# SAFETY DATA SHEET

## Section 1 - Identification

**Product identifier** **REVOLUTION; STRONGHOLD**

**Other means of identification**

**Synonyms** Selamectin topical solution- Single dose tubes * PARADYNE * REVOLUTION 6% * REVOLUTION 12% * STRONGHOLD 6 * STRONGHOLD 12

**Recommended use of the chemical and restrictions on use**

**Recommended use** Veterinary antiparasitic ( endectocide )

**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)

## Section 2 - Hazard(s) identification

**Classification of the hazardous chemical**

| | | |
|---|---|---|
| **Physical hazards** | Flammable liquids | Category 2 |
| **Health hazards** | Serious eye damage/eye irritation | Category 2A |
| | Reproductive toxicity | Category 2 |
| | 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 | Health hazard | Exclamation mark | Environment

**Signal word** Danger

**Hazard statement(s)** Highly flammable liquid and vapour. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of damaging fertility or the unborn child. Very toxic to aquatic life with long lasting effects.

**Precautionary statement(s)**

**Prevention** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid breathing mist/vapours. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

| | |
|---|---|
| **Response** | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF exposed or concerned: Get medical advice/attention. Call a POISON CENTRE/doctor if you feel unwell. In case of fire: Use appropriate media to extinguish. Collect spillage. If eye irritation persists: Get medical advice/attention. |
| **Storage** | Store in a well-ventilated place. Keep cool. Store locked up. |
| **Disposal** | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| **Supplemental information** | May cause slight skin irritation. |
| **Other hazards which do not result in classification** | None known. |

## Section 3 - Composition and information on ingredients

**Mixture**

| Identity of chemical ingredients | CAS number and other unique identifiers | Concentration of ingredients (%) |
|---|---|---|
| Isopropyl alcohol | 67-63-0 | 72-86 |
| Selamectin | 220119-17-5 | 7-15 |
| DIPROPYLENE GLYCOL METHYL ETHER | 34590-94-8 | 6-14 |
| Butylated hydroxytoluene | 128-37-0 | <1 |

## Section 4 - First aid measures

**Description of necessary first aid measures**

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|---|---|
| **Inhalation** | For breathing difficulties, oxygen may be necessary. Call a POISON CENTRE or doctor/physician if you feel unwell. |
| **Skin contact** | Take off immediately all contaminated clothing. 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. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. |
| **Personal protection for first-aid responders** | 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. IF exposed or concerned: Get medical advice/attention. Wash contaminated clothing before reuse. For personal protection, see section 8 of the SDS. 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. |
| **Symptoms caused by exposure** | May cause drowsiness and dizziness. Headache. Nausea, vomiting. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Mild skin irritation. |
| **Medical attention and special treatment** | Provide general supportive measures and treat symptomatically. Symptoms may be delayed. |

## Section 5 - Firefighting measures

| | |
|---|---|
| **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** | 2YE |
| **General fire hazards** | Highly flammable liquid and vapour. |
| **Specific methods** | Use standard firefighting procedures and consider the hazards of other involved materials. |

**Extinguishing media**

| | |
|---|---|
| **Suitable extinguishing media** | Water fog. Alcohol resistant foam. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. |
| **Unsuitable extinguishing media** | Do not use water jet as an extinguisher, as this will spread the fire. |

## Section 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. Keep people away from and upwind of spill/leak. 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. Avoid breathing mist/vapours. Avoid contact with eyes, skin, and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use appropriate containment to avoid environmental contamination. Local authorities should be advised if significant spillages cannot be contained. Use personal protection recommended in Section 8 of the SDS. |
| **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). Extinguish all flames in the vicinity. Keep combustibles (wood, paper, oil etc) away from spilled material. Prevent product from entering drains. Prevent entry into waterways, sewer, basements or confined areas.<br><br>Large Spills: Stop the flow of material, if this is without risk. Ground container and transfer equipment to eliminate static electric sparks. Take precautionary measures against static discharge. 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.<br><br>Small Spills: Absorb spillage with non-combustible, absorbent material. Clean surface thoroughly to remove residual contamination.<br><br>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. |

