Material Safety Data Sheet  
Silver Diethyldithiocarbamate

Section 1 - Chemical Product and Company Identification

**MSDS Name:**  
Silver Diethyldithiocarbamate

**Catalog Numbers:**  
LC22425

**Synonyms:**  
Diethyldithiocarbamic acid, silver salt

**Company Identification:**  
LabChem Inc  
200 William Pitt Way  
Pittsburgh, PA 15238

**Company Phone Number:**  
(412) 826-5230

**Emergency Phone Number:**  
(800) 424-9300

**CHEMTREC Phone Number:**  
(800) 424-9300

Section 2 – Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1470-61-7</td>
<td>Silver diethyldithiocarbamate</td>
<td>100</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

**Emergency Overview**

**Appearance:** Light tan powder.

**Danger:** Causes eye, skin, and respiratory tract irritation. Harmful if swallowed.

**Target Organs:** Liver, respiratory system, eyes, thyroid, skin.

**Potential Health Effects**

**Eye:**  
Causes eye irritation.

**Skin:**  
Causes skin irritation. May be harmful if absorbed through the skin. Some dithiocarbamates have been reported to cause sensitization dermatitis (Mallinckrodt Baker).

**Ingestion:**  
Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Can cause nervous system damage. Dithiocarbamate compounds may cause thyroid abnormalities. Single doses can cause reduced iodine uptake by the thyroid gland. Central nervous system damage and neurotoxic effects may be due to carbon disulfide metabolite.

**Inhalation:**  
Causes respiratory tract irritation. May cause effects similar to those described for ingestion. May be harmful if inhaled.
Chronic:
Prolonged or repeated skin contact may cause dermatitis. Chronic inhalation or ingestion of silver salts may cause argyria characterized by a permanent blue-gray discoloration of the eyes, skin, mucous membranes, and internal organs. This malady results from the accumulation of silver in the body.

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. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion:
Call a poison control center. 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 aid.

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. Do NOT use mouth-to-mouth resuscitation.

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, thermal decomposition or combustion may generate irritating and highly toxic gases.

Extinguishing Media:
Use water spray, dry chemical, carbon dioxide, or chemical foam.

Autoignition Temperature:
Not available.

Flash Point:
Not available.

NFPA Rating:
(estimated) Health: 2; Flammability: 1; Instability: 0

Explosion Limits:
Lower: n/a  Upper: n/a

Section 6 - Accidental Release Measures

General Information:
Use proper personal protective equipment as indicated in Section 8.
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Spills/Leaks:
Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation. Do not let this chemical enter the environment. Consider reclamation rather than disposal.

Section 7 - Handling and Storage

Handling:
Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Do not get on skin or in eyes. Do not ingest or inhale.

Storage:
Store in a cool, dry, well-ventilated area away from incompatible substances. Keep refrigerated. (Store below 4°C/39°F.) Store protected from light.

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</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver diethylthiocarbamate</td>
<td>0.01 mg/m³ TWA (as Ag) (listed under Silver soluble compounds).</td>
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</table>

OSHA Vacated PELs:
Silver diethylthiocarbamate: 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 gloves to prevent skin exposure.

Clothing:
Wear appropriate protective clothing to prevent skin exposure.

Respirators:
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Powder
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**Color:** Green- lt. tan
**Odor:** characteristic odor
**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:** 172-175°C
**Decomposition Temperature:** Not available
**Solubility in water:** Soluble
**Specific Gravity/Density:** Not available
**Molecular Formula:** C5H10AgNS2
**Molecular Weight:** 256.13

**Section 10 - Stability and Reactivity**

**Chemical Stability:**
Stable. However, may decompose if heated. May discolor on exposure to light.

**Conditions to Avoid:**
Light, dust generation, excess heat.

**Incompatibilities with Other Materials:** Strong oxidizing agents.

**Hazardous Decomposition Products:** Nitrogen oxides, carbon monoxide, oxides of sulfur, carbon dioxide.

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

**Section 11 - Toxicological Information**

**RTECS:**
CAS# 1470-61-7 unlisted.

**LD50/LC50:**
Not available

**Carcinogenicity:**
CAS# 1470-61-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:**
Based on the results of studies of workers exposed to carbon disulfide & supporting data from animal studies, the nervous system appears to be the critical target for carbon disulfide-induced toxicity, manifested most often as reduced conduction velocity in the peripheral nerves & impaired performance in psychomotor testing. Other effects for which there is considerable weight of evidence in humans exposed to CS2 include alterations in serum lipids & blood pressure that are associated with increased risk of cardiovascular disease, systemic ophthalmological effects, including those on color vision and damage to the blood vessels of the retina, and (with higher exposures) increased mortality from heart disease.

**Teratogenicity:**
No information found.

**Reproductive:**
No information found.

**Mutagenicity:**
See actual entry in RTECS for complete information.
Neurotoxicity:
No information found.

Section 12 - Ecological Information

No information found

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: Not regulated
Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information

US Federal
TSCA:
CAS# 1470-61-7 is listed on the TSCA inventory.
SARA Reportable Quantities (RQ):
None of the chemicals in this material have an RQ.
CERCLA/SARA Section 313:
This material contains Silver diethyldithiocarbamate (listed as Silver compounds), 100%. (CAS# 1470-61-7) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
OSHA - Highly Hazardous:
None of the chemicals in this product are considered highly hazardous by OSHA.

US State
State Right to Know:
CAS# 1470-61-7 is present on state lists from California, Pennsylvania, Minnesota, and New Jersey.
California Regulations:
None.

European/International Regulations
Canadian DSL/NDSL:
CAS# 1470-61-7 is listed on Canada's DSL List.
Canada Ingredient Disclosure List:
CAS# 1470-61-7 is listed on the Canadian Ingredient Disclosure List.
Section 16 - Other Information

MSDS Creation Date: November 14, 2007
Revision Date: December 19, 2007

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