



Material Safety Data Sheet

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Infosafe No. 3NU1E Issue Date : December 2004 ISSUED by NUFARM

Product Name : **BROADSIDE Herbicide**

Classified as hazardous according to criteria of NOHSC

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name BROADSIDE Herbicide
Product Code 0145
Product Use For the control of certain broadleaf weeds in wheat, barley, commercial rye, oats, triticale and turf as per the Directions for Use table.
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/Telex Number Tel: (03) 9282-1000 Fax: (03) 9282-1001
Product Type Group C I Herbicide
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. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization Liquid

Ingredients	Name	CAS	Proportion
	Hydrocarbon Liquid	64742-94-5	289 g/L
	MCPA (present as the iso-octyl ester)	26544-20-7	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
	Proprietary surfactant mixture (non-hazardous)		5-10 %

3. HAZARDS IDENTIFICATION

Harmful by inhalation, in contact with skin and if swallowed.
Possible risk of harm to the unborn child.
Harmful: may cause lung damage if swallowed.

Other Information Poisons Schedule 6

4. FIRST AID MEASURES

Inhalation Remove to fresh air, apply artificial respiration if necessary.
Obtain medical assistance.

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 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.
Remove contaminated clothing and laundry 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.
Seek medical advice if irritation develops or persists.

First Aid Facilities If poisoning occurs, contact a doctor or Poisons Information Centre on 13 11 26 (Australia).

Advice to Doctor Treat symptomatically.
If vomiting occurs, solvent present may cause pulmonary pneumonitis.

5. FIRE FIGHTING MEASURES

Extinguishing Media Water fog, foam, carbon dioxide or dry chemical.

Specific Hazards

Hazardous Although material is not flammable, the concentrate is combustible.

Combustion Products 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.

Protective Equipment Breathable air apparatus may have to be worn in confined spaces.

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.

Environmental Prevent from entering drains, waterways or sewers.

Precautions Use earthen bunds or absorbent bunding to prevent spreading of spillage.

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.

7. HANDLING AND STORAGE

Handling For personal protective equipment (PPE) and hygiene advice, refer Section 8.

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.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limits 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/m³; 17ppm TWA, as total hydrocarbon.

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.

Eng. Controls Handle in well ventilated areas, generally natural ventilation is adequate.

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. By 1st September, 2005 all users must have received such training.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Clear, dark-brown liquid

Odour Typical solvent odour

Melting Point <0°C



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Solubility in Water	Forms an emulsion in water.
Boiling Point	190-270°C (for solvent present)
Specific Gravity (H₂O=1)	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.
Ignition Temperature	Not known
Flammable Limits LEL	0.6% for solvent
Flammable Limits UEL	7% for solvent

10. STABILITY AND REACTIVITY

Hazardous Polymerization	Hazardous polymerisation is not possible.
Hazardous Reaction	Keep away from strong oxidising agents, may react violently.

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. The product may constitute a moderate hazard during spraying operations.
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. 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 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.

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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, 'ADI List', TGA, June 2004).

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

Acute Toxicity - Fish LC50 (96 hr) for rainbow trout is 135 mg/l for dicamba
 LC50 (96 hr) for rainbow trout is 1.15 mg/l for MCPA iso-octyl ester
 LC50 (96 hr) 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 (ChemCollect).

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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 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.

14. 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
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.
UN Number (Sea Transport) 3082
IMO Class/Packing Group Class 9
 Packing Group III
IMO Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 (contains Bromoxynil)

15. REGULATORY INFORMATION

Risk Phrase 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 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.

Poisons Schedule S6
Hazard Category Harmful
Packaging & Labelling POISON
 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

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



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

...End Of MSDS...