



Infosafe No™ 3NU1E

Issue Date : June 2009

ISSUED by NUFARM

CS: 1.4.21

Product Name **BROADSIDE Herbicide**

Classified as hazardous

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	BROADSIDE Herbicide
Product Code	0145
Product Type	Group C I 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 certain broadleaf weeds in wheat, barley, cereal rye, oats, triticale and turf 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	Classified as hazardous 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)	Classified as hazardous R20/21/22 Harmful by inhalation, in contact with skin and if swallowed. R63 Possible risk of harm to the unborn child. R65 Harmful: may cause lung damage if swallowed.
Safety Phrase(s)	S13 Keep away from food, drink and animal feeding stuffs. S2 Keep out of reach of children. S23(2) Do not breathe vapour. S24 Avoid contact with skin. S62 If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.
Other Information	Poisons Schedule S6

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>MCPA (present as the iso-octyl ester)</td><td>94-74-6</td><td>280 g/L</td></tr><tr><td>Bromoxynil (present as the octanoate ester)</td><td>1689-99-2</td><td>140 g/L</td></tr><tr><td>Dicamba (present as the acid)</td><td>1918-00-9</td><td>40 g/L</td></tr><tr><td>Hydrocarbon Liquid</td><td>64742-94-5</td><td>289 g/L</td></tr><tr><td>Proprietary surfactant mixture (non-hazardous)</td><td></td><td>5-10 %</td></tr></tbody></table>	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>	MCPA (present as the iso-octyl ester)	94-74-6	280 g/L	Bromoxynil (present as the octanoate ester)	1689-99-2	140 g/L	Dicamba (present as the acid)	1918-00-9	40 g/L	Hydrocarbon Liquid	64742-94-5	289 g/L	Proprietary surfactant mixture (non-hazardous)		5-10 %
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4. FIRST AID MEASURES

Inhalation	Remove to fresh air, apply artificial respiration if necessary. Obtain medical assistance.
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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 Ageing 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 for an adult person) 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	Wash affected areas thoroughly with soap and water.
Eye	Remove contaminated clothing and launder before re-use. If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes. Seek medical advice if irritation develops or persists.
First Aid Facilities	If poisoning occurs, contact a doctor or the Poisons Information Centre (Australia) on 13 11 26.
Advice to Doctor	Treat symptomatically. If vomiting occurs, solvent present may cause pulmonary pneumonitis.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Water fog, foam, carbon dioxide or dry chemical.
Hazards from Combustion Products	Although material is not flammable, the concentrate is combustible. Keep upwind. If involved in a fire, it will emit toxic fumes of hydrogen bromide, hydrogen chloride, hydrogen cyanide or other compounds of bromine, chlorine and nitrogen.
Special Protective Equipment for fire fighters	Breathable air apparatus may have to be worn in confined spaces.
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 in sealed open top containers for disposal.
Personal Protection	For appropriate personal protective equipment (PPE), refer Section 8.
Clean-up Methods - Large Spillages	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	Prevent from entering drains, waterways or sewers. Use earthen bunds or absorbent bunding to prevent spreading of spillage.

7. HANDLING AND STORAGE

Precautions for Safe Handling	For personal protective equipment (PPE) and hygiene advice, refer Section 8.
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. Keep container tightly sealed and do not store with seed, fertilisers or foodstuffs.
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. The manufacturer of the solvent has recommended an occupational exposure limit of 100 mg/m ³ ; 17ppm TWA, as total hydrocarbon.
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Engineering Controls	Handle in well ventilated areas, generally natural ventilation is adequate.
Personal Protective Equipment	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.
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, dark-brown liquid
Odour	Typical solvent odour
Melting Point	<0°C
Boiling Point	190-270°C (for solvent present)
Solubility in Water	Forms an emulsion in water.
Specific Gravity	1.089
pH Value	Neutral
Vapour Pressure	0.19 mPa @ 25°C Bomoxynil octanoate; 0.48 mPa @ 20°C MCPA iso-octyl ester; 1.67 @ 25°C mPa Dicamba.
Vapour Density (Air=1)	~5 (for solvent present)
Volatile Component	~30% v/v
Flash Point	75°C (PMCC)
Flammability	Combustible liquid C1.
Auto-Ignition Temperature	Not known
Flammable Limits - Lower	0.6% for solvent
Flammable Limits - Upper	7% for solvent

