SECTION 1 : Identification of the substance/mixture and of the supplier

Product name: Lipase
Manufacturer/Supplier Trade name:
Manufacturer/Supplier Article number: S25731

Recommended uses of the product and uses restrictions on use:

Manufacturer Details:
AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331

Supplier Details:
Fisher Science Education
15 Jet View Drive, Rochester, NY 14624

Emergency telephone number:
Fisher Science Education Emergency Telephone No.: 800-535-5053

SECTION 2 : Hazards identification

Classification of the substance or mixture:
Not classified for physical or health hazards according to GHS.
Hazard Not Otherwise Classified - Combustible Dust

Signal word: Warning

Hazard statements:
Precautionary statements:
If medical advice is needed, have product container or label at hand
Keep out of reach of children
Read label before use

Other Non-GHS Classification:

SECTION 3 : Composition/information on ingredients

Created by Global Safety Management, Inc. - Tel: 1-813-435-5161 - www.gsmsds.com
Ingredients:

<table>
<thead>
<tr>
<th>CAS 9001-62-1</th>
<th>Lipase powder</th>
<th>100 %</th>
</tr>
</thead>
</table>

Percentages are by weight

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Get medical assistance if cough or other symptoms appear.

After skin contact: Rinse/flush exposed skin gently using soap and water for 15-20 minutes. Seek medical advice if discomfort or irritation persists.

After eye contact: Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

After swallowing: Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation, discomfort, or vomiting persists. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed:

- Irritation
- Headache
- Nausea
- Shortness of breath
- Not Determined

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5 : Firefighting measures

Extinguishing media

- Suitable extinguishing agents: Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

For safety reasons unsuitable extinguishing agents:

Special hazards arising from the substance or mixture:

- Thermal decomposition can lead to release of irritating gases and vapors.

Advice for firefighters:

- Protective equipment: Wear protective eyeware, gloves, and clothing. Refer to Section 8. Use NIOSH-approved respiratory protection/breathing apparatus.

- Additional information (precautions): Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational.

Environmental precautions:

- Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

- Wear protective eyeware, gloves, and clothing. Refer to Section 8. Sweep up or use vacuum with HEPA filter and place in appropriate container for disposal. For disposal, refer to Section 13. Prevent generation of dust.

Reference to other sections:
SECTION 7 : Handling and storage

Precautions for safe handling:
Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Do not eat, drink, smoke, or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:
Keep container tightly sealed. Store away from incompatible materials. Store with similar hazards.

SECTION 8 : Exposure controls/personal protection

Control Parameters:
9001-62-1, Lipase, OSHA PEL TWA (Total Dust) 15 mg/m3 (50 mppcf*)
9001-62-1, Lipase, ACGIH TLV TWA (inhalable particles) 10mg/m3

Appropriate Engineering controls: Provide adequate ventilation. Ensure eye wash and safety showers are available.

Respiratory protection: Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

Protection of skin: Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

Eye protection: Safety glasses or goggles are appropriate eye protection.

General hygienic measures: Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing. Before wearing wash contaminated clothing.

SECTION 9 : Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance (physical state,color):</td>
<td>Beige powder</td>
</tr>
<tr>
<td>Explosion limit lower:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Explosion limit upper:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Odor:</td>
<td>Unpleasant</td>
</tr>
<tr>
<td>Vapor pressure:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Vapor density:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>pH-value:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Relative density:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Melting/Freezing point:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Solubilities:</td>
<td>Water soluble</td>
</tr>
<tr>
<td>Boiling point/Boiling range:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water):</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Flash point (closed cup):</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Auto/Self-ignition temperature:</td>
<td>Not Determined</td>
</tr>
</tbody>
</table>
Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Evaporation rate: Not Determined
Decomposition temperature: Not Determined
Flammability (solid,gaseous): Not Determined
Viscosity: a. Kinematic:Not Determined
b. Dynamic: Not Determined
Density: Not Determined

SECTION 10 : Stability and reactivity

Reactivity: Nonreactive under normal conditions.
Chemical stability: Stable under normal conditions.
Possible hazardous reactions: None under normal processing.
Conditions to avoid: Incompatible materials. High temperatures. Avoid formation of dust.
Incompatible materials: Strong oxidizers.
Hazardous decomposition products: Oxides of carbon.

SECTION 11 : Toxicological information

Acute Toxicity: No additional information.
Chronic Toxicity: No additional information.
Corrosion Irritation: No additional information.
Sensitization: No additional information.
Single Target Organ (STOT): No additional information.
Numerical Measures: No additional information.
Carcinogenicity: Lipase 9001-62-1: Not listed as a carcinogen (ACGIH, IARC, NTP)
Mutagenicity: No additional information.
Reproductive Toxicity: No additional information.

SECTION 12 : Ecological information

Ecotoxicity Persistence and degradability: Not Determined
Bioaccumulative potential: Not Determined
Mobility in soil: Not Determined
Other adverse effects: Not Determined

SECTION 13 : Disposal considerations

Waste disposal recommendations:
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste.
Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14 : Transport information

UN-Number
Not Regulated

UN proper shipping name
Not Regulated

Transport hazard class(es)
Packing group: Not Regulated

Environmental hazard:
Transport in bulk:

Special precautions for user:

SECTION 15 : Regulatory information

United States (USA)
SARA Section 311/312 (Specific toxic chemical listings):
SARA Section 313 (Specific toxic chemical listings):
    None of the ingredients is listed
RCRA (hazardous waste code):
    None of the ingredients is listed
TSCA (Toxic Substances Control Act):
    All ingredients are listed.
CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):
    None of the ingredients is listed

Proposition 65 (California):

Chemicals known to cause cancer:
    None of the ingredients is listed
Chemicals known to cause reproductive toxicity for females:
    None of the ingredients is listed
Chemicals known to cause reproductive toxicity for males:
    None of the ingredients is listed
Chemicals known to cause developmental toxicity:
    None of the ingredients is listed

Canada

Canadian Domestic Substances List (DSL):
    All ingredients are listed.
Canadian NPRI Ingredient Disclosure list (limit 0.1%):
    None of the ingredients is listed
Canadian NPRI Ingredient Disclosure list (limit 1%):
    None of the ingredients is listed

SECTION 16 : Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information...
contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

**GHS Full Text Phrases:**

**Abbreviations and acronyms:**

- IMDG: International Maritime Code for Dangerous Goods
- PNEC: Predicted No-Effect Concentration (REACH)
- CFR: Code of Federal Regulations (USA)
- SARA: Superfund Amendments and Reauthorization Act (USA)
- RCRA: Resource Conservation and Recovery Act (USA)
- TSCA: Toxic Substances Control Act (USA)
- NPRI: National Pollutant Release Inventory (Canada)
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- ACGIH: American Conference of Governmental Industrial Hygienists
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- WHMIS: Workplace Hazardous Materials Information System (Canada)
- DNEL: Derived No-Effect Level (REACH)

**Effective date:** 02.09.2015

**Last updated:** 03.19.2015