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## MATERIAL SAFETY DATA SHEET

# Sodium Selenate

MSDS Number : 004

Effective Date : 01/20/09

### I. Product Identification

Trade Name	:	Sodium Selenate
Synonyms	:	Sodium Selenate, Anhydrous
Chemical Formula	:	Na <sub>2</sub> SeO <sub>4</sub>
Molecular Weight	:	188.9
Manufacturer	:	Pacific Rare Specialty Metals And Chemicals, Inc. (PRSMCI) Lot 6 Blk 1, Phase II, West Avenue, Cavite Economic Zone, Rosario, Cavite, Philippines, 4106 Emergency Phone : (+63-02) 784 - 4000 Web Site : <a href="http://www.pacificrarespecialty.com">www.pacificrarespecialty.com</a>

### II. Composition / Information on Components

Sodium Selenate (CAS# 13410-01-0 , EC # 236-501-8)

### III. Hazard Identification

Flammability Rating	:	0 (Not combustible)
Reactivity Rating	:	0 (Not reactive when mixed with water)
Health Rating	:	3 (Poison, toxic by inhalation and if swallowed)
Contact Rating	:	2 (Causes eye and skin irritation)
Protective Equip	:	Goggles, Gloves

#### Potential Health Effects :

**Acute Exposure** : Material is irritating to mucous membranes and upper respiratory tract. Possible risk of irreversible effects.

**Inhalation** : Toxic by inhalation. Maybe fatal if inhaled.

**Ingestion** : Very toxic if swallowed. Maybe fatal if swallowed.

**Skin Contact** : Harmful in contact with skin. Can be absorbed through skin. Maybe fatal if absorbed through skin.

**Eye Contact** : May cause conjunctivitis.

**Chronic Exposure**: Possible mutagen. Target organ (s): Liver, kidneys.

#### IV. First - Aid Measures

- Inhalation** : Remove victim into fresh air. Allow the affected person to rest. If not breathing, give artificial respiratory. If breathing is difficult, give Oxygen.
- Ingestion** : Induce vomiting with saline solution for conscious and alert victims only. Rush victim to the nearest hospital.
- Skin Contact** : Immediately flush with copious amount of water for at least 15 minutes while removing contaminated clothing and shoes. Neutralize with 10% sodium thiosulfate solution then wash with soap and water. Wash contaminated clothing before reuse.
- Serious Skin Contact** : Wash with a disinfectant soap and cover the contaminated skin with an antibacterial cream. Seek immediate medical attention.
- Eye Contact** : Rinse thoroughly under running water for 20 minutes with eyelids held open. Seek medical attention.

#### V. Fire Fighting Measures

- Fire** : Not considered to be a fire hazard.
- Explosion** : Not considered to be an explosion hazard.
- Fire Extinguishing Media:** Use carbon dioxide gas, dry chemical or foam. DO NOT use water.
- Special Information** : Fire-fighters should wear full protective clothing including self-contained breathing apparatus.  
Apply water spray or fog to cool nearby equipment. Avoid fire-fighting water to enter environment.

#### VI. Accidental Release Measures

- Personal Precautions** : Evacuate all personnel immediately and ventilate area. Avoid breathing vapour.
- Environmental Precautions:** Prevent entry of product in public water, sewers or oil. Notify authorities if product enters sewers or public waters.
- Methods of Cleaning Up** : Sweep up spilled material and collect recoverable product into labeled containers for recycling. Ventilate and wash spill site with plenty of water preventing runoff from entering drains. For larger spills, vacuum up spilled material. Personnel must wear full protective clothing including breathing apparatus. Avoid raising dust.

#### VII. Handling and Storage

- Handling** : Avoid eyes, skin and clothing contact and inhalation of this material as dust. Wash hands thoroughly after handling. Wear gas/vapor respirators, rubber gloves, safety goggles or total encapsulating clothes (TEC). Containers of this material maybe hazardous when empty since they retain product residues; observe all warnings and precautions listed for the product.
- Storage** : Sodium Selenate is hygroscopic and should be kept in a tightly closed container, store in a dry and cool, protected area. Keep away from strong oxidizing agents, organic materials or dust particles (as is easily reduced to red elemental Selenium). Keep away from acids. Do not expose to extreme heat.

#### VIII. Exposure Controls / Personal Protection

- Airborne Exposure Limits** : OSHA PEL : 0.2 mg/m<sup>3</sup>, as Se  
ACGIH TLV : 0.2 mg/m<sup>3</sup>, as Se
- Respiratory Protection** : Wear appropriate NIOSH / MSHA approved respirator.  
*WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.*
- Skin Protection** : Wear impervious protective clothing, including boots, gloves, as appropriate, to prevent skin contact.
- Eye Protection** : Wear chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

**IX. Physical and Chemical Properties**

Form	: Crystalline powder	Specific Gravity	: 1.612 (water = 1)
Color	: White	Melting Point	: Sublimes at 340-350 °C
Odor	: odorless	Boiling Point	: Decomposes
Solubility	: Easily soluble in Water (840 g/L @ 35°C)		

**X. Stability and Reactivity**

<b>Stability</b>	:	Stable at ordinary temperature.
<b>Hazardous Decomposition Products:</b>	:	Selenium Dioxide, Hydrogen selenide
<b>Hazardous Polymerization</b>	:	Will not occur.
<b>Incompatibilities</b>	:	Strong oxidizing agents, strong alkalis, acids.
<b>Conditions to Avoid</b>	:	Avoid open flame and sources of ignition.

**XI. Toxicological Information**

<b>Toxicological Data</b>	:	Oral Rat LD50 : 1600 µg/kg
<b>Reproductive Toxicity</b>	:	In laboratory animals, this compound has caused both birth defects and damage to the reproductive system.
<b>Carcinogenicity</b>	:	EPA / IRIS classification : Group D1 – Not classified as a human carcinogen. (IARC Category : # 3)

**XII. Ecological Information**

<b>Environmental Fate</b>	:	No information found.
<b>Environmental Toxicity</b>	:	For selenium salts : The LC50/96-hour values for fish are less than 10 mg/L. This material is expected to be toxic to very toxic to aquatic life.

**XIII. Disposal Considerations**

Discard any waste product, residue, disposable container, liner or spilled material in an environmentally acceptable manner that is in full compliance with all applicable national and local laws and regulations. Burn in a chemical incinerator equipped with an afterburner and scrubber. When this material is liquid, it is better to neutralize its chemical nature by using a dilute solution of sodium carbonate

**XIV. Transport Information**

	<u>Proper Shipping Name</u>	<u>Hazard Class</u>	<u>UN/NA</u>	<u>Packing Grp</u>
Domestic (Land, D.O.T.) :	Selenate	6.1	UN 2630	I
International (Water, I.M.O.) :	Selenate	6.1	UN 2630	I
International (Air, I.C.A.O.) :	Selenate	6.1	UN 2630	I

**XV. Regulatory Information****International Regulatory status**

UNEP Persistent Organic Pollutant (POP)	Not listed
UNEP Prior Informed Consent Chemical (PIC)	Not listed
WHO Obsolete Pesticide	Not listed

**US & California Regulatory status**

US EPA Registered	No
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US EPA Hazardous Air Pollutant	Yes
US EPA Minimum Risk Pesticide (25b list)	No
CA Registered	No
CA Groundwater Contaminant	Not listed
Ca Toxic Air Contaminant	HAPTAC

**XVI. Other Information**

**NFPA Ratings:** (estimated) Health: **3** ; Flammability: **0**; Reactivity: **0**

**Disclaimer:**

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