MATERIAL SAFETY DATA SHEET

MSDS ID: 50101
Version: 20161015

1. PRODUCT AND COMPANY INFORMATION

Product Name: Biotin Protein Ligase
Product IDs: BI001

GeneCopoeia, Inc.
9620 Medical Center Drive
Suite 101
Rockville, MD 20850
301-762-0888

Contact Information for emergency responses:
1-866-360-9531
1-301-762-0888
Outside of the USA: 001-301-762-0888

Product Use:

These products are for laboratory research use only. They are not intended for human or animal therapeutic, diagnostics, or any other clinical uses, unless otherwise stated.
2. HAZARDOUS MATERIAL IDENTIFICATION ON INGREDIENTS

The following list shows components of this product classified as hazardous based on physical properties and health effects:

No hazardous components

3. HAZARDS IDENTIFICATION

Hazards Overview

Occupational exposure presents little or no health hazard.

Potential Health Effects:

<table>
<thead>
<tr>
<th>Component</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye</td>
<td>May cause irritation of the eye.</td>
</tr>
<tr>
<td>Skin</td>
<td>May cause skin irritation.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>May be harmful from inhalation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May be harmful or causing discomfort from inhalation.</td>
</tr>
<tr>
<td>Carcinogenic</td>
<td>None</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>None</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

**Eye:** Holding eyelids open, flush eyes with plenty of water (in an eyewash if accessible) for at least 15 minutes. Seek medical attention if symptoms develop (redness, itching, etc.) or persist.

**Skin:** Wash with plenty of soap and water. Seek medical attention if symptoms develop (redness, itching, etc.).

**Inhalation:** Move person to fresh air. Seek medical attention unless effects are mild and temporary.

**Ingestion:** Give plenty of water if conscious. If vomiting occurs naturally, wash mouth out. Be prepared to induce vomiting upon a physician's advice. Seek medical attention if symptoms develop.

**Note To Physician:** Treat symptomatically.
5. FIRE FIGHTING MEASURES

Flashpoint Deg C: Not available.
Upper Flammable Limit %: Not available.
Lower Flammable Limit %: Not available.
Auto ignition Temperature Deg C: Not available.

Extinguishing Media:
Use means appropriate for surrounding materials.

Firefighting Techniques/Equipment:
Standard turnout gear ("bunker gear"). Positive-pressure self-contained breathing apparatus.

Hazardous Combustion Products:
Includes carbon dioxide, carbon monoxide, dense smoke.

6. ACCIDENTAL RELEASE MEASURES

Accidental releases may be subject to special reporting requirements and other regulatory mandates. Refer to Section 8 for personal protection equipment recommendations.

Spill Cleanup:
Absorb spill. Common absorbent materials should be effective. Deposit in appropriate containers for removal and disposal.

7. HANDLING AND STORAGE

Storage of some materials is regulated by federal, state, and/or local laws.

Storage Pressure: Ambient
Handling Procedures: Keep closed or covered when not in use.
Storage Procedures: Suitable for most general chemical storage areas.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limits: We are not aware of any national exposure limit.
Engineering Controls: Area ventilation is generally adequate.

Personal Protective Equipment:

Eye: Safety glasses should be the minimum eye protection.
Skin: Gloves should be used as minimum hand protection.
Respiratory: No respiratory protection will be needed under normal industrial operating conditions.
9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Form: Colorless liquid
Odor: No odor
Boiling Point (C): No data available
Melting Point (C): No data available
Solubility in water: Soluble
pH: No data available
Density: No data available
Volatile: No data available
Viscosity: No data available

10. STABILITY AND REACTIVITY

Stability: Stable under ordinary conditions of use and storage.
Conditions to Avoid: No known dangerous reactions under normal condition of uses.
Hazardous Decomposition: None known.
Hazardous Polymerization: Not expected to occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: None
Dermal/Skin: May cause skin irritation for susceptible persons.
Eyes: May cause eye irritation for susceptible persons.
Inhalation/Respiratory: May be harmful if inhaled.
Oral/Ingestion: May be harmful if ingested orally.

Target Organs: No data found.

Carcinogenicity:
Carcinogenic: None
Reproductive toxicity: None
NTP: Not tested.
IARC: Not listed.
OSHA: Not regulated.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:
No ecological information available.

Environmental Fate (Degradation, Transformation, and Persistence):
Bioconcentration is not expected to occur.
13. DISPOSAL CONSIDERATIONS

Dispose of the materials in accordance with local regulations.

14. TRANSPORT INFORMATION

Proper Shipping Name: Not regulated.
Hazard class: None
Subsidiary class: None
Packing group: None
UN-No: None

15. REGULATORY INFORMATION

UNITED STATES Regulations:

SARA 313:
Not regulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40CFR 61):
This product does not contain HAPs

TSCA:
This product is solely for research and development purposes only and may not be used, processed or distributed for a commercial purpose. It may only be handled by technically qualified individuals.

Materials used in manufacturing processes which are subject to compliance with the Federal Food Drug and Cosmetic Act (FDA) are not subject to the Toxic Substance Control Act (TSCA). The TSCA research use only restriction does not apply to FDA regulated manufacturing processes nor the resulting product per 15 U.S.C. 2602(2).

California Prop 65
No Prop 65 Chemicals.

CANADA:

DSL/NDSL: Not determined.

No hazardous components

EUROPEAN UNION:

Product risk phrases: None assigned.
Product safety phrases: Not applicable.
Product classification: N/A
EINECS: No hazardous components
16. OTHER INFORMATION

Abbreviations

N/A - Data is not applicable or not available
SARA - Superfund and Reauthorization Act
NTP - National Toxicology Program
OSHA - Occupational Health and Safety Administration
IARC - International Agency for Research on Cancer
PROP 65 - California Safe Drinking Water and Toxic Enforcement Act of 1986
EINECS - European Inventory of Existing Commercial Chemical Substances

The above information was obtained by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since GeneCopoeia Inc. cannot control the actual methods, volumes, or conditions of use, the Company shall not be held responsible and liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS MSDS DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.