Section 1: IDENTIFICATION of CHEMICAL PRODUCT and COMPANY

Product Name: **U-Seal**

Product Identifier: 650 g/kg bismuth subnitrate in an inert gel base.

Product Code: 521065 (200 syringes)

Recommended Use: For the prevention of clinical and subclinical mastitis in dairy cows during the non-lactating (dry) period and early post-calving.

Restrictions on Use: For animal treatment only.

Company Identification: Avet Health Pty Ltd

Address: Unit F24, 16 Mars Road, Lane Cove NSW 2066 Australia

Email: info@avet.health

Customer Centre: 1300 28 38 28

National Poisons Information Centre: 13 11 26 (24 hours)

Emergency Telephone Number: 1300 28 38 28 (9am – 5pm, Monday to Friday)

Section 2: HAZARDS IDENTIFICATION

Hazard Classifications: This product has been assessed according to GHS and is classified as non-hazardous.

Signal word: None

GHS Pictograms: None

Precautionary statements: None

Other hazards: None known.

Section 3: COMPOSITION / INFORMATION on INGREDIENTS

INGREDIENT	CAS No.	CONTENT
Bismuth subnitrate	1304-85-4	65%
Ingredients not contributing to the hazards	-	35%

Section 4: FIRST AID MEASURES

General Information: Consult the National Poisons Centre on 13 11 26 or a doctor immediately in every case of suspected chemical poisoning. Never give fluids or induce vomiting if a patient is unconscious or convulsing regardless of cause of injury. If medical advice/attention is needed, have this SDS, product container or label at hand.

Symptoms and Effects of Exposure: Direct contact with eyes may cause temporary irritation, eye tearing, redness, and discomfort. This material may cause skin irritation (redness and pain) in some persons.

Inhalation: If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary. If respiratory symptoms occur, remove patient to fresh air. Lay patient down and keep warm and rested. If breathing is shallow or has stopped, ensure airway is clear and apply resuscitation. If breathing is difficult, give oxygen and seek medical assistance immediately.

Ingestion: If swallowed do NOT induce vomiting. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully.

Skin: If skin contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.

Eye: If eye contact occurs: Immediately flush the eye continuously with running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Continue flushing for at least 20 minutes. If eye irritation persists, get medical advice/attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Recommended First Aid Facilities: Ready access to running water and soap is required. Accessible eyewash is required.

Advice to Doctor: Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

Flash Point: Not flammable.

Hazardous Combustion Products: If involved in a fire, may emit poisonous and corrosive fumes.

Extinguishing Media: There is no restriction on the type of extinguisher which may be used. Use extinguishing media suitable for surrounding area.

Protective Equipment: Protective gloves and boots and breathing apparatus.

HAZCHEM Code: Not specified.

Section 6: ACCIDENTAL RELEASE MEASURES

Spills and Disposal: Wear gloves and appropriate protective clothing. Avoid breathing vapours and contact with skin and eyes. Clean up all spills immediately. For small spills, clean up spilled product then wipe area and put empty container in garbage. For large spills, exclude non-essential people from the area. Contain and absorb spill with sand, earth, inert material or vermiculite. Prevent spillage from entering drains or water courses and call emergency services.

Protective Clothing: For appropriate personal protective equipment see section 8.

Environmental Precautions: Prevent from entering drains, waterways or sewers. If spill does enter waterways contact local authority.

Section 7: HANDLING AND STORAGE

Handling: Handle this product to avoid exposure, taking all recommended precautions. Avoid contact with skin, eyes and inhalation of vapours. Use in a well-ventilated area. Do not allow clothing wet with material to stay in contact with skin. Use personal protective equipment as required. Do not eat, drink or smoke while handling product.

Storage: Keep out of reach of children. Store below 30°C (room temperature). Protect from light. Store in original container, tightly closed in a cool, dry place.

Other Information: Avoid contact with incompatible substances as listed in Section 10. Always read the label before use.

When tested in accordance with *UN Dangerous Goods Code for Class 5.1* the product does not meet the requirements for classification as Division 5.1 Oxidising Solid.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

This SDS describes personal protective measures relating to long term industrial and manufacturing exposure and emergency situations, such as accidents and spills. See product label for personal protective measures during normal use of the marketed product.

Exposure Limits: No exposure limits have been assigned for this product. Known exposure limits for ingredients are as follows:

Occupational Exposure Limits (OEL)

Australian Exposure Standards (WES)

INGREDIENT	TWA	STEL
Bismuth subnitrate	Not available	Not available

Emergency Limits

INGREDIENT	TEEL-1	TEEL-2	TEEL-3
Bismuth subnitrate	13 mg/m^3	150 mg/m^3	890 mg/m^3

Engineering Controls: Handle in a well-ventilated area. Ensure that the work environment remains clean.

Personal Protective Equipment (PPE):

Eye protection: Safety glasses with side shields or chemical goggles are recommended when handling bulk quantities of this product.

Skin protection: When handling bulk quantities, prevent skin contact by wearing chemical protective gloves e.g. PVC. Wear safety gumboots, e.g. rubber.

Respiratory protection: Not required for the normal use of this product.

