



Infosafe No™ 3NU2X

Issue Date :April 2009

ISSUED by NUFARM

CS: 1.4.21

Product Name **ARSENAL XPRESS® Herbicide**

Not classified as hazardous

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	ARSENAL XPRESS® Herbicide
Product Code	0099
Product Type	Group BM Herbicide
Company Name	NUFARM AUSTRALIA LIMITED. (ABN 80 004 377 780)
Address	103-105 Pipe Road Laverton North Victoria 3026 Australia
Emergency Tel.	1800 033 498 (24hr Australia)
Telephone/Fax Number	Tel: +61 3 9282-1000 Fax: +61 3 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	Not classified as hazardous NON-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)	Not classified as hazardous
Other Information	Poisons Schedule S5

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization	Liquid															
Ingredients	<table><thead><tr><th><u>Name</u></th><th><u>CAS</u></th><th><u>Proportion</u></th></tr></thead><tbody><tr><td>Glyphosate present as the isopropylamine salt</td><td>1071-83-6</td><td>150 g/L</td></tr><tr><td>Imazapyr present as the isopropylamine salt</td><td>81334-34-1</td><td>150 g/L</td></tr><tr><td>Other ingredients (considered non-hazardous)</td><td></td><td>10-30 %</td></tr><tr><td>Water</td><td></td><td>Remainder</td></tr></tbody></table>	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>	Glyphosate present as the isopropylamine salt	1071-83-6	150 g/L	Imazapyr present as the isopropylamine salt	81334-34-1	150 g/L	Other ingredients (considered non-hazardous)		10-30 %	Water		Remainder
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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.



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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.**Hazards from Combustion** If involved in a fire, the dehydrated components may emit oxides of carbon, oxides of nitrogen and possibly oxides of phosphorus.**Products** This product, or spray solutions of this product, react with galvanised steel or unlined steel (except stainless steel) containers and tanks, to produce hydrogen gas which may form a highly flammable or explosive gas mixture.**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** Always read the label and any attached leaflet before use.

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.

Requirements Concerning Special Training NSW regulations require that people who use pesticides in their job or business must have training in the application of the materials.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form Liquid**Appearance** Clear amber liquid**Odour** Faint amine**Solubility in Water** Soluble in water.**Specific Gravity** 1.12**pH Value** 7.3



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Vapour Pressure <0.013 mPa @ 60°C for imazapyr; 0.0113 mPa @ 25°C for glyphosate**Volatile Component** 54% (for water)**Octanol/Water Partition Coefficient** 0.11 for imazapyr; <-3.2 (pH2-5) glyphosate**Flammability** Non combustibile material.

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 vapour 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) 4050 mg/kg for glyphosate as isopropylamine salt

LD50 (rat) >5000 mg/kg for imazapyr

Acute Toxicity - Inhalation LC50 (rat) (4hr) >1.3 mg/l for glyphosate as isopropylamine salt

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 glyphosate for a human is 0.3 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 30 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 Office of Chemical Safety, 'ADI List', December 2008).

ADI for imazapyr is 2.5 mg/kg/day, NOEL 250 mg/kg/day.

12. ECOLOGICAL INFORMATION

Persistence / Degradability Glyphosate is rapidly absorbed and inactivated by contact with soil.

Soil residual activity for imazapyr is 6 months to 2 years in temperate climates; 6 months in tropical climates.

Acute Toxicity - Fish The following is data for the active ingredient, imazapyr.

Not toxic to fish.

LC50 (96hr) for rainbow trout, bluegill sunfish and channel catfish is >100 mg/l.

The following data is for a similar glyphosate isopropylamine salt/surfactant formulation.

LC50 (96hr) for rainbow trout is 1080 mg/l.

Acute Toxicity - Other Organisms Not toxic to birds.

Not toxic to bees.



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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 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. 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

Transport Information	It is good practice to separate this product from food, food related materials, animal feedstuffs, seed or fertilisers during transport.
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	S5
Packaging & Labelling	CAUTION 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

Date of preparation or last revision of MSDS	Reviewed 22/04/2009
Contact Person/Point	Normal Hours: Mr Volker Maier Phone: +61 3 9282 1000 After Hours: Shift Supervisor Phone: 1800 033 498
Revisions Highlighted	The MSDS was reviewed. Minor changes were made to the information.
Other Information	® Registered trademark of BASF ...End Of MSDS...

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