

1: Identification of the Substance and Supplier

Product Name	SAPROL
Recommended Use	Fungicide
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	June 2024

2: Hazards Identification

Hazard Pictograms



Signal Words

Hazard Classes:

Flammable Liquid (Cat. 4)
Skin Irritation (Cat. 2)
Eye Irritation (Cat. 2)
Reproductive Toxicity (Cat. 1)
Specific target organ toxicity (repeated exposure) (Cat. 1)
Hazardous to terrestrial vertebrates

Precautionary Statements:

Prevention

Danger

Hazard Statements:

H227 Combustible Liquid
H315 Causes skin irritation
H319 Causes serious eye irritation
H360 May damage fertility or the unborn child
H372 Causes damage to organs through prolonged or repeated exposure
Harmful to terrestrial vertebrates

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
P201 Obtain special instructions before use
P202 Do not handle until all safety precautions have been read and understood
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
No smoking
P260 Do not breathe dust/fume/gas/mist/vapours/spray
P264 Wash hands thoroughly after handling
P270 Do not eat, drink or smoke when using this product
P280 Wear protective gloves/protective clothing/eye protection/face protection
P281 Use personal protective equipment as required
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. Take all reasonable steps to ensure that this product does not cause any significant adverse effects to the environment beyond the application area. Do not apply directly into or onto water.
P370+P378 In case of fire use water spray, foam, dry chemical or CO2 to extinguish
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P302+P352 IF ON SKIN: Wash with plenty water

Response

Storage	<p>P314 Get medical advice/attention if you feel unwell</p> <p>P321 specific treatment (Refer to section 4)</p> <p>P332+P313 If skin irritation occurs: Get medical advice/attention.</p> <p>P362 Take off contaminated clothing and wash it before reuse</p> <p>P308+P313 If exposed or concerned: Get medical advice/attention.</p> <p>P337+P313 If eye irritation persists: Get medical advice/attention.</p> <p>P318 If exposed or concerned, get medical advice</p> <p>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).</p>
Disposal	<p>P403+235 Store in a well ventilated place. Keep cool.</p> <p>P405 Store locked up</p> <p>P501 Dispose of contents by using it in accordance with the label. Dispose of the container via AgRecovery after triple rinsing (use the rinsate for spraying).</p>

3: Composition/ Information on Ingredients

Ingredient	CAS No	Content (% w/v)
Triflorine (active ingredient)	26644-46-2	19
N-methylpyrrolidone	872-50-4	10 - 30
N,N-dimethylformamide	68-12-2	10 - 30
Other ingredients	Proprietary	Remainder

4: First Aid Measures

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

Ingestion:	Do not induce vomiting.. Rinse mouth immediately. Seek medical advice if feeling unwell
Skin Contact:	Wash with plenty of soap and water. Seek medical advice if irritation occurs.
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 if feeling
Workplace Facilities:	Hand wash facility. Eye wash facility
Advice to Doctor:	No specific antidote. Treat symptomatically
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:	No data available
Skin Contact:	Irritation
Eye Contact:	Irritation
Inhalation:	Headache, abdominal pain, diarrhoea, nausea, vomiting.

5: Fire-Fighting Measures

Extinguishing Media	Water spray, foam, dry chemical or CO2. Avoid water jet.
Specific Hazards Arising from Fire	During a fire, toxic fumes may be emitted. Wear self-contained breathing apparatus. Contain runoff.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting gear.

6: Accidental Release Measures

Personal Precautions	Caution: Floors may be slippery if wet. Eliminate all ignition sources and naked lights. Use non-sparking equipment. Leave and/or avoid entering confined spaces. Wear personal protective clothing and equipment as described in section 8. Respiratory protection (with organic vapour cartridge) required for any spill other than minor. Exclude non-essential people from the area.
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

Storage:	Keep out of reach of children. Store in the original tightly closed container in a cool, well ventilated, and secure area.
Handling and Use:	Keep out of reach of children. Refer to Prevention statements in section 2 above. Keep people and animals away from the area while spraying and for the duration of the REI.
Incompatible materials	Acids, bases, oxidising agents, halogenated compounds
REI	Until spray has dried

