



Material Safety Data Sheet

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Infosafe No. 3NUFT Issue Date : May 2007 ISSUED by NUFARM

Product Name : **Arsenal® Herbicide**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name Arsenal® Herbicide
Product Code 0098
Product Type Group B 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 various annual and perennial weeds in non-crop situations, 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 NON-HAZARDOUS SUBSTANCE.
NON-DANGEROUS GOODS.
Hazard classification according to the criteria of NOHSC.
Dangerous goods classification according to the Australia Dangerous Goods Code.
Other Information Poisons Schedule : Not Scheduled

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization Liquid
Ingredients

<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
Imazapyr present as the isopropylamine salt	81334-34-1	250 g/L
Water		Remainder

4. FIRST AID MEASURES

Inhalation Remove affected person to fresh air until recovered.
If symptoms develop or persist, seek 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.
Give a glass of water.
If vomiting occurs, give more water to drink to assist dilution.
Skin Wash affected areas thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
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.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media None required but use water spray to cool containers or personnel threatened by fire.



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Hazards from Combustion Products If involved in a fire, the dehydrated components may emit oxides of carbon and oxides of nitrogen.
Hazchem Code None Allocated
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.
Personal Protection For appropriate personal protective equipment (PPE), refer Section 8.
Clean-up Methods - Large Spillages 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 bunded areas before absorbing remaining material into vermiculite or other absorbent.
Environmental Precautions This product is a herbicide and spills can damage crops, pastures and desirable vegetation. Prevent from entering drains, waterways or sewers.

7. HANDLING AND STORAGE

Precautions for Safe Handling Do not mix, store or apply the product or spray solutions of the product in galvanised steel or unlined steel (except stainless steel) containers or spray tanks.
Conditions for Safe Storage Store in the closed, original container in a cool, well ventilated area. Do not store for prolonged periods in direct sunlight.
Other Information Do not use on or in situations where damage to susceptible crops or plants such as cotton, tobacco, tomatoes, flowers, vines, fruit trees or other susceptible crop plants may result from direct application or drift.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards No exposure standards have been set for this product or the active ingredients.
Engineering Controls Handle in well ventilated areas, generally natural ventilation is adequate.
Personal Protective Equipment It is good practice to wear suitable personal protective equipment (PPE). 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 face shield or goggles.
Hygiene Measures 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form Liquid
Appearance Clear amber liquid
Odour Faint amine
Solubility in Water Soluble in water.
Specific Gravity 1.06
pH Value 6.5 - 7.0
Vapour Pressure <0.013 mPa @ 60°C for imazapyr
Volatile Component 54% (for water)
Octanol/Water Partition Coefficient 0.11 for imazapyr
Flammability Non combustible material.



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10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Incompatible Materials	The addition of a strong alkali such as caustic soda will cause release of isopropylamine vapour. Isopropylamine is moderately toxic, LD50 (oral, rat) is 820 mg/kg and a TLV of 5 ppm (TWA) has been set.
Hazardous Polymerization	Hazardous polymerisation is not possible.

11. TOXICOLOGICAL INFORMATION

Inhalation	The components of the product are of low volatility and no adverse effects are expected from 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 of low toxicity if swallowed.
Skin	May irritate the skin.
Eye	May irritate the eyes.
Chronic Effects	Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.
Reproductive Toxicity	Data indicates no reproductive effects.
Mutagenicity	Data indicates no mutagenic effects.
Carcinogenicity	Data indicates no carcinogenic effects.
Acute Toxicity - Oral	LD50 (rat) >5000 mg/kg for imazapyr
Acute Toxicity - Inhalation	LC50 (rat) (4hr) >5.1 mg/l for imazapyr
Eye Irritation	Mild eye irritant.
Skin Irritation	Mild skin irritant.
Other Information	The Australian Acceptable Daily Intake (ADI) for imazapyr for a human is 2.5 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 250 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, September 2006).

12. ECOLOGICAL INFORMATION

Persistence / Degradability	Soil residual activity for imazapyr is 6 months to 2 years in temperate climates; 6 months in tropical climates.
Environ. Protection	Spray drift can cause damage, read the label for more information.
Acute Toxicity - Fish	The following is data for the active ingredient, imazapyr. Not toxic to fish. LC50 (96 hr) for rainbow trout, bluegill sunfish, channel catfish is >100 mg/l.
Acute Toxicity - Other Organisms	Not toxic to birds. Not toxic to bees.

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 (ChemClear®).
Container Disposal	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



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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 on-site container disposal is necessary, triple rinse empty container with water, add rinsate to the spray tank. Puncture top, sides and bottom, crush and bury in an approved landfill or bury with at least 500 mm of soil cover away from pasture and crop areas, water supplies and houses.
Empty containers and product should not be burnt.

14. TRANSPORT INFORMATION

Transport Information It is good practice to separate this product from food, food related materials, animal feedstuffs, seed or fertilisers during transport.
U.N. Number 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.

15. REGULATORY INFORMATION

Poisons Schedule Not Scheduled
Packaging & Labelling KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING
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 First Issue
Highlighted
Other Information © Registered trademark of BASF
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