

SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Elanco Animal Health (Division of Eli Lilly and Company (NZ) Limited)
Level 1, 123 Ormiston Road
Botany Junction, Auckland, New Zealand

Telephone Toll Free: 0800 ELANCO (0800 352 626)
From anywhere in New Zealand 08:30am to 5:30pm Monday to Friday

Chemical nature: Water based solution of Monepantel, Abamectin and other ingredients.
Trade Name: **Zolvix Plus**
Product Use: Veterinary Product / Anthelmintic for use as described on the product label.
Creation Date: **Aug, 2016**
This version issued: **Aug, 2016** and is valid for 5 years from this date.

SECTION 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

This product is classified as: Xi, Irritating. N, Dangerous to the environment. Hazardous according to the criteria of SWA.

Not subject to the ADG Code when transported in Australia by Road or Rail in packages 500kg(L) or less; or IBCs (refer to SP AU01). However if transported by Air or Sea, this provision does not apply. Then the product is classed as Dangerous (Class 9 Environmentally Hazardous) by IATA and IMDG respectively. See details below and in Section 14 of this SDS.

Risk Phrases: R43, R50/53. May cause sensitisation by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment.
Safety Phrases: S2, S20, S28, S29, S37, S46, S61, S24/25. Keep out of reach of children. When using, do not eat or drink. After contact with skin, wash immediately with plenty of soap and water. Do not empty into drains. Wear suitable gloves. If swallowed, contact a doctor or Poisons Information Centre immediately and show this SDS or label. Avoid release to the environment. Refer to special instructions/Safety Data Sheets. Avoid contact with skin and eyes.
SUSMP Classification: S5
ADG Classification: Class 9: Miscellaneous Dangerous Goods.
UN Number: 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.



GHS Signal word: WARNING

HAZARD STATEMENT:

H317: May cause an allergic skin reaction.
H410: Very toxic to aquatic life with long lasting effects.

PREVENTION

P102: Keep out of reach of children.
P261: Avoid breathing fumes, mists, vapours or spray.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves, protective clothing and eye or face protection.

RESPONSE

P363: Wash contaminated clothing before reuse.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P333+P313: If skin irritation or rash occurs: Get medical advice.
P391: Collect spillage.
P370+P378: Not combustible. Use extinguishing media suited to burning materials. Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal foam can be used.

STORAGE

P402+P404: Store in a dry place. Store in a closed container.
P403+P235: Store in a well-ventilated place. Keep cool.

DISPOSAL

P501: Dispose of contents and containers as specified on the registered label. (See Section 13 of this SDS)

SAFETY DATA SHEET

Issued by: Elanco Animal Health (Division of Eli Lilly and Company (NZ) Limited)

Phone: Toll Free: 0800 352 626

Poisons Information Centre: 13 1126 from anywhere in Australia, (0800 764 766 in New Zealand)

Statement of Hazardous Nature (New Zealand)

HSNO Approval number HSR100758

Veterinary Medicines (Non-dispersive Closed System Application) Group Standard 2012

6.1E: Substances that are acutely toxic – May be harmful, Aspiration hazard.

6.8B: Substances that are suspected human reproductive or developmental toxicants.

6.8C: Substances that produce toxic human reproductive or developmental effects on or via lactation.

6.9B: Substances that are harmful to human target organs or systems.

9.1A: Substances that are very ecotoxic in the aquatic environment.

9.4A: Substances that are very ecotoxic to terrestrial invertebrates.

DG Classification: Classified as a Dangerous Good for transport in accordance with the Land Transport Rule Dangerous Goods 2005 and NZS 5433:2007.

Emergency Overview

Description & Colour: Clear yellowish to yellow-brown liquid.

Odour: No data re odour.

Major Health Hazards: possible skin sensitiser.

Potential Health Effects

INHALATION:

Short Term Exposure: Product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort.

Long Term Exposure: No data for health effects associated with long term inhalation.

SKIN CONTACT:

Short Term Exposure: Classified as a potential sensitiser by skin contact. Exposure to a skin sensitiser, once sensitisation has occurred, may manifest itself as skin rash or inflammation, and in some individuals this reaction can be severe. In addition product may be irritating, but is unlikely to cause anything more than mild transient discomfort.

Long Term Exposure: No data for health effects associated with long term skin exposure.

EYE CONTACT:

Short Term Exposure: This product may be irritating to eyes, but is unlikely to cause anything more than mild transient discomfort.

Long Term Exposure: No data for health effects associated with long term eye exposure.

