

# SAFETY DATA SHEET

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Revision Number 2

## 1. Identification

|                             |   |
|-----------------------------|---|
| <b>Product Name</b>         | <b>Sodium selenate, anhydrous</b>               |
| <b>CAS No</b>               | 13410-01-0                                      |
| <b>Synonyms</b>             | Selenic acid, disodium salt.; Disodium selenate |
| <b>Recommended Use</b>      | Laboratory chemicals.                           |
| <b>Uses advised against</b> | Food, drug, pesticide or biocidal product use.  |

Details of the supplier of the safety data sheet

## 2. Hazard(s) identification

### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|  |            |
|--|------------|
| Acute oral toxicity                                  | Category 1 |
| Acute Inhalation Toxicity - Dusts and Mists          | Category 2 |
| Skin Corrosion/Irritation                            | Category 2 |
| Serious Eye Damage/Eye Irritation                    | Category 2 |
| Specific target organ toxicity - (repeated exposure) | Category 2 |
| Target Organs - Kidney, Heart, Liver.                |            |

### Label Elements

#### Signal Word

Danger

#### Hazard Statements

Causes skin irritation  
Causes serious eye irritation  
May cause damage to organs through prolonged or repeated exposure  
Fatal if swallowed or if inhaled

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Do not breathe dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Wear respiratory protection  
Wear protective gloves/protective clothing/eye protection/face protection

**Response**

Get medical attention/advice if you feel unwell

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
Immediately call a POISON CENTER or doctor/physician

**Skin**

IF ON SKIN: Wash with plenty of soap and water  
If skin irritation occurs: Get medical advice/attention  
Take off contaminated clothing and wash before reuse

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If eye irritation persists: Get medical advice/attention

**Ingestion**

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
Rinse mouth

**Storage**

Store locked up  
Store in a well-ventilated place. Keep container tightly closed

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Very toxic to aquatic life with long lasting effects

### 3. Composition/Information on Ingredients

| Component       | CAS No     | Weight % |
|-----------------|------------|----------|
| Sodium selenate | 13410-01-0 | >95      |

### 4. First-aid measures

**General Advice**

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

**Eye Contact**

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

**Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth

method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

|  |  |
|--|--|
| <b>Ingestion</b>                           | Do NOT induce vomiting. Call a physician or poison control center immediately. |
| <b>Most important symptoms and effects</b> | None reasonably foreseeable.   |
| <b>Notes to Physician</b>                  | Treat symptomatically  |

## 5. Fire-fighting measures

|   |                          |
|---|--------------------------|
| <b>Unsuitable Extinguishing Media</b>   | No information available |
| <b>Flash Point</b>                      | No information available |
| <b>Method -</b>                         | No information available |
| <b>Autoignition Temperature</b>         | No information available |
| <b>Explosion Limits</b>                 |                          |
| <b>Upper</b>                            | No data available        |
| <b>Lower</b>                            | No data available        |
| <b>Sensitivity to Mechanical Impact</b> | No information available |
| <b>Sensitivity to Static Discharge</b>  | No information available |

### Specific Hazards Arising from the Chemical

Non-combustible. Do not allow run-off from fire-fighting to enter drains or water courses.

### Hazardous Combustion Products

None known.

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

### NFPA

|               |                     |                    |                         |
|---------------|---------------------|--------------------|-------------------------|
| <b>Health</b> | <b>Flammability</b> | <b>Instability</b> | <b>Physical hazards</b> |
| 4             | 0                   | 1                  | N/A                     |

## 6. Accidental release measures

|                                  |   |
|----------------------------------|---|
| <b>Personal Precautions</b>      | Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.   |
| <b>Environmental Precautions</b> | Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. |

**Methods for Containment and Clean Up** Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

## 7. Handling and storage

|                 |  |
|-----------------|--|
| <b>Handling</b> | Wear personal protective equipment/face protection. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance. |
| <b>Storage.</b> | Keep containers tightly closed in a dry, cool and well-ventilated place. Store under an inert atmosphere. Protect from moisture. Incompatible Materials. Acids.  |

