Material Safety Data Sheet
D-Biotin

ACC# 60717

Section 1 - Chemical Product and Company Identification

**MSDS Name:** D-Biotin
**Catalog Numbers:** BP232 1, BP232-1, BP2321
**Synonyms:** (+)-Biotin; Coenzyme R; Factor S; Vitamin B7; Vitamin H.

**Company Identification:**
- Fisher Scientific
- 1 Reagent Lane
- Fair Lawn, NJ 07410

**For information, call:** 201-796-7100
**Emergency Number:** 201-796-7100
**For CHEMTREC assistance, call:** 800-424-9300
**For International CHEMTREC assistance, call:** 703-527-3887

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>58-85-5</td>
<td>Biotin</td>
<td>&gt;98</td>
<td>200-399-3</td>
</tr>
</tbody>
</table>

**Hazard Symbols:** None listed.
**Risk Phrases:** None listed.

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

Appearance: white solid. **Caution!** The toxicological properties of this material have not been fully investigated. This substance has caused adverse reproductive and fetal effects in animals. 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. The toxicological properties of this substance have not been fully investigated.

**Inhalation:** May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.

**Chronic:** Prolonged or repeated exposure may cause adverse reproductive effects. May cause fetal effects.

Section 4 - First Aid Measures

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**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

**Ingestion:** Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**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 if cough or other symptoms appear.

**Notes to Physician:** Treat symptomatically and supportively.

### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

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

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 1; Flammability: 0; Instability: 0

### 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. Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Provide ventilation.

### Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

**Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

### Section 8 - Exposure Controls, Personal Protection

**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**

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

**OSHA Vacated PELs:** Biotin: No OSHA Vacated PELs are listed for this chemical.
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 a respirator's use.

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**Section 9 - Physical and Chemical Properties**

**Physical State:** Solid

**Appearance:** white

**Odor:** none reported

**pH:** 4.5; 0.01% solution

**Vapor Pressure:** Negligible.

**Vapor Density:** Not available.

**Evaporation Rate:** Negligible.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:** 444 deg F

** Decomposition Temperature:** Not available.

**Solubility:** Moderately soluble in water.

**Specific Gravity/Density:** Not available.

**Molecular Formula:** C10H16N2O3S

**Molecular Weight:** 244.1836

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**Section 10 - Stability and Reactivity**

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** High temperatures, incompatible materials, dust generation.

**Incompatibilities with Other Materials:** Oxidizing agents.

**Hazardous Decomposition Products:** Nitrogen oxides, carbon monoxide, oxides of sulfur, irritating and toxic fumes and gases, carbon dioxide.

**Hazardous Polymerization:** Has not been reported.

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**Section 11 - Toxicological Information**

**RTECS#:**

**CAS# 58-85-5:** XJ9088200

**LD50/LC50:**

Not available.

**Carcinogenicity:**

CAS# 58-85-5: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

**Epidemiology:** No information available.

**Teratogenicity:** No information available.

**Reproductive Effects:** No information available.

**Neurotoxicity:** No information available.
Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.
**RCRA U-Series:** None listed.

Section 14 - Transport Information

<table>
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<tr>
<th>Shipping Name:</th>
<th>US DOT</th>
<th>IATA</th>
<th>RID/ADR</th>
<th>IMO</th>
<th>Canada TDG</th>
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</thead>
<tbody>
<tr>
<td>CARBON DIOXIDE, SOLID</td>
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<td></td>
<td></td>
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<tr>
<td>Hazard Class:</td>
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<tr>
<td>UN Number:</td>
<td>UN1845</td>
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<tr>
<td>Packing Group:</td>
<td>III</td>
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</tbody>
</table>

Section 15 - Regulatory Information

**US FEDERAL**

**TSCA**
CAS# 58-85-5 is listed on the TSCA inventory.

**Health & Safety Reporting List**
None of the chemicals are on the Health & Safety Reporting List.

**Chemical Test Rules**
None of the chemicals in this product are under a Chemical Test Rule.

**Section 12b**
None of the chemicals are listed under TSCA Section 12b.

**TSCA Significant New Use Rule**
None of the chemicals in this material have a SNUR under TSCA.

**SARA**

**CERCLA Hazardous Substances and corresponding RQs**
None of the chemicals in this material have an RQ.

**SARA Section 302 Extremely Hazardous Substances**
None of the chemicals in this product have a TPQ.

**Section 313**
No chemicals are reportable under Section 313.

**Clean Air Act:**
This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone

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depletors. This material does not contain any Class 2 Ozone depletors.

**Clean Water Act:**
None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:**
None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**
CAS# 58-85-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
California No Significant Risk Level: None of the chemicals in this product are listed.

**European/International Regulations**
**European Labeling in Accordance with EC Directives**
**Hazard Symbols:**
Not available.
**Risk Phrases:**

**Safety Phrases:**

**WGK (Water Danger/Protection)**
CAS# 58-85-5: 1

**Canada - DSL/NDSL**
CAS# 58-85-5 is listed on Canada's DSL List.

**Canada - WHMIS**
This product has a WHMIS classification of D2A.

**Canadian Ingredient Disclosure List**

**Exposure Limits**

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**Section 16 - Additional Information**

**MSDS Creation Date:** 7/14/1999  
**Revision #2 Date:** 3/18/2003

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability 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 Fisher 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 Fisher has been advised of the possibility of such damages.