1. IDENTIFICATION

Product Identifier
Product Name
Banner

Other Means of Identification
Product Code
071200

Recommended Use of the Chemical and Restrictions on Use
Recommended Use
Bio-enzymatic digestant. For industrial use.

Details of the Supplier of the Safety Data Sheet
Midlab, Inc.
140 Private Brand Way
Athens, TN 37303

Emergency Telephone Number
Company Phone Number
Phone: 1-423-337-3180
Emergency Telephone (24 hr)
INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Contains non-pathogenic bacterial spores.

Appearance White
Physical State Liquid
Odor Fresh

Classification
This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). However, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>60-100</td>
</tr>
<tr>
<td>Alcohols, C9-11 ethoxylated</td>
<td>68439-46-3</td>
<td>1-5</td>
</tr>
<tr>
<td>Diethylene Glycol Monobutyl Ether</td>
<td>112-34-5</td>
<td>1-5</td>
</tr>
<tr>
<td>Sodium Xylene Sulfonate</td>
<td>1300-72-7</td>
<td>1-5</td>
</tr>
</tbody>
</table>

Contains 1-5% non-pathogenic bacterial spores.

**If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.**

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention.

Skin Contact
If skin irritation occurs, rinse affected area with water.
Inhalation  No known hazardous effects. If symptoms occur, remove to fresh air.
Ingestion  Drink plenty of water. If any discomfort persists, obtain medical attention.

Most Important Symptoms and Effects
Symptoms  Prolonged contact may cause painful stinging or burning of eyes and lids, watering of eye, and irritation. Prolonged or repeated skin contact may cause irritation.

Indication of any Immediate Medical Attention and Special Treatment Needed
Notes to Physician  Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Water spray (fog). Carbon dioxide (CO2). Dry chemical. Foam.

Unsuitable Extinguishing Media
Not determined.

Specific Hazards Arising from the Chemical
None known.

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.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions  Use personal protective equipment as required.
Environmental Precautions  Avoid release to the environment.

Methods and Material for Containment and Cleaning Up

Methods for Containment  Prevent further leakage or spillage if safe to do so.
Methods for Clean-Up  Collect spillage. Collect in a clean, dry waste container for disposal. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Advice on Safe Handling  Avoid contact with eyes. Observe good industrial hygiene practices.

Conditions for Safe Storage, Including Any Incompatibilities
Storage Conditions  Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep from freezing.
Incompatible Materials  None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines  No exposure limits noted for ingredient(s)
Appropriate Engineering Controls
Engineering Controls  Ventilation systems.
Individual Protection Measures, such as Personal Protective Equipment

**Eye/Face Protection**  No protective equipment is needed under normal use conditions.

**Skin and Body Protection**  No protective equipment is needed under normal use conditions.

**Respiratory Protection**  No protective equipment is needed under normal use conditions.

**General Hygiene Considerations**  Handle in accordance with good industrial hygiene and safety practice.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on Basic Physical and Chemical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical State</strong></td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td><strong>Appearance</strong></td>
<td>Opaque</td>
<td></td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>White</td>
<td></td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>Fresh</td>
<td></td>
</tr>
<tr>
<td><strong>Odor Threshold</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>7.0-7.5</td>
<td></td>
</tr>
<tr>
<td><strong>Melting Point/Freezing Point</strong></td>
<td>~ 0 °C / ~32 °F</td>
<td></td>
</tr>
<tr>
<td><strong>Boiling Point/Boiling Range</strong></td>
<td>~ 100 °C / ~212 °F</td>
<td></td>
</tr>
<tr>
<td><strong>Flash Point</strong></td>
<td>Not applicable</td>
<td>Tag Open Cup</td>
</tr>
<tr>
<td><strong>Evaporation Rate</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Flammability (Solid, Gas)</strong></td>
<td>n/a-liquid</td>
<td></td>
</tr>
<tr>
<td><strong>Upper Flammability Limits</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Lower Flammability Limit</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Vapor Pressure</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Vapor Density</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Specific Gravity</strong></td>
<td>1.01</td>
<td></td>
</tr>
<tr>
<td><strong>Water Solubility</strong></td>
<td>Completely soluble</td>
<td>@ 25 °C (77 °F)</td>
</tr>
<tr>
<td><strong>Solubility in other solvents</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Partition Coefficient</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Auto-ignition Temperature</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Decomposition Temperature</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Kinematic Viscosity</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Dynamic Viscosity</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Explosive Properties</strong></td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td><strong>Oxidizing Properties</strong></td>
<td>Not determined</td>
<td></td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

