



Safety Data Sheet

Nutrisol® Selenium Liquid

1. Identification of Substance & Company

Product

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|-----------------------------|---|
| Product name | Nutrisol® Selenium Liquid |
| Product code | 7095 (20L) 7096 (200L) |
| HSNO approval | HSR002521 |
| Approval description | Animal Nutritional and Animal Care Products Group Standard 2020 |
| UN number | NA |
| Proper Shipping Name | NA |
| DG class | NA |
| Packaging group | NA |
| Hazchem code | NA |
| Uses | Supplement for animal feed - Se 5mg – 1mL dose |

Company Details

| | |
|-------------------------|--|
| Company | Nutritech International |
| Physical Address | 6 Aintree Avenue Airport Oaks, Mangere Auckland New Zealand |
| Postal Address | PO Box 201 231 Auckland Airport 2150 New Zealand |
| Telephone | 0800 736 336 (0800 REMEDY) |
| Email | customerservices@nutritech.co.nz |
| Website | www.nutritech.co.nz |

Emergency Telephone Number: 0800 764 766

2. Hazard Identification

Approval

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR002521, Animal Nutritional and Animal Care Products Group Standard 2020). The substance has been classified as hazardous according to the criteria in the Hazardous substances (Hazard Classification) Notice 2020.

GHS 7 Classes**Hazard Statements**

| | |
|--|---|
| Acute toxicity category 4 (oral) | H302 - Harmful if swallowed. |
| Acute toxicity category 4 (inhalation) | H332 - Harmful if inhaled. |
| Skin sensitiser category 1 | H317 - May cause an allergic skin reaction. |
| Mutagen category 2 | H341 - Suspected of causing genetic defects. |
| STOT* repeated exposure category 2 | H373 - May cause damage to organs through prolonged or repeated exposure. |
| Chronic aquatic category 3 | H412 - Harmful to aquatic life with long lasting effects. |



SYMBOLS

WARNING



Other Classifications

There are no other classifications that are known to apply.

Precautionary Statements

| | |
|-------------------|---|
| Prevention | <p>P102 - Keep out of reach of children.</p> <p>P103 - Read label before use.</p> <p>P201 - Obtain special instructions before use.</p> <p>P202 - Do not handle until all safety precautions have been read and understood.</p> <p>P260 - Do not breathe vapours.</p> <p>P264 - Wash hands thoroughly after handling.</p> <p>P270 - Do not eat, drink or smoke when using this product.</p> <p>P271 - Use only outdoors or in a well-ventilated area.</p> <p>P272 - Contaminated work clothing should not be allowed out of the workplace.</p> <p>P273 - Avoid release to the environment.</p> |
| Response | <p>P280 - Wear protective gloves/eye protection/face protection.</p> <p>P101 - If medical advice is needed, have product container or label at hand.</p> <p>P301+P312 - IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.</p> <p>P330 - Rinse mouth.</p> <p>P302+P352 - IF ON SKIN: Wash with plenty of soap and water.</p> <p>P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.</p> <p>P363 - Wash contaminated clothing before reuse.</p> <p>P304+P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P312 - Call a POISON CENTRE or doctor/physician if you feel unwell.</p> <p>P308+P313 - IF exposed or concerned: Get medical advice/ attention.</p> <p>P314 - Get medical advice/attention if you feel unwell.</p> <p>P391 - Collect spillage.</p> |
| Storage | P405 - Store locked up. |
| Disposal | P501 - Dispose of contents/container in accordance with local/regional/national/international regulation. |

3. Composition / Information on Ingredients

| Component | CAS/ Identification | Concentration |
|----------------------|---------------------|-------------------------|
| water | 7732-18-5 | >90% |
| sodium selenite | 10102-18-8 | 1-2% (5mg per 1mL dose) |
| colours and flavours | proprietary | <0.1% |

This is a commercial product whose exact ratio of components may vary slightly. Trace quantities of impurities are also likely.

4. First Aid

General Information

If medical advice is needed, have product container or label at hand. You should call the National Poisons Centre if you feel that you may have been harmed or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service).

Recommended first aid facilities

Ready access to running water is recommended. Accessible eyewash is recommended.



