



SAFETY DATA SHEET

Product Name: **Ospray Nimble Herbicide**

Issued by: Ospray Pty Ltd

Issue Date: March 2013

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FOR 24 HOUR ADVICE IN AN EMERGENCY ONLY PHONE 1800 033 111

1. Identification of Chemical Product and Company

Ospray Pty Ltd
50 Middleton Rd
Cottonvale Qld 4375
www.ospray.com.au

Phone: 07 4685 2441 (BH)
Freecall: 1800 624 597 (BH)
Emergency phone: 1800 033 111 (24 hours)

Substance: Blend of Diflufenican and Bromoxynil in a suitable solvent system.
Trade Name: **Ospray Nimble Herbicide**
APVMA No.: 68622
Product Use: For the control of certain broadleaf weeds in winter cereals and pastures as described on the product label.

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 phrases:

R22 Harmful if swallowed.

R23 Toxic by inhalation.

R41 Risk of serious damage to eyes.

R43 May cause sensitization by skin contact.

R63 Possible risk of harm to the unborn child.

R65 Harmful: may cause lung damage if swallowed.

Safety phrases:

S1/2 Keep locked up and out of reach of children.

S13 Keep away from food, drink and animal feeding stuffs.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S46 If swallowed, seek medical advice immediately and show this container or label.

Poison Schedule: S6

3. Composition/Information on Ingredients

Ingredient Name	CAS No.	Proportion
Bromoxynil octanoate	1689-99-2	250 g/L
Diflufenican	83164-33-4	25 g/L
Ketones	-	200 g/L
Liquid hydrocarbon	64742-94-5	125 g/L
N-Methyl-2-pyrrolidone	872-50-4	50 g/L
Other ingredients (non-hazardous)	-	30-60%

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 the container or label, or contact the Poisons Information Centre on 131126 (Aust). Make every effort to prevent vomit from entering the lungs by careful placement of the patient.

Skin: Wash affected areas thoroughly with soap and water. Remove contaminated clothing and launder before re-use. If irritation persists, seek medical advice.

Eye: If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes. Seek medical advice.

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



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5. Fire Fighting Measures

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

Hazards from Combustion Products: Combustible liquid at high temperatures. If involved in a fire, it will emit oxides of carbon and nitrogen, hydrogen chloride, hydrogen bromide and possibly other compounds of bromine, chlorine, fluorine and nitrogen.

Special Protective Equipment for fire fighters: Breathable air apparatus may have to be worn if material is involved in fires especially 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 spilled material and waste in sealable open-top type containers for disposal.

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.

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

8. Exposure Controls and 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/m³; - ppm TWA, as total hydrocarbon.

Safe Work Australia has set the following exposure standard for N-methyl pyrrolidone : TLV (TWA) 103 mg/m³, STEL 309 mg/m³. SK

'SK' notice - absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.

Permissible Exposure Level (PEL) for diflufenican recommended by the manufacturer is 2.3 mg/m³.

Engineering Controls: Local exhaust ventilation may be required in confined spaces.

Personal Protective Equipment: When preparing and using the product wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and face shield.

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: Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

9. Physical and Chemical Properties

Appearance:	Amber liquid
Odour:	Hydrocarbon odour
Boiling point:	176-200°C (for solvent)
Solubility in water:	Forms an emulsion in water
Specific gravity:	1.15
pH:	4-5
Vapour pressure:	0.19 mPa @ 25°C for bromoxynil octanoate; 0.00425 mPa for diflufenican
Volatile component:	~ 60%
Octanol / water partition coefficient:	Kow Log P is 5.4 for bromoxynil octanoate, 4.9 for diflufenican
Flash point:	25°C
Flammability:	Combustible liquid C1.
Auto ignition temperature:	Not determined
Explosion properties:	No information

10. Stability and Reactivity

Chemical stability: Stable under normal conditions.



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Hazardous reactions: Keep away from strong oxidising agents, may react violently.