INGESTION:

Short Term Exposure: Significant oral exposure is considered to be unlikely. However, this product may be irritating to mucous membranes but is unlikely to cause anything more than transient discomfort.

Long Term Exposure: No data for health effects associated with long term ingestion.

CARCINOGEN STATUS:

SWA: No significant ingredient is classified as carcinogenic by SWA.

NTP: No significant ingredient is classified as carcinogenic by NTP.

IARC: No significant ingredient is classified as carcinogenic by IARC.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

| Ingredients | CAS No | Conc,% | TWA (mg/m ³) | STEL (mg/m ³) |
|---------------------------------|-------------|--------|--------------------------|---------------------------|
| Monepantel | 887148-69-8 | 25g/L | not set | not set |
| Abamectin | 71751-41-2 | 2g/L | not set | not set |
| Other non hazardous ingredients | secret | to 100 | not set | not set |

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

SECTION 4 - FIRST AID MEASURES

GENERAL INFORMATION:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

SAFETY DATA SHEET

Issued by: Elanco Animal Health (Division of Eli Lilly and Company (NZ) Limited)

Phone: Toll Free: 0800 352 626

Poisons Information Centre: 13 1126 from anywhere in Australia, (0800 764 766 in New Zealand)

| | |
|----------------------|--|
| Inhalation: | No first aid measures normally required. However, if inhalation has occurred, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice. |
| Skin Contact: | Wash gently and thoroughly with water (use non-abrasive soap if necessary) for 5 minutes or until chemical is removed. |
| Eye Contact: | No effects expected. If irritation does occur, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes. Take special care if exposed person is wearing contact lenses. |
| Ingestion: | If product is swallowed or gets in mouth, do NOT induce vomiting; wash mouth with water and give some water to drink. If symptoms develop, or if in doubt contact a Poisons Information Centre or a doctor. |

SECTION 5 - FIRE FIGHTING MEASURES

| | |
|------------------------------------|--|
| Fire and Explosion Hazards: | The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. There is little risk of an explosion from this product if commercial quantities are involved in a fire. Only small quantities of decomposition products are expected from this product at temperatures normally achieved in a fire. This will only occur after heating to dryness. Fire decomposition products from this product are likely to be irritating if inhaled. |
| Extinguishing Media: | Not combustible. Use extinguishing media suited to burning materials. Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal foam can be used. Try to contain spills, minimise spillage entering drains or water courses. |
| Fire Fighting: | If a significant quantity of this product is involved in a fire, call the fire brigade. There is little danger of a violent reaction or explosion if significant quantities of this product are involved in a fire. Recommended personal protective equipment is full fire kit and breathing apparatus. |
| Flash point: | Does not burn. |
| Upper Flammability Limit: | Does not burn. |
| Lower Flammability Limit: | Does not burn. |
| Autoignition temperature: | Not applicable - does not burn. |
| Flammability Class: | Does not burn. |

SECTION 6 - ACCIDENTAL RELEASE MEASURES

| | |
|---|--|
| Accidental release: | In the event of a major spill, prevent spillage from entering drains or water courses. Wear full protective clothing including eye/face protection. All skin areas should be covered. See below under Personal Protection regarding Australian Standards relating to personal protective equipment. Suitable materials for protective clothing include rubber, PVC. Eye/face protective equipment should comprise as a minimum, protective goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned below (section 8). Otherwise, not normally necessary. |
| Stop leak if safe to do so, and contain spill. | Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Because of the environmentally hazardous nature of this product, special care should be taken to restrict release to waterways or drains. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this SDS and the label, instructions on the label prevail. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry. |

SAFETY DATA SHEET

SECTION 7 - HANDLING AND STORAGE

- Handling:** Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.
- Storage:** This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. Check packaging - there may be further storage instructions on the label.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

SWA Exposure Limits TWA (mg/m³) STEL (mg/m³)

Exposure limits have not been established by SWA for any of the significant ingredients in this product.

The ADI for Monepantel is set at 0.03mg/kg/day. The corresponding NOEL is set at 2.96mg/kg/day.