**Reactivity**
Not reactive under normal conditions.

**Chemical Stability**
Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**
None under normal processing.

**Conditions to Avoid**
Keep out of reach of children. Keep from freezing.

**Incompatible Materials**
None known.

**Hazardous Decomposition Products**
When exposed to fire, produces normal products of combustion.

### 11. TOXICOLOGICAL INFORMATION

**Information on Likely Routes of Exposure**

**Product Information**
Eye Contact  Avoid contact with eyes.

Skin Contact  Avoid contact with skin.

Inhalation  Avoid breathing vapors or mists.

Ingestion  Do not taste or swallow.

**Component Information**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohols, C9-11 ethoxylated 68439-46-3</td>
<td>= 1378 mg/kg (Rat)</td>
<td>&gt; 2 g/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td>Diethylene Glycol Monobutyl Ether 112-34-5</td>
<td>= 3384 mg/kg (Rat)</td>
<td>= 2700 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td>Sodium Xylene Sulfonate 1300-72-7</td>
<td>= 7200 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Information on Physical, Chemical and Toxicological Effects**

**Symptoms**  Please see section 4 of this SDS for symptoms.

**Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure**

**Carcinogenicity**  This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

**Numerical Measures of Toxicity**

Not determined

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**  An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylene Glycol Monobutyl Ether 112-34-5</td>
<td>100: 96 h Desmodesmus subspicatus mg/L EC50</td>
<td>1300: 96 h Lepomis macrochirus mg/L LC50 static</td>
<td>-</td>
<td>2850: 24 h Daphnia magna mg/L EC50 100: 48 h Daphnia magna mg/L EC50</td>
</tr>
</tbody>
</table>

**Persistence/Degradability**  Not determined

**Bioaccumulation**  Not determined

**Mobility**  Not determined

**Other Adverse Effects**  Not determined

**13. DISPOSAL CONSIDERATIONS**

**Waste Treatment Methods**

**Disposal of Wastes**  Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging**  Disposal should be in accordance with applicable regional, national and local laws and regulations.

**14. TRANSPORT INFORMATION**
DOT: Not regulated
IATA: Not regulated
IMDG: Not regulated

15. REGULATORY INFORMATION

International Inventories
Not determined

US Federal Regulations

SARA 311/312 Hazard Categories

Acute Health Hazard: Yes

SARA 313

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylene Glycol Monobutyl Ether</td>
<td>112-34-5</td>
<td>1-5</td>
<td>1.0</td>
</tr>
</tbody>
</table>

US State Regulations

U.S. State Right-to-Know Regulations
The following ingredients appear on various state right to know lists and/or California’s Proposition 65 List:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>State List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylene Glycol Monobutyl Ether</td>
<td>NJ &amp; PA</td>
</tr>
</tbody>
</table>

AZ- Arizona Ambient Air Quality Guidelines
CT- Connecticut Hazardous Air Pollutants
CA- California Director’s List of Hazardous Substances
CAP65- California Prop65
FL- Florida Substances List
ID- Idaho Non-Carcinogen Toxic Air Pollutants

IL- Illinois Toxic Air Contaminant- Carcinogenic
MA- Massachusetts Right to Know List
MN- Minnesota Hazardous Substances List
NJ- New Jersey Right to Know List
PA- Pennsylvania Right to Know List
RI- Rhode Island Hazardous Substances List
## 16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical Hazards</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

**Issue Date**: 04-Dec-2012  
**Revision Date**: 19-Nov-2013  
**Revision Note**: New format Version 1.0

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**Keep Out of Reach of Children. For Industrial and Institutional Use Only.**

*Denotes changes from last version.

End of Safety Data Sheet