Other: When handling bulk quantities of this product, overalls, PVC apron or protective suit. Have eyewash unit at hand. Ensure there is ready access to a safety shower.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White to off-white oily paste
Odour:	Mild waxy odour
Odour threshold:	Not available
pH:	Not available
Melting Point:	Not available
Boiling Point:	Not available
Flash Point:	Not available
Evaporation Rate:	Not available
Flammability:	Not flammable
Upper flammability limits:	Not applicable
Lower flammability limits	Not available
Vapour Pressure:	Not available
Vapour density:	Not available
Relative density:	Not less than 1.8 g/mL
Solubility in Water:	Immiscible
Partition coefficient:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	250 - 950 Pa·s

Section 10: STABILITY AND REACTIVITY

Reactivity: This product is unlikely to react or polymerise under normal storage conditions. The product has been tested in accordance with *UN Dangerous Goods Code for Class 5.1* and does not meet the criteria to be classified as an oxidiser.

Stability: When stored appropriately this product should show no significant degradation within the expiry period shown on the label.

Conditions to Avoid: Extreme temperatures.

Incompatible Materials: Strong oxidizing agents and strong acids, organic materials, combustible materials.

Hazardous Decomposition Products: Combustion products include carbon dioxide, nitrogen oxides, silicon dioxide and other pyrolysis products typical of burning organic material.

Section 11: TOXICOLOGICAL INFORMATION

Acute Toxicity:
Ingestion: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be acutely toxic by the oral route.

Bismuth subnitrate: Oral (rat) LD_{50}: > 2000 mg/kg

Inhalation: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be acutely toxic by the inhalation route. Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

Dermal: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be acutely toxic by the dermal route. Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

Skin Corrosion / Irritation: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be a skin irritant.

Serious Eye Damage / Irritation: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be an eye irritant.

Respiratory or Skin Sensitisation: No data for the mixture is available. Based on available data for the ingredients, the mixture is not thought to cause respiratory or skin sensitisation.

Germ Cell Mutagenicity: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be mutagenic.

Carcinogenicity: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be carcinogenic.

Reproductive Toxicity: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be a reproductive toxicant.

STOT: Single exposure: No data for the mixture is available. Based on available data for the ingredients, the mixture is not thought to be a Specific Target Organ Toxicant after single exposure.

STOT: Repeat exposure: No data for the mixture is available. Based on available data for the ingredients, the mixture is not thought to be a Specific Target Organ Toxicant after repeat exposure.

Aspiration Hazard: No data available.

Narcotic Effects: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to have any narcotic effects.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be an aquatic toxicant.

Fish
Bismuth subnitrate: LC_{50} (96h): > 137mg/L.

Crustaceans
Bismuth subnitrate: EC_{50} (48h): > 137mg/L.

Algae
EC_{50} (72h): > 137mg/L, NOEC (72h): ≥ 137mg/L.

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
Bismuth subnitrate	No data	No data	No data	No data

Section 13: DISPOSAL INFORMATION

Product Disposal: Dispose of product only by using according to label or at an approved landfill.

Container Disposal: Wrap with paper and put in garbage.

Section 14: TRANSPORT INFORMATION

Dangerous Goods Classification: Not classified as a Dangerous Good for land, sea or air transport.

Section 15: REGULATORY INFORMATION

Poison Schedule (SUSMP): Not scheduled. Bismuth subnitrate appears in Appendix B – Substances Considered Not to Require Control by Scheduling, of the SUSMP.

APVMA No.: 86556

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations.

Section 16: OTHER INFORMATION

This information is based on data believed by Avet Health Pty Ltd to be accurate at the time of writing but is subject to change without notice. It is given in good faith, but no warranty expressed or implied is made as to its accuracy, completeness otherwise and no assumption of liability from howsoever arising is made by Avet Health Pty Ltd Pty Limited by reason of the provision of this information. Every person dealing with the materials referred to herein does so at his/her own risk absolutely and must make independent determinations of suitability and completeness of information from all sources to ensure their proper use.

Legend:

AICS	Australian Inventory of Chemical Substances.
APVMA	Australian Pesticides and Veterinary Medicines Authority.
CAS No.	Chemical Abstracts Service Registry Number.
EC_{50}	The median effect concentration, being a statistically derived concentration of a substance that can be expected to cause an adverse reaction in 50% of organisms or a 50% reduction in growth or in the growth rate of organisms.
GHS	Globally Harmonized System of Classification and Labelling of Chemicals.
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters.
LC_{50}	The median lethal concentration, being a statistically derived concentration of a substance that can be expected to cause death in 50% of animals.
LD_{50}	The median lethal dose, being a statistically derived single dose of a substance that can be expected to cause death in 50% of animals.
NICNAS	National Industrial Chemicals Notification and Assessment Scheme.
NOEC	No observable effect concentration.
PPE	Personal Protective Equipment.
PVC	Polyvinyl chloride.
SDS	Safety Data Sheet.
STEL	Short Term Exposure Limit.
STOT	Specific Target Organ Toxicity.
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons.
TEELs	Temporary Emergency Exposure Limits. Guidelines designed to predict the response of members of the general public to different concentrations of a chemical during an emergency response incident.
TEEL-1	The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic, nonsensory effects. However, these effects are not disabling and are transient and reversible upon cessation of exposure.
TEEL-2	The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting, adverse health effects or an impaired ability to escape.
TEEL-3	The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience life-threatening adverse health effects or death.
TWA	Time-Weighted Average.

References:

ChemID Plus
EPA New Zealand Chemical Classification and Information Database (CCID)
HSDB (Hazardous Substances Data Bank)

END OF SDS