## Section 7 - Handling and storage

| | |
|---|---|
| **Precautions for safe handling** | Highly flammable. May be ignited by open flame. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not taste or swallow. Avoid breathing mist or vapour. Avoid contact with eyes, skin, and clothing. Use only outdoors or in a well-ventilated area. Wear personal protective equipment. Observe good industrial hygiene practices. Wash thoroughly after handling. When using, do not eat, drink or smoke. Avoid release to the environment. Avoid prolonged exposure.<br><br>Also, Industrial use: Take precautionary measures against static discharges. Use only non-sparking tools. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Ground and bond containers when transferring material. 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. Store below 30°C (86°F) Store in a cool, dry place out of direct sunlight. Do not handle or store near an open flame, heat or other sources of ignition. 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).<br><br>Also, Industrial use: Keep in an area equipped with sprinklers. 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. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. |

## Section 8 - Exposure controls and personal protection

| | |
|---|---|
| **Control parameters** | Follow standard monitoring procedures. |

**Occupational exposure limits**

**Zoetis**

| Components | Type | Value |
|---|---|---|
| Selamectin (CAS 220119-17-5) | TWA | 200 µg/m³ |

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

| Components | Type | Value |
|---|---|---|
| Butylated hydroxytoluene (CAS 128-37-0) | TWA | 10 mg/m3 |
| DIPROPYLENE GLYCOL METHYL ETHER (CAS 34590-94-8) | TWA | 308 mg/m3 |
| | | 50 ppm |
| Isopropyl alcohol (CAS 67-63-0) | STEL | 1230 mg/m3 |
| | | 500 ppm |
| | TWA | 983 mg/m3 |
| | | 400 ppm |

**US. ACGIH Threshold Limit Values (TLV)**

| Components | Type | Value | Form |
|---|---|---|---|
| Butylated hydroxytoluene (CAS 128-37-0) | TWA | 2 mg/m3 | Inhalable fraction and vapour. |
| DIPROPYLENE GLYCOL METHYL ETHER (CAS 34590-94-8) | TWA | 50 ppm | |
| Isopropyl alcohol (CAS 67-63-0) | STEL | 400 ppm | |
| | TWA | 200 ppm | |

**UK. OELs. Workplace Exposure Limits (WELs) (EH40/2005 (Fourth Edition 2020)), Table 1**

| Components | Type | Value |
|---|---|---|
| Butylated hydroxytoluene (CAS 128-37-0) | TWA | 10 mg/m3 |
| DIPROPYLENE GLYCOL METHYL ETHER (CAS 34590-94-8) | TWA | 308 mg/m3 |
| | | 50 ppm |
| Isopropyl alcohol (CAS 67-63-0) | STEL | 1250 mg/m3 |
| | | 500 ppm |
| | TWA | 999 mg/m3 |
| | | 400 ppm |

**Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG), as updated**

| Components | Type | Value | Form |
|---|---|---|---|
| Butylated hydroxytoluene (CAS 128-37-0) | TWA | 10 mg/m3 | Vapor and aerosol, inhalable fraction. |
| DIPROPYLENE GLYCOL METHYL ETHER (CAS 34590-94-8) | TWA | 310 mg/m3 | Vapour. |
| | | 50 ppm | Vapour. |
| Isopropyl alcohol (CAS 67-63-0) | TWA | 500 mg/m3 | |
| | | 200 ppm | |

**Biological limit values**

**ACGIH Biological Exposure Indices (BEI)**

| Components | Value | Determinant | Specimen | Sampling Time |
|---|---|---|---|---|
| Isopropyl alcohol (CAS 67-63-0) | 40 mg/l | Acetone | Urine | * |

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

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

| Components | Value | Determinant | Specimen | Sampling Time |
|---|---|---|---|---|
| Isopropyl alcohol (CAS 67-63-0) | 25 mg/l | ACETON | Urine | * |
| | 25 mg/l | ACETON | Blood | * |

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

**Appropriate engineering controls**

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Provide eyewash station and safety shower. Industrial use: Provide adequate general and local exhaust ventilation.

