

# SAFETY DATA SHEET

## ACTELLIC 50EC

### 1: Identification of the Substance and Supplier

<b>Product Name</b>	<b>ACTELLIC 50EC</b>
<b>Recommended Use</b>	Insecticide
<b>Suppliers Details</b>	Orion AgriScience Ltd Unit 1, 15 Sir Gil Simpson Drive, Harewood, Christchurch, 8053 PO Box 39 071, Harewood, Christchurch, 8545
<b>Web Address</b>	<a href="http://www.orionagriscience.co.nz">www.orionagriscience.co.nz</a>
<b>Email Address</b>	<a href="mailto:orders@orionagriscience.co.nz">orders@orionagriscience.co.nz</a>
<b>Telephone Number</b>	(03) 928 2386 (office hours), 0800 674 6627 (free phone)
<b>Emergency Telephone</b>	0800 CHEMCALL (0800 243 622) (24 hours)
<b>National Poison Centre</b>	0800 POISON (0800 764 766) (24 hours)
<b>Date of Issue/Revision</b>	October 2024

### 2: Hazards Identification

#### Hazard Pictograms



#### Signal Words

##### Hazard Classes:

Flammable Liquid (Cat. 3)  
Aspiration Hazard (Cat.1)  
Eye Irritation (Cat. 2)  
Reproductive Toxicity (Cat. 2)  
Specific Target Organ Toxicity repeated exposure (Cat. 1)  
Hazardous to the aquatic environment acute (Cat. 1)  
Hazardous to the aquatic environment chronic (Cat. 1)  
Hazardous to soil organisms  
Hazardous to Terrestrial Vertebrate  
Hazardous to Terrestrial Invertebrate

##### Precautionary Statements:

Prevention

#### Danger

##### Hazard Statements:

H226 Flammable liquid and vapour  
H304 Maybe fatal if swallowed and enters airways  
H319 Causes serious eye irritation  
H361 Suspected of damaging fertility or the unborn child  
H372 Causes damage to organs through prolonged or repeated exposure  
H400 Very toxic to aquatic life  
H410 Very toxic to aquatic life with long lasting effects  
H423 Harmful to the soil environment  
H431 Very toxic to terrestrial vertebrates  
H441 Very toxic to terrestrial invertebrates

P203 Obtain read and follow all safety instructions before use  
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  
P233 Keep container tightly closed  
P240 Ground and bond container and receiving equipment  
P241 Use explosion proof electrical/ventilating/lighting equipment  
P242 Use non sparking tools  
P243 Take action to prevent static discharges  
P280 Wear protective gloves/protective clothing/eye protection/face protection  
P264 Wash hands and face thoroughly after handling  
P265 Do not touch eyes  
P260 Do not breathe dust/fume/gas/mist/vapours/spray  
P272 Contaminated work clothing should not be allowed out of the workplace  
P203 Obtain, read and follow all safety instructions before use

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Response	<p>P270 Do not eat, drink or smoke when using this product</p> <p>Keep out of reach of children. Read label before use. Do not use until all safety precautions have been read and understood. Use only outdoors or in a well ventilated area. Explosive concentrations of vapours may form in enclosed or poorly ventilated areas. Always use diluted in water. Never use neat. Concentration of Actellic 50EC should not exceed 8% in spray solution. Do not use with thermal foggers. Do not apply using hand gun equipment. Do not use near air vents or ducts. 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 off contaminated clothing and wash before reuse. 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. Do not apply this substance to plants if bees are foraging, or the plants are in flower or part flower, and are likely to be visited by non-target invertebrate</p> <p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water (or shower)</p> <p>P370+P378 In case of fire use water spray, foam, dry chemical or CO2 to extinguish. Avoid water jet</p> <p>P302+P317 IF ON SKIN: Get medical help</p> <p>P301+P310 IF SWALLOWED: Immediately call a POISON CENTRE/doctor</p> <p>P331 Do NOT induce vomiting</p> <p>P332+P317 If skin irritation occurs get medical advice</p> <p>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</p> <p>P337+P313 If eye irritation persists: Get medical advice/attention</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water</p> <p>P333+P317 If skin irritation or rash occurs: Get medical help</p> <p>P308+P313 If exposed or concerned: Get medical advice/attention</p> <p>P321 Specific treatment (See first aid instructions)</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse</p> <p>P318 If exposed or concerned, get medical advice</p> <p>P319 Get medical help if you feel unwell</p> <p>P391 Collect spillage</p> <p>First aid measures described in section 4. Fire extinguishing instructions described in section 5. 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>
Storage	<p>P403+P235 Store in a well ventilated place. Keep cool</p> <p>P405 Store locked up</p> <p>Keep out of reach of children</p>
Disposal	<p>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).</p>

