

SAFETY DATA SHEET

Preparation Date: 7/21/15

Revision date 2/18/2019

Revision Number: G2

1. IDENTIFICATION

Product identifier

Product code: S1428
Product Name: SODIUM SELENATE, ANHYDROUS, CRYSTAL

Other means of identification

Synonyms: Disodium selenate
 Sel-tox SSO2 and SS-20
 Selenic acid (H₂SeO₄), disodium salt
 Selenic acid, disodium salt
 Sodium selenium oxide (Na₂SeO₄)
CAS #: 13410-01-0
RTECS # VS6650000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: Insecticide.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Tom Tyner (USA - West Coast)
Contact Person: Ibad Tirmiz (USA - East Coast)

2. HAZARDS IDENTIFICATION

Classification

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

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 1
Acute toxicity - Inhalation (Dusts/Mists)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2

Label elements

Danger

Hazard statements

Fatal if swallowed
 Toxic if inhaled

Product code: S1428

Product name: SODIUM SELENATE,
 ANHYDROUS, CRYSTAL

Page

May cause damage to organs through prolonged or repeated exposure



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

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

Precautionary Statements - Response

Specific treatment (see .? on this label)

Get medical advice/attention if you feel unwell

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.

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

Rinse mouth

Precautionary Statements - Storage

Store locked up

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

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight-%
Sodium Selenate, Anhydrous	13410-01-0	100

4. FIRST AID MEASURES

First aid measures

General Advice:

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. First aider needs to protect himself. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Skin Contact:

Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops. Consult a physician if necessary.

Eye Contact:

Flush eyes with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

Inhalation:

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. WARNING! It may be hazardous to the person providing aid

to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce 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.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Fatal if swallowed.

Most important symptoms and effects, both acute and delayed

Symptoms Ingestion may cause nausea, vomiting, and diarrhea
It may affect the kidneys
May affect the liver
garlic breath
May cause metallic taste
Coughing and wheezing
May cause pulmonary edema
Dyspnea (Shortness of breath and difficulty breathing)
May cause central nervous system effects

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous combustion products No information available.

Specific hazards No information available.

Special Protective Actions for Firefighters

Specific Methods: No information available

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Avoid dust formation. Do not ingest. Do not breathe dust. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Hygroscopic. Protect from moisture. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials. Store in a segregated and approved area.

Incompatible Materials:

Oxidizing agents
Acids

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
Sodium Selenate, Anhydrous	13410-01-0	0.2 mg/m ³ TWA (as Se)	0.2 mg/m ³ TWA (a Se) 1 mg/m ³ IDLH (Immediately Dangerous to Life or Health) (as Se)	0.2 mg/m ³ TWA (as Se)	None

Canada

Component	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Sodium Selenate, Anhydrous	13410-01-0	0.2 mg/m ³ TWA (as Se)	0.1 mg/m ³ TWA (as Se)	0.2 mg/m ³ TWA (as Se)	0.2 mg/m ³ TWAEV (as Se)

Australia and Mexico

Component	CAS No	Australia	Mexico
Sodium Selenate, Anhydrous	13410-01-0	0.1 mg/m ³ TWA (selenium compounds)	0.2 mg/m ³ TWA (as Se)

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection:	Goggles or Safety glasses with side-shields.
Skin and body protection:	Long sleeved clothing Gloves Chemical resistant apron
Respiratory protection:	Wear respirator with dust filter. Be sure to use an approved/certified respirator or equivalent.
Hygiene measures:	Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid	Appearance: Crystalline powder. Crystalline solid. Powder.	Color: White.
Odor: Odorless.	Taste No information available.	Formula Na ₂ SeO ₄
Molecular/Formula weight (g/mole): 188.94 g/mole	Flammability (solid, gas) no data available	Flashpoint (°C/°F): No information available
Flash Point Tested according to: Not available	Autoignition Temperature (°C/°F): No information available	Lower Explosion Limit (%): No information available
Upper Explosion Limit (%): No information available	Melting point/range(°C/°F): No information available	Decomposition temperature(°C/°F): No information available
Boiling point/range(°C/°F): No information available	Bulk density: No information available	Density (g/cm³): No information available