**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 protective gloves.

Industrial use: Wear appropriate chemical resistant gloves. Impervious gloves are recommended if skin contact with drug product is possible and for bulk processing operations.

**Other**

Not normally needed.

Industrial use: Wear suitable protective clothing. Impervious protective clothing is recommended if skin contact with drug product is possible and for bulk processing operations.

**Respiratory protection**

No personal respiratory protective equipment normally required.

Industrial use: In case of insufficient ventilation, wear suitable respiratory equipment. 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 and full facepiece.

**Thermal hazards**

Not applicable.

**Hygiene measures**

Observe any medical surveillance requirements. When using do not 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.

## Section 9 - Physical and chemical properties

**Appearance**

Liquid solution.

**Physical state**

Liquid.

**Form**

Liquid.

**Colour**

Yellow. - Colourless.

**Odour**

Characteristic alcohol odor.

**Odour threshold**

Not available.

**pH**

Not available.

**Melting point/freezing point**

194 °C (381.2 °F) estimated

**Initial boiling point and boiling range**

84 °C (183.2 °F)

**Flash point**

19.0 °C (66.2 °F)

**Evaporation rate**

Not available.

**Vapour pressure**

Not available.

**Vapour density**

Not available.

| | |
|---|---|
| **Relative density** | Not available. |
| **Solubility(ies)** | |
| **Solubility (water)** | Insoluble |
| **Partition coefficient (n-octanol/water)** | Not available. |
| **Flammability (solid, gas)** | Not applicable. |
| **Upper/lower flammability or explosive limits** | |
| **Explosive limit - lower ( %)** | Not available. |
| **Explosive limit – upper (%)** | 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** | > 0.82 - < 0.85 |

## Section 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** | Keep away from heat, spark, open flames and other sources of ignition. Sunlight. Contact with incompatible materials. |
| **Incompatible materials** | Acids. Strong oxidising agents. Isocyanates. Chlorine. Combustible material. organic materials. |
| **Hazardous decomposition products** | Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition. |

## Section 11 - Toxicological information

**Information on possible routes of exposure**

**Inhalation** May cause drowsiness or 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<br>Species: Rabbit<br>Severity: Mild |
| DIPROPYLENE GLYCOL METHYL ETHER | Species: Rabbit<br>Severity: Mild |
| Selamectin | Species: Rabbit<br>Severity: Minimal |
| Butylated hydroxytoluene | Species: Rabbit<br>Severity: Moderate |

**Eye contact** Causes serious eye irritation.

| | |
|---|---|
| Isopropyl alcohol | Result: Irritation<br>Species: Rabbit<br>Severity: Severe |
| DIPROPYLENE GLYCOL METHYL ETHER | Species: Rabbit<br>Severity: Mild |
| Selamectin | Species: Rabbit<br>Severity: Mild |

**Eye contact**

| | |
|---|---|
| Butylated hydroxytoluene | Species: Rabbit<br>Severity: Moderate |

**Ingestion** Health injuries are not known or expected under normal use. May be harmful if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

**Symptoms related to exposure** Headache. Nausea, vomiting. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Mild skin irritation. Prolonged exposure may cause chronic effects.

