



# Material Safety Data Sheet

Page 1 of 5

Infosafe No. 3NU1W Issue Date : August 2006 ISSUED by NUFARM

Product Name : Astound Duo Insecticide

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name** Astound Duo Insecticide  
**Product Code** 1710  
**Product Type** Group 3A Insecticide  
**Company Name** NUFARM AUSTRALIA LIMITED. (ABN 80 004 377 780)  
**Address** 103-105 Pipe Road Laverton North  
Victoria 3026 Australia  
**Emergency Tel.** 24hr 1800 033 498  
**Telephone/Fax Number** Tel: (03) 9282-1000 Fax: (03) 9282-1001  
**Recommended Use** For the control of certain insect pests, including heliothis (Helicoverpa spp.) on various crops and redlegged earth mite and blue oat mite on certain field crops and pastures and certain insect pests on fruit and vegetable crops as indicated in the Directions for Use table on the label.  
**Other Information** This MSDS describes, to the best of our knowledge, the properties of the concentrated product. The physical properties and some of the assessments do not apply to the properties of the product once it has been diluted for application. Acute health effects of the diluted product are likely to be much less severe.

## 2. HAZARDS IDENTIFICATION

**Hazard Classification** HAZARDOUS SUBSTANCE.  
NON-DANGEROUS GOODS.  
Hazard classification according to the criteria of NOHSC.  
Dangerous goods classification according to the Australia Dangerous Goods Code.  
**Risk Phrase(s)** R22 Harmful if swallowed.  
R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.  
**Safety Phrase(s)** S2 Keep out of reach of children.  
S36/37 Wear suitable protective clothing and gloves.  
S45 In case of accident or if you feel unwell seek medical advice immediately  
**Other Information** Poisons Schedule S6

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical Characterization** Liquid  
**Ingredients**

<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
Liquid Hydrocarbons	64742-94-5	742 g/L
Alpha Cypermethrin	67375-30-8	100 g/L
Surfactant		0-10 %

**Substance Chemical Family** Synthetic Pyrethroid

## 4. FIRST AID MEASURES

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



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<b>Ingestion</b>	Rinse mouth thoroughly with 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. The above first aid instructions are mandated by the Commonwealth Department of Health and Aged Care via the National Drugs and Poisons Schedule. These instructions are suitable for ingestion of spray solution and small amounts of concentrate; however, if SUBSTANTIAL AMOUNTS of the concentrate have been swallowed (more than about 15ml) AND if medical assistance is more than 30 minutes away, the induction of vomiting should be CONSIDERED, preferably based on MEDICAL ADVICE if a physician can be contacted by phone. All care must be taken to prevent vomit from being inhaled. Do not give anything by mouth to a semi-conscious or unconscious person.
<b>Skin</b>	Remove contaminated clothing and launder before re-use. Wash affected areas thoroughly with soap and water. If irritation persists, seek medical advice.
<b>Eye</b>	If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes. Seek medical advice.
<b>First Aid Facilities</b>	If poisoning occurs, contact a doctor or Poisons Information Centre on 13 11 26 (Australia).
<b>Advice to Doctor</b>	Treat symptomatically. In cases of skin contact, application of Vitamin E cream has been found to have very high therapeutic value.

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## 5. FIRE FIGHTING MEASURES

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<b>Suitable Extinguishing Media</b>	Water fog, foam, carbon dioxide or dry chemical.
<b>Hazards from Combustion Products</b>	Avoid using large volumes of water which would spread the product. Although material is not flammable, the concentrate is combustible. If involved in a fire, it will emit carbon monoxide and possibly hydrogen chloride.
<b>Speical Protective Equipment for fire fighters</b>	Breathable air apparatus may have to be worn if material is involved in fires especially in confined spaces.
<b>Hazchem Code</b>	None Allocated
<b>Other Information</b>	STOP FIRE WATER FROM ENTERING DRAINS OR WATER BODIES.

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## 6. ACCIDENTAL RELEASE MEASURES

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<b>Spills &amp; Disposal</b>	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. Dispose of at a landfill in accordance with local regulations. On-site disposal of concentrate is not acceptable.
<b>Clean-up Methods - Large Spillages</b>	Place damaged containers in recovery bins (if available) and return to manufacturer.

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## 7. HANDLING AND STORAGE

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<b>Precautions for Safe Handling</b>	Do NOT contaminate dams, rivers or streams, or any other water bodies with pesticide or used containers. Do NOT spray in high winds.
<b>Conditions for Safe Storage</b>	Store in the closed, original container in a dry, well ventilated area out of direct sunlight. Do not store below 4 °C.
<b>Other Information</b>	Always read the label and any attached leaflet before use.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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# Material Safety Data Sheet

Page 3 of 5

Infosafe No. 3NU1W Issue Date : August 2006 ISSUED by NUFARM

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<b>National Exposure Standards</b>	No biological exposure limit allocated. No exposure standards have been set for this product or the active ingredients. The manufacturer of the solvent has recommended an occupational exposure limit of 100 mg/m <sup>3</sup> ; 17ppm TWA, as total hydrocarbon.
<b>Engineering Controls</b>	Handle in well ventilated areas, generally natural ventilation is adequate.
<b>Respiratory Protection</b>	Do not inhale spray mist.
<b>Eye Protection</b>	Wear chemical goggles.
<b>Personal Protective Equipment</b>	When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and goggles.
<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.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Form</b>	Liquid
<b>Appearance</b>	Clear straw coloured liquid.
<b>Odour</b>	Aromatic Odour.
<b>Boiling Point</b>	184°C
<b>Solubility in Water</b>	Not soluble.
<b>Specific Gravity</b>	0.92 @20°C
<b>Volatile Component</b>	>60% by volume
<b>Flash Point</b>	62°C
<b>Flammability</b>	Combustible liquid C1.
<b>Kinematic Viscosity</b>	>27 x10 <sup>-6</sup> m <sup>2</sup> /sec

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## 10. STABILITY AND REACTIVITY

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<b>Chemical Stability</b>	Do not store below 4°C. The product crystallises at low temperatures.
<b>Hazardous Reactions</b>	Keep away from strong oxidising agents.
<b>Hazardous Polymerization</b>	Hazardous polymerisation is not possible.

