UN GHS REVISION 7

Safety Data Sheet

Selenium Powder Black 99.9% AR

Version 1.0, Date of issue: 2026-07-04

SECTION 1: Identification

1.1 GHS Product identifier

Product name	Selenium Powder Black 99.9% AR
Product number	C02289
Brand	Chemnovo

1.3 Recommended use of the chemical and restrictions on use

Laboratory reagent

1.4 Supplier's details

Name	Hurst Scientific
Address	2 Transit Place, 6112 Forrestdale WA, Australia
Telephone	1300 778 068
email	sales@hurstscientific.com.au

1.5 Emergency phone number

Australian Poisons Information Centre 13 11 26

Australian Emergency Services 000

SECTION 2: Hazard identification

General hazard statement

Classified as a Hazardous substance according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.

Classified as Dangerous goods according to the ADG Code for the Transport of Dangerous Goods by Road and Rail (7th Edition).

2.1 Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Acute Toxicity (Inhalation), Cat. 3
- Acute Toxicity (Oral), Cat. 3
- STOT – Repeated Exposure, Cat. 2
- Hazardous to the Aquatic Environment (Chronic), Cat. 4

2.2 GHS label elements, including precautionary statements

Pictograms

1. Skull and crossbones; 2. Health hazard

Signal word

Danger

Hazard statement(s)

H331	Toxic if inhaled.
H301	Toxic if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure.
H413	May cause long lasting harmful effects to aquatic life.

Precautionary statement(s)

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P316	Get emergency medical help immediately.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P319	Get medical help if you feel unwell.
P321	Specific treatment (see supplemental first-aid instructions on this label).
P330	Rinse mouth.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulations.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTRE/doctor.
P314	Get medical advice/attention if you feel unwell.

2.3 Other hazards

No information available on PBT / vPvB status or endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

3.1 Substances

Hazardous components

Component	Concentration
Selenium (CAS: 7782-49-2)	**≥ 99.9 – < 100%**
CLASSIFICATIONS: Acute Toxicity (Inhalation), Cat. 3; Acute Toxicity (Oral), Cat. 3; STOT – Repeated Exposure, Cat. 2; Hazardous to the Aquatic Environment (Chronic), Cat. 4. **HAZARDS:** H331 - Toxic if inhaled; H301 - Toxic if swallowed; H373 - May cause damage to organs through prolonged or repeated exposure; H413 - May cause long lasting harmful effects to aquatic life.	

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

Eye contact

Flush eyes with copious amounts of water for at least 15 minutes. If irritation develops or persists, seek medical attention.

Skin contact

Remove contaminated clothing and wash affected area with soap and water thoroughly. If irritation develops, seek medical attention.

Inhalation

Evacuate to fresh air immediately. If unconscious, place in recovery position and provide artificial respiration if breathing ceases. Seek medical attention.

Ingestion

DO NOT induce vomiting. Wash mouth out with copious amounts of water and seek medical attention.

First-aid facilities

Eye wash station, safety shower and First Aid kit.

4.2 Most important symptoms and effects, both acute and delayed

The most important symptoms and effects are described in Section 2 (hazard statements) and Section 11 (toxicological information).

4.3 Indication of immediate medical attention and special treatment needed

Treat symptomatically. For advice, contact the Poisons Information Centre (Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Use an extinguishing medium suitable for the surrounding fire and other material involved. Water spray, dry chemical powder, carbon dioxide or foam. Do not scatter spilled material with high-pressure water streams.

5.2 Specific hazards arising from the chemical

Combustion may produce toxic and irritating gases.

5.3 Special protective actions for fire-fighters

Fire fighters should wear self-contained breathing apparatus (SCBA) operated in positive-pressure mode and full protective clothing. Fight the fire from a safe location. Prevent firefighting runoff from entering waterways, drains and sewers. Contain and collect fire-control water for later disposal.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Avoid contact with skin and eyes. Wear suitable protective equipment (see Section 8). Evacuate non-essential personnel from the area. Avoid generating and breathing dust.

6.2 Environmental precautions

Prevent the spill from entering drains, sewers and waterways. In the event of a major spill, contain the material and notify the relevant authorities. This product is hazardous to the aquatic environment — prevent any release to the environment.

6.3 Methods and materials for containment and cleaning up

Contain the spill and prevent further release. Sweep or vacuum the spilled material using clean, non-sparking tools, avoiding dust generation. Place the collected solid into a labelled, sealable container for disposal. Ventilate the area.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Prevent dispersion of dust. Use local exhaust ventilation where dust or aerosol may be generated.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated area. Keep containers tightly closed and upright when not in use. Store away from incompatible materials (see Section 10). Inspect containers regularly for damage or leaks.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Selenium (CAS: 7782-49-2)
AU/SWA (AU): TWA: 0.1 mg/m³ (as Se)

8.2 Appropriate engineering controls

Ensure an adequate ventilation or exhaust system is in place.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standard AS 1337 and be selected and used in accordance with AS 1336.

