



MATERIAL SAFETY DATA SHEET

ACTELIC[®] 900 SOLVENT FREE LIQUID INSECTICIDE

Date of Issue: October 2008

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **Actellic[®] 900 Solvent Free Liquid Insecticide**
Other Names: Pirimiphos-methyl
Recommended Use: Insecticide
Supplier: AgNova Technologies Pty Ltd
ACN: 097 705 158
Address: Suite 10/857 Doncaster Road
Doncaster East Vic 3109 Australia
Telephone: (03) 9840 2333
Facsimile: (03) 9840 2555
Website: www.agnova.com.au
Contact: Managing Director
Emergency Telephone Number: 1800 033 111 (24 hours)

2. HAZARDS IDENTIFICATION

HAZARDOUS SUBSTANCE – DANGEROUS GOODS

Hazard Classification: Classified as hazardous according to the criteria of NOHSC.
Classified as harmful according to NOHSC.
Risk Phrases: R22 Harmful if swallowed
Safety Phrases: None
ADG Classification: Classified as a Dangerous Good according to Australian Code for the Transport of Dangerous Goods by Road and Rail
SUSDP Classification: Poisons Schedule 6 (S6)
(Standard for the Uniform Scheduling of Drugs and Poisons)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Concentration % :
Pirimiphos-methyl	29232-93-7	> 90
n-Butylalcohol	71-36-3	1-9
Methylisobutylketone	108-10-1	1-9
Emulsifiers	-	10-29



MATERIAL SAFETY DATA SHEET

ACTELIC[®] 900 SOLVENT FREE LIQUID INSECTICIDE

Date of Issue: October 2008

4. FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (Phone 13 11 26), and follow the advice given. Show this Material Safety Data Sheet to a doctor.

Ingestion:	If swallowed, rinse mouth with water and give water to drink. Immediately contact a doctor or Poisons Information Centre (Telephone: 13 11 26) and follow advice given. Only induce vomiting at the instruction of a physician.
Inhalation:	Remove to fresh air. Apply artificial respiration if necessary, and get medical attention.
Skin Contact:	If skin contact occurs, remove contaminated clothing and wash with soap and water. If irritation occurs seek medical advice.
Eye Contact:	Immediately flush eyes with copious quantities of water for 15 minutes. Seek medical advice.
First Aid Facilities:	Provide washing facilities in the workplace.
Symptoms:	May cause eye irritation.
Medical Attention:	Treat symptomatically.
Aggravated Medical Conditions Caused by Exposure:	None known.

5. FIRE FIGHTING MEASURES

Extinguishing Media:	Water fog, fine water spray, foam or dry agent.
Hazards from Combustion Products:	Will emit toxic fumes including oxides of carbon, nitrogen and sulphur. Heating can cause expansion or decomposition leading to violent rupture of containers.
Special Protective Precautions and Equipment for Fire Fighters:	Wear self-contained breathing apparatus and structural fire fighters uniform.
Hazchem Code:	3[Y]



MATERIAL SAFETY DATA SHEET

ACTELIC[®] 900 SOLVENT FREE LIQUID INSECTICIDE

Date of Issue: October 2008

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures:	In case of spillage it is important to take all steps necessary to: <ul style="list-style-type: none">• Avoid eye and skin contact.• Avoid contamination of waterways.
Methods and Materials for Containment and Clean Up Procedures:	Wear full length protective clothing, boots and breathing apparatus. Prevent spill from entering drains, sewers or any body of water. Contain and absorb with sand, earth or inert absorbent. Scoop or shovel into sealable containers for disposal in accordance with applicable local, state and federal regulations. Decontaminate area with soap and minimal water.

