SAFETY DATA SHEET

1. Identification

Product identifier: Doramectin Levamisole HCL Injection Solution

Other means of identification:
- Synonyms: DECTOMAX V dual combination injection for cattle * VALCOR

Recommended use of the chemical and restrictions on use:
- Recommended use: Veterinary product
- Restrictions on use: Not for human use

Details of manufacturer or importer:
- Company Name (AU): Zoetis Australia Pty Ltd
- ABN 94 156 476 425
- Level 6, 5 Rider Boulevard
- Rhodes NSW 2138 AUSTRALIA
- Tel: 1800 814 883
- Fax: (02) 8876 0444
- Email: productsupport.au@zoetis.com
- Emergency Phone: 1800 814 883 (all hours)
- Police and Fire Brigade: Dial 000
- If ineffective: Dial Poisons Information Centre (13 1126 from anywhere in Australia)

2. Hazard(s) identification

Classification of the hazardous chemical:
- Physical hazards: Not classified.
- Health hazards:
  - Acute toxicity, oral: Category 4
  - Serious eye damage/eye irritation: Category 1
  - Reproductive toxicity: Effects on or via lactation
  - Specific target organ toxicity following repeated exposure: Category 1 (blood, hematopoietic system)
- Environmental hazards:
  - Hazardous to the aquatic environment, acute hazard: Category 1
  - Hazardous to the aquatic environment, long-term hazard: Category 1

Label elements, including precautionary statements:
- Hazard symbol(s):
  - Corrosion
  - Health hazard
  - Exclamation mark
  - Environment
- Signal word: Danger
- Hazard statement(s):
  - Harmful if swallowed. Causes serious eye damage. May cause harm to breast-fed children. Causes damage to organs (blood, hematopoietic system) through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.
- Precautionary statement(s):
  - Prevention: Obtain special instructions before use. Do not breathe mist/vapours. Avoid contact during pregnancy/while nursing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear eye protection/face protection.
3. Composition/information on ingredients

Mixture

<table>
<thead>
<tr>
<th>Identity of chemical ingredients</th>
<th>CAS number and other unique identifiers</th>
<th>Concentration of ingredients (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levamisole hydrochloride</td>
<td>16595-80-5</td>
<td>15</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>100-51-6</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Doramectin</td>
<td>117704-25-3</td>
<td>0.5</td>
</tr>
<tr>
<td>Butylated hydroxyanisole</td>
<td>25013-16-5</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Butylated hydroxytoluene</td>
<td>128-37-0</td>
<td>&lt;0.1</td>
</tr>
</tbody>
</table>

Composition comments: Other components below reportable levels.

4. First-aid measures

Description of necessary first aid measures

Inhalation: Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact: In the case of skin contact, immediately wash the skin with plenty of soap and water. In the event of accidental self injection or needle stick injury, wash the injury thoroughly with clean running water. Get medical attention immediately.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Ingestion: IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Personal protection for first-aid responders: IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Symptoms caused by exposure: Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause Fatigue. Pallor. Jaundice. May cause drowsiness or dizziness. May cause reproductive effects.

Medical attention and special treatment: Provide general supportive measures and treat symptomatically.

5. Fire-fighting measures


Suitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Unsuitable extinguishing media: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for fire fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions: In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Firefighters should wear full protective gear.

Hazchem code: None.

General fire hazards: No unusual fire or explosion hazards noted.

Specific methods: Use standard firefighting procedures and consider the hazards of other involved materials.
6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel**
Keep unnecessary personnel away.

**For emergency responders**
Keep unnecessary personnel away. Ensure adequate ventilation. Wear appropriate protective equipment and clothing during clean-up. Do not get in eyes, on skin, or on clothing. Do not breathe mist or vapour. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained.

**Environmental precautions**
Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**Methods and materials for containment and cleaning up**
Ensure adequate ventilation. Wear appropriate protective equipment and clothing during clean-up. Avoid release to the environment. Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Clean surface thoroughly to remove residual contamination.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7. Handling and storage

**Precautions for safe handling**
Do not handle until all safety precautions have been read and understood. Use this product with adequate ventilation. Wear personal protective equipment. Do not get this material in contact with eyes. Do not breathe mist/vapours. Avoid contact with skin. Avoid accidental injection. Avoid prolonged exposure. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Avoid release to the environment. Use appropriate container to avoid environmental contamination.

**Conditions for safe storage, including any incompatibilities**
Store locked up. Store in a well-ventilated place. Do not store in direct sunlight. Keep away from food, drink and animal feeding stuffs. Use appropriate container to avoid environmental contamination. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls and personal protection

**Control parameters**
Follow standard monitoring procedures.

**Occupational exposure limits**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doramectin (CAS 117704-25-3)</td>
<td>TWA</td>
<td>200 µg/m³</td>
</tr>
<tr>
<td>Levamisole hydrochloride (CAS 16595-80-5)</td>
<td>TWA</td>
<td>0.18 mg/m³</td>
</tr>
</tbody>
</table>

**Australia. National Workplace OELs (Workplace Exposure Standards for Airborne Contaminants, Appendix A)**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butylated hydroxytoluene (CAS 128-37-0)</td>
<td>TWA</td>
<td>10 mg/m³</td>
</tr>
</tbody>
</table>

**US. ACGIH Threshold Limit Values**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butylated hydroxytoluene (CAS 128-37-0)</td>
<td>TWA</td>
<td>2 mg/m³</td>
<td>Inhalable fraction and vapour.</td>
</tr>
</tbody>
</table>

**UK. EH40 Workplace Exposure Limits (WELs)**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butylated hydroxytoluene (CAS 128-37-0)</td>
<td>TWA</td>
<td>10 mg/m³</td>
</tr>
</tbody>
</table>
Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzyl alcohol (CAS 100-51-6)</td>
<td>TWA</td>
<td>22 mg/m³</td>
<td>Vapour and aerosol.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 ppm</td>
<td>Vapour and aerosol.</td>
</tr>
<tr>
<td>Butylated hydroxyanisole (CAS 25013-16-5)</td>
<td>TWA</td>
<td>20 mg/m³</td>
<td>Vapour and aerosol, inhalable fraction.</td>
</tr>
<tr>
<td>Butylated hydroxytoluene (CAS 128-37-0)</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Vapour and aerosol, inhalable fraction.</td>
</tr>
</tbody>
</table>

**Biological limit values**
No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**
Keep air contamination levels below the exposure limits or within the OEB range listed above in this section. General ventilation normally adequate. Provide eyewash station.

**Individual protection measures, for example personal protective equipment (PPE)**

- **Eye/face protection**
  Wear safety glasses with side shields (or goggles).

- **Skin protection**
  - **Hand protection**
    Wear appropriate chemical resistant gloves.
  - **Other**
    Wear suitable protective clothing. Use protective clothing (uniforms, lab coats, disposable coveralls, etc.) in both production and laboratory areas.

- **Respiratory protection**
  Whenever air contamination (mist, vapor or odor) is generated, respiratory protection is recommended as a precaution to minimize exposure. If the applicable Occupational Exposure Limit (OEL) is exceeded, wear an appropriate respirator with a protection factor sufficient to control exposures to below the OEL.

- **Thermal hazards**
  Not applicable.

**Hygiene measures**
When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties**

**Appearance**
- **Physical state**
  Liquid.
- **Form**
  Liquid.
- **Colour**
  Not available.
- **Odour**
  Not available.
- **Odour threshold**
  Not available.
- **pH**
  4 - 5
- **Melting point/freezing point**
  Not available.
- **Initial boiling point and boiling range**
  Not available.
- **Flash point**
  112.0 °C (233.6 °F) (Closed cup)
- **Evaporation rate**
  Not available.
- **Flammability (solid, gas)**
  Not applicable.

**Upper/lower flammability or explosive limits**
- **Flammability limit - lower (%)**
  Not available.
- **Flammability limit - upper (%)**
  Not available.
- **Explosive limit - lower (%)**
  Not available.
- **Explosive limit – upper (%)**
  Not available.
- **Vapour pressure**
  Not available.
- **Vapour density**
  Not available.
- **Relative density**
  Not available.
Solubility

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other physical and chemical parameters

Explosive properties Not explosive.

Oxidising properties Not oxidising.

10. Stability and reactivity

Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability
Material is stable under normal conditions.

Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

Conditions to avoid
Contact with incompatible materials. Sunlight. Keep away from heat, sparks, flame and all other sources of ignition. Avoid contact with acids.; may generate Formaldehyde.

Incompatible materials
Strong acids. Strong oxidising agents.

Hazardous decomposition products
Thermal decomposition products may include oxides of carbon, nitrogen, and sulfur. May include hydrogen chloride. Formaldehyde.

11. Toxicological information

Information on possible routes of exposure

Inhalation
Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

Skin contact
Prolonged skin contact may cause temporary irritation.

Doramectin Levamisole HCL Injection Solution Result: Non-irritant Species: Rabbit

Benzyl alcohol Species: Guinea Pig
Severity: Moderate

Species: Rabbit
Severity: Minimal

Butylated hydroxytoluene Species: Rabbit
Severity: Moderate

Doramectin Species: Rabbit
Severity: Non-irritating

Eye contact
Causes serious eye damage.

Doramectin Levamisole HCL Injection Solution In vitro study Result: Serious eye damage

Butylated hydroxytoluene Species: Rabbit
Severity: Moderate

Doramectin Species: Rabbit
Severity: Non-irritating

Benzy alcohol Species: Rabbit
Severity: Severe

Ingestion
Harmful if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.
Symptoms related to exposure: Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause Pallor. Fatigue. Jaundice. May cause drowsiness or dizziness. May cause reproductive effects.

Acute toxicity: Harmful if swallowed.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doramectin Levamisole HCL Injection Solution</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>300 - 2000 mg/kg</td>
</tr>
<tr>
<td><strong>Components</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benzyl alcohol (CAS 100-51-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>2000 mg/kg</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rat</td>
<td>&gt; 4.178 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 mg/l, 8 Hours</td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Mouse</td>
<td>1580 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>1230 mg/kg</td>
</tr>
<tr>
<td>Butylated hydroxyanisole (CAS 25013-16-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intraperitoneal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>881 mg/kg</td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Mouse</td>
<td>1100 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>2000 mg/kg</td>
</tr>
<tr>
<td><strong>Chronic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOAEL</td>
<td>Rat</td>
<td>3300 mg/kg, 12 days Liver Blood</td>
</tr>
<tr>
<td>Butylated hydroxytoluene (CAS 128-37-0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intraperitoneal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Mouse</td>
<td>138 mg/kg</td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Mouse</td>
<td>650 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>1700 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>890 mg/kg</td>
</tr>
<tr>
<td><strong>Chronic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOAEL</td>
<td>Mouse</td>
<td>2000 mg/kg, 4 days Liver, Kidney, Ureter, Bladder</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>5185 mg/kg, 4 weeks Liver</td>
</tr>
<tr>
<td>Doramectin (CAS 117704-25-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat (F)</td>
<td>500 - 1000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Rat (M)</td>
<td>1000 - 2000 mg/kg</td>
</tr>
<tr>
<td>Components</td>
<td>Species</td>
<td>Test Results</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-----------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Chronic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Dog</td>
<td>0.1 mg/kg/day, 3 months (Central Nervous System)</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>2 mg/kg/day, 3 months (Liver)</td>
</tr>
<tr>
<td>Levamisole hydrochloride (CAS 16595-80-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Mouse</td>
<td>223 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>180 mg/kg</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td></td>
<td>Prolonged skin contact may cause temporary irritation.</td>
</tr>
<tr>
<td>Corrosivity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doramectin Levamisole HCL Injection Solution</td>
<td>Species: Rabbit</td>
<td>Result: Non-irritant</td>
</tr>
<tr>
<td>Irritation Corrosion - Skin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doramectin</td>
<td>Species: Rabbit</td>
<td>Result: Non-irritating</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td></td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>Eye contact</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doramectin Levamisole HCL Injection Solution</td>
<td>Species: Rabbit</td>
<td>Result: Serious eye damage</td>
</tr>
<tr>
<td>Butylated hydroxytoluene</td>
<td>Species: Rabbit</td>
<td>Severity: Moderate</td>
</tr>
<tr>
<td>Doramectin</td>
<td>Species: Rabbit</td>
<td>Severity: Non-irritating</td>
</tr>
<tr>
<td>Benzyl alcohol</td>
<td>Species: Rabbit</td>
<td>Severity: Severe</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respiratory sensitisation</td>
<td></td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Skin sensitisation</td>
<td></td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
<tr>
<td>Skin Sensitisation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doramectin Levamisole HCL Injection Solution</td>
<td>Species: Mouse</td>
<td>Result: Negative</td>
</tr>
<tr>
<td>Levamisole hydrochloride</td>
<td></td>
<td>Result: sensitising</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td></td>
<td>No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doramectin</td>
<td>Species: Salmonella</td>
<td>Bacterial Mutagenicity (Ames) Result: Negative</td>
</tr>
<tr>
<td>Butylated hydroxyanisole</td>
<td>Species: Salmonella</td>
<td>In Vitro Bacterial Mutagenicity (Ames) Result: Negative</td>
</tr>
<tr>
<td>Doramectin</td>
<td>Species: Bone marrow</td>
<td>In Vivo Micronucleus Result: Negative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Species: Mouse Lymphoma</td>
</tr>
</tbody>
</table>
Mutagenicity

Doramectin

Unscheduled DNA Synthesis
Result: Negative
Species: Rat Hepatocyte

Carcinogenicity

Based on available data, the classification criteria are not met. This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

ACGIH Carcinogens

Butylated hydroxytoluene (CAS 128-37-0)  A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Butylated hydroxyanisole (CAS 25013-16-5)  2B Possibly carcinogenic to humans.

Butylated hydroxytoluene (CAS 128-37-0)  3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity

May cause harm to breastfed babies.

Developmental effects

Doramectin

> 6 mg/kg/day Embryo / Fetal Development, Not teratogenic
Result: NOEL
Species: Rat
Organ: Oral

0.75 mg/kg/day Embryo / Fetal Development, Maternal Toxicity, Teratogenic
Result: NOEL
Species: Rabbit
Organ: Oral

3 mg/kg/day Embryo / Fetal Development, Fetotoxicity, Not Teratogenic
Result: NOEL
Species: Mouse
Organ: Oral

Butylated hydroxyanisole

30 g/kg Embryo / Fetal Development, teratogenic
Result: LOEL
Species: Rat
Organ: Oral

Butylated hydroxytoluene

6 g/kg Embryo / Fetal Development, teratogenic
Result: LOEL
Species: Rat
Organ: Oral

Specific target organ toxicity - single exposure

Not classified.

Specific target organ toxicity - repeated exposure

Causes damage to organs (blood, hematopoietic system) through prolonged or repeated exposure.

Aspiration hazard

Not an aspiration hazard.

12. Ecological information

Ecotoxicity

Very toxic to aquatic life with long lasting effects. Avoid release to the environment.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzyl alcohol (CAS 100-51-6)</td>
<td>Pseudokirchneriella subcapitata (Green Alga)</td>
<td>EC50 500 mg/l, 72 Hours</td>
</tr>
<tr>
<td>Aquatic Algae</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Daphnia magna (Water Flea)</td>
<td>EC50 230 mg/l, 48 Hours</td>
</tr>
<tr>
<td>Crustacea</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pimephales promelas (Fathead Minnow)</td>
<td>LC50 460 mg/l, 96 Hours</td>
</tr>
</tbody>
</table>
### Components Test Results

<table>
<thead>
<tr>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute</strong></td>
<td></td>
</tr>
<tr>
<td>Fish LC50</td>
<td>Bluegill (Lepomis macrochirus) 10 mg/l, 96 hours</td>
</tr>
<tr>
<td>Doramectin (CAS 117704-25-3) MIC</td>
<td>Aspergillus niger (Fungus) 600 mg/l, 48 hours</td>
</tr>
<tr>
<td></td>
<td>Clostridium perfingens (Bacterium) 40 mg/l</td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
</tr>
<tr>
<td>Crustacea EC50</td>
<td>Daphnia magna (Water Flea) 0.0001 mg/l, 48 Hours</td>
</tr>
<tr>
<td>Fish LC50</td>
<td>Lepomis macrochirus (Bluegill Sunfish) 0.011 mg/l, 96 Hours</td>
</tr>
<tr>
<td></td>
<td>Oncorhynchus mykiss (rainbow trout) 0.0051 mg/l, 48 Hours</td>
</tr>
</tbody>
</table>

**Persistence and degradability**  
No data available for this product. The following information is available for the individual ingredients.

**Biodegradability**  
Percent Degradation (Aerobic Biodegradation)  
Benzyl alcohol 92 - 96 %  
Test Duration: 28 days

**Bioaccumulative potential**  
No data available for this product. The following information is available for the individual ingredients.

**Partition coefficient**  
n-octanol / water (log Kow)  
Benzyl alcohol 1.1  
Doramectin 4.4

**Mobility in soil**  
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### 13. Disposal considerations

**Disposal methods**  
Avoid release to the environment. Do not discharge into drains, water courses or onto the ground.  
Do not dispose of waste into sewer. Considering the relevant known environmental and human health hazards of the material, review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure and environmental release.  
It is recommended that waste minimization be practiced. The best available technology should be utilized to prevent environmental releases. This may include destructive techniques for waste and wastewater. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Residual waste**  
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

**Contaminated packaging**  
Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

**ADG**  
Not regulated as dangerous goods.

**RID**  
**UN number** UN3082  
**UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Doramectin, Benzyl alcohol)  
**Transport hazard class(es)**  
Class 9  
**Subsidiary risk** -  
**Label(s)** 9  
**Packing group** III  
**Environmental hazards** Yes  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**IATA**  
**UN number** UN3082

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Material name: Doramectin Levamisole HCL Injection Solution  
2968 SDS AUSTRALIA  
9 / 12
UN proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Doramectin, Benzyl Alcohol)

Transport hazard class(es):
- Class: 9
- Subsidiary risk: -
- Packing group: III
- Environmental hazards: Yes
- ERG Code: 9L

Special precautions for user:
Read safety instructions, SDS and emergency procedures before handling.

Other information:
- Passenger and cargo aircraft: Allowed with restrictions.
- Cargo aircraft only: Allowed with restrictions.

IMDG:
- UN number: UN3082
- UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Doramectin, Benzyl Alcohol), MARINE POLLUTANT

Transport hazard class(es):
- Class: 9
- Subsidiary risk: -
- Packing group: III
- Environmental hazards: Yes
- Marine pollutant: Yes
- EmS: F-A, S-F

Special precautions for user:
Read safety instructions, SDS and emergency procedures before handling.
Not established.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IATA; IMDG; RID

Marine pollutant

General information:
As of January 1, 2015, materials offered for transport that are classified for transportation only as Marine Pollutants and which are packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 Liters or less for liquids or having a net mass per single or inner packaging of 5 kilograms or less for solids are NOT subject to ICAO/IATA, IMDG, or ADR transport regulations provided the general packaging requirements of those regulations are met. Refer to ICAO/IATA A197, IMDG 2.10.2.7, ADR SP 375.

15. Regulatory information
Safety, health and environmental regulations
This Safety Data Sheet was prepared in accordance with the Australia Model Code of Practice for the preparation of safety data sheets for hazardous chemicals.

Poison Schedule (Product) – Schedule 5

APVMA approval number: 90001

Australia Medicines & Poisons Appendix A
Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix B
Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix D
Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix E
Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix F
Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix G
Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix H
Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix I
Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix J
Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix K
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 10
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 2
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 3
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 4
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 5
Doramectin (CAS 117704-25-3)

Australia Medicines & Poisons Schedule 6
Doramectin (CAS 117704-25-3)

Australia Medicines & Poisons Schedule 7
Doramectin (CAS 117704-25-3)

Australia Medicines & Poisons Schedule 8
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 9
Poisons schedule number not allocated.

High Volume Industrial Chemicals (HVIC)
Benzyl alcohol (CAS 100-51-6) 10000 - 99999 TONNES See the regulation for additional information.

Importation of Ozone Deleting Substances (Customs(Prohibited imports) Regulations 1956, Schedule 10)
Not listed.

National Pollutant Inventory (NPI) substance reporting list
Not listed.

Prohibited Carcinogenic Substances
Not regulated.

Prohibited Substances (National Model Regulation for the control of Workplace Hazardous Substances, Schedule 2 NOHSC:1005 (1994) as amended)
Not listed.

Restricted Importation of Organochlorine Chemicals (Customs(Prohibited Imports) Regulations 1956, Schedule 9)
Not listed.
### Restricted Carcinogenic Substances

Not regulated.

### International regulations

**Stockholm Convention**

Not applicable.

**Rotterdam Convention**

Not applicable.

**Kyoto Protocol**

Not applicable.

**Montreal Protocol**

Not applicable.

**Basel Convention**

Not applicable.

### International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Industrial Chemicals (AICIS)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>No</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Taiwan Chemical Substance Inventory (TCSI)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s) and a "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

### 16. Other information

**Issue date**

15-January-2016

**Revision date**

29-October-2021

**Key abbreviations or acronyms used**

ATE: Acute Toxicity Estimate according to REGULATION (EC) No 1272/2008 (CLP).

**Disclaimer**

Zoetis Inc. believes that the information contained in this Safety Data Sheet is accurate, and while it is provided in good faith, it is without warranty of any kind, expressed or implied. If data for a hazard are not included in this document there is no known information at this time. The information in the sheet was written based on the best knowledge and experience currently available.

**Revision information**

This document has undergone significant changes and should be reviewed in its entirety.