### 3: Composition/ Information on Ingredients

Ingredient	CAS No	Content (% w/v)
Pirimiphos-methyl (active ingredient)	29232-93-7	50
Solvent naphtha	64742-94-5	30 – 60
Isobutanol	78-83-1	<10
Other ingredients	Proprietary	Remainder

### 4: First Aid Measures

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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.

<b>Ingestion:</b>	Do NOT induce vomiting. Seek medical advice immediately.
<b>Skin Contact:</b>	Wash with plenty of soap and water. Seek medical advice if irritation or rash occurs, or if feeling unwell.
<b>Eye Contact:</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if easy to do so. Continue rinsing. Seek medical advice if irritation persists.
<b>Inhalation:</b>	Remove to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice if feeling unwell.
<b>Workplace Facilities:</b>	Hand wash facility. Eye wash facility
<b>Advice to Doctor:</b>	Actellic 50EC is an organophosphorus insecticide, which inhibits cholinesterase activity, and interferes in nerve pulse transmission. Onset of symptoms may be delayed for several hours. Atropine is the specific antidote and may be given immediately by qualified staff, at a level of 2 - 5mg (intravenously or intramuscularly), every 20 minutes until atropinisation occurs. Considerable amounts of atropine may be necessary. Atropine must NOT be given to cyanosed patients; administer oxygen first. Do NOT use opiates or barbiturates. If convulsions occur, administer diazepam (10mg intravenously). Take venous blood sample for determination of blood cholinesterase activity. Cholinesterase reactivators (Pralidoxime) should, if possible, be given at the same time as atropine. They are not effective after 24 hours post exposure and are not substitutes for atropine. Pralidoxime should be administered at: Mild poisoning: 1g in 2 - 3ml water (intramuscularly), Severe poisoning: 2g in 30ml water (intravenously). Following ingestion, adsorbents such as charcoal may be of value. If gastric lavage or emesis is considered necessary, inhalation of hydrocarbons must be prevented. Hydrocarbon aspiration may complicate poisonings involving ingestion.
<b>National Poison Centre</b>	0800 POISON (0800 764 766) (24 hours)

Symptoms of Exposure which could occur if this material is not handled in accordance with instructions:

<b>Ingestion:</b>	Nausea, vomiting, abdominal pain, weakness, unconsciousness. The solvent in this product may cause bronchopneumonia or pulmonary oedema if aspirated into the lungs from ingestion or from vomiting.
<b>Skin Contact:</b>	Irritation. Contact may induce an allergic response in susceptible individuals
<b>Eye Contact:</b>	Irritation and eye damage
<b>Inhalation:</b>	Headache, nausea, cough, sore throat

### 5: Fire-Fighting Measures

<b>Fire/Explosion Hazard</b>	Flammable liquid and vapour.
<b>HAZCHEM Code</b>	3Y
<b>ERP Guide No</b>	14
<b>Extinguishing Media</b>	Water spray, foam, dry chemical or CO2. Avoid water jet.
<b>Fire Fighting Instructions</b>	During a fire, toxic fumes may be emitted. Wear self-contained breathing apparatus. Contain runoff.
<b>Specific Hazards Arising from Fire</b>	No data available

### 6: Accidental Release Measures

<b>Personal Precautions</b>	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.
<b>Environmental Precautions</b>	Prevent further spillage or leakage. Prevent material from entering drains, waterways, etc.
<b>Clean Up</b>	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

<b>Storage:</b>	Keep out of reach of children. Store in the original tightly closed container in a cool, well ventilated, locked
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### Handling and Use:

and secure area.

