

1: Identification of the Substance and Supplier

Product Name	INVICTUS OIL
Recommended Use	Horticultural spraying oil
Company 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	August 2018

2: Hazards Identification

Hazard Pictograms	(None)
Priority Identifiers	HARMFUL Keep Out of Reach of Children
HSNO Classes	Secondary Identifiers:
6.1E	May be harmful if swallowed, inhaled or absorbed through the skin
6.3B	May cause mild skin irritation
9.1D	Harmful to aquatic organisms

3: Composition/ Information on Ingredients

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

4: First Aid Measures

Skin Contact:	In case of contact, immediately wash affected area with soap and water. Wash contaminated clothing before reuse. Seek medical advice if irritation persists.
Eye Contact:	Hold eyes open and rinse with water for at least 15 minutes. Remove contact lenses if easy to do so. Seek medical advice if irritation persists.
Ingestion:	Do not induce vomiting. Seek medical advice if feeling unwell.
Inhalation:	Immediately move to fresh air and rest. Maintain half upright position if breathing is difficult. Seek medical advice immediately.
Workplace Facilities:	Hand wash facility. Eye wash facility.
Advice to Doctor:	No specific antidote. Treat symptomatically. If swallowed, product may enter lungs due to low viscosity and lead to serious pulmonary lesions.
National Poison Centre	0800 POISON (0800 764 766) (24 hours)

5: Fire-Fighting Measures

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.

6: Accidental Release Measures

Caution: Floors may be slippery if wet. When dealing with spills wear personal protective clothing and equipment as described in section 8. Prevent further spillage or leakage. Keep bystanders away. 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: Storage, Handling and Use

Storage:	Keep out of reach of children. Store in the original, tightly closed container, in a secure area.
Handling and Use:	Keep out of reach of children. Avoid contact with eyes and skin. Avoid inhalation of vapour or spray mist. When mixing or applying, wear protective clothing as described in section 8. Do not eat, drink or smoke while using. Wash hands and face after use. Wash protective clothing after use.
Approved Handler	Not required.
Tracking	Not required.
Record Keeping	Record of use must be kept if 3 litres or more is used in an area within 24 hours, and is likely to enter air or water and leave that place.
REI	Until spray has dried
Site Requirements under the HSNO Act 1996 and HSNO Regulations:	<ul style="list-style-type: none"> • A location test certificate is not required • A hazardous atmosphere zone is not required • Fire extinguishers are not required • Signage is required for 10 000 litres or more • Emergency information is required for 50 litres or more • An emergency plan is required for 10 000 litres or more • Secondary containment is required for 10 000 litres or more • Separation/Segregation from incompatible substances is not applicable.
Additional Requirements	All aspects of storage, handling, use, disposal and record keeping must be in accordance with NZS 8409:2004 'Management of Agrichemicals', and relevant local and regional council plans.

8: Exposure Control / Personal Protection

Tolerable Exposure Limit	None established.
Workplace Exposure Standards	Product – None established (Use lowest practicable level). Ingredient – None established (Use lowest practicable level).
Engineering Controls	Limited given nature of use.
Personal Protection:	
Eye	Safety glasses/goggles when mixing or applying.
Skin	Cotton overalls snugly fitting at the neck, wrist and ankle, chemical resistant boots and gloves (butyl, neoprene, nitrile).
Respiratory	Not required where spray mist is not inhaled. Otherwise, respirator (organic vapour and particulate matter) is required.

9: Physical and Chemical Properties

Appearance	Amber Liquid
Odour	Aliphatic
Boiling Point	>300°C
Flash Point	>140°C
Auto ignition Temperature	>230°C
Explosive Limits	1 – 6% in air
Density	0.83 g/mL (approx.)
Viscosity	<20.5 mm ² /s
Vapour Pressure	Limited volatility

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Vapour Density	Limited volatility
Solubility in Water	Emulsifiable
pH	4.0 – 10.0 (1% emulsion)
Oxidising Properties	Not an oxidizer
Corrosive Properties	Not a corrosive

10: Stability and Reactivity

Stability	Stable under normal conditions.
Incompatibility	Avoid mixing with strong acids, alkalis, and oxidizing agents such as chlorine compounds, ammonium nitrate, etc.
Decomposition	Decomposition will not occur under normal conditions.
Dangerous Reactions	Products arising from combustion or thermal decomposition may be toxic, corrosive or flammable.

11: Toxicological Information

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

Swallowed	Nausea, vomiting, diarrhea. Product may enter lungs due to low viscosity and lead to serious pulmonary lesions.
Eye	Non-irritating
Skin	May cause irritation. Prolonged or repeated contact may result in degreasing of the skin and dermatitis.
Inhalation	Irritation. See Swallowed.
Acute Toxicity (Active Ingredient)	<ul style="list-style-type: none">• Acute Oral LD50 > 2000 mg/kg• Acute Dermal LD50 > 2000 mg/kg• Acute Inhalation LC50 > 5 mg/L
Sensitisation Effects	None
Mutagenic Effects	None
Carcinogenic Effects	None
Reproductive Effects	None
Teratogenic (Birth) Effects	None
Systemic Effects	None

12: Ecotoxicity Information

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

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

Ecotoxic Effects	<ul style="list-style-type: none">• Acute Oral LD50 (Rat) >2000 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
Environmental Fate	Biodegradable
Partition Co-Efficient (Kow)	Not available
Environmental Exposure Limit:	None established

13: Disposal Considerations

Product	Dispose of product by using it in accordance with the label. Do not burn. 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 agricultural recycling scheme. Do not burn. Do not use packaging for any other purpose.

14: Transport Information

Dangerous Goods	Not dangerous for transport
Passenger Service Vehicle	Maximum quantity 10 litres

15: Regulatory

HSNO Approval No	HSR000414
ACVM Registration No	P9597

16: Other Information

Glossary	
Approved Handler	For some hazardous substances, persons storing, handling and using must be trained and certified
DT50	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.
ERP Guide	Dangerous Goods – Initial Emergency Response Guide SNZ HB 76:2008
HAZCHEM Code	Emergency action code for emergency services
HSNO	Hazardous Substances and New Organisms
LC50	Concentration that will kill 50% of organisms
LD50	Dose that will kill 50% or organisms
MTQ	Maximum Transport Quantity. The maximum amount of dangerous goods that can be transported by road by the user
Partition Co-Efficient Kow	Ratio of concentration between octanol and water. Values are given as the log value. A high value indicates a substance may bioaccumulate
Record Keeping	Includes a spray diary
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.
Safety Note	A brief document providing hazardous substance information for transport, storage and emergency management purposes
STEL	Short term exposure level
Tolerable Exposure Limit	Maximum concentration limit of a substance above which persons must not be exposed
Tracking	For some hazardous substances, a record must be kept of the transport, storage, sale and use of the product
TWA	Time weighted average
Workplace Exposure Standard	An occupational health standard limiting concentrations of specified substances to which persons are exposed
Wide Dispersive Use	A method of application involving equipment such as boom sprayers, mist blowers, vine sprayers, row sprayers, etc., as well as aerial application. Hand gunning within 30m of a property boundary is also

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classified as wide dispersive use. Knapsack sprayers are not classed as wide dispersive use

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, Safety Note 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. Always read the product label before use.