Hazardous polymerization: Hazardous polymerisation is not possible.

11. Toxicological Information

Inhalation:	Symptoms of exposure by inhalation are similar to those described for ingestion.
Ingestion:	Possible symptoms of exposure include: headache, nausea, dizziness and weakness. If aspirated into the lung, e.g. from vomiting, the presence of solvent may result in chemical pneumonitis or other lung damage.
Skin:	May irritate the skin. Prolonged contact with the concentrate can cause defatting of the skin and may result in dermatitis. The product is a skin sensitiser
Eye:	May irritate the eyes.
Chronic effects:	Chronic Overexposure: Weight loss and damage to liver and kidneys may be expected if exposure is excessive.
Reproductive toxicity:	The solvent, N-methyl pyrrolidone (NMP), may cause effects on the cardiovascular and skeletal systems of developing embryos. 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. The significance of supernumerary ribs as an indicator of developmental toxicity and extrapolation to other species remain problematical. (1)
Acute toxicity:	Oral: LD50 (rat) 365 mg/kg for bromoxynil octanoate; LD50 (rat) >5000 mg/kg for diflufenican. Dermal: LD50 (rat) >2000 mg/kg for bromoxynil octanoate; LD50 (rat) >2000 mg/kg for diflufenican. Inhalation: LC50 (rat) (4hr) 0.76 mg/l for bromoxynil octanoate. The product is an eye irritant, a moderate skin irritant and 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 and Environmental Health, 'ADI List', December 2011). ADI for diflufenican is 0.2 mg/kg/day, NOEL 16.3 mg/kg/day.

12. Ecological Information

Persistence / degradability:	Average soil half life of bromoxynil is 1 days.
Known harmful effects on the environment:	Harmful to fish and other aquatic organisms.
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.
Environmental protection:	Marine pollutant. Spray drift can cause damage, read the label for more information.
Acute fish toxicity:	The following is data for the active ingredient, bromoxynil octanoate. Toxic to fish. LC50 (96hr) for rainbow trout is 0.041 mg/l
Acute daphnia toxicity:	LC50 (48hr) for daphnia is 0.046 mg/l for bromoxynil octanoate; LC50 (48hr) for daphnia is 0.24 mg/l for diflufenican.
Acute toxicity – other organisms:	Bees: Not toxic to bees. LD50 >100 µg/bee

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®).



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Container Disposal: Do not use this container for any other purpose. Triple or preferably pressure rinse inner bladder or containers before disposal. Add rinsings to the spray tank. If recycling, replace cap and return clean containers to recycler or designated collection point.

If not recycling, break, crush or puncture and deliver empty packaging for appropriate disposal at an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government regulations.

DO NOT burn empty containers or product. 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.

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

Land transport: Non dangerous for road and rail transport in packaging, including IBCs not greater than 3000 L.
ADG For bulk shipments as Class 9, use UN 3082, HazChem code 2Z.

Sea transport:	UN Number	3082
(IMDG)	UN Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Bromoxynil)
	Class	9
	Subsidiary risk	None allocated
	Marine pollutant	Yes

Air transport:	UN Number	3082
(ICAO/IATA)	UN Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Bromoxynil)
	Class	9
	Subsidiary risk	None allocated

15. Regulatory Information

Poisons Schedule: S6

Packaging & Labelling: POISON, KEEP OUT OF REACH OF CHILDREN, READ SAFETY DIRECTIONS BEFORE OPENING OR USING

Hazard category: Toxic, irritant

Other information: This product is registered with the Australian Pesticides and Veterinary Medicines Authority (APVMA). APVMA product number: 68622

16. Other Information

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

This Material Safety Data Sheet summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

DISCLAIMER

This product must be used, stored and handled strictly as directed in accordance with the label and this Safety Data Sheet. To the extent permitted by law, Ospray Pty Ltd, the trademark owner, manufacturer and vendors of the product will not be liable for any loss or damage arising from use, storage or handling contrary to the product label and MSDS.