

SAFETY DATA SHEET

According to
HSNO Hazardous Substances (Safety Data Sheets) Notice 2017

Section 1. Identification of the material and the supplier

Product: **Selenium Chip**
Product Use: Fertiliser nutrient trace element (Se) additive.
Restriction of Use: Refer to Section 15

New Zealand Supplier: **PGG Wrightson Seeds Ltd**
Address: 1375 Springs Road
RD4, Lincoln, 7674
Christchurch

Telephone: +64 3 966 9300
Emergency No: 0800 764 766 (National Poison Centre)

Date of SDS Preparation: 14 November 2024

Section 2. Hazards Identification

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval No: Fertilisers (Subsidiary Hazard) Group Standard 2020, HSR002571

Pictograms



Signal Word: **WARNING**

GHS Classification and Category	Hazard Code	Hazard Statement
Acute oral toxicity Cat. 4	H302	Harmful if swallowed.
Acute inhalation toxicity Cat. 4	H332	Harmful if inhaled.
Germ cell mutagenicity Cat. 2	H341	Suspected of causing genetic defects.
Specific target organ toxicity – repeated exposure Cat. 2	H373	May cause damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment chronic Cat. 3	H412	Harmful to aquatic life with long lasting effects.

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.

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Tel: 64 9 475 5240 www.techcomp.co.nz

P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective clothing [as detailed in SDS Section 8].

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P314	Get medical advice/attention if you feel unwell.
P330	Rinse mouth.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.

Storage Code	Storage Statement
P405	Store locked up.
	Store in original closed pack, in a dry ventilated place away from moisture and feedstuffs.

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Wt%	CAS NUMBER.
Sodium Selenate Anhydrous	2 - 2.5	13410-01-0
Talc	2-3	14807-96-6
Non-hazardous ingredients	To balance	NA

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Rinse cautiously with water for 15 minutes. If eye irritation persists: Get medical advice.
If on Skin	Remove contaminated clothing. Neutralise with 10% Sodium Thiosulphate solution then wash affected area thoroughly with soap and water. If a large area is affected seek medical assistance.
If Swallowed	Do not induce vomiting. Wash out mouth thoroughly with water. Never give anything to the mouth of an unconscious person. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs. Seek medical attention if needed.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Apply artificial respiration if not breathing. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms:

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Ingestion:	Toxic if swallowed. Swallowing may result in nausea, vomiting, diarrhoea and abdominal pain. Large amounts may cause muscle spasms, coma and death from respiratory failure.
Inhalation:	Not applicable.
Skin:	Not applicable.
Eye:	Not applicable.
Chronic:	Suspected of causing genetic defects. May cause damage to organs through prolonged or repeated exposure.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable solid
Hazards from combustion products	May emit toxic fumes of selenium dioxide if involved in fires or exposed to extreme heat.
Suitable Extinguishing media	Carbon dioxide to exclude air
Precautions for firefighters and special protective clothing	Breathing apparatus plus full protective clothing. Keep up wind. Do not allow washings to reach sewage or effluent systems.
HAZCHEM CODE	2X

Section 6. Accidental Release Measures

Wear protective gear as detailed in Section 8. Evacuate all unnecessary personnel. Prevent product from entering the sewers, waterways, or low areas. Contain spill and sweep up. Dispose of waste according to the applicable local and national regulations.

Section 7. Handling and Storage

Precautions for Handling:

- Read carefully and follow all instructions. Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Do not breathe dust.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Wear protective clothing
- Avoid release to the environment.
- Use personal protective equipment as required.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Store locked up.
- Keep out of reach of children.
- Store in the closed, original container in a dry, well ventilated area, as cool as possible out of direct sunlight.
- Refer to the current NZS8409 Management of Agrichemicals and the HSNO Regulations.

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³
Sodium Selenate (as Se)	-	0.2	-	-
Talc (containing no asbestos fibres) [14807-96-6]	-	2(r)	-	-

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices APRIL 2022 13TH EDITION.

Engineering Controls

Handle in well-ventilated area. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below exposure limits. Avoid generating and inhalation of dust. Keep containers closed when not in use.