**Acute toxicity** May be harmful if swallowed.

| Components | Species | Test Results |
|---|---|---|
| Butylated hydroxytoluene (CAS 128-37-0) | | |
| **Acute** | | |
| **Dermal** | | |
| LD50 | Rat | > 2000 mg/kg |
| **Intraperitoneal** | | |
| LD50 | Mouse | 138 mg/kg |
| **Oral** | | |
| LD50 | Mouse | 650 mg/kg |
| | Rat | 1700 mg/kg |
| | | 890 mg/kg |
| **Chronic** | | |
| **Oral** | | |
| LOAEL | Mouse | 2000 mg/kg, 4 days Liver, Kidney, Ureter, Bladder |
| | Rat | 5185 mg/kg, 4 weeks Liver |
| DIPROPYLENE GLYCOL METHYL ETHER (CAS 34590-94-8) | | |
| **Acute** | | |
| **Dermal** | | |
| LD50 | Rabbit | 9510 mg/kg |
| **Inhalation** | | |
| *Vapour* | | |
| LC50 | Rat | > 3.35 mg/l, 7 hours (No deaths) |
| **Oral** | | |
| LD50 | Rat | > 5000 mg/kg |
| Isopropyl alcohol (CAS 67-63-0) | | |
| **Acute** | | |
| **Dermal** | | |
| LD50 | Rabbit | 12800 mg/kg |
| **Inhalation** | | |
| LC50 | Rat | 16000 ppm, 8 hours |
| | | 51.05 mg/l, 8 Hours |
| | | 30 mg/l |
| **Oral** | | |
| LD50 | Mouse | 3600 mg/kg |
| | Rat | > 2000 mg/kg |
| **Chronic** | | |
| **Inhalation** | | |
| NOAEL | Rat | 4000 ppm, 20 weeks (Liver, Central nervous system) |

| Components | Species | Test Results |
|---|---|---|
| Selamectin (CAS 220119-17-5) | | |
| **Acute** | | |
| **Oral** | | |
| LD50 | Mouse | > 1600 mg/kg |
| | Rat | > 1600 mg/kg |
| **Subchronic** | | |
| **Oral** | | |
| NOAEL | Dog | 40 mg/kg/day, 3 months [Target organ(s): None identified] |
| | Rat | 5 mg/kg/day, 3 months [Target organ(s): Liver] |

**Skin corrosion/irritation** Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

**Corrosivity**

| | |
|---|---|
| Isopropyl alcohol | Result: Irritation<br>Species: Rabbit<br>Severity: Mild |
| DIPROPYLENE GLYCOL METHYL ETHER | Species: Rabbit<br>Severity: Mild |
| Selamectin | Species: Rabbit<br>Severity: Minimal |

**Serious eye damage/irritation** Causes serious eye irritation.

**Eye contact**

| | |
|---|---|
| Isopropyl alcohol | Result: Irritation<br>Species: Rabbit<br>Severity: Severe |
| DIPROPYLENE GLYCOL METHYL ETHER | Species: Rabbit<br>Severity: Mild |
| Selamectin | Species: Rabbit<br>Severity: Mild |
| Butylated hydroxytoluene | Species: Rabbit<br>Severity: Moderate |

**Respiratory or skin sensitisation**

**Respiratory sensitisation** Not a respiratory sensitiser.

**Skin sensitisation** This product is not expected to cause skin sensitisation.

**Skin Sensitisation**

| | |
|---|---|
| Selamectin | GPMT<br>Species: Guinea Pig<br>Severity: Negative |

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Mutagenicity**

| | |
|---|---|
| Isopropyl alcohol | Bacterial Mutagenicity (Ames)<br>Result: Negative<br>Species: Salmonella |
| Selamectin | Bacterial Mutagenicity (Ames)<br>Result: Negative<br>Species: Salmonella |
| | In Vitro Cytogenetics<br>Result: Negative<br>Species: Human lymphocytes |

**Mutagenicity**

| | |
|---|---|
| Isopropyl alcohol | In Vitro Sister Chromatid Exchange<br>Result: Negative |
| DIPROPYLENE GLYCOL METHYL ETHER | In vitro tests<br>Result: Negative |
| Selamectin | In Vivo Micronucleus<br>Result: Negative<br>Species: Mouse |
| | Mammalian Cell Mutagenicity<br>Result: Negative<br>Species: Chinese Hamster Ovary (CHO) cells HGPRT |
| Isopropyl alcohol | Mammalian Cell Mutagenicity<br>Result: Negative<br>Species: HGPRT Chinese Hamster Ovary (CHO) cells |

