

# MATERIAL SAFETY DATA SHEET

## Orb-3® Professional Enzymes

### Section 1 – Chemical Product & Company Identification

**Trade Name:** Orb-3® Professional Enzymes  
**Chemical Family:** Mixture  
**Product Description:** A concentrated, non-bacterial, readily biodegradable enzyme solution.  
**Manufacturer:** Great Lakes Bio Systems, Inc.  
13916 Leetsbir Road, Sturtevant, WI 53177  
**Technical Support:** 800-236-1366  
**Chemical Emergency:** 800-424-9300  
**Issue Date:** 10/29/2010  
**Supersedes Date:** 6/13/2008

### Section 2 – Hazards Identification

**Emergency overview:** Moderately irritating to the eyes. Mild skin irritation.

#### Potential Health effects

**Eyes:** May cause irritation unless immediately rinsed.  
**Skin:** May cause irritation upon prolonged contact.  
**Inhalation:** Unknown  
**Ingestion:** May cause irritation to the mouth and throat. May cause nausea.

### Section 3 – Composition / Information on Ingredients

<u>Components</u>	<u>CAS #</u>	<u>Percent</u>
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Orb-3® Professional Enzymes is a proprietary composition “not considered hazardous” under the OSHA Hazard Communication Standard CFR Title 29 1910.1200

### Section 4 – First Aid Measures

#### First aid procedures

**Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation persists.

**Skin Contact:** Flush skin with large amounts of water. Remove any contaminated clothing and wash before reuse. Seek medical attention if irritation occurs.

**Inhalation:** If symptoms are experienced, remove source of contamination and/or move victim to fresh air. If breathing is difficult, have trained personnel administer oxygen. If respiration stops, have trained personnel administer artificial respiration. Get medical attention immediately.

**Ingestion:** Give large amounts of water. Do not induce vomiting. If spontaneous vomiting is inevitable, prevent aspiration by keeping victim’s head below the knees. Get immediate medical attention.

## Section 5 – Fire Fighting Measures

**Flash Point:** None

### Extinguishing

**Media:** Water fog or fine spray, carbon dioxide, dry chemical or foam.

### Fire fighting

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

## Section 6 – Accidental Release Measures

### Personal

**Precautions:** Isolate area. Keep unnecessary personnel away. Keep out of low areas. Ventilate closed spaces before entering.

### Environmental

**Precautions:** Prevent further leakage or spillage if safe to do so.

### Methods for

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

### Methods for

**Clean-up:** Wear appropriate protective equipment and clothing during clean-up.

Large spill: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Dispose in accordance with all local, state and federal regulations.

Small spill: Follow same procedure as above.

## Section 7 – Handling and Storage

**Handling:** Avoid contact with skin and eyes. Wash hands thoroughly after handling.

**Storage:** Store this product below 120°F (49°C), preferably below 75°F (24°C), in a cool, dry, well ventilated area away from heat, sparks, flame, oxidizers and out of direct sunlight. For best results, use within 12 months.

## Section 8 – Exposure Controls, Personal Protection

### Personal Protection

**General:** Eye wash fountain is recommended.

**Eyes:** Wear chemical goggles.

**Skin:** Wear suitable protective clothing. Use impervious gloves.

## Section 9 – Physical & Chemical Properties

<b>Vapor Pressure:</b>	<0.01 mm Hg @ 68° F (20° C)
<b>Vapor Density (air = 1):</b>	Same as water
<b>Specific Gravity:</b>	~1.02 – 1.03 @ 77° F (25° C)
<b>Solubility in water:</b>	Complete
<b>VOC:</b>	Negligible
<b>Appearance:</b>	Translucent amber liquid
<b>pH:</b>	3.8 – 4.2 @ 77° F (25° C)
<b>Boiling Point:</b>	> 212° F (100° C)
<b>Flash Point:</b>	None
<b>Freezing Point:</b>	< 32° F (0° C)
<b>Evaporation Rate:</b>	<0.01 *N-butyl acetate = 1
<b>Weight:</b>	8.5 – 8.6 lbs. /gallon
<b>Odor:</b>	Mild

## Section 10 – Stability & Reactivity

<b>Chemical Stability:</b>	Stable at normal conditions.
<b>Incompatible Materials:</b>	Strong oxidizing agents, alkalis
<b>Hazardous Decomposition Products:</b>	None known.
<b>Conditions to avoid:</b>	See Section 7.
<b>Hazardous Polymerization:</b>	Will not occur.

## Section 11 – Toxicology Information

**Toxicology data:** Not available.

## Section 12 – Ecological Information

**Ecotoxicity:** Readily biodegradable.

48 hr. LC50	<i>D. pulex</i> (daphnia)	9.8 mg/l
96 hr. LC50	<i>P. promelas</i> (fathead minnow)	16.7 mg/l

## Section 13 – Disposal Considerations

**Disposal instructions:** Dispose in accordance with all applicable regulations. All wastes must be handled in accordance with local, state and federal regulations. Regulations vary.

## Section 14 – Transportation Information

**General information:** Non-hazardous.

### US DOT

**Proper Shipping Description:** NMFC 48580.3 Cleaning/Scouring/Wash Comp  
Class 55

## Section 15 – Regulatory Information

**TSCA Inventory Status:** This product and/or all of its components are either included on or exempt from the TSCA Inventory of Chemical Substances.

**DSL (Canada):** This product and/or all of its components are either included on or exempt from the Domestic Substances List.

## Section 16 – Other Information

**HMIS ratings:** Health: 1  
Flammability: 0  
Physical hazard: 0

**NFPA ratings:** Health: 1  
Flammability: 0  
Reactivity: 0

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