

# MATERIAL SAFETY DATA SHEET

## BioWorld Liquid Optimizer Plus

\*Identify\*

BioWorld Products LLC  
Manufacturer

MSDS Number\*

8244 West Hillsdale Court  
Address

CAS Number\*

Visalia, California 93291 USA

5/2/01  
Date Prepared

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### SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

| Components - Chemical Name & Common Names<br>(Hazardous Components 1% or greater; Carcinogens 0.1% or greater)  | %*   | OSHA<br>PEL | ACGIH<br>TLV | Other Limits<br>Recommended |
|---|------|-------------|--------------|-----------------------------|
| Hydrochloric Acid (for stable shelf life)   | .1   |             |              |                             |
| Non-Hazardous Ingredients: Natural Biotechnology Formulation<br>Nontoxic, Noncorrosive, Nonpathogenic.  | 99.9 |             |              |                             |
| Soluble Liquid Nutrients for Microbial Enhancement and Reproduction<br>including Vitamins & Minerals, Amino Acids, Polysaccharides,<br>Esters, Alcohols, Oils, Proteins, and Natural Liquid Enzymes |      |             |              |                             |
| <b>Other additions:</b><br>Organic Surfactants and Natural Odor Neutralizing Compounds  |      |             |              |                             |
| <b>Total</b>  | 100  |             |              |                             |

### SECTION 2 - PHYSICAL / CHEMICAL CHARACTERISTICS

|   |   |
|---|---|
| Boiling Point: 212°F / 100° C                   | Specific Gravity (H <sub>2</sub> O = 1): 1.0028 |
| Vapor Pressure(mm Hg and Temperature): 17 mm Hg | Melting Point: N/A                              |
| Vapor Density (Air = 1): N/A                    | Evaporation Rate (_____ = 1): N/A               |
| Solubility in Water: 100%                       | Water Reactive: No                              |
| Appearance and Odor: Blue-green; floral odor    |   |

### SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

|  |                                   |  |      |      |
|--|-----------------------------------|--|------|------|
| Flash Point and<br>Method Used: All            | Auto-Ignition<br>Temperature: N/A | Flammability Limits<br>in Air % by Volume: Non Flammable | LEL: | UEL: |
| Extinguisher Media: All                        |                                   |  |      |      |
| Special Fire Fighting Procedures: None         |                                   |  |      |      |
| Unusual Fire and Explosion Hazards: None Known |                                   |  |      |      |

## SECTION 4 - REACTIVITY HAZARD DATA

Stability:  Stable  Unstable | Conditions to Avoid: N/A

Incompatibility (Materials to Avoid): Strong base, oxidizing or reducing agents

Hazardous Decomposition Products: None

Hazardous Polymerization  
 May Occur  Will not Occur | Conditions to Avoid: N/A

## SECTION 5 - HEALTH HAZARD DATA

**Primary Routes of Entry**  Inhalation  Ingestion  Not Hazardous | **Carcinogen Listed In**  NTP  IARC Monograph  OSHA  Not Listed

Health Hazards  
Acute:  
Chronic:

Signs and Symptoms of Exposure: None expected in normal use.

Medical Conditions Generally Aggravated by Exposure: None

**Emergency First Aid Procedures** - Seek medical assistance for further treatment, observation, and support if necessary.

Eye Contact: Irrigation with running water.

Skin Contact: Wash in running water.

Inhalation: Seek fresh air location. Contact physician if condition persists.

Ingestion: Drink water. Contact physician if conditions persist.

## SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (Specify Type): N/A

Protective Gloves: Rubber Gloves | Eye Protection: Goggles

**Ventilation to be Used**  Local Exhaust - N/A  Mechanical (general) - N/A  Special - N/A  
 Other (specify)

Other Protective Clothing and Equipment: N/A

Hygienic Work Practices: N/A

## SECTION 7- PRECAUTIONS FOR SAFE HANDLING AND USE / LEAK PROCEDURES

Steps to be Taken if Material is Spilled or Released: Contain spill; mop up or vacuum.

Waste Disposal Methods: Pour into sewage system as shown on label; product is used to increase the activity in sewage systems and manure pits. Can apply to open field.

Precautions to be Taken in Handling and Storage: Do not freeze - container may break. Material may be stored outside.

Other Precautions and/or Specific Hazards: Avoid eye and skin contact.