

MATERIAL SAFETY DATA SHEET

Orb-3® Enzyme Cleaner RTU

Section 1 – Chemical Product & Company Identification

Trade Name: Orb-3® Enzyme Cleaner RTU
Chemical Family: Mixture
Product Description: Ready to use biodegradable enzyme cleaner for hard and soft surfaces in and around pools and spas.
Manufacturer: Great Lakes Bio Systems, Inc.
13916 Leetsbir Road, Sturtevant, WI 53177
Technical Support: 800-236-1366
Chemical Emergency: 800-424-9300

Issue Date: 7/14/2010
Supersedes Date: 1/3/2007

Section 2 – Hazards Identification

Emergency overview: Avoid contact with 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® Enzyme Cleaner RTU 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

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| Vapor Pressure: | <0.01 mm Hg @ 68° F (20° C) |
| Vapor Density (air = 1): | Same as water |
| Specific Gravity: | ~1.00 – 1.01 @ 77° F (25° C) |
| Solubility in water: | Complete |
| VOC: | Negligible |
| Appearance: | Translucent light yellow liquid |
| pH: | 3.8 – 4.2 @ 77° F (25° C) |
| Boiling Point: | > 212° F (100° C) |
| Flash Point: | None |
| Freezing Point: | < 32° F (0° C) |
| Evaporation Rate: | <0.01 *N-butyl acetate = 1 |
| Weight: | 8.3 – 8.4 lbs. /gallon |
| Odor: | Mild |

Section 10 – Stability & Reactivity

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

Section 11 – Toxicology Information

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| Toxicology data: | Not available. |
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Section 12 – Ecological Information

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| Ecotoxicity: | Readily biodegradable. | |
| 48 hr. LC50 | <i>D. pulex</i> (daphnia) | 588 mg/l |
| 96 hr. LC50 | <i>P. promelas</i> (fathead minnow) | 1002 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

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| General information: | Non-hazardous. |
| US DOT: | Not regulated. |
| 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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