SAFETY DATA SHEET

Revision date: 15-Nov-2023

Revision Number 5

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product identifier

Product Name SODIUM SELENITE

Product Code(s) 000000033693

Other means of identification

UN number 2630

CAS No. 10102-18-8

Recommended use of the chemical and restrictions on use

Recommended use Pharmaceutical and cosmetic applications.

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier
Ixom Operations Pty Ltd (Bronson & Jacobs division) - incorporated in Australia
Street Address: 166 Totara Street
Mt Maunganui South
New Zealand

Telephone Number: +64 9 309 2528
Facsimile: +64 9 0508 366 364

For further information, please contact

Contact Point Product Safety Department

Emergency telephone number

Emergency Telephone **0 800 734 607 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on Land; DANGEROUS GOODS.

Classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

GHS Classification

SIGNAL WORD
Danger

Approval Number: HSR003454

Acute toxicity - Oral	Category 1
Acute toxicity - Inhalation (Dusts/Mists)	Category 3
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Germ cell mutagenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

Label elements

Hazard statements
H300 - Fatal if swallowed
H331 - Toxic if inhaled
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H341 - Suspected of causing genetic defects
H372 - Causes damage to organs through prolonged or repeated exposure
H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements - Prevention
Do not breathe fume, gas, mist, vapours, spray
Do not eat, drink or smoke when using this product
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wash face, hands and any exposed skin thoroughly after handling
Use only outdoors or in a well-ventilated area
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves / protective clothing / eye protection / face protection
Avoid release to the environment
Precautionary Statements - Response
Specific treatment (see First aid on this SDS)
If exposed or concerned: Get medical advice/attention
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
IF ON SKIN: Wash with plenty of soap and water
If skin irritation or rash occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth
Collect spillage
Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Precautionary Statements - Disposal
Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Other hazards which do not result in classification
Contact with acids liberates toxic gas

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical name	CAS No.	Weight-%
Selenious acid (H2SeO3), disodium salt	10102-18-8	100

4. FIRST AID MEASURES

Description of first aid measures

General advice For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

Emergency telephone number Poisons Information Center, New Zealand: 0800 764 766
Poisons Information Center, Australia: 13 11 26

Inhalation Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, (trained personnel should) give oxygen. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately if symptoms occur.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if symptoms occur.

Skin contact Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. If skin irritation persists, call a physician.

Ingestion Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Transport promptly to hospital or medical centre.

Most important symptoms and effects, both acute and delayed

Symptoms Irritation. May cause redness and tearing of the eyes. May cause allergic skin reaction. Redness. Rashes. Hives. after ingestion and inhalation may includes: abdominal cramps, vomiting, damage to liver and kidney, Odour of garlic on the breath and sweat, Bronchopneumonia and dermatitis, Dyspnoea, Vertigo, Pulmonary oedema, Hepatic problems, Toxic effect on organs, Dental erosions, Loss of hair and Alteration of the metabolism. (1).

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically. May cause sensitization by skin contact. Administer vitamin C as antidote and induce vomiting immediately.(2).

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO2). Foam. Water spray.

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical

Specific hazards arising from the chemical	Non-combustible. Decomposes on heating emitting toxic fumes. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Hazardous combustion products	Oxides of sodium. Oxides of selenium.

Special protective actions for fire-fighters

Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
Hazchem code	2X

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid generation of dust. Avoid breathing dust / fume / gas / mist / vapours / spray. Avoid contact with skin, eyes, and clothing. Do not touch or walk through spilled material. Wash thoroughly after handling. Use personal protective equipment as required. Keep people away from and upwind of spill/leak.
For emergency responders	Clear area of all unprotected personnel. Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions	Prevent further leakage or spillage if safe to do so. Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Stop leak if you can do it without risk. Do not touch or walk through spilled material. Remove ignition sources. Provide adequate ventilation. Dike far ahead of spill to collect runoff water. Soak up condensate with inert absorbent material and collect in ventilated waste container for disposal.
Methods for cleaning up	Cover with damp absorbent(inert material, sand or soil). Vacuum or sweep material and place in a disposal container. Avoid generation of dust. Use personal protective equipment as required. Collect and seal in properly labelled containers or drums for disposal.

