

# Material Safety Data Sheet

## Diethyldithiocarbamic acid, silver salt

ACC# 01399

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Diethyldithiocarbamic acid, silver salt

**Catalog Numbers:** AC114290000, AC114290050, AC114290250, AC419330000, AC419330100, AC419330250, S666-25

**Synonyms:** Silver diethyldithiocarbamate.

**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

CAS#	Chemical Name	Percent	EINECS/ELINCS
1470-61-7	Silver diethyldithiocarbamate	99	216-003-7

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: beige green powder.

**Warning!** Causes eye, skin, and respiratory tract irritation. The toxicological properties of this material have not been fully investigated.

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

#### Potential Health Effects

**Eye:** Causes eye irritation.

**Skin:** Causes skin irritation. Some dithiocarbamates have been reported to cause sensitization dermatitis. (Mallinckrodt Baker)

**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. The toxicological properties of this substance have not been fully investigated. 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:** May cause respiratory tract irritation. May cause effects similar to those described for ingestion. The toxicological properties of this substance have not been fully investigated.

**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:** Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately.

**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:** 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. Dusts at sufficient concentrations can form explosive mixtures with air. Combustion generates toxic fumes.

**Extinguishing Media:** For small fires, use water spray, dry chemical, carbon dioxide or chemical foam.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

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

**Upper:** Not available.

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

### Section 6 - Accidental Release Measures

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

**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. Consider reclamation rather than disposal.

## 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. Avoid contact with skin and eyes. Avoid breathing dust.

**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 general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Silver diethyldithiocarbamate	0.01 mg/m <sup>3</sup> TWA (as Ag) (listed under Silver soluble compounds).	0.01 mg/m <sup>3</sup> TWA (as Ag) (listed under Silver soluble compounds), 10 mg/m <sup>3</sup> IDLH (as Ag) (listed under Silver soluble compounds).	0.01 mg/m <sup>3</sup> TWA (listed under Silver soluble compounds).

**OSHA Vacated PELs:** Silver diethyldithiocarbamate: 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:** 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

**Appearance:** beige green

**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 deg C

**Decomposition Temperature:** Not available.

**Solubility:** Soluble.

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

**Molecular Formula:** C<sub>5</sub>H<sub>10</sub>AgNS<sub>2</sub>

**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:** Will not occur.

## 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 available.

**Reproductive Effects:** No information available.

**Mutagenicity:** Please refer to RTECS for specific information.

**Neurotoxicity:** No information available.

**Other Studies:**

## 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

	US DOT	Canada TDG
<b>Shipping Name:</b>	Not regulated as a hazardous material	No information available.
<b>Hazard Class:</b>		
<b>UN Number:</b>		
<b>Packing Group:</b>		

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 1470-61-7 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.

#### 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.

#### SARA Codes

CAS # 1470-61-7: immediate, delayed.

#### Section 313

This material contains Silver diethyldithiocarbamate (listed as Silver compounds), 99%, (CAS# 1470-61-7) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

#### Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone 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. CAS# 1470-61-7 is listed as a Toxic Pollutant under the Clean Water Act.

#### OSHA:

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

#### STATE

CAS# 1470-61-7 can be found on the following state right to know lists: California, (listed as Silver compounds), Pennsylvania, (listed as Silver compounds), Minnesota, (listed as Silver soluble compounds).

#### California Prop 65

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:**

S 24/25 Avoid contact with skin and eyes.

**WGK (Water Danger/Protection)**

CAS# 1470-61-7: 1

**Canada - DSL/NDSL**

CAS# 1470-61-7 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of D2B.

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.

**Canadian Ingredient Disclosure List**

CAS# 1470-61-7 (listed as Silver soluble compounds) is listed on the Canadian Ingredient Disclosure List.

<b>Section 16 - Additional Information</b>
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**MSDS Creation Date:** 9/02/1997

**Revision #4 Date:** 5/26/2005

*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.*