

NUFARM FLIGHT HERBICIDE

Infosafe No.: 3NUM8
ISSUED Date : 01/02/2025
ISSUED by: NUFARM AUSTRALIA LIMITED.

Section 1 - Identification

Product Identifier

NUFARM FLIGHT HERBICIDE

Product Code

0222

Product Type

Group 4.6.12 Herbicide

Company Name

NUFARM AUSTRALIA LIMITED. (ABN 80 004 377 780)

Address

103-105 Pipe Road Laverton North
Victoria 3026 AUSTRALIA

Telephone/Fax Number

Tel: +61 3 9282-1000

Fax: +61 3 9282-1001

Emergency Phone Number

1800 033 498 (24hr Australia)

Emergency Contact Name

www.nufarm.com.au

E-mail Address

SDSANZ@nufarm.com

Recommended use of the chemical and restrictions on use

For the control of certain broadleaved weeds including wild radish with developing Group I and/or F herbicide resistance in winter cereals as per the Directions for Use table on the label.

Section 2 - Hazard(s) Identification

GHS classification of the substance/mixture

Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Complies with the requirements of Special Provision AU01 and therefore exempted from being classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Classified as Dangerous Goods according to International Maritime Dangerous Goods Code (IMDG) and International Air Transport Association (IATA).

Flammable liquids: Category 4

Acute toxicity: Category 4 - Oral

Acute toxicity: Category 4 - Inhalation

Skin corrosion/irritation: Category 2

Eye damage/irritation: Category 2

Sensitisation - skin: Category 1

Germ cell mutagenicity: Category 1

Carcinogenicity: Category 1

Reproductive toxicity: Category 2

Specific target organ toxicity (single exposure): Category 3 (Narcotic)

Specific target organ toxicity (repeated exposure): Category 1

Hazardous to the Aquatic Environment - Acute Hazard: Category 1
Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1

Signal Word (s)

DANGER

Hazard Statement (s)

H227 Combustible liquid.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H340 May cause genetic defects.
H350 May cause cancer.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Pictogram (s)

Health hazard, Exclamation mark, Environment



Precautionary Statement—Prevention

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statement—Response

P308+P313 IF exposed or concerned: Get medical advice/attention.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330 Rinse mouth.
P302+P352 IF ON SKIN: Wash with plenty of water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
P370+P378 In case of fire: Use water fog, foam, carbon dioxide or dry chemical to extinguish.
P391 Collect spillage.

Precautionary Statement—Storage

P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Precautionary Statement—Disposal

P501 Dispose of contents/container to an approved waste disposal plant.

Section 3 - Composition and Information on Ingredients

Ingredients

Name	CAS	Proportion
MCPA, salts and esters of		30-40 %
bromoxynil octanoate (ISO)	1689-99-2	15-<20 %
Solvent naphtha, petroleum, light aromatic	64742-95-6	1-<10 %
Picolinafen	137641-05-5	1-<5 %
Other ingredients (non-hazardous)		Balance

Information on Composition

MCPA (CAS 94-74-6) is present as the ethyl hexyl ester

Section 4 - First Aid Measures

Inhalation

If inhaled, remove affected person from contaminated area. Apply artificial respiration if not breathing. Seek medical attention.

Ingestion

Do not induce vomiting. Wash out mouth thoroughly with water. Seek immediate medical attention.

Skin

Remove all contaminated clothing immediately. Wash affected area thoroughly with soap and water. Wash contaminated clothing before reuse or discard. Seek medical attention.

Eye

If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. Seek medical attention

First Aid Facilities

Eyewash, safety shower and normal washroom facilities.

Advice to Doctor

Treat symptomatically.

Other Information

For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

Section 5 - Firefighting Measures

Suitable Extinguishing Media

Water fog, foam, carbon dioxide or dry chemical.

Hazards from Combustion Products

Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including hydrogen chloride, hydrogen bromide, hydrogen fluoride, hydrogen cyanide, phosgene and other compounds of chlorine, bromine, nitrogen and fluorine.

Specific hazards arising from the chemical

This product will burn if exposed to fire.

Hazchem Code

•3Z

Decomposition Temperature

Not available

Precautions in connection with Fire

Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) operated in positive pressure mode and full protective clothing to prevent exposure to vapours or fumes. Water spray may be used to cool down heat-exposed containers. Fight fire from safe location. This product should be prevented from entering drains and watercourses.