**Carcinogenicity**

**ACGIH Carcinogens**

| | |
|---|---|
| Butylated hydroxytoluene (CAS 128-37-0) | A4 Not classifiable as a human carcinogen. |
| Isopropyl alcohol (CAS 67-63-0) | A4 Not classifiable as a human carcinogen. |

**IARC Monographs. Overall Evaluation of Carcinogenicity**

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

**Reproductive toxicity** Suspected of damaging fertility or the unborn child.

**Developmental effects**

| | |
|---|---|
| Selamectin | 10 mg/kg/day Prenatal & Postnatal Development, Developmental toxicity<br>Result: NOAEL<br>Species: Rat |
| Isopropyl alcohol | 1200 mg/kg/day Prenatal & Postnatal Development, No effects at maximum dose<br>Result: NOAEL<br>Species: Rat<br>Organ: Oral |
| Selamectin | 40 mg/kg/day Prenatal & Postnatal Development, Maternal Toxicity<br>Result: NOAEL<br>Species: Rat<br>Organ: Oral |
| Butylated hydroxytoluene | 6 g/kg Embryo / Fetal Development, teratogenic<br>Result: LOEL<br>Species: Rat<br>Organ: Oral |
| Isopropyl alcohol | 7000 ppm Prenatal & Postnatal Development, Maternal toxicity, Fetotoxicity, Embryotoxicity<br>Result: LOAEL<br>Species: Rat<br>Organ: Inhalation |
| DIPROPYLENE GLYCOL METHYL ETHER | Not teratogenic |

**Reproductivity**

| | |
|---|---|
| Selamectin | 10 mg/kg/day Reproductive & Fertility, Fetotoxicity<br>Result: NOAEL<br>Species: Rat |

**Reproductivity**

| | |
|---|---|
| Isopropyl alcohol | 1000 mg/kg/day 2 Generation Reproductive Toxicity, Maternal Toxicity, Fetal mortality<br>Result: LOAEL<br>Species: Rat<br>Organ: Oral |

**Specific target organ toxicity - single exposure** May cause drowsiness or dizziness.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** Prolonged inhalation may be harmful.

**Other information** Caution - Pharmaceutical agent.

## Section 12 - Ecological information

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

| Components | | Species | Test Results |
|---|---|---|---|
| Isopropyl alcohol (CAS 67-63-0) | | | |
| **Aquatic** | | | |
| *Acute* | | | |
| Fish | LC50 | Bluegill (Lepomis macrochirus) | > 1400 mg/l, 96 hours |
| Selamectin (CAS 220119-17-5) | | | |
| **Aquatic** | | | |
| Algae | EC50 | Selenastrum capricornutum (Green Alga) | > 763 ug/l, 72 Hours |
| Crustacea | EC50 | Daphnia magna (Water Flea) | 26 ng/l, 48 Hours |
| | LC50 | Mysidopsis bahia (Mysid Shrimp) | 28 ng/l, 96 Hours |
| Fish | LC50 | Cyprinodon variegatus (Sheepshead Minnow) | > 28 ug/l, 48 Hours |
| | | Oncorhynchus mykiss (rainbow trout) | 266 ug/l, 96 Hours |

**Persistence and degradability** No data is available on the degradability of this product. As with other members of the avermectin family, selamectin 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.

**Biodegradability**

**Percent Degradation (Aerobic Biodegradation)**

| | |
|---|---|
| DIPROPYLENE GLYCOL METHYL ETHER | Result: Readily biodegradable |

**Bioaccumulative potential** No data available for this product. Not expected to bioaccumulate. The following information is available for the individual ingredients.

