



Material Safety Data Sheet

Infosafe No. NU00H Issue Date : March 2006 ISSUED by NUFARM

Product Name : AMITROLE T Herbicide

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name AMITROLE T Herbicide
Product Code 0085
Product Type Group F Herbicide
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 weeds in orchards, vineyards, irrigation ditches and drains, eucalyptus and pine plantations, roadsides, pre-plant wheat and barley, and for general industrial situations as per 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) R40(3) Possible risk of irreversible effects.
R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.
Safety Phrase(s) S13 Keep away from food, drink and animal feeding stuffs.
S2 Keep out of reach of children.
S36/37 Wear suitable protective clothing and gloves.
Other Information Poisons Schedule S5

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Name	CAS	Proportion
	Water		500-700 g/L
	Amitrole (3-amino-1,2,4-triazole)	61-82-5	250 g/L
	Ammonium thiocyanate	1762-95-4	220 g/L

4. FIRST AID MEASURES

Inhalation Remove affected person to fresh air until recovered.
Obtain medical advice.

Ingestion 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 20ml) 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.

Skin If skin contact occurs, remove contaminated clothing and wash skin thoroughly with water.
Remove contaminated clothing and launder before re-use.



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Eye If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes.
If irritation persists consult a doctor.

Advice to Doctor Treat symptomatically.
Note that ingestion of ammonium thiocyanate may create symptoms similar to iodism or bromide intoxication.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media If involved in a fire, the product will not burn. Choose extinguishing media to suit the burning material.

Hazards from Combustion Products Non-combustible.
If involved in a fire, the dehydrated components may emit oxides of nitrogen and oxides of sulphur.

Speical Protective Equipment for fire fighters Breathable air apparatus may have to be worn in confined spaces.

Hazchem Code None Allocated

Other Information Hazchem code has not been assigned.

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.
Dispose of at a landfill in accordance with local regulations.
If possible, ring 1800 033 498 for specialist advice.

Environmental Precautions Prevent from entering drains, waterways or sewers.
This product is a herbicide and spills can damage crops, pastures and desirable vegetation.

7. HANDLING AND STORAGE

Conditions for Safe Storage Store in the closed, original container in a dry, well ventilated area out of direct sunlight.
Do not store in the same area as acids.
Keep container tightly sealed and do not store with seed, fertilisers or foodstuffs.

Tank Cleaning Thoroughly flush all spray equipment with water following the use of this product and before use with other products.

Other Information Always read the label and any attached leaflet before use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards	Name	STEL		TWA		Footnote
		mg/m3	ppm	mg/m3	ppm	
	Amitrole (3-amino-1,2,4-triazole)			0.2		
Engineering Controls	Natural ventilation is sufficient when handling concentrate and preparing spray solution.					
Personal Protective Equipment	It is good practice to wear suitable personal protective equipment (PPE). When opening the container and preparing the spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and face shield or goggles. When using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves.					



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Hygiene Measures After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.
Wash contaminated clothing before re-use.
Wash goggles and gloves before storage and re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Brown liquid.
Melting Point <0°C
Boiling Point >100°C
Solubility in Water Soluble in water.
Specific Gravity 1.12
Vapour Pressure Amitrole is not volatile
Volatile Component 63%
Flash Point Not applicable for water based formulation
Flammability Product is not a combustible liquid - a water based solution.
Flammable Limits - Lower Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions.
Incompatible Materials Reaction with acids can liberate a toxic gas.
Corrosive to iron, steel, copper and brass.
Hazardous Reactions Violent reactions between thiocyanates and oxidising agents are possible.
Hazardous Polymerization Hazardous polymerisation is not possible.

11. TOXICOLOGICAL INFORMATION

Inhalation Not a likely route of exposure when handling the concentrate.
However, care should be taken to avoid the inhalation of excessive amounts of spray mist during field spraying, respiratory irritation may occur.

Ingestion The concentrate is harmful if swallowed.
Amounts swallowed incidental to normal handling procedures and use are not expected to cause injury.
However, swallowing of large amounts may cause injury, mainly due to ammonium thiocyanate.
Possible symptoms of exposure of the concentrate include: nausea, vomiting, diarrhoea, convulsions and possibly skin rashes or eruptions..

Skin The concentrated product may cause slight irritation on contact.
Prolonged contact with the concentrate may cause irritation and cause skin eruptions.
Acute dermal toxicity has not been determined for this product; based on data available for its components, dermal toxicity is expected to be low.

Eye The concentrate may cause irritation of the eyes.
Extent of potential injury is not known.

Chronic Effects Chronic Exposure:
For Amitrole: Based on the results of animal studies, liver and thyroid effects may result. In prolonged feeding studies with animals, effects on the thyroid have been documented, including the formation of tumors.
Epidemiological studies of workers using amitrole in the field have been inconclusive with respect to an increase in the incidence of a specific cancer. Refer carcinogenicity entry below.
For Ammonium Thiocyanate: Ingestion of this substance may lead to an effect that mimics iodism, ie a condition resulting from an overdose of iodine, characterised by running eyes and nose, salivation and skin eruptions.

Mutagenicity Laboratory studies are not conclusive, some positive, some negative.



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Carcinogenicity Worksafe Australia has classified amitrole in the occupational environment as a Carcinogen Category 3 substance. This means that the substance is not classifiable as to carcinogenicity to humans. IARC (International Agency for Research on Cancer) has determined that the mechanism in rats and mice is unlikely to occur in humans; hence amitrole has been classified by IARC as Cat 3, not classifiable as to carcinogenicity to humans.

Acute Toxicity - Oral LD50 (rat) 1100 - 24600 mg/kg for amitrole
LD50 (rat) 1527 mg/kg for Amitrole T Herbicide
LD50 (mouse) 300 mg/kg for ammonium thiocyanate

Acute Toxicity - Dermal LD50 rat >10000 mg/kg

Eye Irritation Mild eye irritant.

Skin Irritation Mild skin irritant.

Other Information The Australian Acceptable Daily Intake (ADI) for amitrole for a human is 0.0003 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.025 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, Sept 2002).

12. ECOLOGICAL INFORMATION

Persistence / Degradability Half life in soil is typically 14 days.
Loss from soil is principally by microbial degradation.

Environ. Protection Spray drift can cause damage, read the label for more information.

Acute Toxicity - Fish Not toxic to fish.

Acute Toxicity - Other Organisms Not toxic to bees.
Not toxic to birds.

13. DISPOSAL CONSIDERATIONS

Product Disposal 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).

Container Disposal 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.
Returnable containers: empty contents fully into application equipment. Replace cap, close all valves and return to the point of supply for refill or storage.
Empty containers and product should not be burnt.

14. TRANSPORT INFORMATION

U.N. Number None Allocated

Proper Shipping Name None Allocated

DG Class None Allocated

Hazchem Code None Allocated

Packing Group None Allocated

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



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15. REGULATORY INFORMATION

Poisons Schedule S5
Packaging & Labelling CAUTION
KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Hazard Category Harmful

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. Various changes were made to the information.
...End Of MSDS...