Precautions to prevent secondary hazards

Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Do not breathe fume, gas, mist, vapours, spray. Do not eat, drink or smoke when using this product. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin, eyes, and clothing. Use personal protection equipment. Use according to package label instructions. Use only outdoors or in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice.

General hygiene considerations Do not breathe dust. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Take off contaminated clothing and wash before reuse. Contaminated work clothing should not be allowed out of the workplace. Wear suitable gloves and eye/face protection.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store locked up. Keep containers tightly closed in a cool, well-ventilated place. Protect from sunlight. Store away from incompatible materials (refer to SDS). Keep container closed when not in use.

Incompatible materials Strong acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

Selenium & compounds, as Se: WES-TWA 0.1 mg/m^3

As published by the New Zealand Workplace Health & Safety Authority.

WES - TWA (Workplace Exposure Standard - Time Weighted Average) - The eight-hour, time-weighted average exposure standard is designed to protect the worker from the effects of long-term exposure.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls

Engineering controls Ensure adequate ventilation, especially in confined areas. Apply technical measures to comply with the occupational exposure limits.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Individual protection measures, such as personal protective equipment

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, CHEMICAL GOGGLES, SAFETY SHOES, FACE SHIELD OR AIR MASK, GLOVES (Long).

NOTE: Chemical goggles and face shield are not required if wearing an air-supplied mask.

Eye/face protection	Goggles.
Hand protection	Impervious gloves.
Skin and body protection	Wear suitable protective clothing. Overalls. Boots.
Respiratory protection	If determined by a risk assessment an inhalation risk exists, wear an organic vapour/particulate respirator or an air supplied mask meeting the requirements of AS/NZS 1715 and AS/NZS 1716.
Environmental exposure controls	No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid
Appearance	Powder
Color	White
Odor	Characteristic
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	9	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash point	Not Applicable	None known
Evaporation rate	Not Applicable	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	Not Applicable	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	850 g/L @ 20 °C	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	Not Applicable	None known
Dynamic viscosity	Not Applicable	None known

Other information

10. STABILITY AND REACTIVITY

Reactivity

Reactivity Hygroscopic: absorbs moisture or water from surrounding air.

Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Possibility of hazardous reactions

Possibility of hazardous reactions Contact with acids liberates toxic gas.

Conditions to avoid

Conditions to avoid Avoid exposure to heat, sources of ignition, and open flame. Dust formation. Direct sunlight.

Incompatible materials

Incompatible materials Strong acids.

Hazardous decomposition products

Hazardous decomposition products Oxides of sodium. Oxides of selenium.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Information on likely routes of exposure

Product Information No adverse health effects expected if the chemical is handled in accordance with this Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the chemical is mishandled and overexposure occurs are:

Inhalation Toxic if inhaled. Breathing in fumes from heating may produce symptoms of 'metal fume fever'. This condition is characterised by influenza type symptoms occurring a few hours after exposure and lasting up to 48 hours. Symptoms may include chills, fever, headache, tightness of the chest, coughing, weakness, dryness of nose and mouth, muscular pain, nausea, and vomiting. Lung oedema may occur and these effects may be delayed.

Eye contact Causes serious eye irritation.

Skin contact May cause irritation. May cause sensitization by skin contact.

Ingestion Fatal if swallowed. Swallowing can result in nausea, vomiting, diarrhoea, and abdominal pain.

Symptoms Irritation. May cause redness and tearing of the eyes. May cause allergic skin reaction. Redness. Rashes. Hives. after ingestion and inhalation may includes: abdominal cramps, vomiting, damage to liver and kidney, Odour of garlic on the breath and sweat, Bronchopneumonia and dermatitis, Dyspnoea, Vertigo, Pulmonary oedema, Hepatic problems, Toxic effect on organs, Dental erosions, Loss of hair and Alteration of the metabolism. (1).