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.. Take precaution against static discharge. Always use diluted in water

### REI

12 hours from application

## 8: Exposure Controls / Personal Protection

### Tolerable Exposure Limit

None established

### Workplace Exposure Standards

None established

### Engineering Controls

Select spray application equipment to minimize exposure to operator and bystanders

### Biological Monitoring

Regular users in direct contact (mixing and application) should undergo biological monitoring of cholinesterase activity. Consult with your GP or Occupational Health Adviser.

### Personal Protection:

#### Eye

Safety glasses/goggles (or full face respirator incorporating visor) when mixing or applying

#### Skin

Chemical resistant coveralls with hood tightly fitting at head, wrists and ankles (e.g., Tychem F suit), chemical resistant boots and chemical resistant gloves (barrier multilayer, nitrile, neoprene, butyl).

#### Respiratory

Not required where vapour or spray mist is not inhaled. Otherwise, respirator (organic vapour and particulate matter) is required.

#### Biological Monitoring

Regular users should undergo biological monitoring of cholinesterase activity. Consult with your GP or Occupational Health Adviser.

Clean protective equipment after use

## 9: Physical and Chemical Properties

### Appearance

Clear Amber Liquid

### Odour

Solvent

### Odour Threshold

Does not apply

### pH

Does not apply

### Melting Point/Freezing Point

Does not apply

### Boiling Point

Does not apply

### Flash Point

49°C (closed cup)

### Flammability

Flammable liquid and vapour

### Upper/Lower Flammability Limits

Does not apply

### Vapour Pressure

Does not apply

### Vapour Density

> 1 (heavier than air)

### Relative Density

1.03 g/mL (approx.)

### Solubility in Water

Emulsifiable

### Partition Coefficient: n-octanol/water

See section 12

### Auto ignition Temperature

Does not apply

### Decomposition Temperature

Does not apply

### Kinematic Viscosity

Contains a low viscosity hydrocarbon solvent

### Particle characteristics

Does not apply

## 10: Stability and Reactivity

### 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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<b>Acute Oral Toxicity</b>	LD50 > 2000 mg/kg
<b>Acute Dermal Toxicity</b>	LD50 > 2000 mg/kg
<b>Acute Inhalation Toxicity</b>	LD50 > 5 mg/L
<b>Skin Irritant/Corrosive</b>	Mild Skin Irritant
<b>Serious eye damage/eye irritation</b>	Strongly Irritating
<b>Respiratory or skin sensitisation</b>	May cause an allergic skin reaction in susceptible individuals
<b>Germ cell mutagenicity</b>	Information not available
<b>Carcinogenicity</b>	Information not available
<b>Reproductive toxicity</b>	Animal feeding studies on rats found pirimiphos-methyl decreased mating performance and pregnancy rate over 3 – 4 generations
<b>Specific Target Organ Toxicity – single exposure</b>	Pirimiphos-methyl is an organophosphorus compound that Interferes with cholinesterase
<b>Specific Target Organ Toxicity – repeated exposure</b>	Pirimiphos-methyl is an organophosphorus compound and Interferes with cholinesterase, an enzyme essential for the correct functioning of the nervous system
<b>Aspiration hazard</b>	Maybe harmful if swallowed and enters airways

### 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:

- Acute Oral LD50 (Bobwhite quail) 40 mg/kg
- LC50 (96 hr) (Rainbow trout) 0.64 mg/l
- LC50 (48 hr) (Daphnia) 0.21 µg/l
- Algae EC50 1.0 mg/l
- Bee LD50 (24 hr) > 0.22 µg/bee

<b>Persistence/degradability</b>	Biodegradable. DT50 (soil) 3.5 – 30 days	
<b>Bioaccumulative Potential</b>	Octanol-water partition coefficient	LogP = 4.2 (high)
<b>Soil Mobility</b>	Soil organic carbon water partitioning coefficient	Koc = 1100 (slightly mobile)
<b>Environmental Exposure Limit:</b>	None established	

### 13: Disposal Considerations

<b>Product</b>	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.
<b>Container</b>	Dispose of to a suitable landfill or via AgRecovery. Do not burn. Do not use packaging for any other purpose.