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Exposure

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| Swallowed | IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell. Rinse mouth. If conscious, give plenty of water to drink. DO NOT INDUCE vomiting. 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. |
| Eye contact | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If any eye irritation occurs: Get medical advice/attention. |
| Skin contact | 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 re-use. |
| Inhaled | Generally, inhalation of vapours is unlikely to result in adverse health effects. If coughing, dizziness or shortness of breath is experienced, remove the patient to fresh air immediately. If patient is unconscious, place in the recovery position (on the side) for transport and contact a doctor. |

Advice to Doctor

Treat symptomatically

5. Firefighting Measures

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| Fire and explosion hazards: | There are no specific risks for fire/explosion for this chemical. It is non-flammable. |
| Suitable extinguishing substances: | Carbon dioxide, extinguishing powder or water jet. Fight larger fires with water jet or alcohol resistant foam. |
| Unsuitable extinguishing substances: | Unknown. |
| Products of combustion: | Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures. |
| Protective equipment: | Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and eye protection. |
| Hazchem code: | NA |

6. Accidental Release Measures

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| Containment | If greater than <i>100L is stored</i> , secondary containment and emergency plans to manage any potential spills must be in place. In all cases design storage to prevent discharge to storm water. |
| Emergency procedures | In the event of spillage alert the fire brigade to location and give brief description of hazard. Stop the source of the leak, if safe to do so. Shut off all possible sources of ignition. Wear protective equipment to prevent skin, eye and respiratory exposure. Clear area of any unprotected personnel. Contain using sand, earth or vermiculite. Do not use sawdust. Prevent by whatever means possible any spillage from entering drains, sewers, or water courses. (If this occurs contact your regional council immediately). |
| Clean-up method | Use absorbent (soil, sand or other inert material). Rags are not recommended for the clean-up of spills, as they may create fire or environmental hazard. Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services. |
| Disposal | Mop up and collect recoverable material into labelled containers for recycling or salvage. Recycle containers wherever possible. This material may be suitable for approved landfill. Dispose of only in accord with all regulations. |
| Precautions | Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation. |

7. Storage & Handling

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| Storage | Avoid storage of harmful substances with food. Store out of reach of children. Containers should be kept closed in order to minimise contamination. Keep from extreme heat and open flames. Avoid contact with incompatible substances as listed in Section 10. Location compliance certificates must be available if storing >1000L. Containers (and outer packaging) must bear the prescribed labelling. |
|----------------|--|



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Handling

Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements. Avoid skin and eye contact and inhalation of vapour, mist or aerosols.

8. Exposure Controls / Personal Protective Equipment

Workplace Exposure Standards

A workplace exposure standard (WES) has not been established by WorkSafe NZ for this product. There is a general limit of 3mg/m³ for respirable particulates and 10mg/m³ for inhalable particulates when limits have not otherwise been established.

| NZ Workplace Exposure Stds | Ingredient | WES-TWA | WES-STEL |
|----------------------------|------------------------------|-----------------------|------------|
| | sodium selenate as Se (skin) | 0.02mg/m ³ | Not listed |

Engineering Controls

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety at Work Act (2015) and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016. Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

Personal Protective Equipment

General

Personal Protective Equipment (PPE) should not be used as the primary means of exposure protection, except in the event of an accident or emergency situation or where all other means of protection have proven to inadequate. Clean PPE after use or dispose of as appropriate. Store PPE for re-use in a clean place. Regular training on the correct use of PPE should be provided. In particular the correct fitting and use of respirators and where applicable the cleaning of respirators should be undertaken.

Eyes

Protective eyewear is not normally necessary when using this product. However, it always prudent to use protective eyewear if splashes are likely.

Skin



Avoid repeated or prolonged skin contact. Wear overalls, rubber boots and impervious gloves. Rubber gloves are recommended. Protective gloves or suitably resistant material must comply with AS 2161. Replace frequently. Gloves should be checked for tears or holes before use. Protective clothing must comply with AS 2919, AS3765.1 or AS3765.2. PVC or rubber boots must comply with AS/NZS 2210.2 and selected and maintained in accordance with AS/NS2210.1. Remove protective clothing and wash exposed areas with soap and water prior to eating, drinking or smoking. Wash hands after handling.

Respiratory



A respirator when airborne concentrations approach the WES (section 8). Respirators must have filters appropriate to the duty and comply with AS/NZS1716 and selected, used and maintained in accordance with AS/NS 1715. Use a respirator with a dust/mist filter. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order. Fit testing and clear guidelines and training for use and maintenance of PPE are necessary.