Skin protection

Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Hand protection

Use occupational protective gloves complying with AS 2161 (Selection, Use and Maintenance).

Respiratory protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable particulate filter should be used. Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Solid
Appearance	Black powder
Colour	No data available
Odour	odourless
Odour threshold	No data available
Melting point/freezing point	217 °C
Boiling point or initial boiling point and boiling range	685 °C
Flammability	No data available
Lower and upper explosion limit/flammability limit	No data available
Flash point	No data available
Explosive properties	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Oxidising properties	No data available
pH	No data available
Kinematic viscosity	No data available
Solubility	Water: Insoluble in water
Partition coefficient n-octanol/water (log value)	No data available
Vapour pressure	0.0 kPa (approx)
Evaporation rate	No data available
Density and/or relative density	4.81 g/cm³
Relative vapour density	No data available
Particle characteristics	No data available
Supplemental information regarding physical hazard classes	No data available
Further safety characteristics (supplemental)	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under normal conditions of storage and handling.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

None under normal use conditions.

10.4 Conditions to avoid

Avoid storing in direct sunlight and avoid extremes of temperature.

10.5 Incompatible materials

Strong oxidising agents, strong acids, strong bases.

10.6 Hazardous decomposition products

No data available.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Toxic if swallowed; Toxic if inhaled; 6700 mg/kg (rat, LD50 oral)

Skin corrosion/irritation

Not expected to be a skin irritant.

Serious eye damage/irritation

Not expected to be an eye irritant.

Respiratory or skin sensitisation

Not expected to be a respiratory or skin sensitiser.

Germ cell mutagenicity

Not considered to be a mutagenic hazard.

Carcinogenicity

Not classifiable as to its carcinogenicity to humans

Reproductive toxicity

Not considered to be toxic to reproduction.

Specific target organ toxicity (STOT) - single exposure

Not expected to cause toxicity to a specific target organ.

Specific target organ toxicity (STOT) - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Not expected to be an aspiration hazard.

SECTION 12: Ecological information

Toxicity

May cause long lasting harmful effects to aquatic life

Persistence and degradability

May cause long-term adverse effects in the environment

Bioaccumulative potential

It is known that selenium accumulates in living tissues. For example, the selenium content of human blood is about 0.2 ppm. This value is about 1000 times greater than the selenium found in surface waters on the planet earth. It is clear that the human body does accumulate or concentrate selenium with respect to the environmental levels of selenium. Selenium has been found in marine fish meal at levels of about 2 ppm. This amount is around 50,000 times greater than the selenium found in seawater. It seems obvious that marine fish are efficient concentrators of selenium

Mobility in soil

No data available

Results of PBT and vPvB assessment

No data available

Endocrine disrupting properties

No data available

Other adverse effects

No data available

SECTION 13: Disposal considerations

Product disposal

Dispose of in accordance with local authority guidelines.

Packaging disposal

Dispose of in accordance with local authority guidelines.

Waste treatment

Dispose of in accordance with local authority guidelines.

Sewage disposal

Do not contaminate drains and waterways.

Other disposal recommendations

Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Australian Dangerous Goods Code, 7th Edition)

UN Number	UN3283
Proper shipping name	SELENIUM COMPOUND, SOLID, N.O.S.
Transport hazard class	6.1
Packing group	I
Special provisions	274
Hazchem code	2X
Environmental hazards	Not classified

IMDG (International Maritime Dangerous Goods Code)

UN Number	UN3283
Proper shipping name	SELENIUM COMPOUND, SOLID, N.O.S.
Transport hazard class	6.1
Packing group	I
Marine pollutant	No

IATA (International Air Transport Association Dangerous Goods Regulations)

UN Number	UN3283
Proper shipping name	SELENIUM COMPOUND, SOLID, N.O.S.
Transport hazard class	6.1
Packing group	I

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Selenium (CAS: 7782-49-2)

Australia SUSMP — Poison Schedule: Schedule 7

15.2 Chemical safety assessment

No chemical safety assessment has been carried out for this product.

SECTION 16: Other information

16.1 Further information/disclaimer

References

1. Safe Work Australia, Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice, (June 2023).
2. Safe Work Australia, National Code of Practice for the Labelling of Workplace Hazardous Chemicals (2015).
3. Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants (2013).
4. National Transport Commission Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code), Volume 1, Edition 7.9 (2023).
5. Standards Australia, Dangerous Goods Initial Emergency Response Guide: Australian Handbook (SAA/SNZ HB76); Homebush (2004).

16.2 Preparation information

This SDS is prepared in accordance with the Safe Work Australia, Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice, (June 2023). The information contained within is believed to be accurate at the date of preparation/review. Hurst Scientific makes no claims of the accuracy or completeness of the information and excludes all liability for any loss or damage related to the supply or use of the information in this safety data sheet. It is recommended the user make their own determinations as to the suitability of the information provided to the application in which the product is to be used. Copyright © 2026 Hurst Scientific