SECTION 1 – IDENTIFICATION

Product Identifier

Product Name: Micro-Scientific Enzyclean IV
Product Code: 128EME

Recommended Use of the Chemical and Restrictions for Use

Recommended Use: Cleaner
Restrictions for Use: Use only as directed.

Details of the Supplier

Manufacturer: Micro-Scientific, LLC
755 Tri-State Parkway
Gurnee, IL 60031 USA
888-253-2536

Emergency Phone Number

24-Hour Number: 1-800-535-5053
International: 1-352-323-3500

SECTION 2 – HAZARDS IDENTIFICATION

Classification

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory sensitization</td>
<td>1</td>
</tr>
</tbody>
</table>

Label Elements

Hazard Symbols(s):

Signal Word(s): Danger

Hazard Statement(s): May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary Statement(s): Avoid breathing dust/fume/gas/mist/vapors/spray. In case of inadequate ventilation wear respiratory protection. If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center/doctor. Dispose of contents/container in accordance with local/regional/national/international regulations.

Other Hazards
5% of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Wt %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin</td>
<td>56-81-5</td>
<td>7-13</td>
</tr>
<tr>
<td>Octanoic acid, potassium salt</td>
<td>764-71-6</td>
<td>1-5</td>
</tr>
<tr>
<td>Subtilisins (proteolytic enzymes)</td>
<td>9014-01-1</td>
<td>0.1-1</td>
</tr>
<tr>
<td>Amylase, .alpha.-</td>
<td>9000-90-2</td>
<td>0.1-1</td>
</tr>
</tbody>
</table>

The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

SECTION 4 – FIRST AID MEASURES

First Aid Measures

Inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Eye Contact: In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention.
Product: Micro-Scientific Enzyclean IV-128EME

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

Skin: If irritation occurs, flush skin with plenty of water. Get medical attention if irritation persists.

Most Important Symptoms and Effects (Acute and Delayed)

Inhalation: May cause respiratory tract irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Eye Contact: May cause eye irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

Skin: May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Indication of any Immediate Medical Attention and Special Treatment Needed

Note to Physician: Treat symptomatically.

SECTION 5 – FIRE FIGHTING MEASURES

Extinguishing Media

Suitable: Treat for surrounding material.

Unsuitable: None known.

Specific Hazards Arising from Chemical

Products of combustion include but are not limited to: oxides of carbon.

Protective Equipment and Precautions for Firefighters

Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Personal Precautions: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental Precautions: See Section 12 for ecological information.

Methods and Material for Containment and Cleaning Up

Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE). Scoop up material and place in a disposal container. Provide ventilation.

SECTION 7 – HANDLING AND STORAGE

Precautions for Safe Handling

Handling: Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not swallow. Handle and open container with care. Use only in well-ventilated areas. When using do not eat, drink or smoke.

General Hygiene Advice: Launder contaminated clothing before use. Wash hands before eating, drinking, or smoking.

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions: Keep out of the reach of children. Keep container tightly closed.

Incompatible Materials: None known.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Exposure Guidelines:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin (56-81-5)</td>
<td>Not available</td>
<td>15 mg/m³</td>
<td>Not available</td>
</tr>
<tr>
<td>Octanoic acid, potassium salt (764-71-6)</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

Product: Micro-Scientific EnzyClean IV- 128EME
Revision Date: 21-Dec-2015


<table>
<thead>
<tr>
<th>Subtilisins (proteolytic enzymes) (9014-01-1)</th>
<th>0.00006 mg/m³</th>
<th>Not available</th>
<th>Not available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amylase, .alpha.- (9000-90-2)</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
</tbody>
</table>

**Appropriate Engineering Controls**

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

**Individual Protection Measures**

**Respiratory Protection:** None required under normal conditions of use. In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and safe working limits of the selected respirator.

**Skin and Body Protection:** Wear suitable protective clothing.

**Eye/Face Protection:** Safety glasses or goggles are recommended when using product.

**General Work/Hygienic Practices:** Handle in accordance with good industrial hygiene and safety practice.

**SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance:** Blue liquid

**Odor:** Fresh

**Odor threshold:** Not determined

**pH:** 8.7

**Melting point/freezing point:** Not available

**Initial boiling point and boiling range:** Not available

**Flash point:** Not available

**Evaporation rate:** Not available

**Flammability (solid, gas):** Not flammable

**Upper/lower flammability or explosive limits:** Not determined

**Vapor pressure:** Not determined

**Vapor density:** Not determined

**Relative density:** 1.11

**Solubility(ies):** Not determined

**Partition coefficient (n-octanol/water):** Not determined

**Auto-ignition temperature:** Not determined

**Decomposition temperature:** Not determined

**Viscosity:** Not determined

**SECTION 10 – STABILITY AND REACTIVITY**

**Reactivity:** Not reactive under normal conditions.

**Chemical stability:** Stable under recommended storage conditions.

**Possibility of hazardous reactions:** None under normal use.

**Conditions to avoid:** None known.

**Incompatible materials:** None known.

**Hazardous decomposition products:** May include and are not limited to: oxides of carbon.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

**Information on Toxicological Effects**

**Likely Routes of Exposure:** Inhalation, skin contact, eye contact, ingestion
Product: Micro-Scientific Enzyclean IV- 128EME

**Information Related to Physical, Chemical, and Toxicological Effects**

See section 4 of this SDS.

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

Carcinogenicity: NTP: No IARC: No OSHA: No

**Numerical Measures of Toxicity**

<table>
<thead>
<tr>
<th>Product</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE (oral)</td>
<td>&gt;2000 mg/kg, rat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATE (dermal)</td>
<td>&gt;2000 mg/kg, rabbit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATE (inhalation)</td>
<td>20 mg/l/4h, rat</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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>Glycerin (56-81-5)</td>
<td>12600 mg/kg (rat)</td>
<td>&gt;10 g/kg (rabbit)</td>
<td>Not available</td>
</tr>
<tr>
<td>Octanoic acid, potassium salt (764-71-6)</td>
<td>Not available</td>
<td>Not available</td>
<td>Not available</td>
</tr>
<tr>
<td>Subtilisins (proteolytic enzymes) (9014-01-1)</td>
<td>1800 mg/kg (rat)</td>
<td>Not available</td>
<td>Not available</td>
</tr>
<tr>
<td>Amylase, .alpha.- (9000-90-2)</td>
<td>&gt;7500 mg/kg (rat)</td>
<td>Not available</td>
<td>&gt;4.96 mg/l/4h</td>
</tr>
</tbody>
</table>

**SECTION 12 - ECOLOGICAL INFORMATION**

Ecotoxicity: Not established

Persistence and degradability: Not established

Bioaccumulative potential: Not established

Mobility in soil: No additional information available.

Other adverse effects: No additional information available.

**SECTION 13 – DISPOSAL CONSIDERATIONS**

See section 8 of this SDS for exposure controls and personal protection.

Dispose of the product and container in accordance with all applicable local, state, and federal regulations.

**SECTION 14 – TRANSPORT INFORMATION**

Note: Classification changes based on quantity, packaging, and method of shipment. See current shipping paper for most up to date shipping information.

DOT (Ground): Not regulated

IATA (Air): Not regulated

IMDG (Vessel): Not regulated

**SECTION 15 – REGULATORY INFORMATION**

All ingredients in this product are listed or are excluded from listing on the US Toxic Substances Act (TSCA) Chemical Substance Inventory.

**SECTION 16 – OTHER INFORMATION**

Issue Date: 21-Dec-2015

Revision Date: 21-Dec-2015

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 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 designed and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet