

Infosafe No™ 3NUY9 Issue Date : August 2017 ISSUED by NUFARM

Product Name **ASTRAL 250 EC Insecticide/Miticide**

Classified as hazardous

## 1. Identification

<b>GHS Product Identifier</b>	ASTRAL 250 EC Insecticide/Miticide	
<b>Product Code</b>	5352	NUL2722
<b>Product Type</b>	Group 3A Insecticide	
<b>Company Name</b>	NUFARM AUSTRALIA LIMITED. (ABN 80 004 377 780)	
<b>Address</b>	103-105 Pipe Road Laverton North Victoria 3026 Australia	
<b>Telephone/Fax Number</b>	Tel: +61 3 9282-1000 Fax: +61 3 9282-1001	
<b>Emergency phone number</b>	1800 033 498 (24hr Australia)	
<b>Recommended use of the chemical and restrictions on use</b>	Controls insect pests and mites of apricots, bananas, barley, canola, citrus, clover, cotton, cucurbits, faba beans, field peas, grapes, lucerne, lucerne seed crops, lupins, navy beans, nectarines, peaches, pears, plums, poppies, subterranean clover, sugarcane, sweet potatoes, tomatoes and wheat as specified in the Directions for Use table on the label.	
<b>Other Information</b>	This Safety Data Sheet describes the properties of the concentrated product. The physical properties and the assessments may not apply to the properties of the product once it has been diluted for application.	

## 2. Hazard Identification

<b>GHS classification of the substance/mixture</b>	OT3 Acute Toxicity - Oral: Category 3 IT4 Acute Toxicity - Inhalation: Category 4 SS-1 Sensitization - Skin: Category 1 CA2 Carcinogenicity: Category 2 AH1 Aspiration Hazard: Category 1 RE1 STOT Repeated Exposure Category 1 SE-3NARC STOT Single Exposure Category 3 (narcotic) AC1 Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1 FL4 Flammable Liquids: Category 4
<b>Signal Word (s)</b>	DANGER
<b>Hazard Statement (s)</b>	H301 Toxic if swallowed. H332 Harmful if inhaled. H317 May cause an allergic skin reaction. H351 Suspected of causing cancer. H372 Causes damage to the nervous system through prolonged or repeated exposure. H304 May be fatal if swallowed and enters airways. AUH066 Repeated exposure may cause skin dryness or cracking. H336 May cause drowsiness or dizziness. H227 Combustible liquid. H410 Very toxic to aquatic life with long lasting effects.
<b>General Precautionary Statement (s)</b>	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read label before use.
<b>Pictogram (s)</b>	Skull and crossbones, Health hazard, Exclamation mark, The below pictograms are GHS Hazard symbols for workplace use only. See SECTION 14 for Dangerous Goods information.



<b>Precautionary statement – Prevention</b>	P264 Wash hands and exposed skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P261 Avoid breathing spray. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves, clothing, eye and face protection.
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**Precautionary statement – Response**

P210 Keep away from flames and hot surfaces. – No smoking.  
 P308+P313 IF exposed or concerned: Get medical advice/attention.  
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
 P330 Rinse mouth.  
 P331 Do NOT induce vomiting.  
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P311 Call a POISON CENTER or doctor/physician.  
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
 P363 Wash contaminated clothing before reuse.

**Other Information**

Poisons Schedule S6

### 3. Composition/information on ingredients

**Chemical** Liquid

**Characterization**
**Ingredients**

<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
Bifenthrin	82657-04-3	250 g/L
Liquid Hydrocarbon	64742-94-5	640 g/L
Other ingredients (considered non-hazardous)		0-10 %

### 4. First-aid measures

**Inhalation** Remove affected person to fresh air until recovered. If symptoms develop or persist, seek medical advice.

**Ingestion** Rinse mouth and then drink plenty of water.  
 If swallowed do NOT induce vomiting; seek medical advice immediately and show this container or label or contact the Poisons Information Centre on 13 11 26 (Aust). Make every effort to prevent vomit from entering the lungs by careful placement of the patient.

**Skin** Wash affected areas thoroughly with soap and water.  
 Remove contaminated clothing and launder before re-use.  
 If irritation persists, seek medical advice.

**Eye contact** If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes.  
 Seek medical advice.

**Advice to Doctor** Treat symptomatically.  
 If vomiting occurs, solvent present may cause pulmonary pneumonitis.  
 Exposure to bifenthrin can result in sensations of tingling especially in the face. The effects are transient and generally disappear in one to two days. Topical application of vitamin E cream is effective in reducing discomfort.

### 5. Fire-fighting measures

**Suitable extinguishing media** Water fog, foam, carbon dioxide or dry chemical.

**Hazards from Combustion** May emit hazardous smoke and fumes if involved in fires or exposed to extreme heat.

**Products**
**Special Protective Equipment for fire fighters** Breathable air apparatus may have to be worn if material is involved in fires especially in confined spaces.

**Hazchem Code** 2X

**Other Information** STOP FIRE WATER FROM ENTERING DRAINS OR WATER BODIES.

### 6. Accidental release measures

**Spills & Disposal** Contain spill and absorb with clay, sand, soil or proprietary absorbent (such as vermiculite).  
 Collect spilled material and waste in sealable open-top type containers for disposal.

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<b>Personal Protection</b>	For appropriate personal protective equipment (PPE), refer Section 8.
<b>Clean-up Methods - Large Spillages</b>	Place damaged containers in recovery bins (if available) and return to manufacturer. If large liquid spills occur, attempt to recover as much spilt material from sumps and banded areas, as possible, before absorbing remaining material into vermiculite or other absorbent.
<b>Environmental Precautions</b>	Prevent product or washings from entering drains, waterways or sewers.

## 7. Handling and storage

<b>Conditions for safe storage, including any incompatibilities</b>	Store in the closed, original container in a cool, well ventilated area. Do not store for prolonged periods in direct sunlight. Keep container tightly sealed and do not store with seed, fertilisers or foodstuffs.
<b>Other Information</b>	Always read the label and any attached leaflet before use.

## 8. Exposure controls/personal protection

<b>Occupational exposure limit values</b>	The manufacturer of the solvent has recommended an occupational exposure limit of 100 mg/m <sup>3</sup> ; 17ppm TWA, as total hydrocarbon. No exposure standards have been set for this product.
<b>Appropriate engineering controls</b>	Handle in well ventilated areas, generally natural ventilation is adequate.
<b>Personal Protective Equipment</b>	When opening the container, preparing product for use and using the prepared product, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), a washable hat, elbow-length PVC gloves and goggles. Re-entry period: Do not enter treated area until spray has dried.
<b>Hygiene Measures</b>	After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash contaminated clothing and safety equipment.
<b>Requirements Concerning Special Training</b>	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.

## 9. Physical and chemical properties

<b>Form</b>	Liquid
<b>Appearance</b>	Clear brown coloured liquid.
<b>Solubility in Water</b>	Forms an emulsion in water.
<b>Specific Gravity</b>	0.969
<b>pH</b>	5-6 (1% solution)
<b>Vapour Pressure</b>	0.0178 mPa @ 20°C for bifenthrin
<b>Partition Coefficient: n-octanol/water</b>	Kow Log P is 6.6 for bifenthrin
<b>Flash Point</b>	66°C
<b>Flammability</b>	Combustible Liquid (GHS). Combustible liquid C1. (does not sustain combustion) AS1940.

## 10. Stability and reactivity

<b>Chemical Stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Keep away from strong oxidising agents.
<b>Hazardous Polymerization</b>	Hazardous polymerisation is not possible.

## 11. Toxicological Information

<b>Acute Toxicity - Oral</b>	LD50 (rat) 54.5 mg/kg for bifenthrin
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<b>Acute Toxicity - Dermal</b>	LD50 (rat) >2000mg/kg
<b>Ingestion</b>	Possible symptoms of exposure include: nausea, vomiting, central nervous system depression and a burning or itching sensation.
<b>Inhalation</b>	Breathing in high concentrations of vapour can produce central nervous system depression, which can lead to loss of coordination, impaired judgement and if exposure is prolonged, unconsciousness. Breathing in high concentrations of aerosols of this material may have the effects noted above and, in addition, cause nausea and irritation of the nose, throat and respiratory tract.
<b>Skin</b>	Will irritate the skin. Prolonged contact with the concentrate can cause defatting of the skin and may result in dermatitis. Prolonged or repeated exposure may cause skin sensitisation. Prolonged contact with the concentrate may result in absorption of bifenthrin in harmful amounts. Exposure to bifenthrin can result in sensations of tingling especially in the face. The effects are transient and generally disappear in one to two days. Topical application of vitamin E cream is effective in reducing discomfort.
<b>Eye</b>	Will irritate the eyes.
<b>Skin Sensitisation</b>	Prolonged and repeated skin contact may result in skin sensitisation. Skin contact may produce skin sensations such as numbing, burning and tingling. These sensations are reversible and usually subside within 24 hours.
<b>Carcinogenicity</b>	An impurity present in the solvent has been found to cause tumors in laboratory studies. The active ingredient, bifenthrin, is a suspected human carcinogen based on limited evidence from studies on laboratory animals. Data indicates no reproductive effects.
<b>Reproductive Toxicity</b>	
<b>Chronic Effects</b>	Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.
<b>Serious eye damage/irritation</b>	This product is a severe eye irritant.
<b>Mutagenicity</b>	Data indicates no mutagenic effects.
<b>Other Information</b>	The Australian Acceptable Daily Intake (ADI) for bifenthrin for a human is 0.01 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 1 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Aust Govt Dept. of Health, Office of Chemical Safety, 'ADI List', March 2016).

## 12. Ecological information

<b>Persistence and degradability</b>	Strongly bound to soil.
<b>Known Harmful Effects on the Environment</b>	Bifenthrin products do not appear to pose any threat to birds. The product is a marine pollutant for sea transport.
<b>Other Precautions</b>	Dangerous to bees. Should not be applied while bees are actively foraging. Do not contaminate streams, rivers or waterways with the chemical or used containers.
<b>Environmental Protection</b>	Marine pollutant. Spray drift should be avoided, read the label for more information.
<b>Acute Toxicity - Fish</b>	The following is data for the active ingredient, bifenthrin. LC50 (96hr) for rainbow trout is 0.00026 mg/l. EC50 (48hr) for daphnia magna is 0.00011 mg/l.
<b>Acute Toxicity - Daphnia</b>	
<b>Acute Toxicity - Other Organisms</b>	The following data is for the active ingredient, bifenthrin. LD50 for bobwhite quail is 1800 mg/kg Toxic to bees. LD50 (contact) 0.01µg/bee.

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### 13. Disposal considerations

<b>Product Disposal</b>	<p>On site disposal of the concentrated product is not acceptable.</p> <p>Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemClear®).</p>
<b>Container Disposal</b>	<p>Do not use this container for any other purpose.</p> <p>Triple or preferably pressure rinse inner bladder or containers before disposal. Add rinsings to the spray tank. If recycling, replace cap and return clean containers to recycler or designated collection point.</p> <p>If not recycling, break, crush or puncture and deliver empty packaging for appropriate disposal at an approved waste management facility.</p> <p>If an approved waste management facility is not available, bury the empty packaging 500mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government regulations.</p> <p>DO NOT burn empty containers or product. drumMUSTER is the national program for the collection and recycling of empty, cleaned, non returnable crop production and on-farm animal health chemical containers. If the label on your container carries the drumMUSTER symbol, triple rinse the container, ring your local Council, and offer the container for collection in the program.</p> <p>Returnable containers: empty contents fully into application equipment. Replace cap, close all valves and return to the point of supply for refill or storage.</p>

### 14. Transport information

<b>Transport Information</b>	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.
<b>U.N. Number</b>	3352
<b>UN proper shipping name</b>	PYRETHROID PESTICIDE, LIQUID, TOXIC - (contains Bifenthrin)
<b>Transport hazard class(es)</b>	6.1
<b>Hazchem Code</b>	2X
<b>Packaging Method</b>	3.8.6.1
<b>Packing Group</b>	III
<b>IERG Number</b>	35
<b>IMO Marine Pollutant</b>	Marine Pollutant

### 15. Regulatory information

<b>Regulatory Information</b>	WHS Schedule 11, item 10 ( flammable liquid, category 4 ), item 35 ( acute toxicity, category 3 ).
<b>Poisons Schedule</b>	S6
<b>Packaging &amp; Labelling</b>	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
<b>Other Information</b>	This product is registered with the Australian Pesticides and Veterinary Medicines Authority (APVMA). APVMA product number: 68017.

### 16. Other Information

<b>Date of preparation or last revision of SDS</b>	23/08/2017 This SDS replaces document dated June 2017.
<b>Contact Person/Point</b>	Normal Hours: Mrs Kathleen Marsh Phone: +61 3 9282 1000 After Hours: Shift Supervisor Phone: 1800 033 498
<b>Revisions Highlighted</b>	The SDS was reviewed. Various changes were made to the information. Hazard identification expanded and carcinogenicity information in section 11



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