personal protective equipment**

**Eye/Face Protection**

**Skin protection**

**Respiratory protection**

Avoid contact with eyes. Goggles.

Long sleeved clothing. Long pants. Chemical resistant gloves. waterproof gloves. Socks and footwear.

Where airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure, use an approved full face positive-pressure, self-contained breathing apparatus. Respiratory protection programs must comply with 29 CFR 1910.134.

**General hygiene considerations**

Avoid contact with skin, eyes and clothing.

## 9. Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

<b>Appearance</b>	Turbid	
<b>Physical state</b>	Liquid	
<b>Odor</b>	Mild characteristic	
<b>color</b>	brown	
<u>Property</u>	<u>VALUES</u>	<u>Remarks/ Method</u>
<b>pH</b>	4.5	Approximately 10% solution
<b>Melting point/freezing point</b>		None known
<b>Boiling Point/Range</b>	104 C	None known
<b>Flash Point</b>		None known
<b>Evaporation Rate</b>		None known
<b>Flammability (solid, gas)</b>		None known
<b>Vapor pressure</b>	17.5 mm Hg	<b>Relative Density</b> 1.16 g/cm <sup>3</sup>
<b>Specific gravity</b>		None known
<b>Bulk density</b>		None known
<b>Water solubility</b>		Soluble in water
None known		<b>Solubility in Other Solvents</b> No information available
None known		<b>Partition coefficient: n-octanol/water</b>
None known		<b>Autoignition temperature</b>
None known		<b>Decomposition temperature</b>
None known		<b>Viscosity</b>

### 9.2 OTHER INFORMATION- NONE

## 10. Stability and Reactivity

### Reactivity

no data available

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

None under normal processing.

**Conditions to avoid**

Extremes of temperature and direct sunlight.

**Incompatible materials**

Strong acids. Strong oxidizing agents. Strong bases.

**Hazardous decomposition products**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

## 11. Toxicological Information

**Information on Likely Routes of Exposure**

<b>Product information</b>	No information available
<b>Inhalation</b>	Not classified.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Skin contact</b>	Not classified.
<b>Ingestion</b>	Not classified.

**Information on Toxicological Effects**

**Symptoms** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Sensitization</b>	No information available.
<b>Mutagenic effects</b>	no data available.
<b>Carcinogenicity</b>	There are no known carcinogenic chemicals in this product.
<b>Reproductive effects</b>	Not Available.
<b>STOT - Single Exposure</b>	no data available.
<b>STOT - Repeated Exposure</b>	no data available.
<b>Aspiration hazard</b>	No information available.

**Numerical Measures of Toxicity - See above**

## 12. Ecological Information

**ecotoxicity**

Harmful to aquatic life with long lasting effects

**Persistence/Degradability**

no data available.

**Bioaccumulation/ Accumulation**

No information available.

**Other Adverse Effects**

no data available

**13. Disposal Considerations****Waste Treatment Methods**

<b>Waste Disposal Method</b>	Dispose of in accordance with local regulations.
<b>Contaminated packaging</b>	Do not reuse empty containers.

**14. Transport Information**

<b>DOT</b>	NOT REGULATED
<b>TDG</b>	NOT REGULATED
<b>IATA</b>	NOT REGULATED
<b>IMDG</b>	NOT REGULATED

**15. Regulatory Information**

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

**signal word** CAUTION

**International Inventories**

<b>USINV</b>	Not present
<b>DSL/NDL</b>	Not present
<b>EINECS/</b>	Not Present
<b>ELINCS</b>	
<b>ENCS</b>	Not Present
<b>China</b>	Not Present
<b>KECL</b>	Not Present
<b>PICCS</b>	Not Present
<b>AICS</b>	Not Present
<b>TSCA</b>	Not Present

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

### Federal Regulations

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ferrous sulfate heptahydrate 7782-63-0				X

#### CERCLA

Not applicable

#### CERCLA

**SARA Product RQ** 0

#### RCRA

### Pesticide Information

Component	FIFRA - Restricted Use	FIFRA - Pesticide Product Other Ingredients	FIFRA - Listing of Pesticide Chemicals	California Pesticides - Restricted Materials
Disodium octaborate tetrahydrate 12280-03-4 ( 1-3 )			X	
Gibberellic acid 77-06-5 ( 0.0033 )			X	

### State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

### State Right-to-Know

### International regulations

#### U.S. EPA Label information

EPA Pesticide registration number 70506-496

## 16. Other Information

#### NFPA

HEALTH 1

flammability 0

Instability 0

Physical hazard -

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Revision Summary

Update logo

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**End of SDS**