

MATERIAL SAFETY DATA SHEET

Section 1 - Chemical Product and Company Identification

MSDS Name: Selenious acid
Catalog Numbers: S/0520/48
Synonyms: Monohydrated selenium dioxide; selenous acid.
Company Identification: Fisher Scientific UK
Bishop Meadow Road, Loughborough
Leics. LE11 5RG
For information in Europe, call: (01509) 231166
Emergency Number, Europe: 01509 231166

Section 2 - Composition, Information on Ingredients

CAS#: 7783-00-8
Chemical Name: Selenious acid
%: 98
EINECS#: 231-974-7

Hazard Symbols:



Risk Phrases:

T N



23/25 33 50/53

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Hygroscopic (absorbs moisture from the air). May cause severe eye irritation and possible injury. May cause liver and kidney damage. May cause severe skin irritation. May cause respiratory and digestive tract burns. May be fatal if inhaled or swallowed. Target Organs: Kidneys, liver, eyes, skin, mucous membranes.

Potential Health Effects

- Eye:** May cause severe eye irritation. May result in corneal injury.
- Skin:** May cause severe skin irritation. May be absorbed through the skin in harmful amounts. Prolonged and/or repeated contact may cause irritation and/or dermatitis.
- Ingestion:** May be fatal if swallowed. May cause liver and kidney damage. May cause burns to the digestive tract.
- Inhalation:** May be fatal if inhaled. May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema.
- Chronic:** Symptoms demonstrated by humans suffering from chronic selenium intoxication, selenosis, include depression, languor, nervousness, dermatitis, gastrointestinal disturbances, giddiness, garlic odor of the breath and sweat, moderate emotional instability, excess dental caries, and in extreme cases, loss of fingernails and partial alopecia (hair loss).

Section 4 - First Aid Measures

- Eyes:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.
- Skin:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.
- Ingestion:** POISON material. If swallowed, get medical aid immediately. Only induce vomiting if directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Inhalation: POISON material. If inhaled, get medical aid immediately. Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

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.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire.

Autoignition: Not applicable.

Temperature:

Flash Point: Not applicable.

Explosion Limits: Not available

Lower:

Explosion Limits: Not available

Upper:

NFPA Rating: health: 3; flammability: 0; instability: ;

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. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Do not breathe dust, mist, or vapor. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use only with adequate ventilation or respiratory protection.

Storage: Store in a cool, dry place. Store in a tightly closed container. Poison room locked.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Selenious acid	0.2 mg/m ³ TWA (as Se) (listed under Selenium compounds).	0.2 mg/m ³ TWA (as Se, except Selenium hexafluoride) (listed under Selenium compounds).1 mg/m ³ IDLH (as Se) (listed under Selenium compounds).	0.2 mg/m ³ TWA (as Se) (listed under Selenium compounds).

OSHA Vacated PELs: Selenious acid: 0.2 mg/m³ TWA (as Se) (listed under Selenium compounds)

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. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

Exposure Limits

Personal Protective Equipment

Eyes: Wear chemical splash goggles.

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
Color: white
Odor: Not available
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: 70 deg C (dec)
Decomposition Temperature:
Solubility in water: Readily soluble in water
Specific Gravity/Density: Not available.
Molecular Formula: H₂SeO₃
Molecular Weight: 128.97

Section 10 - Stability and Reactivity

Chemical Stability:	Stable under normal temperatures and pressures.
Conditions to Avoid:	Dust generation, moisture, excess heat.
Incompatibilities with Other Materials	Strong reducing agents, finely powdered metals.
Hazardous Decomposition Products	Selenium/selenium oxides.
Hazardous Polymerization	Will not occur.

Section 11 - Toxicological Information

RTECS#:	CAS# 7783-00-8: VS7175000
LD50/LC50:	RTECS: Not available. Other: Oral rat LDLo: 25 mg/kg.
Carcinogenicity:	Selenious acid - IARC: Group 3 (not classifiable) (Selenium compounds).
Other:	See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Other: No information 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: SELENIUM COMPOUND, SOLID, N.O.S.
Hazard Class: 6.1
UN Number: UN3283
Packing Group: II
Canada TDG
Shipping Name: SELENIUM COMPOUNDS, NOS (SELENIOS ACID)
Hazard Class: 6.1
UN Number: UN3283
Packing Group: III

USA RQ: CAS# 7783-00-8: 10 lb final RQ; 4.54 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T N

Risk Phrases:

R 23/25 Toxic by inhalation and if swallowed.

R 33 Danger of cumulative effects.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

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

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

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

S 60 This material and its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)

CAS# 7783-00-8: Not available

Canada

CAS# 7783-00-8 is listed on Canada's DSL List

Canadian WHMIS Classifications: 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.

CAS# 7783-00-8 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 7783-00-8 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 12/12/1997

Revision #5 Date 11/20/2008

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 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.