7. HANDLING AND STORAGE

Precautions for Safe Handling:	Avoid contact with eyes and skin. Avoid breathing vapour/mist. Use with adequate ventilation. If inhalation risk exists, wear organic vapour respirator meeting the requirements of AS/NZ 1715 and AS/NZ 1716.
Conditions for Safe Storage including any Incompatibilities:	Store in tightly sealed original containers in a cool, dry well-ventilated area out of direct sunlight. Store in a locked room away from children, authorized persons, animals, food, feedstuffs, seed and fertilisers. Do not use containers for any other purpose. Avoid storing in cold conditions as crystallisation may occur at low temperatures (below 5 ⁰ C) resulting in separation of the active ingredient.



MATERIAL SAFETY DATA SHEET

ACTELIC[®] 900 SOLVENT FREE LIQUID INSECTICIDE

Date of Issue: October 2008

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National Exposure Standards: No occupational exposure standards have been established for the product. The supplier recommended hygiene standard for some of the ingredients:

	TWA		STEL		NOTICES
	ppm	mg/m ³	ppm	mg/m ³	
Methylisobutyl-ketone	50	205	75	307	
n-Butylalcohol	50	152	Peak	limit	Sk
Pirimiphos-methyl	-	3	-	-	Sk

TWA = the time weighted average airborne concentrations over a eight-hour working day, for a five-day working week over an entire working life. STEL = Short Term Exposure Limit – the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal 8 hour work day. Peak Limit – a ceiling concentration which should not be exceeded over a measurement period which should be as short as possible but not exceeding 15 minutes. "Sk Notice" – absorption through the skin may be a significant source of exposure. The exposure standard is invalid if such contact should occur.

Biological Limit Values: No biological limit allocated.

Engineering Controls: Ensure adequate ventilation. Ensure air concentrations are controlled below quoted hygiene standards.

Personal Protective Equipment (PPE):
Eyes: Safety glasses.
Gloves: Elbow length impervious gloves.
Respiratory: If inhalation risk, use an organic vapour respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear amber liquid
Odour: Solvent like odour
pH: No data available
Vapour Pressure: No data available
Vapour Density: No data available
Boiling Point: No data available
Melting Point: No data available
Solubility: Slightly soluble in water



MATERIAL SAFETY DATA SHEET

ACTELIC[®] 900 SOLVENT FREE LIQUID INSECTICIDE

Date of Issue: October 2008

Specific Gravity:	1.137 g/cm ³
Bulk Density:	Not applicable
Flash Point:	55 ^o C
Flammability (explosive) Limits:	No data available
Auto-Ignition Temperature:	No data available
Octanol/Water Partition Coefficient:	No data available
Particle Size:	Not applicable
Formulation:	Liquid

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal storage conditions.
Conditions to Avoid:	Avoid storing in cold conditions as crystallisation may occur at low temperatures (below 5 ^o C) resulting in separation of the active ingredient.
Incompatible Materials:	None known.
Hazardous Decomposition Products:	During a fire this product will emit toxic fumes including oxides of carbon, nitrogen and sulphur.
Hazardous Reactions:	None



11. TOXICOLOGICAL INFORMATION

Health Effects from Likely Routes of Exposure:

This product is harmful according to NOHSC.

- Ingestion:** No adverse health effects are expected from swallowing.
- Inhalation:** Not harmful.
Test on rats indicate this product is not harmful due to the inhalation of the active ingredient.
- Skin Contact:** Not harmful.
Test on rats indicate this product is not harmful following skin contact with the active ingredient.
- Eye Contact:** May cause eye irritation.
- Other:** The active, pirimiphos-methyl is an organophosphorous insecticide which inhibits cholinesterase activity, producing both local and systemic effects by interference with nerve transmission. Onset of symptoms may be delayed for several hours. Studies in animals show that repeated exposure produce no significant effects except for cholinesterase inhibition.
No other known health effects.

Animal Toxicity Data:

No data is available for the product so results are based on the active ingredient.

