

MATERIAL SAFETY DATA SHEET

ELANCO AF0510 MONTEBAN 100 NARASIN PREMIX

AF0510

Revision No: 4.0 8 November 2010

Company Name and Address:

Elanco Animal Health A Division of Eli Lilly Australia Pty Ltd A.B.N. 39 000 233 992 112 Wharf Road, West Ryde, N.S.W. 2114, Australia

Contact Numbers:

Tel: (02) 9878 7777 Fax: (02) 9878 7720

Emergency Telephone Numbers:

Elanco Animal Health: 1800 226 324 (Toll free) *OR* Poisons Information Centre: 131126 (Australia-wide)

CHEMWATCH: 1800 039 008: 24 hour emergency contact number (spills and accidents)

| | Section 1 - Identification |
|---|--|
| Product Name: | ELANCO AF0510 MONTEBAN 100 NARASIN PREMIX |
| Other Names: | Narasin |
| Manufacturer's Product Code: | AF0510 |
| UN Number: | None allocated |
| Dangerous Goods Class/Subsidiary Risk: | None allocated |
| Hazchem Code: | 2X Recommended |
| Poisons Schedule: | 6 |
| Pack Size and Container Type: | 25 kg paper bag |
| Use: | <u>Major Recommended Uses</u> : As an aid to the prevention of coccidiosis caused by <i>Eimeria acervulina</i> , <i>E. brunetti</i> , <i>E. maxima</i> , <i>E. mivati</i> , <i>E. necatrix</i> and <i>E. tenella</i> <u>Major Recommended Method of Application</u> : Mixed with feed |

Section 2 – Hazards Identification

Hazardous according to criteria of Worksafe Australia

Not classified as Dangerous Goods for transport by road and rail according to the criteria of ADG 7

| Risk Phrases: | R22 Harmful if swallowed R34 Causes burns R37 Irritating to respiratory system. |
|-----------------|--|
| Safety Phrases: | R41 Risk of serious damage to eyes S 22 Do not breathe dust S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice S 28 After contact with skin, wash immediately S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible) |

Section 3 – Composition / Information on Ingredients

| Ingredient | CAS | Concentration |
|---|------------|---------------|
| Narasin | 55134-13-9 | 10% |
| Diluent, may include rice hulls, corn grits, or similar | - | 85 – 90% |
| Anti-dusting oil | - | 0-5% |

| | Section 4 – First Aid Measures |
|---------------|--|
| Inhalation: | Remove to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: contact the Poisons Information Centre or doctor. |
| Skin contact: | Remove contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: get medical advice. Wash contaminated clothing before reuse. |
| Eye contact: | 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. |
| Ingestion: | Do NOT induce vomiting. Get immediate medical advice. If available, administer activated charcoal (6-8 heaped teaspoons) with 2 to 3 glasses of water. Do not give anything by mouth to an unconscious person. |

If poisoning occurs, contact a doctor or Poisons Information Centre Phone 13 11 26

| Section 5 – Fire Fighting Measures | | |
|--|--|--|
| Flash Point: Lower Explosion Limit: Upper Explosion Limit: Extinguishing media: Hazards from combustion products: | No applicable information found No applicable information found No applicable information found Use water, carbon dioxide, dry chemical, foam or Halon As a finely divided material, may form dust mixtures in air which could explode if subjected to an ignition source. May produce irritating, toxic or asphyxiating fumes when exposed to heat or | |
| Precautions for fire fighters: | fire. Wear positive-pressure, self-contained breathing apparatus (SCBA) and protective fire-fighting clothing (including fire-fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance. 2X recommended | |

Section 6 – Accidental Release Measures

Emergency Procedures: Wear protective equipment, including eye protection, to avoid exposure. Prevent spill material from entering drains, sewers or waterways. Vacuum material with appropriate dust collection filter in place. Be aware of potential for dust explosion when using electrical equipment. If vacuum is not available, lightly mist material and remove by sweeping or wet wiping. Large spills should be reported to Elanco Animal Health for assistance.

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| | Section 7 – Handling and Storage | | |
| Requirements for storage areas and containers: | Store in a cool, dry place below 30°C. Protect from moisture and heat. Product should not be used after the date printed on the container | | |
| Section 8 | Section 8 – Exposure Controls / Personal Protection | | |
| Exposure Guideline: | Narasin - LEG 11 micrograms/m3 TWA for 12 hours | | |
| | Grain Dust - PEL 10 mg/m3 TWA. TLV 4 mg/m3 TWA for 8 or 12 hours (total). Lilly preferred exposure limit is TLV | | |
| | The anti-dusting oil reduces potential exposure under normal conditions of use | | |
| Use in a manufacturing | setting: | | |
| Engineering measures: | Use laboratory fume hood or local exhaust ventilation | | |
| Respiratory protection: | Use an approved respirator fitted with dust/particulate filter | | |
| Eye protection: | Chemical goggles and/or face shield | | |
| Skin and body protection: | Chemical-resistant gloves and body covering to minimize skin contact. If handled in a ventilated enclosure, as in a laboratory setting, respirator and goggles or face shield may not be required. Safety glasses are always required. | | |
| When opening the conta | ainer and mixing into feed: | | |
| Respiratory protection: | Disposable dust face mask covering mouth and nose | | |
| Skin and body protection: | Cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC and goggles | | |
| Other Handling Precautions: | Do not allow adult turkeys, horses or other equines access to formulations containing narasin. Ingestion of narasin by equines and adult turkeys has been fatal. Do not feed to laying chickens. Under normal use and handling conditions, wear goggles to protect eyes and wear impermeable gloves and protective equipment to avoid direct contact with skin. Wash thoroughly with soap and water after handling. | | |

