


1: Identification of the Substance and Supplier

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| Product Name | INVICTUS OIL |
| Recommended Use | Horticultural Spraying Oil |
| Suppliers Details | Orion AgriScience Ltd Unit 1, 15 Sir Gil Simpson Drive, Harewood, Christchurch, 8053 PO Box 39 071, Harewood, Christchurch, 8545 |
| Web Address | www.orionagriscience.co.nz |
| Email Address | orders@orionagriscience.co.nz |
| Telephone Number | (03) 928 2386 (office hours), 0800 674 6627 (free phone) |
| Emergency Telephone | 0800 CHEMCALL (0800 243 622) (24 hours) |
| National Poison Centre | 0800 POISON (0800 764 766) (24 hours) |
| Date of Issue/Revision | November 2020 |

2: Hazards Identification

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| Hazard Pictograms |  |
| Signal Words | Danger |
| Hazard Classes: | Hazard Statements: |
| 6.1E Aspiration Hazard (Cat. 1) | H304 May be fatal if swallowed and enters airways |
| Precautionary Statements: | |
| Prevention | P101 If medical advice is needed, have product container or label at hand P102 Keep out of reach of children P103 Read carefully and follow all instructions Read label before use. Avoid contact with eyes and skin. Do not breathe in the vapour or spray mist. When mixing or applying, wear personal protection as described in section 8. |
| Response | P301+P316 IF SWALLOWED: Get emergency medical help immediately P331 Do NOT induce vomiting First aid measures described in section 4. Contain and collect spillage for disposal. In an emergency call 111, Police or Fire Brigade. For specialist advice in an emergency only, call 0800 CHEMCALL (0800 243 6225) (24 hrs). |
| Storage | P405 Store locked up |
| Disposal | P501 Dispose of contents by using it in accordance with this label. Dispose of the container via AgRecovery after triple rinsing (use the rinsate for spraying). |

3: Composition/ Information on Ingredients

| Ingredient | CAS No | Content (% w/v) |
|-------------------|-------------|-----------------|
| Mineral Oil | 64742-46-7 | >60 |
| Other ingredients | Proprietary | Remainder |

4: First Aid Measures

If medical advice is needed, have product container or label at hand. If exposed or concerned, get medical advice. For advice call the National Poisons Centre or a Doctor

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| Ingestion: | Do not induce vomiting. Seek medical advice immediately |
| Skin Contact: | Wash with plenty of soap and water. Seek medical advice if irritation occurs. |

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| Eye Contact: | Rinse cautiously with water for several minutes. Remove contact lenses, if easy to do so. Continue rinsing. Seek medical advice if irritation persists. |
| Inhalation: | Remove to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice immediately |
| Workplace Facilities: | Hand wash facility. Eye wash facility |
| Advice to Doctor: | No specific antidote. Treat symptomatically. If gastric lavage or emesis is considered necessary, inhalation of hydrocarbons must be prevented. Hydrocarbon aspiration may complicate poisonings involving ingestion. |
| National Poison Centre | 0800 POISON (0800 764 766) (24 hours) |
| Symptoms of Exposure which could occur if this material is not handled in accordance with instructions: | |
| Ingestion: | Nausea, vomiting, diarrhea. Product may enter lungs due to low viscosity. |
| Skin Contact: | Mild Irritation. Prolonged or repeated contact may result in degreasing of the skin and dermatitis. |
| Eye Contact: | Irritation |
| Inhalation: | Irritation. See Ingestion. |

5: Fire-Fighting Measures

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| Fire/Explosion Hazard | Non-Flammable (but will be combustible in a fire) |
| HAZCHEM Code | Not Applicable |
| ERP Guide No | Not Applicable |
| Extinguishing Media | Water spray, foam, dry chemical or CO2. Avoid water jet. |
| Fire Fighting Instructions | During a fire, toxic fumes may be emitted. Wear self-contained breathing apparatus. Contain runoff. |
| Specific Hazards Arising from Fire | No data available |

6: Accidental Release Measures

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| Personal Precautions | Caution: Floors may be slippery if wet. Wear personal protective clothing and equipment as described in section 8. Exclude non-essential people from the area. Eliminate all ignition sources and naked lights. Ensure adequate ventilation, especially in confined spaces. |
| Environmental Precautions | Prevent further spillage or leakage. Prevent material from entering drains, waterways, etc. |
| Clean Up | Absorb spillage with inert material such as spill kit, sand or cat litter. Collect and place in a sealable container for disposal. Wash down affected area with water and detergent. Absorb and collect washings for disposal. Dispose of safely to a suitable landfill. |

