

Sodium Selenite

Prepared in accordance with the Globally Harmonized System (GHS) of Classification and Labelling of Chemicals, as adopted under the Work Health and Safety Regulations (Australia).

SECTION 1 — IDENTIFICATION

Product Name	Sodium Selenite
Catalogue Number	AS-8015
CAS Number	10102-18-8
EC Number	233-267-9
Molecular Formula	Na_2SeO_3
Synonyms	Disodium selenite; Selenious acid, disodium salt
Recommended Use	Laboratory reagent for analytical, research and industrial formulation use only. Not for food, dietary supplement, therapeutic, diagnostic, cosmetic, or veterinary use.
Supplier	AuSaMicS Pty Ltd, 36/25 Trafalgar Road, Epping VIC 3076, Australia Phone: +61 412 520 598 Email: support@ausamics.com
Emergency Telephone	AuSaMicS Pty Ltd: +61 412 520 598 (business hours, AEST) Poisons Information Centre (Australia): 13 11 26 (24 hours)

SECTION 2 — HAZARDS IDENTIFICATION

GHS Classification:

Hazard Class	Category	Hazard Statement
Acute toxicity, Oral	Category 2	H300 — Fatal if swallowed
Acute toxicity, Inhalation	Category 2	H330 — Fatal if inhaled
Skin irritation	Category 2	H315 — Causes skin irritation
Eye irritation	Category 2	H319 — Causes serious eye irritation
Skin sensitisation	Category 1	H317 — May cause an allergic skin reaction
Aquatic hazard, chronic	Category 2	H411 — Toxic to aquatic life with long-lasting effects

Signal Word: DANGER

Pictograms:



Precautionary Statements: P260 (Do not breathe dust/fume), P264 (Wash hands thoroughly after handling), P270 (Do not eat, drink or smoke when using this product), P273 (Avoid release to the environment), P280 (Wear protective gloves/eye protection), P301+P310+P330 (IF SWALLOWED: immediately call a POISON CENTER/doctor; rinse mouth), P304+P340+P310 (IF INHALED: remove to fresh air, keep comfortable for breathing; immediately call a POISON CENTER/doctor), P305+P351+P338 (IF IN EYES: rinse cautiously with water; remove contact lenses if

present and easy to do; continue rinsing), P333+P313 (If skin irritation or rash occurs: get medical advice/attention), P391 (Collect spillage), P405 (Store locked up), P501 (Dispose of contents/container in accordance with local/national regulations).

Other hazards: This substance does not meet the criteria for PBT (persistent, bioaccumulative, toxic) or vPvB (very persistent, very bioaccumulative) under current assessment criteria.

SECTION 3 — COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No.	EC No.	Concentration
Sodium Selenite (Na_2SeO_3)	10102-18-8	233-267-9	≥ 98%

Substance (not a mixture). Molecular weight: 172.94 g/mol.

SECTION 4 — FIRST AID MEASURES

Inhalation	Remove to fresh air immediately. If breathing is difficult, give oxygen. Seek immediate medical attention.
Skin Contact	Remove contaminated clothing immediately. Wash skin thoroughly with water for at least 15 minutes. Seek medical attention if irritation persists.
Eye Contact	Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present and easy to do. Seek immediate ophthalmological attention.
Ingestion	Rinse mouth. Do not induce vomiting. Seek immediate medical attention — call the Poisons Information Centre (13 11 26) or a doctor.
Most Important Symptoms	May cause allergic skin reaction (rash, itching, swelling). Ingestion or inhalation may be fatal — symptoms can include nausea, vomiting, abdominal pain, garlic odour on breath, and respiratory distress.
Medical Attention	Treat symptomatically. Selenium toxicity should be considered; contact a Poisons Information Centre for management advice.

SECTION 5 — FIRE-FIGHTING MEASURES

Health	Flammability	Reactivity
4 (Severe)	0 (Minimal)	0 (Minimal)
Suitable Extinguishing Media	Use extinguishing media appropriate to the surrounding fire; product itself is not combustible.	
Unsuitable Extinguishing Media	None known.	
Specific Hazards	Not combustible. Contact with acids may liberate toxic selenium oxide/hydride gases. Fire in the vicinity may generate hazardous fumes.	
Advice for Firefighters	Wear self-contained breathing apparatus (SCBA) and full protective equipment.	

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Personal Precautions	Evacuate non-essential personnel. Ensure adequate ventilation. Avoid generating dust. Wear appropriate PPE (Section 8).
Environmental Precautions	Prevent entry to drains, waterways, and soil. Toxic to aquatic life.
Containment & Clean-Up	Sweep or vacuum (avoid dust generation) and place in a suitable labelled container for disposal. Wash the spill site thoroughly after material is removed.