Specific gravity:
3.098

pH
No information available

Vapor pressure @ 20°C (kPa):
No information available

Evaporation rate:
No information available

Vapor density:
No information available

VOC content (g/L):
No information available

Odor threshold (ppm):
No information available

**Partition coefficient
(n-octanol/water):**
No information available

Viscosity:
No information available

Miscibility:
No information available

Solubility:
Soluble in hot water
Partially soluble in cold water

10. STABILITY AND REACTIVITY

Reactivity

Reactive with oxidizing agents
Reactive with acids

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Incompatible materials. Exposure to moisture. Exposure to moist air.

Incompatible Materials: Oxidizing agents
Acids

Hazardous decomposition products: No information available.

Other Information

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Ingestion. Inhalation.

Acute Toxicity

Component Information

Sodium Selenate, Anhydrous

CAS No 13410-01-0

LD50/oral/rat = 1600 µg/kg Oral LD50 Rat; 1.6 mg/kg Oral LD50 Rat

LD50/oral/mouse = No information available

LD50/dermal/rabbit = No information available

LD50/dermal/rat = No information available

LC50/inhalation/rat = No information available

Product code: S1428

Product name: SODIUM SELENATE,
ANHYDROUS, CRYSTAL

Page

LC50/inhalation/mouse = No information available
Other LD50 or LC50information = 2.25 mg/kg Oral LD50 Rabbit

Product Information

LD50/oral/rat =
Value - Acute Tox = 1.6 mg/kg

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
Value - Acute Tox = No information available

LD50/dermal/rat
VALUE - Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: Causes skin irritation.

Eye Contact: Causes eye irritation.

Inhalation Toxic by inhalation. Causes respiratory tract (nose, throat, lung) irritation with coughing and shortness of breath. Other symptoms may include pulmonary edema, epistaxis, olfactory fatigue.

Ingestion Fatal if swallowed. Causes nausea, vomiting, hypermotility, diarrhea, garlic odor of breath. It may also affect the heart, liver (liver function tests impaired), and behavior/central nervous system (muscle weakness, irritability, fatigue, muscle contraction or spasticity, convulsions, lightheaded sensation, headache, tremors, coma, CNS depression) and cause muscle aches and pains.

Aspiration hazard No information available.

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

Chronic Toxicity Prolonged or repeated ingestion can cause headache, nausea, vomiting, diarrhea, white streaks in the nails, pallor, loss of hair, skin rashes, garlic odor in breath, coated tongue, metallic taste in mouth. May also affect the spleen, blood (leukotocytosis, anemia), behavior/central nervous system (nervousness and mood changes), liver, kidneys (tubular necrosis), heart (EKG changes).

Sensitization: No information available.

Mutagenic Effects: Cytogenic Analysis: human lymphocyte

Mutations in microorganisms
Experiments with bacteria and/or yeast have shown mutagenic effects

Carcinogenic effects: Not considered carcinogenic.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Sodium Selenate, Anhydrous	13410-01-0	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

*IARC (International Agency for Research on Cancer)
Group 3 - Not classifiable as to its carcinogenicity to humans
NTP (National Toxicology Program)*

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: No information available
Developmental Effects: No information available
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available.
STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.
Target Organs: Liver. Kidneys. Heart.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility in soil No information available
Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
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Product code: S1428

Product name: SODIUM SELENATE,
ANHYDROUS, CRYSTAL

Page

Sodium Selenate, Anhydrous	13410-01-0	None	None	None	None
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14. TRANSPORT INFORMATION

DOT

UN-No: Not Regulated
Proper Shipping Name: Selenates (sodium selenate)
Hazard Class 6.1
Subsidiary Class No information available
Packing group: No information available
Emergency Response Guide Number No information available
Marine Pollutant No data available
DOT RQ (lbs): No information available
Special Provisions No Information available
Symbol(s): [DOT]: (G) - Identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parentheses, in association with the basic description.
Description: UN2630,Selenates ,6.1,PG I

TDG (Canada)

UN-No: UN2630
Proper Shipping Name: Selenates
Hazard Class 6.1
Subsidiary Risk: No information available
Packing Group: I
Marine Pollutant No Information available
Description: UN2630,SELENATES,6.1,PG I