WES Additional Information

Not applicable



9. Physical & Chemical Properties

| | |
|---|-------------------|
| Appearance | red liquid |
| Odour | not specified |
| Odour Threshold | no data |
| pH | no data |
| Freezing/melting point | ~0°C |
| Boiling Point | ~100°C |
| Flashpoint | non flammable |
| Flammability | non flammable |
| Upper & lower flammable limits | no LEL or UEL |
| Vapour pressure | no data |
| Vapour density | no data |
| Specific gravity/density | ~1 |
| Solubility | miscible in water |
| Partition coefficient | no data |
| Auto-ignition temperature | no data |
| Decomposition temperature | no data |
| Viscosity | no data |
| Particle Characteristics | no data |

10. Stability & Reactivity

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|---|---|
| Stability | Stable |
| Conditions to be avoided | Containers should be kept closed in order to avoid contamination. Keep from extreme heat and open flames. |
| Incompatible groups | Reactive with oxidising agents and acids. |
| Substance Specific Incompatibility | None known |
| Hazardous decomposition products | Oxides of carbon. |
| Hazardous reactions | none known |

11. Toxicological Information

Summary

IF SWALLOWED: Harmful if swallowed. May cause gastrointestinal irritation with nausea and vomiting, diarrhea. May cause halitosis (bad breath) and affect the central nervous system (e.g. convulsions), blood, urinary system, cardiovascular system, and liver.

IF IN EYES: no effect anticipated.

IF ON SKIN: May cause mild skin irritation and an allergy (rash) in some individuals.

IF INHALED: Liquid preparation does not contain volatile substances. Harmful if inhaled.

CHRONIC TOXICITY: long term or over-exposure to selenium compounds by ingestion may affect the blood (anaemia, leucocytosis), liver (hepatic necrosis, haemorrhage, cirrhosis), urinary system (kidneys, bladder). It may also cause metallic taste, garlic-like odour on the breath, paleness, coated tongue, nervousness, irritability, fatigue, and hyperreflexia.

Supporting Data

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|--------------|-------------------|---|
| Acute | Oral | Using LD ₅₀ 's for ingredients, the Acute Toxicity Estimate (ATE) (oral) for the mixture is between 300 and 2000mg/kg. Data considered includes: sodium selenite 7mg selenium/kg bodyweight. |
| | Aspiration | This mixture is not considered an aspiration hazard. |
| | Dermal | Using LD ₅₀ 's for ingredients, the Acute Toxicity Estimate (ATE) (dermal) for the mixture is >2,000 mg/kg. |
| | Inhaled | Using LD ₅₀ 's for ingredients, the Acute Toxicity Estimate (ATE) (inhalation) for the mixture is between 1 and 5mg/L/4h. Data considered includes: Sodium selenite: 52-510mg/m ³ . |
| | Eye | The mixture is not considered to be an eye irritant. |
| | Skin | The mixture is not considered to be a skin irritant. |



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| Chronic | Sensitisation | The mixture is considered to be a contact sensitizer, because sodium selenate is known to be a contact sensitizer. |
| | Mutagenicity | The mixture is considered to be a suspected mutagen, because sodium selenite is suspected to be a mutagen. |
| | Carcinogenicity | No ingredient present at concentrations > 0.1% is considered a carcinogen. |
| | Reproductive / Developmental | No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation. |
| | Systemic | The mixture is considered to be a suspected target organ toxicant, because sodium selenite is known to be a target organ toxicant, present <10%. |
| | Aggravation of existing conditions | None known. |

12. Ecological Data

Summary

This mixture is considered harmful to aquatic life with long lasting effects.

Supporting Data

| | |
|---------------------------------|--|
| Aquatic | Using EC ₅₀ 's for ingredients, the calculated EC ₅₀ for the mixture is between 1 and 100 mg/L. Data considered includes: sodium selenite Acute: NOEC: 0.9399mg/L (fish), LC ₅₀ : 0.69mg Se/L (96h, Pimephales promelas), 0.083mg/L (48hr, Gammarus pseudolimnaeus Scud), 0.2mg Se/ (96hr, Selenastrum capricornutum green algae), 0.69mg/L (96hr, Pimephales promelas). Chronic: NOEC: 0.39mg/L (32d, Pimephales promelas) |
| Bioaccumulation | No data |
| Degradability | No data |
| Soil | No evidence of soil toxicity. |
| Terrestrial vertebrate | See acute toxicity. |
| Terrestrial invertebrate | No evidence of toxicity towards terrestrial invertebrates. |
| Biocidal | no data |

