

MATERIAL SAFETY DATA SHEET



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Emergency Contact:
1800 033 111

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: eChem Abamectin Insecticide/Miticide

Full Product Name: eChem Abamectin Insecticide/Miticide.
Other Names: Abamectin.
Use: Liquid insecticide/miticide for use on cotton and the control of pest mites on pears, apples, tomatoes, strawberries and ornamentals.
Company: eChem (Australia) Pty Ltd
Address: Level 4, Lantos Place 80 Stamford Road, Indooroopilly QLD 4068
ACN/ABN: 089 133 095
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SECTION 2 HAZARDS IDENTIFICATION

Classified as hazardous according to criteria of Safe Work Australia.
Classified as a Dangerous Good according to the ADG Code.
Combustible Liquid (C1).

Risk phrases: R20 Harmful by inhalation.
R22 Harmful if swallowed.
R36/37/38 Irritating to eyes, respiratory system and skin.
R61 May cause harm to the unborn child.

Safety Phrases: S2 Keep out of reach of children.
S13 Keep away from food, drink and animal feedstuffs.
S23 Do not breathe vapour or spray.
S24/25 Avoid contact with skin and eyes.
S36/37/39 Wear suitable protective clothing and gloves and eye/face protection.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

CHEMICAL	CAS NUMBER	PROPORTION
Abamectin	71751-41-2	2% w/w
N-Methyl pyrrolidone	872-50-4	10-30%
Methyl diicnol	112-34-5	10-30%
Aromatic Hydrocarbons	64742-94-5	1-10%
Other ingredients determined not to be hazardous		to 100%

Trace quantities of impurities are possible.

SECTION 4 FIRST AID MEASURES**FIRST AID**

- Ingestion:** If poisoning occurs, contact a Doctor or Poisons Information Centre. Phone 13 1126. Give plenty of water to drink. Get to a doctor or hospital quickly.
- Eye contact:** If in eyes, immediately flush with water for at least 15 minutes. If irritation occurs and persists, obtain medical attention.
- Skin contact:** Remove contaminated clothing. Wash skin thoroughly with soap and water. If skin irritation persists, seek medical advice.
- Inhalation:** Remove to fresh air and observe until recovered. If irritation or symptoms persists more than about 30 minutes, seek medical advice.

Advice to Doctor: Treat symptomatically. No specific antidote is available.

SECTION 5 FIRE FIGHTING MEASURES

Specific Hazard: eChem Abamectin is a C1 combustible liquid (Flash point > 62°C). Sealed, overheated containers may present an explosion hazard.

Extinguishing media: Extinguish fire using foam blanket, carbon dioxide or dry agent. If not available, use waterfog or fine water spray but ensure all runoff is contained.

Hazards from combustion products: Will produce toxic and noxious vapours when burnt. Will not polymerise. Sealed, overheated containers may present explosion hazard. Cool intact containers with water to reduce drum pressure. Contain all runoff.

Precautions for fire-fighters and special protective equipment: Isolate fire area. Evacuate downwind residents. Wear full protective clothing and self contained breathing apparatus. Do not breathe smoke or vapours generated.

SECTION 6 ACCIDENTIAL RELEASE MEASURES

Emergency procedures / Material and methods for containment and cleanup procedures: Wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC gloves, goggles and half facepiece respirator. Clear area of all unprotected personnel. Wear full protective clothing and equipment including chemical resistant gloves. Prevent spill from spreading or entering waterways, sewers or underground drains. Absorb spill with absorbent material such as sand clay or cat litter. Place material into an approved drum. To decontaminate spill area, tools and equipment wash with a suitable solution (eg organic solvent, detergent, bleach or caustic) and add the solution to the drums of waste already collected. Dispose of drummed waste and decontamination solution in accordance with the requirements of Local Authorities or State Waste Management Authorities. Do not cut or weld metal containers.

SECTION 7 HANDLING AND STORAGE

Precautions for safe Handling: No smoking, eating or drinking should be allowed where material is used or stored. Wear protective equipment to prevent skin and eye contamination. When opening the container, preparing spray and using prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC gloves and goggles. For space applications, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC gloves, goggles and half facepiece respirator with dust cartridge or canister.

Conditions for safe Storage: Store in the closed, original container in a well ventilated area away from children, animals, food, feedstuffs, seed and fertilisers. Do not store for prolonged periods in direct sunlight. Do not re-use container for any purpose. eChem Abamectin is classified as Dangerous Goods class 6.1. Product is a combustible liquid (C1) and must be stored away from naked lights, heat sources and oxidising agents.

Observe procedures detailed in Australian Standard AS1940 for flammable and combustible liquids. DO NOT cut or weld containers.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**Exposure Guidelines:**

Exposure guidelines have not been established for this product by Safe Work Australia, however the following exposure guidelines are established for ingredients in this product.

Atmospheric Contaminant	Exposure Standard (TWA)	STEL (mg/m ³)
N-methyl pyrrolidone (Skin*)	1.03 mg/m ³ (25 ppm)	309 mg/m ³ (75 ppm)
Aromatic Hydrocarbons	100 ppm	-

TWA = Time-weight Average STEL = Short term Exposure Limit

* The 'skin' notation refers to the potential for dermal absorption of the material including mucous membranes and the eyes by contact with vapours or direct skin contact.

Biological Limit Values:

No biological limit allocated.

Engineering controls:

Use in ventilated areas. Keep containers closed when not in use.

Personal Protective equipment (PPE):

General: When opening the container, preparing spray and using prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC gloves and goggles. For space applications, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC gloves, goggles and half facepiece respirator with dust cartridge or canister. If product in eyes, wash it out immediately with water.

Personal Hygiene: After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, goggles, contaminated clothing and respirator (and if rubber, wash with detergent and warm water). Shower at the end of the workday.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear liquid.
Odour:	Characteristic odour.
Specific Gravity:	1.01 ± 0.05.
Solubility in Water:	Emulsifies in water.
pH:	Not known
Flammability:	Combustible liquid (C1).
Corrosive hazard:	Not corrosive.
Flashpoint (°C):	> 62°C.
Poisons Schedule:	This product is a schedule 6 (S6) poison.
Formulation type:	Emulsifiable concentrate (EC).

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Product is considered stable in ambient conditions for a period of at least 2 years after manufacture.

Conditions to avoid: Do not leave in direct sunlight for long periods.

Incompatible materials: Avoid strong oxidizing agents.

Hazardous decomposition products: In a fire hazardous decomposition products include Carbon dioxide, carbon monoxide, nitrogen and nitrogen compounds and smoke.

Hazardous reactions: No particular reactions to avoid.

SECTION 11 TOXICOLOGICAL INFORMATION

No specific data is available for this product as no toxicity tests have been conducted on this product. Information presented is our best judgement based on similar products and/or individual components. As with all products for which limited data is available, caution must be exercised through the use of protective equipment and handling procedures to minimise exposure. Irritating to the eyes and skin.

SECTION 11 TOXICOLOGICAL INFORMATION (Continued)**Potential Health Effects:****ACUTE EFFECTS**

Swallowed: This product is harmful if swallowed. The estimated Acute Oral LD₅₀ (rat) = 325 mg/kg.

Eye: This product is a moderate irritant to the eyes.

Skin: This product is irritating to the skin. Repeated or prolonged exposure will have a degreasing effect on the skin and may cause irritant contact dermatitis. The calculated Acute Dermal LD₅₀ > 2000 mg/kg.

Inhaled: Harmful by inhalation. Inhalation of mists or sprays may produce respiratory irritation. The estimated Acute Inhalation LC₅₀ is 3.5 mg/L/4 hours.

Long Term Exposure: When this product is used according to the directions, prolonged exposure to users is not expected. In a 1 year study with dogs given oral doses of 0.25 to 1 mg/kg/day, there were no changes in tissue at any dose level. However, some dogs at the 0.5 and 1 mg/kg/day levels had papillary dilation, weight loss, lethargy, tremors and recumbency. The NOEL for this study was 0.25 mg/kg/day. Similar results were seen in a 2 year study with rats fed 0.75, 1.5 or 2 mg/kg/day. No changes in the nervous or muscular systems were observed, but rats in all dosage levels exhibited body weight gains significantly higher than the controls. When mice were fed 8 mg/kg/day, the highest dose tested, for 94 weeks, the males developed dermatitis and changes in blood formation in the spleen, while females exhibited tremors and weight loss.

Abamectin has produced cleft palate in the offspring of treated mice and rabbits, but only at doses that were also toxic to the mothers. There were no birth defects in the offspring of rats given up to 1 mg/kg/day.

Abamectin is not mutagenic. Abamectin was not carcinogenic in rats of mice fed the maximum tolerated doses.

Safe Work Australia has classified N-methyl pyrrolidone in the occupational environment as a teratogen Category 1 substance. This means that the substance is regarded as causing developmental toxicity in humans based on strong evidence from animal studies.