Acute toxicity

Numerical measures of toxicity

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Selenious acid (H2SeO3), disodium salt	= 7 mg/kg (Rat)	-	-

See section 16 for terms and abbreviations

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

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization May cause sensitization by skin contact.

Germ cell mutagenicity Suspected of causing genetic defects.

Carcinogenicity

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

Chemical name	New Zealand	IARC
Selenious acid (H2SeO3), disodium salt - 10102-18-8		Group 3

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity Avoid contaminating waterways. Very toxic to aquatic life with long lasting effects.

Terrestrial ecotoxicity There is no data for this product.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Selenious acid (H2SeO3), disodium salt	IC50: 96.6 mg/L (72h, Selenastrum capricornutum)(1)	LC50: 8.2 mg/L (96h, Onchorhynchus mykiss)(1)	EC50: 7.9 mg/L/(48h, Daphnia magna)(1)

Persistence and degradability

Persistence and degradability No information available.

Bioaccumulative potential

Bioaccumulation Bioaccumulation is not expected. (1).

Mobility

Mobility in soil No information available.

Other adverse effects

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of product in packaging/container in a way that is consistent with the Hazardous Substances (Disposal) Notice 2017 and the Act, and Hazardous Substances (Amendments and Revocations) Notice 2020. Treat the chemical using a method that changes the characteristics or composition of the chemical so that the chemical is no longer a hazardous chemical; or export the chemical from New Zealand as waste. Class 6 and 8 chemicals – may be discharged into the environment if a tolerable exposure limit has been set for the substance (or a component of that chemical); and the discharge does not, after reasonable mixing, result in the concentration of the substance in an environmental medium exceeding the tolerable exposure limit. If there is not tolerable exposure limit for the substance, then it may only be discharged into the environment if the substance is very rapidly converted to substances that are not hazardous substances.

Contaminated packaging For packages that have been in direct contact with hazardous chemicals, the person must ensure that the package is rendered incapable of containing any chemical. It must be disposed of in a manner that is consistent with the requirements for disposal of the chemical that it contained, taking into account the material the package is manufactured from. Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous chemical (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the chemical to be classified as hazardous (class 6, 8, or 9 chemical).

14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on Land; DANGEROUS GOODS.

UN number 2630
Proper shipping name SELENITES
Hazard class 6.1
Packing group I
Environmental hazard Yes
Hazchem code 2X

IATA Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN number 2630
UN proper shipping name SELENITES
Transport hazard class(es) 6.1
Packing group I

IMDG Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN number 2630
UN proper shipping name SELENITES
Transport hazard class(es) 6.1

Packing group	I
IMDG EMS Fire	F-A
IMDG EMS Spill	S-A
Marine pollutant	Yes

15. REGULATORY INFORMATION

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

New Zealand

National regulations See section 8 for national exposure control parameters

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International Inventories

NZIoC	This material is listed on the New Zealand Inventory of Chemicals.
TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	This material is listed on the Australian Inventory of Industrial Chemicals.

Legend:
NZIoC - New Zealand Inventory of Chemicals
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC- Australian Inventory of Industrial Chemicals

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

16. OTHER INFORMATION

(1) Supplier Safety Data Sheet 11/ 2020
(2) Bronson & Jacobs Safety Data Sheet 06/ 2018

Prepared By	This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).
Issuing Date:	15-Nov-2023

Reason(s) For Issue: 5 Yearly Revised Primary SDS
Change in Hazardous Chemical Classification

Revision Note:
The symbol (*) in the margin of this SDS indicates that this line has been revised.

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australian Industrial Chemicals Introduction Scheme (AICIS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

Disclaimer
This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Bronson & Jacobs representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

Bronson and Jacobs incorporating the businesses of Woods and Woods and Keith Harris and Australian Botanical Products.

End of Safety Data Sheet