Material Safety Data Sheet
Lycopodium Powder

MSDS# 52037

Section 1 - Chemical Product and Company Identification

MSDS Name: Lycopodium Powder
Catalog Numbers: S75530-1
Synonyms: Club moss spores; Lycopodium seeds (spores); vegetable sulfur

Company Identification:
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>8023-70-9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Name</td>
<td>Lycopodium Powder</td>
</tr>
<tr>
<td>%</td>
<td>ca. 100</td>
</tr>
<tr>
<td>EINECS#</td>
<td>unlisted</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazard Symbols:</th>
<th>None listed</th>
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<tbody>
<tr>
<td>Risk Phrases:</td>
<td>None listed</td>
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</tbody>
</table>

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! Flammable solid. The toxicological properties of this material have not been fully investigated. May cause eye and skin irritation. May cause respiratory and digestive tract irritation. Target Organs: No data found.

Potential Health Effects

Eye: May cause eye irritation.
Skin: May cause skin irritation.
Ingestion: May cause irritation of the digestive tract. Low hazard for usual industrial handling. The toxicological properties of this substance have not been fully investigated.
Inhalation: May cause respiratory tract irritation. May cause asthmatic attacks due to allergic sensitization of the respiratory tract. The toxicological properties of this substance have not been fully investigated.
Chronic: No information found.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin: Get medical aid if irritation develops or persists. Flush skin with plenty of soap and water.
Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid if irritation or symptoms occur.
Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

Section 5 - Fire Fighting Measures

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. This material in sufficient quantity and reduced particle size is
Information: capable of creating a dust explosion. Flammable solid. Will be easily ignited by heat, sparks or flame. Powder suspended in air can produce an explosive flash.

Extinguishing Media:
- Use water spray, dry chemical, or carbon dioxide. Use agent most appropriate to extinguish fire.

Autoignition Temperature: Not available.
Flash Point: Not available
Explosion Limits: Lower: Not available
Explosion Limits: Upper: Not available

NFPA Rating: health: 1; flammability: 2; instability: 1;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. If sweeping is necessary, use a dust suppressant agent. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. May form flammable dust-air mixtures. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Storage: Keep away from heat, sparks, and flame. Store in a cool, dry place. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lycopodium Powder</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs: Lycopodium Powder: None listed

Engineering Controls:
- Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Powder
- Color: pale yellow
- Odor: none reported
- pH: Not available
- Vapor Pressure: Not available
- Vapor Density: Not available
- Evaporation Rate: Not available
- Viscosity: Not available
- Boiling Point: Not available
Freezing/Melting Point: Not available
Decomposition Temperature: Not available
Solubility in water: Insoluble in water.
Specific Gravity/Density: Not available.
Molecular Formula: Not applicable.
Molecular Weight: 0

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: High temperatures, incompatible materials, ignition sources, moisture.
Incompatibilities with Other Materials: Oxidizing agents, acids, alkalis.
Hazardous Decomposition Products: No data available.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 8023-70-9: None listed
LD50/LC50: RTECS: Not available.
Carcinogenicity: Lycopodium Powder - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: Please contact Fisher Scientific for shipping information
Hazard Class:
UN Number:
Packing Group:
Canada TDG
Shipping Name: Not available
Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: Not available
Risk Phrases:
Safety Phrases:
S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)
CAS# 8023-70-9: Not available

Canada
CAS# 8023-70-9 is listed on Canada's DSL List
Canadian WHMIS Classifications: B4
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.
CAS# 8023-70-9 is not listed on Canada's Ingredient Disclosure List.

US Federal
CAS# 8023-70-9 is not listed on the TSCA Inventory. It is for research and development use only.

Section 16 - Other Information
MSDS Creation Date: 12/12/1997
Revision #6 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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