Section 6 - Accidental Release Measures

Emergency Procedures

Wear appropriate personal protective equipment and clothing to prevent exposure. Increase ventilation. If possible contain the spill. Place inert absorbent material onto spillage. Collect the material and place into a suitable labelled container. Do not dilute material but contain. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

Environmental Precautions

This product is a herbicide and spills can damage crops, pastures and desirable vegetation.

Section 7 - Handling and Storage

Precautions for Safe Handling

Avoid inhalation of vapours and mists, and skin or eye contact. Use only in a well ventilated area. Keep containers sealed when not in use. Prevent the build up of mists or vapours in the work atmosphere. Do not use near ignition sources. Do not pressurise, cut, heat or weld containers as they may contain hazardous residues. Maintain high standards of personal hygiene by washing hands prior to eating, drinking, smoking or using toilet facilities.

Avoid exposure. Do not handle until all safety precautions have been read and understood. It is recommended that pregnant or breastfeeding women should not handle this product unless adequate exposure protection can be assured at all times. Female personnel planning pregnancy should be made aware of the potential risks.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated area away from sources of ignition, foodstuffs, clothing and incompatible materials such as oxidising agents. Keep containers closed when not in use, securely sealed and protected against physical damage. Inspect regularly for deficiencies such as damage or leaks. Have appropriate fire extinguishers available in and near the storage area. Take precautions against static electricity discharges. Use proper grounding procedures. Ensure that storage conditions comply with applicable local and national regulations. This product must be stored in a locked room or place away from children, animals, food, feedstuffs, seed and fertiliser.

For information on the design of the storeroom, reference should be made to Australian Standard AS1940 - The storage and handling of flammable and combustible liquids.

Storage Regulations

Classified as a Class C1 (COMBUSTIBLE LIQUID) for the purpose of storage and handling, in accordance with the requirements of AS1940 (2017).

Section 8 - Exposure Controls and Personal Protection

Occupational exposure limit values

No exposure standards have been established for this material, however, the TWA exposure standards for refined mineral oil mist is 5 mg/m³. As with all chemicals, exposure should be kept to the lowest possible levels.

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

Source: Safe Work Australia.

Biological Monitoring

No biological limits allocated.

Control Banding

Not available

Engineering Controls

This substance is hazardous and should be used with a local exhaust ventilation system, drawing vapours away from workers' breathing zone. A flame-proof exhaust ventilation system is required. If the engineering controls are not sufficient to maintain concentrations of vapours/mists below the exposure standards, suitable respiratory protection must be worn. Refer to relevant regulations for further information concerning ventilation requirements.

Refer to AS 1940 - The storage and handling of flammable and combustible liquids and AS/NZS 60079.10.1 Explosive atmospheres - Classification of areas - Explosive gas atmospheres, for further information concerning ventilation requirements.

Respiratory Protection

If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

Eye and Face Protection

Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 (series) - Eye Protectors for Industrial Applications.

Hand Protection

Wear gloves of impervious material such as elbow-length PVC gloves. Final choice of appropriate gloves will vary according to individual circumstances. i.e. methods of handling or according to risk assessments undertaken. Occupational protective gloves should conform to relevant regulations.

Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Thermal Hazards

No further relevant information available.

Body Protection

Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

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.

Section 9 - Physical and Chemical Properties

Properties	Description	Properties	Description
Form	Liquid	Appearance	Dark brown liquid
Colour	Dark brown	Odour	Solvent odour
Melting Point	<0°C	Boiling Point	190 - 270°C for solvent
Decomposition Temperature	Not available	Solubility in Water	Disperses in water
Specific Gravity	1.07 - 1.09	pH	3.5 - 4 in 1% solution
Vapour Pressure	0.19 mPa @ 25°C Bromoxynil octanoate; 0.48 mPa @ 20°C MCPA 2EHE; 0.00017 mPa @ 25°C Picolinafen.	Relative Vapour Density (Air=1)	~5 (for solvent present)
Evaporation Rate	Not available	Odour Threshold	Not available
Viscosity	Not available	Volatile Component	10 - 20%
Partition Coefficient: n-octanol/water (log value)	5.4 for Bromoxynil octanoate 5.7 for MCPA 2EHE 5.43 for Picolinafen	Flash Point	75°C
Flammability	Combustible	Auto-Ignition Temperature	Not available
Flammable Limits - Lower	0.6% for solvent	Flammable Limits - Upper	7.0% for solvent
Explosion Properties	Not available	Oxidising Properties	Not available
Particle Characteristics	Not applicable		

Section 10 - Stability and Reactivity

Reactivity

Reacts with incompatible materials.