10. STABILITY AND REACTIVITY

Hazardous Reactions	Keep away from strong oxidising agents, may react violently.
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. In confined spaces, some discomfort may occur due to the presence of some solvent vapour.
Ingestion	The product may constitute a moderate hazard during spraying operations. 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. If aspirated into the lung, e.g. from vomiting, the presence of solvent may result in chemical pneumonitis.
Skin	Acute dermal toxicity has not been determined for this product; based on data available for its components, dermal toxicity is expected to be harmful. Prolonged contact with the concentrate can cause defatting of the skin and may

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	result in dermatitis. The concentrated product may cause slight irritation on contact.
Eye	The concentrate may cause irritation of the eyes. Prolonged contact with the concentrate may cause damage to the eye.
Chronic Effects	Chronic Overexposure: Weight loss and damage to liver and kidneys may be expected if exposure is excessive.
Reproductive Toxicity	Bromoxynil octanoate has been assigned R63 on the basis of studies, in rats, rabbits and mice which show reduced ossification and increased incidence of supernumerary ribs at doses (range 5-15 mg/kg/day) which are not toxic maternally. Supernumerary ribs are seen in control animals and are often seen in reproductive toxicity studies. The ribs disappear during subsequent development with rats, but not with mice. The significance of supernumerary ribs as an indicator of developmental toxicity and extrapolation to other species remain problematical. (1)
Mutagenicity	The weight of evidence indicates that the product does not present a mutagenic risk.
Acute Toxicity - Oral	LD50 (rat) 1707 mg/kg for dicamba LD50 (rat) 365 mg/kg for bromoxynil octanoate LD50 (rat) 2235 mg/kg for MCPA iso-octyl ester
Acute Toxicity - Dermal	LD50 (rat) >2000 mg/kg for bromoxynil octanoate LD50 (rabbit) >2000 mg/kg for dicamba and MCPA iso-octyl ester LD50 (rabbit) 1675 mg/kg for bromoxynil octanoate
Acute Toxicity - Inhalation	LC50 (rat) (4hr) >9.6 mg/l for dicamba LC50 (rat) (4hr) >3.1 mg/l for MCPA iso-octyl ester
Eye Irritation	The product is an eye irritant.
Skin Irritation	Mild to moderate skin irritant.
Skin Sensitisation	MCPA iso-octyl ester is a skin sensitiser.
Other Information	The Australian Acceptable Daily Intake (ADI) for bromoxynil for a human is 0.003 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.3 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 MCPA is 0.01 mg/kg/day, NOEL 1.1 mg/kg/day. ADI for dicamba is 0.03 mg/kg/day, NOEL 3 mg/kg/day.

12. ECOLOGICAL INFORMATION

Known Harmful Effects on the Environment	The product is a marine pollutant for sea transport.
Other Precautions	Do not spray in high winds. Do not contaminate dams, waterways or sewers with this product or the containers which have held this product.
Environ. Protection	Spray drift can cause damage, read the label for more information.
Acute Toxicity - Fish	LC50 (96hr) for rainbow trout is 135 mg/l for dicamba LC50 (96hr) for rainbow trout is 1.15 mg/l for MCPA iso-octyl ester LC50 (96hr) for rainbow trout is 0.041 mg/l for bromoxynil octanoate
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 (ChemClear®).
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



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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 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.

14. TRANSPORT INFORMATION

Transport Information Storage and Transport It is good practice to separate this product from food, food related materials, animal feedstuffs, seed or fertilisers during transport. Considered non dangerous for road and rail transport (in packaging, including IBCs not greater than 3000 Lt each) by the Australian Code for the Transport of Dangerous Goods by Road and Rail. Ref: ADG7; SP No. AU01.

UN Number (Sea Transport) For bulk shipments as Class 9, use UN 3082, HazChem code •3Z.
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 Bromoxynil)

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

Date of preparation or last revision of MSDS Revised 29/06/2009

Contact Person/Point Normal Hours: Mr Volker Maier Phone: +61 3 9282 1000
After Hours: Shift Supervisor Phone: 1800 033 498

Literature References (1) Krieger ed. (2001) Handbook of Pesticide Toxicology, Second Edition Vol.2 Agents Academic Press.

Revisions Highlighted The MSDS was reviewed. Various changes were made to the information.

...End Of MSDS...

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