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## 11. TOXICOLOGICAL INFORMATION

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<b>Inhalation</b>	May cause irritation to the respiratory tract. Breathing vapour can result in headaches, dizziness and possible nausea. 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.
<b>Ingestion</b>	The concentrate is harmful if swallowed. Ingestion of alpha-cypermethrin in relatively large amounts can result in headache, nausea, lethargy, motor weakness and incoordination.
<b>Skin</b>	May irritate the skin. Exposure to alpha-cypermethrin 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. The occurrence of 'facial sensations' is an indication of exposure. Under these circumstances work practices should be reviewed.
<b>Eye</b>	The concentrate may cause irritation of the eyes.
<b>Chronic Effects</b>	Repeated exposure could result in peripheral nervous system damage.
<b>Acute Toxicity - Oral</b>	LD50 (rat) 79 - 474 mg/kg for alpha-cypermethrin technical



# Material Safety Data Sheet

Page 4 of 5

Infosafe No. 3NU1W Issue Date : August 2006 ISSUED by NUFARM

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<b>Acute Toxicity - Dermal</b>	LD50 (rat) >2000 mg/kg for alpha-cypermethrin LD50 (rabbit) >2000 mg/kg for alpha-cypermethrin
<b>Acute Toxicity - Inhalation</b>	LC50 (rat) (4hr) >0.32 mg/l
<b>Eye Irritation</b>	Mild eye irritant.
<b>Skin Irritation</b>	Mild skin irritant.
<b>Other Information</b>	The Australian Acceptable Daily Intake (ADI) for alpha-cypermethrin for a human is 0.05 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 4.7 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: Comm. Dept. of Health and Ageing, 'ADI List', TGA, June 2006).

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## 12. ECOLOGICAL INFORMATION

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<b>Persistence / Degradability</b>	Average field half life of alpha-cypermethrin is 90 days.
<b>Known Harmful Effects on the Environment</b>	Alpha-cypermethrin products do not appear to pose any threat to birds. The product is a marine pollutant for sea transport. Alpha-cypermethrin is toxic to fish.
<b>Acute Toxicity - Fish</b>	The following is data for the active ingredient, alpha-cypermethrin. Toxic to fish. LC50 (96hr) for rainbow trout is 0.0028 mg/l.
<b>Acute Toxicity - Daphnia</b>	LC50 (48 hr) for alpha-cypermethrin is 0.0003 mg/l.
<b>Acute Toxicity - Other Organisms</b>	Birds: Not toxic to birds. LD50 for mallard duck is >10,000 mg/kg Bees: Toxic to bees. LD50 0.059 µg/bee. Should not be applied while bees are actively foraging.

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## 13. DISPOSAL CONSIDERATIONS

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<b>Product Disposal</b>	On site disposal of the concentrated product is not acceptable. 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 (ChemCollect).
<b>Container Disposal</b>	Do not use this container for any other purpose. Triple rinse containers, add rinsate to the spray tank, then offer the container for recycling/reconditioning, or puncture top, sides and bottom and dispose of in landfill in accordance with local regulations. 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. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, puncture or shred and bury containers in 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 waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt. Returnable containers: empty contents fully into application equipment. Replace cap, close all valves and return to the point of supply for refill or storage.

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## 14. TRANSPORT INFORMATION

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<b>U.N. Number</b>	None Allocated
<b>DG Class</b>	None Allocated
<b>Hazchem Code</b>	None Allocated
<b>Packing Group</b>	None Allocated



# Material Safety Data Sheet

Page 5 of 5

Infosafe No. 3NU1W Issue Date : August 2006 ISSUED by NUFARM

Product Name : **Astound Duo Insecticide**

**Storage and Transport** Considered non dangerous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail.

**UN Number (Sea Transport)** 3082

**IMO Class/Packing Group** Class 9; Packing Group III

**IMO Marine Pollutant** Marine Pollutant

**IMO Proper Shipping Name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(contains Alpha-cypermethrin)

## 15. REGULATORY INFORMATION

**Poisons Schedule** S6

**Packaging & Labelling** POISON  
KEEP OUT OF REACH OF CHILDREN  
READ SAFETY DIRECTIONS BEFORE OPENING OR USING

**Hazard Category** Harmful

**AICS (Australia)** All of the components in this product are listed on the Australian Inventory of Chemical Substances.

## 16. OTHER INFORMATION

**Contact Person/Point** Normal Hours: Mr Volker Maier Phone: (03) 9282 1000  
After Hours: Shift Supervisor Phone: 1800 033 498

**Revisions Highlighted** The MSDS was reviewed. Minor changes were made to the information.  
...End Of MSDS...