SECTION 12 ECOLOGICAL INFORMATION

Environmental Toxicology: No information is available for the product. The following information refers to the active ingredient, abamectin. Toxic to waterfowl (Mallard duck LD₅₀ = 84 mg/kg), but relatively non toxic to upland game birds (Bobwhite quail LD₅₀ > 2000 mg/kg) Toxic to fish - rainbow trout LD₅₀ = 3.6 µg/L and bluegill sunfish LD₅₀ = 9.6 µg/L. Very toxic to *Daphnia magna* LC₅₀ (48 hour) = 0.34 µg/L. Toxic to bees. DO NOT contaminate streams, rivers or water courses.

Environmental Fate: No information is available for the product. The following information refers to the active ingredient, abamectin. Abamectin binds tightly to soil with rapid degradation by soil microorganisms. Does not bioaccumulate.

SECTION 13 DISPOSAL CONSIDERATIONS**Spills and Disposal:****1) After intended use (disposal of empty containers):**

Triple or preferably pressure rinse containers before disposal. Add rinsings to 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 500mm in a disposal pit specifically marked and set up for this purpose clear of water ways desirable vegetation and tree roots. Empty containers and product should not be burnt. Do not cut or saw empty containers, as there is the possibility that fumes inside the container maybe ignited and cause the container to explode.

2) After spill or accident

Dispose of drummed waste and decontamination solution in accordance with the requirements of Local Authorities or State Waste Management Authorities. In rural areas contact ChemClear <http://www.chemclear.com.au> for help with collection of unwanted rural chemicals.

SECTION 14 TRANSPORT INFORMATION

Transport: eChem Abamectin is classified as Dangerous Goods under the Australian Code for the Transport of Dangerous Goods by Road and Rail and also by the Maritime Dangerous Goods (IMDG) Code and the International Air transport Association (IATA). The following Dangerous Goods Classification applies class 6.1, with label "Toxic 6", UN No. 2902, Packaging Group III. Proper Shipping Name: PESTICIDES, LIQUID, TOXIC, N.O.S. (Contains 1.8% Abamectin), Hazchem Code: 2XE. EPG: Standards Australia Guide No. 34. Do not load with Dangerous Goods Class 1, foodstuffs or foodstuff empties. Hazard Identification Number (HIN) 60.

This product is a Schedule 6 Poison (S6) and must be stored in accordance with the relevant Health Department regulations. Product is a combustible liquid (C1) and must be stored away from naked lights, heat sources and oxidising agents. Observe procedures detailed in Australian Standard AS1940-1988 for flammable and combustible liquids.

SECTION 15 REGULATORY INFORMATION

Under the Standard for Uniform Scheduling of Drugs and Poisons (SUSDP), this product is a schedule 6 poison.

This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product Registration No. 53306.

This product is classified as a Hazardous Substance under the criteria of Safe Work Australia. (T: Toxic, Xn: Harmful, Xi: Irritant).

eChem Abamectin is classified as Dangerous Goods under the Australian Code for the Transport of Dangerous Goods by Road and Rail.

Requirements concerning special training:

Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

SECTION 16 OTHER INFORMATION

Issue Date: 20 March 2013. Valid for 5 years. (Revised address details).

Key to abbreviations and acronyms used in this MSDS:

ADG Code: Australian Dangerous Goods Code (for the transport of dangerous goods by Road and Rail).

Carcinogen: An agent which is responsible for the formation of a cancer.

Genotoxic: Capable of causing damage to genetic material, such as DNA.

LD₅₀: Median Lethal Dose. A statistically derived single dose of a substance that can be expected to cause death in 50% of dosed animals.

Mutagenic: Able to produce a mutation (a change in the genetic material of cells).

Neurotoxicity: An adverse change in the structure or function of the nervous system.

Oedema: Accumulation of fluid in tissues.

PPE: Personal protective equipment.

Teratogen: An agent capable of causing abnormalities in a developing foetus, that is causing birth defects.

STEL: Short Term Exposure Limits

TWA: The Time Weighted Average airborne concentration over an eight-hour working day, for a five day working week over an entire working life.

Safe Work Australia: Formally known as Australian Safety & Compensation Council (ASCC) which was formally known as the National Occupational Health & Safety Commission (NOHSC).

References

1. "Search Hazardous Substances". HSIS Safe Work Australia website. (2013).
2. "Approved Criteria for Classifying Hazardous Substances" 3rd Ed. NOHSC Australia. [NOHSC:1008 (2004)]. October 2004.

SECTION 16 OTHER INFORMATION (Continued)

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.

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

End MSDS