7: Handling and Storage

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| Storage: | Keep out of reach of children. Store in the original tightly closed container in a locked and secure area. |
| Handling and Use: | Refer to Prevention statements in section 2 above. Exclude people and animals from the application area, both during application and for the duration of the REI. |
| REI | Until spray has dried |

8: Exposure Controls / Personal Protection

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| Tolerable Exposure Limit | None established |
| Workplace Exposure Standards | None established |
| Engineering Controls | Select spray application equipment to minimize exposure to operator and bystanders |
| Personal Protection: | |
| Eye | Safety glasses/goggles when mixing or applying |
| Skin | Chemical resistant overalls snugly fitting at the neck, wrist and ankle, boots and gloves |
| Respiratory | Not required where spray mist is not inhaled. Otherwise, respirator (organic vapour and particulate matter) is required. |

Clean protective equipment after use

9: Physical and Chemical Properties

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| Appearance | Clear amber liquid |
| Odour | Aliphatic |
| Odour Threshold | No data available |
| pH | Not applicable |
| Melting Point/Freezing Point | No data available |
| Boiling Point | >300°C |
| Flash Point | >140°C |
| Flammability | Combustible |
| Upper/Lower Flammability Limits | 1 – 6% in air |
| Vapour Pressure | No data available |
| Vapour Density | No data available |
| Relative Density | 0.815 – 0.840 g/mL (approx.) |
| Solubility in Water | Emulsifiable |
| Partition Coefficient: n-octanol/water | See section 12 |
| Auto ignition Temperature | >230°C |
| Decomposition Temperature | No data available |
| Kinematic Viscosity | <20.5 mm ² /s |

10: Stability and Reactivity

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| Stability | Stable under normal conditions |
| Hazardous Reactions | None Expected |
| Incompatibility | None Known |
| Hazardous Decomposition Products | None Known |

11: Toxicological Information

This section describes effects which could occur if this material is not handled in accordance with this data sheet and label instructions

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| Acute Oral Toxicity | LD50 > 5000 mg/kg |
| Acute Dermal Toxicity | LD50 > 5000 mg/kg |
| Acute Inhalation Toxicity | LD50 > 5 mg/L (Note: Aspiration hazard) |
| Skin Irritant/Corrosive | None |
| Eye Irritant/Corrosive | None |
| Sensitisation Effects | None |
| Mutagenic Effects | None |
| Carcinogenic Effects | None |
| Reproductive Effects | None |
| Specific Organ Toxicity | None |

12: Ecological Information

This section describes effects which could occur if this material is not handled in accordance with this data sheet and label instructions

The following information is presented in respect of the active ingredient:

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| Ecotoxicity | <ul style="list-style-type: none"> Acute Oral LD50 (Rat) >5000 mg/kg LC50 (96 hr) (Fish) >100 mg/l EC50 (48 hr) (Crustacea) >100 mg/l EC50 (72 hr) (Algae) >100 mg/l Non – toxic to bees |
| Persistence/degradability | Biodegradable |

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| Bioaccumulative Potential | Not bioaccumulative |
| Soil Mobility | Immobile in soil |
| Environmental Exposure Limit: | None established |

13: Disposal Considerations

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| Product | Dispose of product by using it in accordance with the label. Waste product should be disposed of to a suitable landfill. For disposal of large quantities contact Orion AgriScience Ltd. |
| Container | Dispose of to a suitable landfill or via AgRecovery. Do not burn. Do not use packaging for any other purpose. |

14: Transport Information

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| Dangerous Goods | |
| UN Number | Not Applicable – Not dangerous for transport |
| Proper Shipping Name | Not Applicable – Not dangerous for transport |
| Class | Not Applicable – Not dangerous for transport |
| Subsidiary Class | Not Applicable – Not dangerous for transport |
| Packing Group | Not Applicable – Not dangerous for transport |
| Additional Information | Not Applicable – Not dangerous for transport |
| MTQ (Non-Commercial) | Not Applicable – Not dangerous for transport |
| Passenger Service Vehicle | No restriction |

15 Regulatory Information

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| EPA Approval No | HSR002503 |
| ACVM Registration No | P9597 |
| Qualified Person | Not required |
| Certified Handler | Not required |
| Workplace Only | No |
| Tracking | Not required |
| Record Keeping | Not required |
| Site Requirements under EPA Notice and HSWHS Regs: | <ul style="list-style-type: none"> • A hazardous substance location compliance certificate is not required • A hazardous area is not required • Separation distances for class 3 and class 6 substances to protected places and public places is not applicable • Fire extinguishers are not required • Signage is not required • An emergency response plan is not required • Secondary containment is not required • Segregation from incompatible substances (classes 1, 2, 3.2, 4 and 5) is not required |
| Additional Requirements | Refer to NZS 8409:2004 'Management of Agrichemicals', and relevant local and regional council plans |