**Partition coefficient n-octanol / water (log Kow)**

| | |
|---|---|
| Selamectin | 3.1, [Measured, Log P] |

**Mobility in soil** The product is immiscible with water and will spread on the water surface. No data available for this product.

**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.

## Section 13 - Disposal considerations

| | |
|---|---|
| **Disposal methods** | Avoid release to the environment. Do not incinerate sealed containers. Do not discharge into drains, water courses or onto the ground. Do not allow this material to drain into sewers/water supplies. Dispose of contents/container in accordance with local/regional/national/international regulations.<br><br>Industrial use: 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. Do not contaminate ponds, waterways or ditches with chemical or used container. |
| **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. Industrial use: |
| **Contaminated packaging** | Since emptied containers may retain product residue, follow label warnings even after container is emptied. |

## Section 14 - Transport information

**ADG**

| | |
|---|---|
| **UN number** | UN1219 |
| **UN proper shipping name** | Isopropanol Solution |
| **Transport hazard class(es)** | |
| **Class** | 3 |
| **Subsidiary hazard** | - |
| **Packing group** | II |
| **Environmental hazards** | No |
| **Hazchem code** | 2YE |
| **Special precautions for user** | Read safety instructions, SDS and emergency procedures before handling. |

See "excepted quantity" provisions if applicable.

**RID**

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

See "excepted quantity" provisions if applicable.

**IATA**

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

See "excepted quantity" provisions if applicable.

**IMDG**

| | |
|---|---|
| **UN number** | UN1219 |
| **UN proper shipping name** | Isopropanol Solution, MARINE POLLUTANT (Selamectin) |
| **Transport hazard class(es)** | |
| **Class** | 3 |
| **Subsidiary hazard** | - |
| **Packing group** | II |
| **Environmental hazards** | |
| **Marine pollutant** | Yes |
| **EmS** | F-E, S-D |
| **Special precautions for user** | Read safety instructions, SDS and emergency procedures before handling. |

See "excepted quantity" provisions if applicable. Marine pollutant requirements apply only to quantities >5 Liters for liquids / >5 Kilograms for solids (per inner package) when shipped as per IMDG, IATA or ADR regulations.

**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**

For small quantities packed in combination packaging, exceptions may apply. See "excepted quantity" provisions if applicable. Please refer to the applicable dangerous goods regulations for additional information. Transport according to the requirements of the appropriate regulatory body.

## Section 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. 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.

APVMA Registration No: 50867, 50881, 50882

**Australia Medicines & Poisons Appendix B**

DIPROPYLENE GLYCOL METHYL ETHER (CAS 34590-94-8)

**High Volume Industrial Chemicals (HVIC)**

| | |
|---|---|
| Isopropyl alcohol (CAS 67-63-0) | 1000 - 9999 TONNES See the regulation for additional information. |

**Importation of Ozone Depleting Substances (Customs(Prohibited imports) Regulations 1956, Schedule 10, as amended)**

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 Carcinogenic Substances**

Not regulated.

**Restricted Importation of Organochlorine Chemicals (Customs(Prohibited Imports) Regulations 1956, Schedule 9)**

Not listed.

**International regulations**

**Stockholm Convention**

Not applicable.

**Rotterdam Convention**

Not applicable.

**Kyoto Protocol**

Not applicable.

**Montreal Protocol**

Not applicable.

**Basel Convention**

Not applicable.

**International Inventories**

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

*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).

## Section 16 - Any other relevant information

| | |
|---|---|
| **Issue date** | 12-December-2019 |
| **Revision date** | 08-August-2024 |
| **Key abbreviations or acronyms used** | AICIS: Australian Inventory of Industrial Chemicals. |
| **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** | Section 7 - Handling and storage: Precautions for safe handling<br>Section 7 - Handling and storage: Conditions for safe storage, including any incompatibilities<br>Physical & Chemical Properties: Multiple Properties |