13. Disposal Considerations

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| Restrictions | There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents. |
| Disposal method | Disposal of this product must comply with the Hazardous Substances (Disposal) Notice 2017 and the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment. |
| Contaminated packaging | Disposal of contaminated packaging must comply with the Hazardous Substances (Disposal) Notice 2017 clause 12. Ensure that the package is rendered incapable of containing any substance and is disposed in a manner that is consistent with the requirements of the substance it contained and the material of the package. If possible reuse or recycle packaging. |



14. Transport Information

Land Transport Rule: Dangerous Goods 2005 - NZS 5433:2007

Transport according to NZS 5433 (Transport of Hazardous Substances on Land). Considered a dangerous good for transport.

| | | | |
|---------------------|-------------------|------------------------------|---------|
| UN number: | 1950 | Proper shipping name: | AEROSOL |
| Class(es) | 2.1 | Packing group: | NA |
| Precautions: | Flammable aerosol | Hazchem code: | NA |

IMDG

| | | | |
|---------------------|-------------------|------------------------------|----------|
| UN number: | 1950 | Proper shipping name: | AEROSOL |
| Class(es) | 2.1 | Packing group: | NA |
| Precautions: | Flammable aerosol | EmS | F-D, S-U |

IATA

| | | | |
|---------------------|-------------------|------------------------------|---------|
| UN number: | 1950 | Proper shipping name: | AEROSOL |
| Class(es) | 2.1 | Packing group: | NA |
| Precautions: | Flammable aerosol | | |

15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR002521, Animal Nutritional and Animal Care Products Group Standard 2020. All ingredients appear on the New Zealand Inventory of Chemicals NZIoC.

Specific Controls

Key workplace requirements are:

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|---------------------------------|---|
| SDS | To be available within 10 minutes in workplaces storing any quantity. |
| Inventory | An inventory of all hazardous substances must be prepared and maintained. |
| Packaging | All hazardous substances should be appropriately packaged including substances that have been decanted, transferred or manufactured for own use or have been supplied |
| Labelling | Must comply with the Hazardous Substances (Labelling) Notice 2017. |
| Emergency plan | Required if > 1000L is stored. |
| Certified handler | Not required. |
| Tracking | Not required. |
| Bunding & secondary containment | Required if > 1000L is stored. |
| Signage | Required if > 1000L is stored. |
| Location compliance certificate | Not required. |
| Flammable zone | Not required. |
| Fire extinguisher | Not required. |

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health and Safety at Work Act 2015 and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, local Council Rules and Regional Council Plans.

16. Other Information

Abbreviations

| | |
|------------------------|---|
| Approval Code | Approval HSR002521, Animal Nutritional and Animal Care Products Group Standard 2020 Controls, EPA. www.epa.govt.nz |
| CAS Number | Unique Chemical Abstracts Service Registry Number |
| EC₅₀ | Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species) |
| EPA | Environmental Protection Authority (New Zealand) |



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|------------------------|--|
| GHS | Globally Harmonised System of Classification and Labelling of Chemicals, 7 th revised edition, 2017, published by the United Nations. |
| HAZCHEM Code | Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters |
| HSNO | Hazardous Substances and New Organisms (Act and Regulations) |
| IARC | International Agency for Research on Cancer |
| LEL | Lower Explosive Limit |
| LD₅₀ | Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats). |
| LC₅₀ | Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats) |
| STEL | Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded |
| STOT RE | System Target Organ Toxicity – Repeated Exposure |
| TWA | Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours) |
| UEL | Upper Explosive Limit |
| UN Number | United Nations Number |
| WES | Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed during work hours (usually 8 hours, 5 days a week). The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the worker's breathing zone. |

References

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|--------------------------|---|
| Data | Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID). |
| Controls | EPA notices, www.epa.govt.nz , Health and Safety at Work (Hazardous Substances) Regulations 2017, www.legislation.govt.nz |
| WES | The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – www.worksafe.govt.nz . |
| Other References: | Suppliers SDS |

Review

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|----------------------|--------------------------|
| Date | Reason for review |
| August 2023 | Not applicable - New SDS |
| February 2025 | Update. |

Disclaimer

This SDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The SDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the SDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The likely GHS 7 classifications for this SDS have been estimated based on general information from the supplier (e.g., hazard, toxicological). This SDS is copyright Datachem and must not be copied, edited or used for other than intended purpose. To contact the SDS author, email info@datachem.co.nz or phone: +64 21 1040951.