ADR

UN Number UN2630
Proper Shipping Name: Selenates
Transport hazard class(es) 6.1
Packing group I
Subsidiary Risk: No information available
Description: UN2630 Selenates,6.1,I

IMDG

UN-No: UN2630
Proper Shipping Name: Selenates
Hazard Class: 6.1
Subsidiary Risk: No information available
Packing Group: I
Marine Pollutant No information available
EMS: F-A

RID

UN Number UN2630
Proper Shipping Name: Selenates
Transport hazard class(es) 6.1
Subsidiary Risk: No information available
Packing group I
Description: UN2630 Selenates,6.1,I

ICAO (air)

UN-No: UN2630
Proper Shipping Name: Selenates

Hazard Class 6.1
Subsidiary Risk: No information available
Packing Group: I
Description: UN2630,Selenates,6.1,PG I

IATA

UN Number UN2630
Proper Shipping Name: Selenates
Transport hazard class(es) 6.1
Subsidiary Risk: No information available
Packing group I
Precautionary Statements - Response 6L
Special Provisions No information available
Description: UN2630,Selenates,6.1,PG I

15. REGULATORY INFORMATION

International Inventories

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia AICS	EINECS-No.
Sodium Selenate, Anhydrous	13410-01-0	PresentACTIVE	Present KE-30916	Present	Present (1)-1212	Present	Present	Present 236-501-8

U.S. Regulations

Sodium Selenate, Anhydrous

Massachusetts RTK: Present
New Jersey RTK Hazardous Substance List: 1726
New Jersey (EHS) List: 1726 100 lb TPQ
New Jersey - Discharge Prevention - List of Hazardous Substances: Present
Pennsylvania RTK: Environmental hazard
Pennsylvania RTK - Environmental Hazard List Present
New York Release Reporting - List of Hazardous Substances:
 1 lb RQ
California Directors List of Hazardous Substances: Present (selenium compounds)

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Component	CAS No	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Sodium Selenate, Anhydrous	13410-01-0	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Component	CAS No	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Sodium Selenate, Anhydrous	13410-01-0	None	100 lb EPCRA RQ	100 lb. EPCRA RQ	Selenium compounds	1.0%

U.S. TSCA

Component	CAS No	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Sodium Selenate, Anhydrous	13410-01-0	Not Applicable	Not Applicable

Canada

WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component
Sodium Selenate, Anhydrous
13410-01-0 (100)

WHMIS 2015 Hazard Classification
Specific target organ toxicity - Repeated exposure - Category 1:
H372 Causes damage to organs through prolonged or repeated exposure. (classification is based on available data for Selenium and Selenium compounds as Sodium selenate)

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

DSL/NDSL

Component	CAS No	Canada (DSL)	Canada (NDSL)
Sodium Selenate, Anhydrous	13410-01-0	Present	Not Listed

Component	CAS No	CEPA Schedule I - Toxic Substances
Sodium Selenate, Anhydrous	13410-01-0	Not listed
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Sodium Selenate, Anhydrous	13410-01-0	Not listed

EU Classification

EU GHS - SV - CLP 1272/2008

Component	CAS No	EU GHS - SV - CLP (1272/2008)
Sodium Selenate, Anhydrous	13410-01-0	

EU - CLP (1272/2008)

R-phrases(s)

R33 - Danger of cumulative effects

R23/25 - Toxic by inhalation and if swallowed

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S -phrase(s)

S28 - After contact with skin, wash immediately with plenty of water

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

S60 - This material and its container must be disposed of as hazardous waste

S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.

S20/21 - When using, do not eat, drink or smoke.

S 1/2 - Keep locked up and out of the reach of children.

Component	CAS No	Classification	Concentration	Safety Phrases
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Product code: S1428

Product name: SODIUM SELENATE,
ANHYDROUS, CRYSTAL

Page

			Limits:	
Sodium Selenate, Anhydrous	13410-01-0		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

T - Toxic

T



N



16. OTHER INFORMATION

Preparation Date: 7/21/15
Revision date: 2/18/2019
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet