SAFETY DATA SHEET

1. Identification
Product identifier: DECTOMAX (Doramectin) Pour-On Solution
Other means of identification:
- Synonyms: DECTOMAX® * Dectomax Pour On Endectocide * DECTOMAX Pour-on

Recommended use of the chemical and restrictions on use
- Recommended use: Veterinary antiparasitic
- 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: australia.animalhealth@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: Flammable liquids
- Health hazards:
  - Serious eye damage/eye irritation: Category 2A
  - Reproductive toxicity: Effects on or via lactation
  - Specific target organ toxicity following single exposure: Category 3 narcotic effects
- 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): Flame Exclamation mark Environment

- Signal word: Danger
- Hazard statement(s): Highly flammable liquid and vapour. Causes serious eye irritation. May cause drowsiness or dizziness. May cause harm to breast-fed children. Very toxic to aquatic life with long lasting effects.
- Precautionary statement(s):
  - Prevention: Obtain special instructions before use. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Do not breathe mist or vapour. Avoid contact during pregnancy/while nursing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/eye protection/face protection.
Response

IF exposed or concerned: Get medical advice/attention. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTRE or doctor/physician if you feel unwell. IF IN EYES: 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/attention. In case of fire: Use appropriate media for extinction. Collect spillage.

Storage

Keep cool. Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards which do not result in classification

None known.

Supplemental information

None.

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>Isopropyl alcohol</td>
<td>67-63-0</td>
<td>60-85</td>
</tr>
<tr>
<td>Doramectin</td>
<td>117704-25-3</td>
<td>0.5</td>
</tr>
<tr>
<td>Triethanolamine</td>
<td>102-71-6</td>
<td>&lt;0.1</td>
</tr>
</tbody>
</table>

4. First-aid measures

Description of necessary first aid measures

Inhalation

Move to fresh air. Call a POISON CENTRE or doctor/physician if you feel unwell. For breathing difficulties, oxygen may be necessary.

Skin contact

Take off immediately all contaminated clothing. Wash off immediately with soap and plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

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

Rinse mouth. Call a physician or poison control centre immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person.

Personal protection for first-aid responders

IF exposed or concerned: Get medical advice/attention. For personal protection, see section 8 of the SDS. Take off all contaminated clothing immediately. Wash contaminated clothing before reuse. In case of shortness of breath, give oxygen. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

Symptoms caused by exposure

May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Mild skin irritation. Prolonged exposure may cause chronic effects.

Medical attention and special treatment

Provide general supportive measures and treat symptomatically. Symptoms may be delayed. In case of shortness of breath, give oxygen. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

Highly flammable. Vapours may ignite. Vapours may travel considerable distance to a source of ignition and flash back. 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 and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

Hazchem Code

2Y E

General fire hazards

Highly flammable liquid and vapour.
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. Local authorities should be advised if significant spillages cannot be contained.

For emergency responders
Keep unnecessary personnel away. Ensure adequate ventilation. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Use personal protection recommended in Section 8 of the SDS. Avoid breathing mist or vapour. Avoid contact with eyes, skin, and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

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. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Take precautionary measures against static discharge. Prevent product from entering drains. Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Stop the flow of material, if this is without risk. Ventilate the contaminated area. Ground container and transfer equipment to eliminate static electric sparks. Use only non-sparking tools. Use water spray to disperse vapors and dilute spill to a nonflammable mixture. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Clean surface thoroughly to remove residual contamination.

Small Spills: Absorb spillage with non-combustible, absorbent material. 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
Highly flammable. May be ignited by open flame. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Wear personal protective equipment. Avoid contact with eyes, skin, and clothing. Avoid breathing mist or vapour. Avoid prolonged exposure. Do not taste or swallow. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash thoroughly after handling. Avoid release to the environment.

Also, Industrial use: Static electricity and formation of sparks must be prevented. Take measures to prevent the build up of electrostatic charge. Use only non-sparking tools. Ground container and transfer equipment to eliminate static electric sparks. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations.

Conditions for safe storage, including any incompatibilities
Store locked up. Keep containers tightly closed in a cool, well-ventilated place. < 30C/86F. Protect from light. Protect from sunlight. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. This material can accumulate static charge which may cause spark and become an ignition source. Take measures to prevent the build up of electrostatic charge. Keep away from food, drink and animal feeding stuffs. Keep out of the reach of children. Store away from incompatible materials (see Section 10 of the SDS).

Also, Industrial use: Keep in an area equipped with sprinklers. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Use only non-sparking tools.

8. Exposure controls and personal protection

Control parameters
Follow standard monitoring procedures.

Occupational exposure limits

Zoetis Components | Type | Value |
--- | --- | --- |
Doramectin (CAS 117704-25-3) | TWA | 200 µg/m³ |

Material name: DECTOMAX (Doramectin) Pour-On Solution
### 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>Isopropyl alcohol (CAS 67-63-0)</td>
<td>STEL</td>
<td>1230 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>500 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>983 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400 ppm</td>
</tr>
<tr>
<td>Triethanolamine (CAS 102-71-6)</td>
<td>TWA</td>
<td>5 mg/m³</td>
</tr>
</tbody>
</table>

### Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol (CAS 67-63-0)</td>
<td>STEL</td>
<td>1230 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>500 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>983 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400 ppm</td>
</tr>
<tr>
<td>Triethanolamine (CAS 102-71-6)</td>
<td>TWA</td>
<td>5 mg/m³</td>
</tr>
</tbody>
</table>

### US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol (CAS 67-63-0)</td>
<td>STEL</td>
<td>400 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>200 ppm</td>
</tr>
<tr>
<td>Triethanolamine (CAS 102-71-6)</td>
<td>TWA</td>
<td>5 mg/m³</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>Isopropyl alcohol (CAS 67-63-0)</td>
<td>STEL</td>
<td>1250 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>500 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>999 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400 ppm</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>Isopropyl alcohol (CAS 67-63-0)</td>
<td>TWA</td>
<td>500 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Triethanolamine (CAS 102-71-6)</td>
<td>TWA</td>
<td>200 ppm</td>
<td>Inhalable fraction.</td>
</tr>
</tbody>
</table>

### Biological limit values

#### Germany. TRGS 903, BAT List (Biological Limit Values)

<table>
<thead>
<tr>
<th>Components</th>
<th>Value</th>
<th>Determinant</th>
<th>Specimen</th>
<th>Sampling time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol (CAS 67-63-0)</td>
<td>25 mg/l</td>
<td>Aceton</td>
<td>Urine</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>25 mg/l</td>
<td>Aceton</td>
<td>Blood</td>
<td>*</td>
</tr>
</tbody>
</table>

* - For sampling details, please see the source document.

#### ACGIH Biological Exposure Indices

<table>
<thead>
<tr>
<th>Components</th>
<th>Value</th>
<th>Determinant</th>
<th>Specimen</th>
<th>Sampling time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol (CAS 67-63-0)</td>
<td>40 mg/l</td>
<td>Acetone</td>
<td>Urine</td>
<td>*</td>
</tr>
</tbody>
</table>

* - For sampling details, please see the source document.

### Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas. Eye wash fountain and emergency showers are recommended.

### 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. Use of an impervious apron is recommended.

Respiratory protection  
In case of insufficient ventilation, wear suitable respiratory equipment. 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. Chemical respirator with organic vapour cartridge, full facepiece, dust and mist filter.

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  
Clear solution.

Physical state  
Liquid.

Form  
Liquid.

Colour  
Light blue.

Odour  
Not available.

Odour threshold  
Not available.

pH  
Not available.

Melting point/freezing point  
Not available.

Initial boiling point and boiling range  
84 °C (183.2 °F)

Flash point  
14.4 °C (57.9 °F)

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(ies)  
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.

Specific gravity  
0.8 @ 25C/77F

10. Stability and reactivity

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

No dangerous reaction known under conditions of normal use.


Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition.

### 11. Toxicological information

#### Information on possible routes of exposure

**Inhalation**

May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.

**Skin contact**

Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

- **Isopropyl alcohol**
  - Result: Irritation
  - Species: Rabbit
  - Severity: Mild

- **Doramectin**
  - Species: Rabbit
  - Severity: Non-irritating

**Eye contact**

Causes serious eye irritation.

- **Isopropyl alcohol**
  - Result: Irritation
  - Species: Rabbit
  - Severity: Severe

- **Doramectin**
  - Species: Rabbit
  - Severity: Non-irritating

**Ingestion**

Health injuries are not known or expected under normal use. May be harmful if swallowed.

**Symptoms related to exposure**

May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Mild skin irritation. Prolonged exposure may cause chronic effects.

**Acute toxicity**

May be harmful if swallowed.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Doramectin (CAS 117704-25-3)</strong></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>Inhalation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dust</td>
<td>Rat</td>
<td>0.54 mg/l, 4 hours</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><strong>Subchronic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOEL</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><strong>Isopropyl alcohol (CAS 67-63-0)</strong></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>12800 mg/kg</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rat</td>
<td>16000 ppm, 8 hours</td>
</tr>
<tr>
<td>Components</td>
<td>Species</td>
<td>Test results</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td>Mouse</td>
<td>3600 mg/kg</td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td><strong>Chronic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>Rat</td>
<td>4000 ppm, 20 weeks (Liver, Central nervous system)</td>
</tr>
<tr>
<td>NOAEL</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Triethanolamine (CAS 102-71-6)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dermal</strong></td>
<td>Rabbit</td>
<td>20 g/kg</td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>8 g/kg</td>
</tr>
<tr>
<td><strong>Skin corrosion/irritation</strong></td>
<td></td>
<td>Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>Species: Rabbit</td>
<td>Result: Irritation, Severity: Mild</td>
</tr>
<tr>
<td>Doramectin</td>
<td>Species: Rabbit</td>
<td>Result: Non-irritating, Severity: Non-irritating</td>
</tr>
<tr>
<td><strong>Serious eye damage/irritation</strong></td>
<td></td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>Species: Rabbit</td>
<td>Result: Irritation, Severity: Severe</td>
</tr>
<tr>
<td>Doramectin</td>
<td>Species: Rabbit</td>
<td>Result: Non-irritating, Severity: Non-irritating</td>
</tr>
<tr>
<td><strong>Respiratory or skin sensitisation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Respiratory sensitisation</strong></td>
<td></td>
<td>Not a respiratory sensitizer.</td>
</tr>
<tr>
<td><strong>Skin sensitisation</strong></td>
<td></td>
<td>This product is not expected to cause skin sensitisation.</td>
</tr>
<tr>
<td>Doramectin</td>
<td>LLNA, concentrations up to 5%</td>
<td>Result: negative, Species: Mouse</td>
</tr>
<tr>
<td><strong>Germ cell mutagenicity</strong></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>Doramectin</td>
<td>Bacterial Mutagenicity (Ames)</td>
<td>Result: negative, Species: Salmonella</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>Bacterial Mutagenicity (Ames)</td>
<td>Result: negative, Species: Salmonella</td>
</tr>
<tr>
<td>Doramectin</td>
<td>In Vitro Sister Chromatid Exchange</td>
<td>Result: negative</td>
</tr>
<tr>
<td></td>
<td>In vivo Micronucleus</td>
<td>Result: negative, Species: Mouse</td>
</tr>
</tbody>
</table>
**Mutagenicity**
Isopropyl alcohol
Mammalian Cell Mutagenicity
Result: negative
Species: HGPRT Chinese Hamster Ovary (CHO) cells

Doramectin
Mammalian Cell Mutagenicity
Result: negative
Species: Mouse Lymphoma

Unscheduled DNA Synthesis
Result: negative
Species: Rat Hepatocyte

**Carcinogenicity**
Due to partial or complete lack of data the classification is not possible.

**ACGIH Carcinogens**
Isopropyl alcohol (CAS 67-63-0)
A4 Not classifiable as a human carcinogen.

**IARC Monographs. Overall Evaluation of Carcinogenicity**
Triethanolamine (CAS 102-71-6)
3 Not classifiable as to carcinogenicity to humans.

**Reproductive toxicity**
May cause harm to breastfed babies. Repeat-dose studies in animals have shown a potential to cause adverse effects on developing fetus.

**Developmental effects**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Route</th>
<th>Effect</th>
<th>NOEL/NOAEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol</td>
<td>Oral</td>
<td>&gt; 6 mg/kg/day Embryo / Fetal Development, Not teratogenic</td>
<td></td>
</tr>
<tr>
<td>Doramectin</td>
<td>Oral</td>
<td>0.75 mg/kg/day Embryo / Fetal Development, Maternal Toxicity, Teratogenic</td>
<td>NOEL</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>Inhalation</td>
<td>7000 ppm Prenatal &amp; Postnatal Development, Maternal toxicity, Fetotoxicity, Embryotoxicity</td>
<td>LOAEL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>Route</th>
<th>Effect</th>
<th>NOEL/NOAEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doramectin</td>
<td>Oral</td>
<td>3 mg/kg/day Embryo / Fetal Development, Fetotoxicity, Not Teratogenic</td>
<td>NOEL</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>Oral</td>
<td>1200 mg/kg/day Prenatal &amp; Postnatal Development, No effects at maximum dose</td>
<td>NOAEL</td>
</tr>
</tbody>
</table>

**Reproductivity**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Route</th>
<th>Effect</th>
<th>NOEL/NOAEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doramectin</td>
<td>Oral</td>
<td>0.3 mg/kg/day 2-generation, No effects except lower pup weight during lactation</td>
<td>NOEL</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>Oral</td>
<td>1000 mg/kg/day 2 Generation Reproductive Toxicity, Maternal Toxicity, Fetal mortality</td>
<td>LOAEL</td>
</tr>
</tbody>
</table>

**Specific target organ toxicity - single exposure**
May cause drowsiness and dizziness.
Specific target organ toxicity - repeated exposure
Due to partial or complete lack of data the classification is not possible. This product may affect Nervous system. Liver. Kidneys. through prolonged or repeated exposure.

Aspiration hazard
Not an aspiration hazard.

Chronic effects
Prolonged exposure may cause chronic effects.

Other information
May be absorbed through the skin and cause systemic effects.

12. Ecological information

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

Components

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doramectin (CAS 117704-25-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC50</td>
<td>Activated sludge</td>
<td>&gt; 1000 mg/l, 3 hours</td>
</tr>
<tr>
<td>MIC</td>
<td>Aspergillus niger (Fungus)</td>
<td>600 mg/l</td>
</tr>
<tr>
<td></td>
<td>Clostridium perfringens (Bacterium)</td>
<td>40 mg/l</td>
</tr>
<tr>
<td></td>
<td>Selenastrum capricornutum (Green Alga)</td>
<td>&gt; 0.026 mg/l, 14 days</td>
</tr>
<tr>
<td>NOEC</td>
<td>Eisenia foetida (Earthworm)</td>
<td>0.89 mg/kg, 56 days (reproduction)</td>
</tr>
<tr>
<td>NOEL</td>
<td>Selenastrum capricornutum (Green Alga)</td>
<td>0.026 mg/l, 14 days</td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC50</td>
<td>Daphnia magna (Water Flea)</td>
<td>0.0001 mg/l, 48 Hours</td>
</tr>
<tr>
<td>LC50</td>
<td>Eisenia foetida (Earthworm)</td>
<td>&gt; 1000 mg/kg, 14 days</td>
</tr>
<tr>
<td></td>
<td>Lepomis macrochirus (Bluegill Sunfish)</td>
<td>0.011 mg/l, 96 Hours</td>
</tr>
<tr>
<td></td>
<td>Oncorhynchus mykiss (Rainbow Trout)</td>
<td>0.0051 mg/l, 96 Hours</td>
</tr>
<tr>
<td>Isopropyl alcohol (CAS 67-63-0)</td>
<td>Aquatic</td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Bluegill (Lepomis macrochirus)</td>
<td>&gt; 1400 mg/l, 96 hours</td>
</tr>
<tr>
<td>Triethanolamine (CAS 102-71-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC50</td>
<td>Ceriodaphnia dubia (Daphnids)</td>
<td>610 mg/l, 48 Hours</td>
</tr>
<tr>
<td></td>
<td>Daphnia Magna (Water Flea)</td>
<td>1386 mg/l, Hours</td>
</tr>
<tr>
<td>LC50</td>
<td>Brachydanio rerio (Zebra fish)</td>
<td>11800 mg/l, 96 Hours</td>
</tr>
<tr>
<td>NOEC</td>
<td>Daphnia magna (Water Flea)</td>
<td>16 mg/l, 21 day(s)</td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>565.2 - 658.3 mg/l, 48 hours</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>10610 - 13010 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

Persistence and degradability
No data is available on the degradability of this product. As with other members of the avermectin family, doramectin is highly toxic to fish and certain aquatic organisms. However, once in contact with soil, it is tightly bound and does not readily desorb. It is unlikely to reach groundwater and is also biodegradable by soil microflora.

Photolysis
Half-life (Photolysis-aqueous)
Doramectin 4.45 hours, @ 25C

Biodegradability
Percent degradation (Aerobic biodegradation)
Doramectin 25.5 % OECD 301D
Test Duration: 28 days

Percent degradation (Aerobic biodegradation-soil)
Doramectin 50 % Loam DT50, 61-79 days

Bioaccumulative potential
No data available for this product.
Partition coefficient
n-octanol / water (log Kow)
Doramectin 4.4

Mobility in soil
No data available for this product. The active ingredient in this formulation is expected to bind to soil or sediment.

Adsorption
Soil/sediment sorption - log Koc
Doramectin 3.88 - 4.94

Other adverse effects
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 contaminate ponds, waterways or ditches with chemical or used container. Do not allow this material to drain into sewers/water supplies. 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. 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. 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 (see: Disposal instructions).

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

14. Transport information

ADG
UN number UN1219
UN proper shipping name ISOPROPANOL SOLUTION
Transport hazard class(es)
Class 3
Subsidiary risk -
Packing group II
Environmental hazards No
Hazchem Code •2YE
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Other information: Limited Quantity is <= 1.0 liters per inner packaging.

RID
UN number UN1219
UN proper shipping name Isopropanol Solution
Transport hazard class(es)
Class 3
Subsidiary risk -
Packing group II
Environmental hazards Yes
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA
UN number UN1219
UN proper shipping name Isopropanol Solution
Transport hazard class(es)
Class 3
Subsidiary risk -
Packing group II
Environmental hazards Marine Pollutant (Doramectin) >5L / Kg
Special precautions for user
Read safety instructions, SDS and emergency procedures before handling.

Other information: Consumer Commodity, 9, ID 8000 if Inner packaging <= 500 mL (17 Fl. Oz); Outer packaging <= 30 kg (66 lb) gross weight.

IMDG
UN number UN1219
UN proper shipping name Isopropanol Solution, MARINE POLLUTANT (Doramectin)
Transport hazard class(es) 3
Class -
Subsidiary risk -
Packing group II
Environmental hazards Yes
Marine pollutant F-E,S-D

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

Other information: Marine pollutant requirements apply only to quantities >5 Liters for liquids / >5 Kilograms for solids (per inner package) when shipped as per IMDG regulations. Limited Quantity is <= 1.0 liters per inner packaging. Outer packaging <= 30 kg. (66 lb) max.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not established.

ADG
IATA; IMDG; RID

Marine pollutant

General information
Please refer to the applicable dangerous goods regulations for additional information. Transport according to the requirements of the appropriate regulatory body.

15. Regulatory information
Safety, health and environmental regulations
National regulations

This Safety Data Sheet was prepared in accordance with Australia Model Code of Practice for the preparation of Safety Data Sheets for Hazardous Chemicals (23/12/2011).

APVMA Registration No. 49665
Poison Schedule (Product): Schedule 6

This SDS replaces version: Issued October 2016

Australia Medicines & Poisons Appendix E
Triethanolamine (CAS 102-71-6)

Australia Medicines & Poisons Appendix F
Triethanolamine (CAS 102-71-6)

Australia Medicines & Poisons Schedule 4
Triethanolamine (CAS 102-71-6)

Australia Medicines & Poisons Schedule 5
DORAMECTIN (CAS 117704-25-3)
TRIETHANOLAMINE (EXCLUDING ITS SALTS AND DERIVATIVES) (CAS 102-71-6)

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

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

High Volume Industrial Chemicals (HVIC)
Isopropyl alcohol (CAS 67-63-0) 1000 - 9999 TONNES See the regulation for additional information.
Triethanolamine (CAS 102-71-6) 1000 - 9999 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 Chemical Substances (AICS)</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>Country(s) or region</td>
<td>Inventory name</td>
<td>On inventory (yes/no)*</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>------------------------</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>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)  
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: 29-May-2018

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

Product and Company Identification: Synonyms
Composition / Information on Ingredients: Ingredients
Physical & Chemical Properties: Multiple Properties
Transport Information: Proper Shipping Name/Packing Group
Regulatory Information: Other
GHS: Classification