16: Other Information

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| Glossary | |
| ADE | Acceptable Daily Exposure – A daily dose, received via any route, below which no adverse effects are expected over a lifetime of exposure |
| ACVM | Agricultural Compounds and Veterinary Medicines group of the Ministry of Primary Industries |
| Cat. | GHS category |
| Ceiling | A concentration that should not be exceeded at any time during any part of the working day |
| Certified Handler | A qualification issued by a Compliance Certifier to handle and use particularly toxic substances (6.1A and |

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| DT50 | 6.1B) Time (days) for 50% reduction in concentration |
| EC50 | Concentration required to produce an effect in 50% of organisms |
| Environmental Exposure Limit | Maximum concentration limit of a substance in an environmental medium, e.g., water, soil. |
| EPA Notice | Hazardous Property Controls Notice 2017 |
| ERP Guide | Dangerous Goods – Initial Emergency Response Guide SNZ HB 76:2008 |
| GHS | Globally harmonized system of classification and labelling of chemicals |
| Hazardous Substance Location | For locations storing hazard substances of certain classes above threshold quantities |
| Compliance Certificate | |
| Hazardous Area | A designated area designed for the presence of flammable substances - Refer AS/NZS 60079.10.1:2009 |
| HAZCHEM Code | Emergency action code for emergency services |
| HSWHS Regs | Health and Safety at Work (Hazardous Substances) Regulations 2017 |
| LC50 | Concentration that will kill 50% of organisms |
| LD50 | Dose that will kill 50% of organisms |
| MTQ | Maximum Transport Quantity. The maximum amount of dangerous goods that can be transported by road by the user |
| Notification | Advance notice given to neighbours and other affected parties, of details of proposed application, and other details as described |
| Octanol-Water Partition Coefficient | The partition coefficient of a substance between n-octanol and water, used as the Logarithm base 10 form, as an indicator that a substance may bioaccumulate |
| PDE | Permitted Daily Exposure - A daily dose below which no adverse effects are expected over a lifetime of exposure |
| Protected Place | Residential properties, schools, hospitals, kindys, factories, shops, warehouses, etc., and other places where people assemble |
| Public Place | A place frequented by the public, including roads (does not include private property) |
| Qualified Person | A requirement for the loader, contractor or person applying the product to hold a qualification such as a GROWSAFE Certificate, Unit Standard 21563, etc. |
| Record Keeping | Includes a spray diary or other record of application |
| REI | Restricted Entry Interval – The length of time after application before entry into the treated area is permitted without the use of protective equipment. For indoor environments, this time period commences once ventilation after treatment begins. |
| Segregation | Certain classes of substances must not be in contact with, and must be stored separately from, certain other classes as specified in HSWHS Regs |
| Separation Distances | The distances specified in Part 11 and Part 13 of HSWHS Regs between storage and/or use of hazardous substances and protected places and/or public places |
| Signage | Positioned at entrances to commercial premises providing information on the hazardous substances present |
| Soil Adsorption Coefficient (Kd) | The ratio of the concentrations of a substance adsorbed onto a solid sorbent to that dissolved in a liquid phase. The higher the value the less mobile the chemical is in soil |
| Soil Organic Carbon-Water Partitioning Coefficient (Koc) | The ratio of the mass of a chemical that is adsorbed in the soil per unit mass of organic carbon in the soil. |
| STEL | Short term exposure level – 15 minute time weighted average |
| Tolerable Exposure Limit | Maximum concentration limit of a substance above which persons must not be exposed |
| Tracking | For some particularly hazardous substances, a record must be kept of the transport, storage, sale and use of the product |

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TWA

Time weighted average calculated over an 8 hour working day

Workplace Exposure Standard

An occupational health standard limiting concentrations of specified substances to which persons are exposed

Workplace Only

A product that is restricted to a workplace only and under the supervision of a certified handler

Please Note

Users must ensure that the most up to date version of this safety data sheet is used.

This Safety Data Sheet summarises information on this product, and how to safely handle and use the product. Each user should familiarise themselves with the product label and Safety Data Sheet, and consider the information in the context of how the product will be handled and used, including in conjunction with other products. Orion AgriScience Ltd assumes no responsibility for the accuracy, completeness or suitability of this information. The user is responsible for determining the suitability and accuracy of this information for their particular purposes.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.