Chemical Stability

Stable under normal conditions of storage and handling.

Possibility of hazardous reactions

Violent reactions between product and oxidising agents is possible.

Avoid chlorates, nitrates, nitric acid, organic peroxides and potassium chlorate.

Conditions to Avoid

Heat, open flames and other sources of ignition.

Incompatible Materials

Strong oxidising agents

Hazardous Decomposition Products

Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including hydrogen chloride, hydrogen bromide, hydrogen fluoride, hydrogen cyanide, phosgene and other compounds of chlorine, bromine, nitrogen and fluorine.

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information

Toxicology Information

No toxicity data available for this material. The available acute toxicity data for ingredients is given below.

Acute Toxicity - Oral

LD50 (rat): 238 mg/kg (Bromoxynil octanoate)

LD50 (rat): 1300 mg/kg (MCPA 2EHE)

LD50 (rat): >5000 mg/kg (Picolinafen)

Acute Toxicity - Dermal

LD50 (rat): >2000 mg/kg (Bromoxynil octanoate)

LD50 (rat): >2000 mg/kg (MCPA 2EHE)

LD50 (rat): >4000 mg/kg (Picolinafen)

Acute Toxicity - Inhalation

LC50 (rat): 0.72 mg/l/4h (Bromoxynil octanoate)

LC50 (rat): >3.1 mg/l/4h (MCPA 2EHE)

LC50 (rat): >5.9 mg/l/4h (Picolinafen)

Ingestion

Harmful if swallowed. Ingestion of this product may cause irritation to the mouth, throat, oesophagus and stomach with symptoms of nausea, abdominal discomfort, vomiting and diarrhoea.

Inhalation

Harmful if inhaled. Inhalation of product vapours can cause irritation of the nose, throat and respiratory system. May cause irritation to the mucous membrane and upper airways, especially where vapours or mists are generated. Symptoms include sneezing, coughing, wheezing, shortness of breath, headache, dizziness, drowsiness, nausea and vomiting.

Skin

Causes skin irritation. Skin contact will cause redness, itching and swelling. Repeated exposure may cause skin dryness and cracking and may lead to dermatitis. May cause an allergic skin reaction.

Eye

Causes serious eye irritation. On eye contact this product will cause tearing, stinging, blurred vision, and redness.

Respiratory Sensitisation

Not expected to be a respiratory sensitiser.

Skin Sensitisation

May cause an allergic skin reaction.

Germ Cell Mutagenicity

May cause genetic defects. Classified as Known or presumed to induce heritable mutations.

Carcinogenicity

May cause cancer. Classified as a Known or presumed human carcinogen.

Reproductive Toxicity

Suspected of damaging fertility or the unborn child. Classified as a suspected human reproductive or developmental toxicant. Bromoxynil octanoate has been classified as suspected of damaging fertility or the unborn child 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.

STOT - Single Exposure

May cause drowsiness or dizziness.

STOT - Repeated Exposure

Causes damage to organs through prolonged or repeated exposure.

Aspiration Hazard

Not expected to be an aspiration hazard.

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.

ADI for MCPA is 0.01 mg/kg/day, NOEL 1.1 mg/kg/day.

ADI for Picolinafen is 0.007 mg/kg/day, NOEL 1.4 mg/kg/day.

Ref: Australian Pesticides and Veterinary Medicines Authority (APVMA) June 2024.

Chronic Overexposure: Weight loss and damage to liver and kidneys may be expected if exposure is excessive.

Section 12 - Ecological Information

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

The available ecological data is given below.

Persistence and degradability

Average soil half life of bromoxynil: 7 days.

Mobility

Not available

Bioaccumulative Potential

Not available

Other Adverse Effects

Not available

Environmental Protection

Do not discharge this material into waterways, drains and sewers.

Spray drift can cause damage, read the label for more information.

Acute Toxicity - Fish

Bromoxynil octanoate

LC50 (rainbow trout): 0.041 mg/l/96h.

MCPA 2EHE

LC50 (rainbow trout): 1.15 mg/l/96h

Acute Toxicity - Daphnia

Bromoxynil octanoate

LC50 : 0.046 mg/l/48h

Acute Toxicity - Algae

Picolinafen

EC50 : 0.00018 mg/l

Acute Toxicity - Other Organisms

Bees: Not toxic to bees. LD50 >100 µg/bee

Hazardous to the Ozone Layer

This product is not expected to deplete the ozone layer.