## 8. Exposure controls / personal protection

**Exposure Guidelines**

| Component       | ACGIH TLV                  | OSHA PEL                             | NIOSH   | Mexico OEL (TWA)           |
|-----------------|----------------------------|--------------------------------------|---|----------------------------|
| Sodium selenate | TWA: 0.2 mg/m <sup>3</sup> | (Vacated) TWA: 0.2 mg/m <sup>3</sup> | IDLH: 1 mg/m <sup>3</sup><br>TWA: 0.2 mg/m <sup>3</sup> | TWA: 0.2 mg/m <sup>3</sup> |

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

**Engineering Measures**

Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment****Eye/face Protection**

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 and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection**

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.

**Recommended Filter type:**

Particulates filter conforming to EN 143.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

|  |                                   |
|--|-----------------------------------|
| Physical State                         | Powder Solid                      |
| Appearance                             | White                             |
| Odor                                   | Odorless                          |
| Odor Threshold                         | No information available          |
| pH                                     | No information available          |
| Melting Point/Range                    | No data available                 |
| Boiling Point/Range                    | No information available          |
| Flash Point                            | No information available          |
| Evaporation Rate                       | Not applicable                    |
| Flammability (solid,gas)               | No information available          |
| Flammability or explosive limits       |                                   |
| Upper                                  | No data available                 |
| Lower                                  | No data available                 |
| Vapor Pressure                         | No information available          |
| Vapor Density                          | Not applicable                    |
| Specific Gravity                       | No information available          |
| Solubility                             | Soluble in water                  |
| Partition coefficient; n-octanol/water | No data available                 |
| Autoignition Temperature               | No information available          |
| Decomposition Temperature              | No information available          |
| Viscosity                              | Not applicable                    |
| Molecular Formula                      | Na <sub>2</sub> O <sub>4</sub> Se |
| Molecular Weight                       | 188.94                            |

## 10. Stability and reactivity

|   |  |
|---|--|
| <b>Reactive Hazard</b>                  | None known, based on information available             |
| <b>Stability</b>                        | Hygroscopic.   |
| <b>Conditions to Avoid</b>              | Incompatible products. Exposure to moist air or water. |
| <b>Incompatible Materials</b>           | Acids  |
| <b>Hazardous Decomposition Products</b> | None under normal use conditions                       |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.               |
| <b>Hazardous Reactions</b>              | None under normal processing.                          |

## 11. Toxicological information

### Acute Toxicity

#### Product Information Component Information

| Component       | LD50 Oral  | LD50 Dermal | LC50 Inhalation                    |
|-----------------|------------|-------------|------------------------------------|
| Sodium selenate | Not listed | Not listed  | LC50 0.052 - 0.51 mg/L ( Rat ) 4 h |

**Toxicologically Synergistic Products** No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Irritation** No information available

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component       | CAS No     | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|-----------------|------------|------------|------------|------------|------------|------------|
| Sodium selenate | 13410-01-0 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** Ames test: positive.

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known

**STOT - repeated exposure** Kidney Heart Liver

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** No information available

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** Tumorigenic effects have been reported in experimental animals.

## 12. Ecological information

### Ecotoxicity

The product contains following substances which are hazardous for the environment. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

| Component       | Freshwater Algae | Freshwater Fish                           | Microtox   | Water Flea           |
|-----------------|------------------|---|------------|----------------------|
| Sodium selenate | Not listed       | Pimephales promelas: EC50 = 0.69 mg/L/96h | Not listed | EC50 = 0.39 mg/L/48h |

**Persistence and Degradability** May persist

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

| Component       | log Pow |
|-----------------|---------|
| Sodium selenate | 5       |

