



## 1. IDENTIFICATION

Product Name: **F-312G Granular Fertilizer Micronutrient**

Product Type: Solid

Recommended /Restrictions of use: Fertilizer Micronutrient Additive

Supplier's Details: Frit Industries Inc  
PO Box 1589  
Ozark, AL 36361-1589  
334-774-2515

Emergency contact number:

Chemical Emergencies - 800-535-5053  
Medical/Handling Emergencies - INFOTRAC  
800-535-5053 USA 352-323-3500 International

## 2. HAZARDS IDENTIFICATION

Hazard Classification: This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

Serious eye damage – Category 1  
Reprotoxicity – Category 1B  
Acute Toxicity (oral) – Category 4

Signal word: Danger

Hazard statements: Causes serious eye damage (H318)  
May damage fertility or the unborn child (H360)  
Harmful if swallowed (H302)

Hazard pictograms:



Precautionary statements:

**Prevention** Keep out of reach of children.  
Obtain, read and follow all safety instructions before use.  
Wash skin thoroughly after handling. Do not touch eyes.  
Do not eat, drink, or smoke when using product.  
Wear protective gloves/ protective clothing/ eye protection/ face protection

**Response** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get emergency medical help.  
IF SWALLOWED: Get medical help. Rinse mouth.  
IF exposed or concerned: Get medical advice.

**Storage** Store locked up.

**Disposal** Dispose of contents/container to an approved waste disposal.

Other hazards: None identified.

Other hazards not contributing to the classification: Spill area may be slippery.

Unknown components with acute toxicity: None.



### 3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture

| Chemical name/component  | CAS#      | Concentration |
|--------------------------|-----------|---------------|
| Sodium Calcium Borate    | 1319-33-1 | > 25 - < 35%  |
| Magnesium Oxide          | 1309-48-4 | > 20- < 30%   |
| Magnesium Sulfate        | 7487-88-9 | > 10 - < 20%  |
| Zinc Oxide               | 1314-13-2 | > 5 - < 15%   |
| Zinc Sulfate Monohydrate | 7446-19-7 | > 5 - < 10%   |

### 4. FIRST-AID MEASURES

Description of first aid measures:

Eye Contact --If in eyes: Flush with water for 15 minutes. Call a doctor for treatment if irritation persists.  
Skin Contact - If on skin: Wash thoroughly with soap and water. Launder clothing before reuse.  
Inhalation -- If inhaled: Remove affected person from source of exposure. Call 911 if breathing is difficult.  
Ingestion -- If ingested: Do not induce vomiting. Get medical attention. Have the product label with you when calling a doctor or going for treatment.

Indication of any immediate medical attention and special treatment needed: No additional information available.

### 5. FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: Water fog, foam or spray, dry chemical, carbon dioxide, sand  
Unsuitable extinguishing media: None  
Special hazards arising from the substance or mixture: Material is not combustible. Product packaging is not self-ignitable, but may support combustion.

Advice for firefighters:

Firefighting instructions: Use extinguishing media appropriate for the surrounding materials.  
Protection during firefighting: Wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Other information: Do not allow run-off from fire-fighting to enter drains or water courses.

### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures:

Use protective equipment to prevent contact with skin and eyes or inhalation of dust.  
Use site specific emergency procedures if product is released. Prevent entry to sewers and public surface waters per site specific containment procedures.

Methods and material for containment and cleaning up:

Use mechanical means. Store material in suitable containers for recycle or disposal.  
Minimize dust generation.

### 7. HANDLING AND STORAGE

Precaution for safe handling: Avoid contact with skin and eyes. After handling, wash hands thoroughly with soap and water. Avoid generating and breathing dust. Wash before eating and drinking.

Safe Storage conditions: Store in a dry, cool, and well-ventilated area. Protect from weather.

Incompatible materials: Strong alkaline or acid compounds.



## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure limits are listed below, if they exist:

| Component                   | Regulation   | Type of listing | Value/Notation                                |
|-----------------------------|--------------|-----------------|-----------------------------------------------|
| Dust – inhalable particles  | OSHA / ACGIH | TWA             | 15 mg/ m <sup>3</sup> / 10 mg/ m <sup>3</sup> |
| Dust – respirable particles | OSHA / ACGIH | TWA             | 5 mg/ m <sup>3</sup> / 3 mg/ m <sup>3</sup>   |
| Zinc compounds              | OSHA/ ACGIH  | TWA             | 15 mg/ m <sup>3</sup> / 10 mg/ m <sup>3</sup> |

Engineering controls: Use adequate ventilation to prevent exposure.

Personal protective measures:

Hand protection:

Wear suitable protective gloves to prevent direct exposure.

Eye protection:

Safety glasses with side shields or tight fitting goggles.

Skin and body protection:

Wear long sleeved clothing or other suitable clothing to prevent skin exposure.

Respiratory protection:

Where dust is generated and appropriate engineering controls cannot maintain acceptable levels, use appropriate respiratory protection equipment to prevent inhalation of materials.