Personal Protection Equipment

Eyes	Wear protective goggles.
Hands and skin	Wear impervious gloves, boots and overalls.
Respiratory	Wear dust masks.

Section 9**Physical and Chemical Properties**

Appearance	Granules
Colour	Green
Odour	Not available
Odour Threshold	Not available
pH	Not available
Boiling Point	Not available
Melting Point	Not available
Freezing Point	Not available
Flash Point	Not available
Flammability	Not available
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Specific Gravity	Not available
Water Solubility	Not soluble
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Kinematic Viscosity	Not available
Particle Characteristics	Not available

Section 10. Stability and Reactivity

Stability of Substance	When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture.
Conditions to Avoid	Avoid contact with oxidising agents.
Incompatible Materials	Avoid contact with oxidising agents.
Hazardous Decomposition Products	May emit toxic fumes of selenium dioxide if involved in fires or exposed to extreme heat on combustion.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Harmful if swallowed. Swallowing may result in nausea, vomiting, diarrhoea and abdominal pain. Large amounts may cause muscle spasms, coma and death from respiratory failure.
Dermal	Not applicable.
Inhalation	Harmful if inhaled.
Eye	Not applicable.
Skin	Not applicable.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Suspected of causing genetic defects.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Repeated or prolonged exposure to selenate compounds may cause bronchial irritation, gastro-intestinal hyper motility resulting in diarrhoea, loss of weight and liver changes.

Acute Toxicity -

Chemical Name	LD50 (Oral)	LD50 (Dermal)	LC50 (inhalation)
Sodium Selenate (13410-01-0)	25 mg/kg (Rat)		0.05 mg/L

Subchronic/ Chronic Toxicity

Rats fed a dietary level of 100ppm, ate little food and all died in 8-16 days. Those receiving 50ppm died in 10-97 days. A dietary level of 15ppm was tolerated for 72 days or more but food intake was about half of normal. All rats survived 7.5ppm (0.37mg/kg) for six months, and their growth was normal.

Section 12. Ecotoxicological Information

Harmful to aquatic life with long lasting effects.

Persistence and degradability	Not readily degradable (sodium selenate)
Bioaccumulation	Unlikely to bio-accumulate.
Mobility in Soil	No data available
Other adverse effects	No data available

Acute Toxicity – Fish: LC50 (96h) for Fathead minnow is 0.69 mg/L for sodium selenate.
 Acute Toxicity – Daphnia: LC50 (96h) Daphnia magna 0.58mg /L for sodium selenate
 LC50 (48h) Daphnia magna 0.75mg/L (adult), 0.55mg/L (juvenile) for sodium selenate.
 Acute Toxicity Algae: EC50 (96h) for green algae 0.2mg/L for sodium selenate.
 Bio accumulative Potential Daphnia BCF value = 3650 for sodium selenate.

Section 13. Disposal Considerations

Disposal Method:

Spent media that has removed toxic chemicals should be examined for specific hazards. Spilled product may be recovered for use if it has not come in contact with liquids or been exposed to significant amounts of gaseous contaminants. Dispose of according to Local Regulations.

Precautions or methods to avoid:

Avoid contamination of any water supply with chemical or empty container.

Section 14 Transport Information

This product is not classified as a Dangerous Good for transport in NZ ; SNZ HB 5433:2021

Road, Rail, Sea and Air Transport

UN No	NA
Class - Primary	NA
Packing Group	NA
Proper Shipping Name	NA
Marine Pollutant	NA
Special Provisions	NA

Section 15 Regulatory Information

This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval Code: Fertilisers (Subsidiary Hazard) Group Standard 2020, HSR002571

HSW (HS) Regulations 2017 and EPA Notices	Trigger Quantity
Certified Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	10,000kg
Emergency Response Plan	1,000kg
Secondary Containment	NA
Restriction of Use	Only use for the intended purpose.

Section 16 Other Information

Glossary

Cat	Category
EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD ₅₀	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices April 2022 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

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Please contact the New Zealand distributor, if further information is required.

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