The ADI for Abamectin is set at 0.0005mg/kg/day. The corresponding NOEL is set at 0.5mg/kg/day. ADI means Acceptable Daily Intake; NOEL means No-observable-effect-level. Data from Australian ADI List, June 2013.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

- Ventilation:** No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that vapours and mists are minimised.
- Eye Protection:** Eye protection such as protective glasses or goggles is recommended when this product is being used.
- Skin Protection:** If you believe you may have a sensitisation to this product or any of its declared ingredients, you should prevent skin contact by wearing impervious gloves, clothes and, preferably, apron. Make sure that all skin areas are covered. See below for suitable material types.
- Protective Material Types:** We suggest that protective clothing be made from the following materials: rubber, PVC.
- Respirator:** Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above. Otherwise, not normally necessary.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES:

- Description & colour:** Clear yellowish to yellow-brown liquid.
- Odour:** No data re odour.
- Boiling Point:** Approximately 100°C at 100kPa.
- Freezing/Melting Point:** Approximately 0°C.
- Volatiles:** Water component.
- Vapour Pressure:** 2.37 kPa at 20°C (water vapour pressure).
- Vapour Density:** As for water.
- Specific Gravity:** No data.
- Water Solubility:** Completely soluble in water.
- pH:** No data.
- Volatility:** No data.
- Odour Threshold:** No data.
- Evaporation Rate:** As for water.
- Coeff Oil/water Distribution:** No data
- Autoignition temp:** Not applicable - does not burn.

SECTION 10 - STABILITY AND REACTIVITY

- Reactivity:** This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

SAFETY DATA SHEET

| | |
|-----------------------------|---|
| Conditions to Avoid: | Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. |
| Incompatibilities: | No particular Incompatibilities. |
| Fire Decomposition: | Only small quantities of decomposition products are expected from this product at temperatures normally achieved in a fire. This will only occur after heating to dryness. Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death. |
| Polymerisation: | This product will not undergo polymerisation reactions. |

SECTION 11 - TOXICOLOGICAL INFORMATION

LOCAL EFFECTS:

Target Organs: There is no data to hand indicating any particular target organs.

For the Mixture

| | |
|----------------------------|---|
| Acute dermal toxicity rat: | LD ₅₀ > 2,000 mg/kg, Method: OECD Test Guideline 402 |
| Sensitisation: | Skin sensitization, mouse. Method: OECD Test Guideline 429 |
| Skin irritation: | No skin irritation, rabbit, OECD Test Guideline 404 |

Classification of Hazardous Ingredients

| Ingredient | Risk Phrases |
|--|---|
| Abamectin | >=0.1%Conc<1%: Xn; R20/22 |
| Monepantel: LD₅₀ Oral, Rat >2000mg/kg | |
| For the component Monepantel | |
| Acute oral toxicity, rat. | LD ₅₀ > 2,000 mg/kg. OECD Test Guideline 423 |
| Acute inhalation toxicity | No data available |
| Acute dermal toxicity rat | LD ₅₀ > 2,000 mg/kg OECD Test Guideline 402 |
| Skin irritation rabbit | No skin irritation OECD Test Guideline 404 |
| Eye irritation rabbit | No eye irritation OECD Test Guideline 405 |
| Sensitisation mouse | Did not cause skin sensitization. OECD Test Guideline 429 |
| Carcinogenicity rat, mouse | Negative OECD Test Guideline 451 |
| Toxicity for reproduction | No effects on fertility or on any other reproductive parameter in a 2-generation study in rats. OECD Test Guideline 416 |
| Developmental Toxicity | No indications of a developmental/toxic effect were seen in studies with rats and rabbits. OECD Test Guideline 414 |
| For the component Abamectin (based on supplier's information) | |
| Acute oral toxicity rat | LD ₅₀ > 8.7 – 12.8 mg/kg |
| Acute oral toxicity mouse | LD ₅₀ 13.6 mg/kg |
| Acute dermal toxicity rabbit | LD ₅₀ > 2,000 mg/kg |
| Acute dermal toxicity rat | LD ₅₀ > 380 mg/kg |
| Acute inhalation toxicity rat, 4 h: LC ₅₀ | 1,100 mg/m ³ |
| Skin irritation rabbit: | No skin irritation |
| Eye irritation | No data available |
| Further information on irritation rabbit: | Slightly irritating to the mucous membranes |
| Sensitisation guinea pig: | Did not cause skin sensitization. |
| Mutagenicity Ames test: | Negative |
| Carcinogenicity Long term tests | did not reveal any indications of carcinogenic effects. |

SECTION 12 - ECOLOGICAL INFORMATION

Very toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment. This product is biodegradable. It will not accumulate in the soil or water or cause long term problems.