Acute:

- Oral Toxicity:** LD₅₀ Oral (ingestion) Rat > 2050 mg/kg
- Dermal Toxicity:** LD₅₀ Dermal (skin contact) Rat > 2000 mg/kg
- Inhalation Toxicity:** LC₅₀ (4 hr) Rat > 5.04 mg/L
- Skin Irritation:** Slight irritant (rabbit)
- Eye Irritation:** Slight irritant (rabbit)
- Sensitisation:** Not a sensitiser

Chronic: The active, pirimiphos-methyl technical has been extensively tested in mammals and in test-tube systems. No evidence of mutagenic, carcinogenic, neurotoxic, tetragenic or reproductive effects was obtained. Cholinesterase levels will return to normal a few weeks after exposure



MATERIAL SAFETY DATA SHEET

ACTELIC[®] 900 SOLVENT FREE LIQUID INSECTICIDE

Date of Issue: October 2008

12. ECOLOGICAL INFORMATION

ACTIVE INGREDIENT :Pirimiphos-methyl

Ecotoxicity: The active ingredient, pirimiphos-methyl is very toxic to aquatic organisms. Pirimiphos-methyl is toxic to birds and bees.

Results below are for the active ingredient.

Fish Toxicity: Acute LC₅₀ (Rainbow Trout *Oncorhynchus mykiss*) = 0.64 mg/L (96 hours)

Acute LC₅₀ (Mirror Carp) = 1.4 mg/L (48 hours)

Daphnia Toxicity: EC₅₀: 1.4 mg/L (48 hours)

Bird Toxicity: Chicken: Oral LD₅₀ = 30 - 60 mg/kg

Bobwhite Quail: Oral LD₅₀ = 140 mg/kg

Bee Toxicity: Pirimiphos-methyl is toxic to bees.

Other: None known.

Persistence and Degradability: There is evidence of hydrolysis in soil and water.

Mobility: Low soil mobility.

Environmental Fate: Liquid with low volatility. Active is sparingly soluble in water and has low mobility in soil.

Bioaccumulative Potential: No data available.

Other Adverse Environmental Effects: None known.



MATERIAL SAFETY DATA SHEET

ACTELIC® 900 SOLVENT FREE LIQUID INSECTICIDE

Date of Issue: October 2008

13. DISPOSAL CONSIDERATIONS

Disposal Methods: Dispose of empty, used containers by triple rinsing or preferably pressure rinsing containers with water. Add the rinsings to the spray tank. DO NOT dispose of undiluted chemicals on site.
If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots.
Waste must not enter waterways.
Contaminated Packaging: Dispose in accordance with applicable local, state and federal regulations.

Special Precautions for Landfill or Incineration: Empty containers and product should not be burnt.

14. TRANSPORT INFORMATION

UN Number: 1224
Proper Shipping Name: KETONES, LIQUID, N.O.S. (Contains PIRIMIPHOS-METHYL, METHYL ISOBUTYL KETONE AND BUTANOL))
Class and Subsidiary Risk: Class 3
Packing Group: III
EPG: HB76 Guide 17
Hazchem Code: 3[Y]

15. REGULATORY INFORMATION

SUSDP: Schedule 6

APVMA: Registered according to the Agricultural and Veterinary Chemicals Act 1988.
APVMA Product Number: 59710



MATERIAL SAFETY DATA SHEET

ACTELLIC® 900 SOLVENT FREE LIQUID INSECTICIDE

Date of Issue: October 2008

16. OTHER INFORMATION

Date of Preparation or Revision:	Replaces June 2007 edition. Reason for update: updating supplier contact information.
Data Sources:	Manufacturer product safety data and published data
Abbreviations and Acronyms:	APVMA – Australian Pesticides and Veterinary Medicines Authority NOHSC – National Occupational Health and Safety Commission SUSDP – Standard for the Uniform Scheduling of Drugs and Poisons TWA – Time Weighed Average = The time weighted average airborne concentrations over an eight -hour working day, for a five-day working week over an entire working life.
Trademark Information:	® Actellic is a Registered Trademark of a Syngenta Group Company.

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

The opinions expressed herein are those of qualified experts with the manufacturer. Since the use of this information and of these opinions and the conditions of use of this product are not within the control of AgNova Technologies Pty Ltd, it is the user's obligation to determine the conditions of safe use of the product.

END OF MSDS