

# Material Safety Data Sheet

## Diphenylselenide, 95%

ACC# 96470

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Diphenylselenide, 95%

**Catalog Numbers:** AC293690000, AC293690100

**Synonyms:** Diphenyl selenium; Phenylselenide; 1,1'-Selenobisbenzene; Benzene, 1,1'-selenobis- (9 CI); Biphenyl selenide; Biphenyl selenium; Difenylselenium; Phenyl selenide

**Company Identification:**

Acros Organics N.V.  
One Reagent Lane  
Fair Lawn, NJ 07410

**For information in North America, call:** 800-ACROS-01

**For emergencies in the US, call CHEMTREC:** 800-424-9300

### Section 2 - Composition, Information on Ingredients

| CAS#      | Chemical Name    | Percent | EINECS/ELINCS |
|-----------|------------------|---------|---------------|
| 1132-39-4 | Diphenylselenide | 95      | 214-474-3     |

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: clear yellow liquid.

**Warning!** Harmful if inhaled or swallowed. Causes respiratory tract irritation. Causes eye and skin irritation. May be absorbed through intact skin. May cause central nervous system effects. The toxicological properties of this material have not been fully investigated.

**Target Organs:** Blood, kidneys, liver, respiratory system, eyes, skin.

#### Potential Health Effects

**Eye:** Vapors cause eye irritation.

**Skin:** May cause skin irritation. May be absorbed through the skin.

**Ingestion:** Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause liver and kidney damage. The toxicological properties of this substance have not been fully investigated.

**Inhalation:** Harmful if inhaled. The toxicological properties of this substance have not been fully investigated. May cause dyspnea (difficult or labored breathing). Vapors cause irritation of the respiratory system.

**Chronic:** Prolonged or repeated skin contact may cause dermatitis. Chronic selenium poisoning is characterized by loss of hair and nails, skin lesions, and abnormalities of the nervous system.

### Section 4 - First Aid Measures

**Eyes:** Immediately 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. Immediately 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:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

**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. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

**Extinguishing Media:** Use extinguishing media most appropriate for the surrounding fire. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

**Flash Point:** > 230e deg F (> 110.00 deg C)

**Autoignition Temperature:** Not available.

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

**Upper:** Not available.

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

### Section 6 - Accidental Release Measures

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

**Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use only in a chemical fume hood. Wash clothing before reuse.

**Storage:** Keep container closed when not in use. 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 only under a chemical fume hood.

### Exposure Limits

| Chemical Name    | ACGIH  | NIOSH  | OSHA - Final PELs  |
|------------------|--|--|--|
| Diphenylselenide | 0.2 mg/m <sup>3</sup> TWA (as Se) (listed under Selenium compounds). | 0.2 mg/m <sup>3</sup> TWA (as Se, except Selenium hexafluoride) (listed under Selenium compounds). | 0.2 mg/m <sup>3</sup> TWA (as Se) (listed under Selenium compounds). |

**OSHA Vacated PELs:** Diphenylselenide: 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 respirator use.

## Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** clear yellow

**Odor:** Not available.

**pH:** Not available.

**Vapor Pressure:** Not available.

**Vapor Density:** 8.04

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** 115 - 117 deg C @ 1.00mm Hg

**Freezing/Melting Point:** Not available.

**Decomposition Temperature:** Not available.

**Solubility:** Not available.

**Specific Gravity/Density:** 1.3380g/cm<sup>3</sup>

**Molecular Formula:** C<sub>12</sub>H<sub>10</sub>Se

**Molecular Weight:** 233.17

## Section 10 - Stability and Reactivity

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

**Conditions to Avoid:** Incompatible materials, excess heat.

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

**Hazardous Decomposition Products:** Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, selenium/selenium oxides.

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

## Section 11 - Toxicological Information

### RTECS#:

CAS# 1132-39-4: SX1825000

### LD50/LC50:

CAS# 1132-39-4:

Oral, rat: LD50 = 360 mg/kg;

### Carcinogenicity:

CAS# 1132-39-4: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information found

**Teratogenicity:** No information found

**Reproductive Effects:** CAS#: 7782-49-2 Effects on Embryo or Fetus: Oral, mouse; TDLo = 134 mg/kg (multigeneration).

**Mutagenicity:** CAS#: 7782-49-2 Oral, mouse: TDLo = 480 mg/kg/60D-C (Skin and appendage tumors).

**Neurotoxicity:** No information found  
**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> | DOT regulated - small quantity provisions apply (see 49CFR173.4) | No information available. |
| <b>Hazard Class:</b>  |  |                           |
| <b>UN Number:</b>     |  |                           |
| <b>Packing Group:</b> |  |                           |

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 1132-39-4 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.

#### Section 313

This material contains Diphenylselenide (listed as Selenium compounds), 95%, (CAS# 1132-39-4) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

#### Clean Air Act:

CAS# 1132-39-4 (listed as Selenium compounds) is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

#### 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# 1132-39-4 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# 1132-39-4 can be found on the following state right to know lists: California, (listed as Selenium compounds), Pennsylvania, (listed as Selenium 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:

T

##### Risk Phrases:

R 23/25 Toxic by inhalation and if swallowed.

R 33 Danger of cumulative effects.

##### Safety Phrases:

S 20/21 When using do not eat, drink or smoke.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 28A After contact with skin, wash immediately with plenty of water

**WGK (Water Danger/Protection)**

CAS# 1132-39-4: No information available.

**Canada - DSL/NDSL**

CAS# 1132-39-4 is listed on Canada's NDSL List.

**Canada - WHMIS**

WHMIS: Not available.

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# 1132-39-4 is listed on the Canadian Ingredient Disclosure List.

|                                     |
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| Section 16 - Additional Information |
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**MSDS Creation Date:** 9/02/1997

**Revision #4 Date:** 10/03/2005

*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.*