For the component Monepantel

| | |
|---------------------------------|--|
| Toxicity to fish | LC ₅₀ 96 h >= 100 mg/L <i>Oncorhynchus mykiss</i> (rainbow trout) OECD Test Guideline 203 |
| Toxicity to daphnia | LC ₁₀₀ 48 h >= 100 mg/L <i>Daphnia magna</i> OECD Test Guideline 202 |
| Toxicity to algae | EC ₅₀ >= 100 mg/L <i>Pseudokirchneriella subcapitata</i> (green algae) OECD Test Guideline 201 |
| Toxicity to soil organisms | NOEC 28 d >= 2.4 mg/kg <i>Eisenia foetida</i> (earthworm) OECD Test Guideline 222 NOEC 28 d >= 0.3 mg/kg Soil microflora OECD Test Guideline 216/217 Remarks: Highest attainable concentration |
| Toxicity to terrestrial plants: | NOEC >= 100 mg/kg Brassica, Glycine, Avene OECD Test Guideline 208 |

SAFETY DATA SHEET

Issued by: Elanco Animal Health (Division of Eli Lilly and Company (NZ) Limited)

Phone: Toll Free: 0800 352 626

Poisons Information Centre: 13 1126 from anywhere in Australia, (0800 764 766 in New Zealand)

For the component Abamectin (based on supplier's information)

| | |
|---------------------|--|
| Toxicity to fish | LC ₅₀ 96 h 3.2 µg/L <i>Salmo gairdneri</i> (rainbow trout) |
| | LC ₅₀ 96 h 42 µg/L <i>Cyprinus carpio</i> (carp) |
| Toxicity to daphnia | EC ₅₀ 0.34 µg/L <i>Daphnia magna</i> (water flea) |
| Toxicity to algae | EC ₅₀ 96 h 7.3 mg/L <i>Scenedesmus obliquus</i> (green algae) |

Behaviour in environmental compartments For the component Monepantel

Biodegradability: no data available

For the component Abamectin (based on supplier's information)

Biodegradability aerobic: half-life time: 14 – 56 d

Degradability, water photolysis: half-life time: <= 0.5 d

Bioconcentration factor BCF: 52

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal: Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 <http://www.chemclear.com.au/> and for help with the disposal of empty drums, contact DrumMuster <http://www.drummuster.com.au/> where you will find contact details for your area.

SECTION 14 - TRANSPORT INFORMATION

UN Number: 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Hazchem Code: •3Z

Special Provisions: 179, 274, AU01

Limited quantities: ADG 7 specifies a Limited Quantity value of 5 L for this class of product.

Dangerous Goods Class: Class 9: Miscellaneous Dangerous Goods.

Packaging Group: III

Packaging Method: P001, IBC03, LP01

Class 9 Miscellaneous Dangerous Goods shall not be loaded in the same vehicle or packed in the same freight container with Dangerous Goods of Class 1 (Explosives).

New Zealand

Classified as Dangerous Goods for transport in accordance with the Land Transport Rule Dangerous Goods 2005 and NZS 5433:2007.

SECTION 15 - REGULATORY INFORMATION

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

The following ingredients: Monepantel, Abamectin, are mentioned in the SUSMP.

New Zealand:

HSNO Approval number HSR100758

Veterinary Medicines (Non-dispersive Closed System Application) Group Standard 2012

SECTION 16 - OTHER INFORMATION

This SDS contains only safety-related information. For other data see product literature.

Acronyms:

| | |
|-----------------------|---|
| ADG Code | Australian Code for the Transport of Dangerous Goods by Road and Rail (7 th edition) |
| AICS | Australian Inventory of Chemical Substances |
| SWA | Safe Work Australia, formerly ASCC and NOHSC |
| CAS number | Chemical Abstracts Service Registry Number |
| Hazchem Code | Emergency action code of numbers and letters that provide information to emergency services especially firefighters |
| IARC | International Agency for Research on Cancer |
| NOS | Not otherwise specified |
| NTP | National Toxicology Program (USA) |
| SUSMP | Standard for the Uniform Scheduling of Medicines & Poisons |
| UN Number | United Nations Number |
| Contact Point: | Regulator Affairs Manager – 0800 352 626 |

THIS SDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

SAFETY DATA SHEET

Issued by: Elanco Animal Health (Division of Eli Lilly and Company (NZ) Limited)

Phone: Toll Free: 0800 352 626

Poisons Information Centre: 13 1126 from anywhere in Australia, (0800 764 766 in New Zealand)



IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS

Please read all labels carefully before using product.

HSNO Approved Code of Practice: Preparation of Safety Data Sheets. New Zealand Chemical Industry Council September 2006.

SAFETY DATA SHEET

Issued by: Elanco Animal Health (Division of Eli Lilly and Company (NZ) Limited)

Phone: Toll Free: 0800 352 626

Poisons Information Centre: 13 1126 from anywhere in Australia, (0800 764 766 in New Zealand)