8: Exposure Controls / Personal Protection

Tolerable Exposure Limit	None established
Workplace Exposure Standards	N-methylpyrrolidone 103 mg/m ³ , 25 ppm (8 hr TWA), 309 mg/m ³ , 75 ppm (15 min STEL) N,N-dimethylformamide 30 mg/m ³ , 10 ppm (8 hr TWA)
Engineering Controls	Select spray application equipment to minimize exposure to operator and bystanders
Personal Protection:	
Eye	Safety glasses/goggles (or full face respirator incorporating visor) when mixing or applying.
Skin	Chemical resistant overalls snugly fitting at the neck, wrist and ankle, boots and gloves (barrier multilayer, nitrile, neoprene). For overhead applications, use chemical resistant head covering (coveralls with hood recommended).
Respiratory	Not required where vapour or spray mist is not inhaled. Otherwise, respirator (organic vapour and particulate matter) is required

Clean protective equipment after use

9: Physical and Chemical Properties

Appearance	Clear Amber Liquid
Odour	Solvent like
Odour Threshold	No data available
pH	Not applicable
Melting Point/Freezing Point	No data available
Boiling Point	No data available
Flash Point	70°C approx. (closed cup method)
Flammability	Flammable
Upper/Lower Flammability Limits	No data available. May form explosive mixture in enclosed or poorly ventilated areas
Vapour Pressure	No data available
Vapour Density	>1 (heavier than air)
Relative Density	1.07 g/mL (approx.)
Solubility in Water	Emulsifiable
Partition Coefficient: n-octanol/water	See section 12
Auto ignition Temperature	No data available
Decomposition Temperature	No data available
Kinematic Viscosity	No data available

10: Stability and Reactivity

Stability	Stable under normal conditions
Hazardous Reactions	None Expected
Incompatibility	Acids, bases, oxidising agents, halogenated compounds
Hazardous Decomposition Products	Carbon oxides, Nitrogen oxides

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

Acute Oral Toxicity	Triforine LD50 >5000 mg/kg, Dimethyl formamide >2000 mg/kg, N-methyl-2-pyrrolidone >3000 mg/kg
Acute Dermal Toxicity	Triforine LD50 >5000 mg/kg, Dimethyl formamide >1000 mg/kg, N-methyl-2-pyrrolidone >5000 mg/kg
Acute Inhalation Toxicity	Triforine >4000 mg/m ³ N-methyl-2-pyrrolidone >LC50 > 5 mg/L
Skin Irritant/Corrosive	Irritant
Eye Irritant/Corrosive	Irritant
Sensitisation Effects	None
Mutagenic Effects	None
Carcinogenic Effects	None
Reproductive Effects	Reproductive and development effects have been noted in long term animal feeding studies on triforine, N-methylpyrrolidone and N,N-dimethylformamide
Specific Organ Toxicity	Long term animal feeding studies on N,N-dimethylformamide have noted damage to liver and kidneys

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:

Ecotoxicity	<ul style="list-style-type: none"> LC50 (96 hr) (Oncorhynchus spp) >1000 mg/l EC50 (48 hr) (Daphnia) 5000 mg/l EC50 (96 hr) (Algae) 500 mg/l
Persistence/degradability	Biodegradable. DT50 (soil) 19 days (typical)
Bioaccumulative Potential	Octanol-water partition coefficient LogP = 2.4 (low)
Soil Mobility	Soil organic carbon water partitioning coefficient Koc = 527 (slightly mobile)
Environmental Exposure Limit:	None established

13: Disposal Considerations

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

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

Maximum quantity 10 litres

15 Regulatory Information

EPA Approval No	HSR000148
ACVM Registration No	P2596
Qualified Person	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 • Signage is required for more than 10000 litres • An emergency response plan is required for more than 10000 litres • Secondary containment is required for more than 10000 litres • Segregation from incompatible substances (classes 1, 2, 3.2, 4 and 5) is required
Restrictions	Do not apply directly into or onto water. Refer to Orion or EPA for more information
Additional Requirements	Refer to NZS 8409:2004 'Management of Agrichemicals', and relevant local and regional council plans

16: Other Information

Glossary	
Sds version June 2024	
ACVM	Agricultural Compounds and Veterinary Medicines group of the Ministry of Primary Industries
Cat.	GHS category
Certified Handler	A qualification issued by a Compliance Certifier to handle and use particularly toxic substances (6.1A and 6.1B)
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.
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
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

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.
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
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
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
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.