Special requirements for PPE, protective clothing or respirators:

No specialty PPE requirements beyond those previously identified.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                               |                 |                        |                            |
|-----------------------------------------------|-----------------|------------------------|----------------------------|
| Physical state:                               | Solid           | Vapor pressure:        | NA                         |
| Color:                                        | Dark Brown      | Vapor density:         | NA                         |
| Odor:                                         | Slight metallic | Relative density       | 90 lbs/ft <sup>3</sup>     |
| Odor threshold:                               | NA              | Solubility:            | Partially soluble in water |
| pH:                                           | 5-6.5           | Partition coefficient: | NA                         |
| Melting point/freezing point:                 | NA              | Auto ignition temp:    | NA                         |
| Initial boiling point/range:                  | NA              | Decomposition temp:    | NA                         |
| Flashpoint:                                   | NA              | Viscosity:             | NA                         |
| Evaporation rate:                             | NA              |                        |                            |
| Flammability (solid gas):                     | NA              |                        |                            |
| Upper/lower flammability or explosive limits: | NA              |                        |                            |

Other information: No additional information.

## 10. STABILITY AND REACTIVITY

Reactivity: This product is stable under normal conditions of use, storage and transport.

Chemical stability: This product is stable at ambient temperatures and atmospheric pressures.

Other:

Hazardous reactions: None determined.

Conditions to avoid: Avoid high temperatures. Prevent contact with moisture or incompatible materials.

Incompatible materials: Strong alkaline or acid compounds.

Hazardous decomposition products: Metal and sulfur fumes when excessive heat is applied.



## **11. TOXICOLOGICAL INFORMATION**

|                                                                    |                                                                                                |
|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Likely routes of exposure:                                         | Inhalation, Ingestion, Skin contact, Eye contact                                               |
| Symptoms/injuries after inhalation:                                | High concentrations of dust may irritate the throat and respiratory system and cause coughing. |
| Symptoms/injuries after Ingestion:                                 | Harmful if swallowed.                                                                          |
| Symptoms/injuries after skin contact:                              | Prolonged contact may cause skin irritation                                                    |
| Symptoms/injuries after eye contact:                               | Causes serious eye damage.                                                                     |
| Acute toxicity:                                                    | Mixture based on components' toxicity.                                                         |
| Reproductive toxicity:                                             | May damage fertility or the unborn child.                                                      |
| Specific Target Organ Toxicity-S E:                                | Not classified.                                                                                |
| Specific Target Organ Toxicity-R E:                                | Not classified.                                                                                |
| Carcinogenicity:                                                   | Not classified.                                                                                |
| NTP (National Toxicology Program):                                 | Not classified.                                                                                |
| IARC (International Agency for Research on Cancer):                | Not classified.                                                                                |
| ACGIH (American Conference of Governmental Industrial Hygienists): | Not classified.                                                                                |

## **12. ECOLOGICAL INFORMATION**

|                                |                                                            |
|--------------------------------|------------------------------------------------------------|
| Toxicity:                      | No testing data available.                                 |
| Persistence and degradability: | No data is available on the degradability of this product. |
| Bioaccumulative potential:     | No data is available.                                      |
| Mobility in soil:              | No data is available.                                      |
| Other adverse effects:         | No further relevant information available.                 |

## **13. DISPOSAL CONSIDERATIONS**

|                                 |                                                                                                                                                                                                                      |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Waste treatment methods:</u> | Recommend recycling excess product if at all possible. Avoid sewage and landfill disposal. Place contaminated material in suitable, labeled containers for disposal. See section 8 for exposure control information. |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## **14. TRANSPORT INFORMATION**

**DOT:** **Not regulated for transport**

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

## **15. REGULATORY INFORMATION**

**OSHA Hazard Communication Standard:** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

|                                            |                                                   |
|--------------------------------------------|---------------------------------------------------|
| Ingredients listed on TSCA inventory:      | Yes                                               |
| CERCLA Section 103 Hazardous Substances:   | Zinc compounds                                    |
| EPCRA Section 311/312 Hazard Categories:   | Serious eye damage; Reprotoxicity, Acute toxicity |
| EPCRA Section 313 Toxic Release Inventory: | Zinc compounds                                    |

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):

This product may contain listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

Micronutrient Approvals / Registrations: California Department of Food and Agriculture (CDFA):

Company Registration# 11554



## **16. OTHER INFORMATION**

Date of preparation/issue date: October 10, 2025 JH

Version: 1.5

Updated section 2 Hazard classifications pictogram and corresponding P-statements etc

Updated section 8 OEL

Disclaimer: The information in this Safety Data Sheet should be provided to all who will use, handle store, transport or otherwise be exposed to this product. All information concerning this product and/or all suggestions for handling and use contained herein are offered in good faith and are believed to be reliable as of the date of publication. Frit Industries, however, makes no warranty as to the accuracy of and/or sufficiency of such information and/or suggestions, as to the product's merchantability or fitness for any particular purpose, or that any suggested use will not infringe any patent. Buyer shall determine for himself, by preliminary tests or otherwise, the suitability of this product for his purposes, including mixing with other products. The information contained herein supersedes all previously issued bulletins on the subject matter covered.