Section 9 – Physical and Chemical Properties

| Grey-brown free-flowing soli Musty | d that may contain coloured particles |
|---------------------------------------|--|
| No applicable information for | und |
| Insoluble | |
| 7-8 (aqueous 50/50) | |
| Flash point: | Not flammable |
| Lower explosion limit: | No applicable information found |
| Upper explosion limit: | No applicable information found |
| | Musty No applicable information for Insoluble 7-8 (aqueous 50/50) Flash point: Lower explosion limit: |

| Section 10 – Stability and Reactivity | |
|---------------------------------------|---|
| Stability: | Stable at normal temperatures and pressures. |
| Materials to avoid: | May react with strong oxidising agents (e.g. peroxides, permanganate, nitric acid, etc) |
| Hazardous decomposition: | May emit toxic fumes when heated to decomposition |
| Hazardous reactions: | Hazardous polymerisation not known to occur |

| Section 11 – Toxicological Information | |
|--|---|
| Acute oral: | LD ₅₀ 331 mg/kg (Rat) |
| Acute dermal: | LD ₅₀ 5,000 mg/kg (Rabbit) |
| Acute inhalation: | Technical grade narasin has a median lethal concentration of 87 mg/m3 for 4 hours in rats. However, studies indicate that Narasin Granualr is not considered to be an inhalation hazard due to its coarse granular nature and its low potential for aerosolisation. |
| Skin Irritation: | Corrosive (Rabbit) |
| Eye Irritation: | Rabbit, corrosive but permanent damage prevented by immediate rinsing |
| The following effects were reported in chronic, teratogenic, and reproductive toxicity studies with narasin in laboratory animals where experimental dosage levels and durations of exposure were in excess of those likely to occur in humans | |

| Target organ effects: | Narasin - Nervous system effects (lesions in peripheral nerves, reduced activity, tremours), heart effects (tissue changes, reduced heart rate, abnormal heart rhythm), muscle effects (skeletal muscle tissue changes). |
|-------------------------------------|--|
| Sensitisation (Narasin): | Not a sensitiser (Guinea pig) |
| Reproductive toxicity (Narasin): | No effects identified in animal studies |
| Mutagenicity (Narasin): | Not mutagenic in bacterial or mammalian cells |

Section 12 – Ecological Information

No environmental data for the mixture or formulation. The environmental information for Narasin are presented.

| Fish: | LC ₅₀ 2.23 mg/L (Rainbow trout, 96 hr) |
|--------------------|--|
| | LC ₅₀ 5.02 mg/L (Bluegill, 96 hr) |
| Algae: | EC ₅₀ 20.56 mg/L (<i>Daphnia magna</i> 48 hr). |
| Kow: | 4.85 (pH 8) |
| Water Solubility: | 102, 681 (mg/L) (pH 7, 9) |
| Half-life in soil: | Photolysis Half-Life (days): 1.5 (pH 7) |
| | Hydrolysis Half-Life (days): 3.5, none, none (pH 5, 7, 9) |

Environmental Summary: Narasin Moderately toxic to plants, worms, birds, and aquatic organisms, and is highly toxic to green algae. No significant effects on soil microorganisms at highest tested concentration. Measurable concentrations in the atmosphere are not expected since it is a non-volatile solid. Water soluble at pH 7 and pH 9. Material will adsorb strongly to sediment or soil. Soil concentrations expected to decline quickly due to fairly rapid degradation. Dissipates from the aquatic environment by photolysis or biodegradation. Material has potential to bioconcentrate in aquatic organisms, however, its rapid biodegradation in soil and photolysis rate make bioconcentration unlikely.

Section 13 – Disposal Considerations

Disposal: After use, shake and empty contents of bags into medicated feed. Do not dispose of undiluted chemicals on site. Puncture or shred and bury empty bags in a local authority landfill. If not available, bury the bag below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, vegetation and roots. Empty bags and product should not be burned. Large quantities should be disposed of in accordance with local regulations.

| | Section 14 – Transport Information |
|-----------------------------|---|
| Road and Rail Transport: | Not classified as dangerous goods when transported by road or rail |
| Marine Transport: | Not classified as Dangerous Goods for marine transport according to the criteria of the IMDG Code |

| Section 15 – Regulatory Information | |
|-------------------------------------|-------|
| Poison Schedule: | 6 |
| APVMA No: | 36784 |

Section 16 – Other Information

Sections Revised:

Format changed to 16 Point, Section 14 – Transport information updated

As of the date of issuance, we are providing available information relevant to the handling of this material in the workplace. All information contained herein is offered with the good faith belief that it is accurate. THIS MATERIAL SAFETY DATA SHEET SHALL NOT BE DEEMED TO CREATE ANY WARRANTY OF ANY KIND (INCLUDING WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE). In the event of an adverse incident associated with this material, this safety data sheet is not intended to be a substitute for consultation with appropriately trained personnel. Nor is this safety data sheet intended to be a substitute for product literature which may accompany the finished product.