

## MATERIAL SAFETY DATA SHEET

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### 1. Product and Company Identification

**Product Name:** N-Zyme Plus  
**Product Code:** 6002  
**Manufacturer information:**  
**Company Name:** Microbial Biological Fertilizer International, LLC  
**Address:** 4006 South 40<sup>th</sup> Street, St. Joseph,  
Missouri, 64503  
**Telephone:** +1 (816) 236 4772  
**Email:** [steven@mbfi.bio](mailto:steven@mbfi.bio)  
**Emergency Phone Number:** +1 (816) 752 0306

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### 2. Hazards Identification

**Important hazards:** May cause severe skin burns and eye damage. May cause cancer.

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### 3. Composition / Information on Ingredients

**Product description:** A liquid fertilizer recommended to supply molybdenum, cobalt and sulphur.

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### 4. First Aid Measures

**Inhalation:** Move victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician or poison control center immediately. Call a poison control center or doctor for treatment advice.

**Skin Contact:** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call a physician. Call a poison control center or doctor for treatment advice.

**Eye Contact:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison control center or doctor for treatment advice.

**Ingestion:** Call a physician or poison control center immediately. Drink 1 or 2 glasses of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

#### Most important symptoms and effects, both acute and delayed

**Symptoms:** May cause redness and tearing of eyes.

#### Indication of any immediate medical attention and special treatment needed

**Note to physicians:** Treat symptomatically.

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## 5. Fire Fighting Measures

### Suitable extinguishing media:

Dry chemical, CO<sub>2</sub>, water spray or regular foam. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal. Water spray, fog, or regular foam.

### Unsuitable extinguishing media:

None.

### Specific hazards arising from the chemical

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

### Hazardous combustion products:

None.

### Explosion data

**Sensitivity to Mechanical Impact:** None.

**Sensitivity to Static Discharge:** None.

### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers/tanks with water spray.

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## 6. Accidental Release Measures

### Personal precautions, protective equipment, and emergency procedures

**Personal precautions:** Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required.

**For emergency responders:** Use personal protection recommended in Section 8. Ventilate the area.

### Environmental precautions

**Environmental precautions:** Prevent entry into waterways, sewers, basements, or confined areas.

### Methods and material for containment and cleaning up

**Methods for containment:** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up:** Prevent spillage or further leakage if it is safe to do so. Contain spillage with sandbags or by other means. Absorb with earth, sand, or absorbent material. Dig up heavily contaminated soil. Flush with water to remove any residues. Keep product and wash water out of drains, sewers, ditches, and waterways.

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## 7. Handling and Storage

### Precautions for safe handling

**Advice on safe handling:** Use personal protective equipment as required. Avoid contact with skin, eyes, or clothing. Wash contaminated clothing before reuse. Do not eat, drink, or smoke when using this product. Do not breathe fumes / mist / vapors / spray.

### Conditions for safe storage, including any incompatibilities

**Storage conditions:** Keep the container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep away from food, drink, and animal feed. Keep cool between 40-80°F (4-27°C). Protect from sunlight.

**Packaging materials:** Do not reuse the container.

**Incompatible materials:** All alkaline materials.

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## 8. Exposure Controls / Personal Protection

### Control parameters

The usual precautionary measures for handling chemicals should be observed. Provide adequate ventilation.

### Appropriate engineering controls

Engineering controls ensure adequate ventilation, especially in confined areas. Showers, eyewash stations, and ventilation systems.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection:

Tight sealing safety goggles.

#### Skin and body protection:

Wear suitable protective clothing. Wear protective butyl rubber gloves. Protective shoes or boots.

#### Respiratory protection:

Ensure adequate ventilation, especially in confined areas.

#### General Hygiene considerations:

When using do not eat, drink, or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes, or clothing. Wash hands thoroughly after handling. Wash contaminated clothing before reuse.

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## 9. Physical and Chemical Properties

Physical state:	Liquid
Color:	Dark Purple
Odor:	Characteristic
pH:	10.2 (at 20°C)
Specific gravity	1.37 g/ml (at 20°C)
Dry matter:	Not applicable
Density:	Not applicable
Solubility:	Soluble
Partition coefficient:	Not applicable
Vapor pressure:	Not applicable
Boiling point:	Not applicable
Melting point:	Not applicable
Flash point:	Not flammable
Explosive properties:	Not explosive
Auto-ignition temp:	Not available

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## 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	Very low or high temperatures and direct sunlight.
Incompatible materials	Avoid Lime Sulphur and Bordeaux mixtures.
Hazardous Decomposition Products	None identified.

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## 11. Toxicological Information

LD <sub>50</sub> :	Acute Oral LD <sub>50</sub> (rat): 3922 mg/kg Cat 5 (Calculated) Acute Dermal LD <sub>50</sub> (rat): 4909 mg/kg Cat 5 (Calculated)
LC <sub>50</sub> :	Inhalation LC <sub>50</sub> (rat): 14.4 mg/L (4h) Cat 5 Mist (Calculated)
Acute Eye Irritation (Rabbit):	Causes serious eye damage.
Acute Dermal Irritation (Rabbit):	May cause skin irritation.
Skin Sensitization (Guinea Pig):	May cause skin burns.
Local effects:	None.
Chronic toxicity:	Non-carcinogenic, non-teratogenic, non-mutagenic or reproductive.

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## 12. Ecological Information

<b>Honeybee (<i>Apis mellifera</i>):</b>	Virtually Non-toxic.
<b>Fish toxicity:</b>	Very toxic to aquatic life with long lasting effects.
<b>Biodegradability:</b>	The products constituents are biodegradable.
<b>Mobility:</b>	Immobile.
<b>Bioaccumulation:</b>	None.

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## 13. Disposal Considerations

Triple rinse the empty container as follows: Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter rinse the empty container three times in succession with one quarter of the container volume of fresh water and decant the rinsate into the spray or mixing tank. Puncture the triple-rinsed container and dispose of it via an approved collector or recycler. Do not bury, burn, or donate the container to any other parties that may use it as a container for food or beverages.

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## 14. Transport Information

<b>UN number:</b>	Not regulated.
<b>UN Proper shipping name:</b>	Not regulated.
<b>Transport hazard class(es):</b>	Not regulated.
<b>Packing Group:</b>	Not regulated.

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## 15. Regulatory Information

### Safety, health, and environmental regulations/legislation specific for the mixture

<b>Authorizations:</b>	Registered per state.
<b>Restrictions on use:</b>	Not relevant.

### Chemical Safety Assessment

Advice on product handling can be found in sections 7 and 8 of this SDS

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## 16. Other Information

The purpose of the above information is to describe the product only in terms of health and safety requirements. The information given should not, therefore, be construed as guaranteeing specific properties or as a specification. Customers should satisfy themselves as to the suitability and completeness of such information for their own particular use.

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