SECTION 7 — HANDLING AND STORAGE

Handling Precautions	Handle under fume hood or with local exhaust ventilation. Avoid inhalation of dust and contact with skin/eyes. Do not eat, drink, or smoke while handling.
Hygiene Measures	Wash hands, forearms, and face thoroughly after handling and before breaks/meals. Remove and launder contaminated clothing before reuse.
Storage Conditions	Store in tightly closed original container in a cool ($\approx 20^{\circ}\text{C}$), dry, well-ventilated location, away from heat, incompatible materials, and out of reach of unauthorised persons. Store locked up.

SECTION 8 — EXPOSURE CONTROLS / PERSONAL PROTECTION

Workplace Exposure Standard	Selenium and compounds (as Se): TWA 0.2 mg/m^3 — refer to Safe Work Australia's current Workplace Exposure Standards for confirmation.
Engineering Controls	Use with local exhaust ventilation or in a fume hood. Ensure eyewash station and safety shower are accessible.
Eye/Face Protection	Chemical safety goggles or face shield.
Hand Protection	Chemically resistant protective gloves (e.g. nitrile).
Skin/Body Protection	Laboratory coat and suitable protective clothing to prevent skin contact.
Respiratory Protection	Not normally required with adequate ventilation; where ventilation is inadequate, use a respirator with a particulate filter appropriate to airborne concentration.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Property	Value
Physical State	Solid, crystalline powder
Appearance	White to almost white; deliquescent
Odour	Odourless
pH (5% aqueous solution)	9.8 – 10.8
Melting Point	$> 350^{\circ}\text{C}$ (decomposes above $\sim 300^{\circ}\text{C}$)
Density	3.1 g/cm^3
Solubility in Water	Freely soluble ($\sim 90\text{ g/100 mL}$ at 20°C)
Solubility — Other	Practically insoluble in ethanol and ether
Autoignition Temperature	$> 400^{\circ}\text{C}$
Flammability	Not flammable

SECTION 10 — STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended ambient storage conditions.
Reactivity	Contact with acids liberates toxic gases (selenium oxides/hydride).
Hazardous Polymerisation	Will not occur.
Incompatible Materials	Strong acids, strong oxidising and reducing agents.
Hazardous Decomposition Products	Selenium oxides, selenium hydride (on contact with acids or at high temperature).

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute Toxicity — Oral (rat)	LD ₅₀ ≈ 7 mg/kg — highly toxic
Skin Corrosion/Irritation	Causes skin irritation (Category 2); may cause allergic reaction (sensitiser, Category 1)
Eye Damage/Irritation	Causes serious eye irritation (Category 2)
Respiratory Sensitisation	No data available
Germ Cell Mutagenicity / Carcinogenicity / Reproductive Toxicity	No data available for this substance under current classification; selenium compounds generally warrant caution and minimisation of exposure
Target Organ Toxicity	Repeated overexposure to selenium compounds has been associated with effects on the liver, nervous system, and respiratory tract — refer to current toxicological literature for detail.

SECTION 12 — ECOLOGICAL INFORMATION

Aquatic Toxicity	Toxic to aquatic life with long-lasting effects (H411, Aquatic Chronic Category 2).
Persistence/Degradability	May cause long-term adverse effects in the environment.
Bioaccumulative Potential	No data available.
Mobility in Soil	No data available; selenite is generally mobile and bioavailable in soil systems.

SECTION 13 — DISPOSAL CONSIDERATIONS

Dispose of contents/container as hazardous waste via a licensed waste contractor, in accordance with Australian Commonwealth, state/territory, and local regulations. Do not discharge to drains or waterways.

SECTION 14 — TRANSPORT INFORMATION (Australian Dangerous Goods Code)

Item	Detail
UN Number	UN 2630
Proper Shipping Name	SELENATES
Technical Name	Sodium selenite
Transport Hazard Class	6.1 (Toxic substances)
Packing Group	I
Environmentally Hazardous	Yes — marine pollutant considerations apply

SECTION 15 — REGULATORY INFORMATION

Sodium selenite (CAS 10102-18-8) is subject to standard Australian workplace chemical requirements under the WHS Regulations and GHS classification and labelling. Users should confirm current listing status on the Australian Industrial Chemicals Introduction Scheme (AICIS) and consult Safe Work Australia's Hazardous Chemical Information System for the most current classification and exposure standards prior to use.

SECTION 16 — OTHER INFORMATION

Revision Date	25 July 2026
SDS Version	1.0

Abbreviations

GHS = Globally Harmonized System; WHS = Work Health and Safety; PBT = Persistent, Bioaccumulative, Toxic; vPvB = very Persistent, very Bioaccumulative; TWA = Time-Weighted Average

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