### 14: Transport Information

<b>Dangerous Goods</b>	
<b>UN Number</b>	1993
<b>Proper Shipping Name</b>	FLAMMABLE LIQUID, N.O.S. (SOLVENT NAPHTHA 36%, BUTANOL 2%)
<b>Class</b>	3
<b>Subsidiary Class</b>	None
<b>Packing Group</b>	III
<b>Additional Information</b>	MARINE POLLUTANT
<b>MTQ (Non-Commercial)</b>	250 litres
<b>Passenger Service Vehicle</b>	1 litre

### 15 Regulatory Information

EPA Approval No	HSR000196
ACVM Registration No	P3590
Qualified Person	Required
Certified Handler	Not required
Workplace Only	No
Tracking	Not required
Record Keeping	Not required (unless > 3 L applied within 24 hours, and which is likely to leave the application area)
Site Requirements under EPA Notice and HSWHS Regs:	<ul style="list-style-type: none"> <li>A hazardous substance location compliance certificate is required for more than 500 L (closed containers &gt; 5 L size), 1500 L (closed containers ≤ 5 L size), or 250 L (open containers)</li> <li>A hazardous area is required</li> <li>Separation distances for class 3 and class 6 substances to protected places and public places is applicable</li> <li>Fire extinguishers are required for more than 500 L (2 fire extinguishers)</li> <li>Signage is required for more than 100 L</li> <li>An emergency response plan is required for more than 100 L</li> <li>Secondary containment is required for more than 100 L</li> <li>Segregation from incompatible substances (classes 1, 2, 3.2, 4 and 5) is required</li> </ul>
Additional Requirements	Refer to NZS 8409:2004 'Management of Agrichemicals', and relevant local and regional council plans

### 16: Other Information

Date of SDS review	October 2024
<b>Glossary</b>	
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 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
Notification	Advance notice given to neighbours and other affected parties, of details of proposed application, and other details as described

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<b>Octanol-Water Partition Coefficient</b>	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
<b>Protected Place</b>	Residential properties, schools, hospitals, kindys, factories, shops, warehouses, etc., and other places where people assemble
<b>Public Place</b>	A place frequented by the public, including roads (does not include private property)
<b>Qualified Person</b>	A requirement for the loader, contractor or person applying the product to hold a qualification such as a GROWSAFE Certificate, Unit Standard 21563, etc.
<b>Record Keeping</b>	Includes a spray diary or other record of application
<b>REI</b>	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.
<b>Segregation</b>	Certain classes of substances must not be in contact with, and must be stored separately from, certain other classes as specified in HSWHS Regs
<b>Separation Distances</b>	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
<b>Signage</b>	Positioned at entrances to commercial premises providing information on the hazardous substances present
<b>Soil Adsorption Coefficient (Kd)</b>	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
<b>Soil Organic Carbon-Water Partitioning Coefficient (Koc)</b>	The ratio of the mass of a chemical that is adsorbed in the soil per unit mass of organic carbon in the soil. The higher the value the less mobile the chemical is in soil
<b>STEL</b>	Short term exposure level – 15 minute time weighted average
<b>Tolerable Exposure Limit</b>	Maximum concentration limit of a substance above which persons must not be exposed
<b>Tracking</b>	For some particularly hazardous substances, a record must be kept of the transport, storage, sale and use of the product
<b>TWA</b>	Time weighted average calculated over an 8 hour working day
<b>Workplace Exposure Standard</b>	An occupational health standard limiting concentrations of specified substances to which persons are exposed
<b>Workplace Only</b>	A product that is restricted to a workplace only and under the supervision of a certified handler
<b>Please Note</b>	

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.