### 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

#### DOT

UN-No UN2630  
 Proper Shipping Name SELENATES  
 Technical Name (SODIUM SELENATE)  
 Hazard Class 6.1  
 Packing Group I

#### TDG

UN-No UN2630  
 Proper Shipping Name SELENATES  
 Hazard Class 6.1  
 Packing Group I

#### IATA

UN-No UN2630  
 Proper Shipping Name SELENATES  
 Hazard Class 6.1  
 Packing Group I

#### IMDG/IMO

UN-No UN2630  
 Proper Shipping Name SELENATES  
 Hazard Class 6.1  
 Packing Group I

### 15. Regulatory information

#### United States of America Inventory

| Component       | CAS No     | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|-----------------|------------|------|---|-----------------------------|
| Sodium selenate | 13410-01-0 | X    | ACTIVE  | -                           |

#### **Legend:**

**TSCA** US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)**

Not applicable

**TSCA 12(b)** - Notices of Export

Not applicable

#### International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component       | CAS No     | DSL | NDSL | EINECS    | PICCS | ENCS | ISHL | AICS | IECSC | KECL     |
|-----------------|------------|-----|------|-----------|-------|------|------|------|-------|----------|
| Sodium selenate | 13410-01-0 | X   | -    | 236-501-8 | X     | X    | X    | X    | X     | KE-30916 |

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

### U.S. Federal Regulations

#### SARA 313

| Component       | CAS No     | Weight % | SARA 313 - Threshold Values % | SARA 313 - Reporting thresholds |
|-----------------|------------|----------|-------------------------------|---------------------------------|
| Sodium selenate | 13410-01-0 | >95      | 1.0 %                         | -                               |

#### SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

#### CWA (Clean Water Act)

| Component       | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|-----------------|----------------------------|-----------------------------|------------------------|---------------------------|
| Sodium selenate | -                          | -                           | X                      | -                         |

#### Clean Air Act

| Component       | HAPS Data | Class 1 Ozone Depletors | Class 2 Ozone Depletors |
|-----------------|-----------|-------------------------|-------------------------|
| Sodium selenate | X         |                         | -                       |

OSHA - Occupational Safety and Health Administration Not applicable

#### CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

| Component       | Hazardous Substances RQs | CERCLA Extremely Hazardous Substances RQs | SARA Reportable Quantity (RQ) |
|-----------------|--------------------------|---|-------------------------------|
| Sodium selenate | -                        | 100 lb                                    | -                             |

California Proposition 65 This product does not contain any Proposition 65 chemicals.

#### U.S. State Right-to-Know Regulations

| Component       | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|-----------------|---------------|------------|--------------|----------|--------------|
| Sodium selenate | X             | X          | X            | X        | X            |

#### U.S. Department of Transportation

Reportable Quantity (RQ): N  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product does not contain any DHS chemicals.

#### Other International Regulations

## Mexico - Grade

No information available

## Authorisation/Restrictions according to EU REACH

| Component       | CAS No     | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|-----------------|------------|---|---|---|
| Sodium selenate | 13410-01-0 | -   | Use restricted. See item 75.<br>(see link for restriction details)            | -   |

## REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

## Safety, health and environmental regulations/legislation specific for the substance or mixture

| Component       | CAS No     | OECD HPV       | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|-----------------|------------|----------------|------------------------------|---------------------------|--|
| Sodium selenate | 13410-01-0 | Not applicable | Not applicable               | Not applicable            | Not applicable                             |

## Contains component(s) that meet a 'definition' of per &amp; poly fluoroalkyl substance (PFAS)?

Not applicable

## Other International Regulations

| Component       | CAS No     | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|-----------------|------------|---|--|----------------------------|------------------------------------|
| Sodium selenate | 13410-01-0 | Not applicable  | Not applicable   | Not applicable             | Annex I - Y25                      |

## 16. Other information

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## Revision Summary

This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

## Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text



**End of SDS**