Section 13 - Disposal Considerations

Disposal Considerations

Dispose of waste according to applicable local and national regulations. Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes including emptied containers are controlled wastes and should be disposed of in accordance with all applicable local and national regulations.

To minimise personal exposure, refer to Section 8 - Exposure Controls and Personal Protection.

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 and Methods

Do not use this container for any other purpose.

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.

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.

Triple or preferably pressure rinse containers before disposal. Add rinsings to the spray tank.

If not recycling, puncture or shred and bury containers in local authority landfill.

If recycling, replace cap and return clean containers to recycler or designated collection point.

Section 14 - Transport Information

Transport Information

Road and Rail Transport (ADG Code):

This product complies with the requirements of Special Provision AU01 and is therefore exempted from being classified as Dangerous Goods according to the ADG Code.

Note: Special Provision AU01:

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail in: packagings that do not incorporate a receptacle exceeding 500 kg(L); or IBCs.

Marine Transport (IMO/IMDG):

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Class/Division: 9

UN No: 3082

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Bromoxynil octanoate and Picolinafen) (Marine Pollutant)

Packing Group: III

EMS: F-A, S-F

Special Provisions: 274, 335, 969

Air Transport (ICAO/IATA):

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

Class/Division: 9

UN No: 3082

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.(Contains Bromoxynil octanoate and Picolinafen)

Packing Group: III

Label: Miscellaneous

Packaging Instructions (passenger & cargo): 964

Packaging Instructions (cargo only): 964

Special provisions: A97, A158, A197, A215

UN Number

None Allocated

Proper Shipping Name

None Allocated

Transport Hazard Class

None Allocated

Hazchem Code

•3Z

Special Precautions for User

Not available

IMDG Marine pollutant

Yes

Transport in Bulk

Not available

Section 15 - Regulatory Information

Regulatory Information

Classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) including Work, Health and Safety Regulations, Australia.

Classified as a Schedule 7 Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Schedule 7 Poisons should be available only to specialised or authorised users. Special regulations restricting their availability, possession, storage or use may apply.

Australia: WHS regulations (2011) - Schedule 11: Item 9 (flammable liquid category 4)

Poisons Schedule

S7

Montreal Protocol

Not listed

Stockholm Convention

Not listed

Rotterdam Convention

Not listed

International Convention for the Prevention of Pollution from Ships (MARPOL)

Not available

Agricultural and Veterinary Chemicals Act 1994

APVMA product number: 65242

Basel Convention

Not listed

Section 16 - Any Other Relevant Information

Date of Preparation

SDS reviewed: January 2025

Supersedes: November 2024

Version Number

3.0

Literature References

Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.

Standard for the Uniform Scheduling of Medicines and Poisons.

Australian Code for the Transport of Dangerous Goods by Road & Rail.

Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous

chemicals.

Code of Practice for Supply Diversion into Illicit Drug Manufacture.

National Code of Practice for Chemicals of Security Concern.

Agricultural Compounds and Veterinary Chemicals Act.

International Agency for Research on Cancer (IARC) Monographs.

Montreal Protocol on Substances that Deplete the Ozone Layer.

Stockholm Convention on Persistent Organic Pollutants (POPs).

Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.

Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.

International Air Transport Association (IATA) Dangerous Goods Regulations.

International Maritime Dangerous Goods (IMDG) Code.

Workplace exposure standards for airborne contaminants.

Adopted biological exposure determinants, American Conference of Industrial Hygienists (ACGIH).

Globally Harmonised System of Classification and Labelling of Chemicals (7th revised edition).

Code of Practice: Managing Noise and Preventing Hearing Loss at Work.

Contact Person/Point

Normal hours: SDS coordinator : Phone +61 3 9282 1000

After hours: Shift supervisor : Phone 1800 033 498

User Codes

User Title Label	User Codes
Field 4	Y

END OF SDS

© Copyright Chemical Safety International Pty Ltd

Copyright in the source code of the HTML, PDF, XML, XFO and any other electronic files rendered by an Infosafe system for Infosafe SDS displayed is the intellectual property of Chemical Safety International Pty Ltd.

Copyright in the layout, presentation and appearance of each Infosafe SDS displayed is the intellectual property of Chemical Safety International Pty Ltd.

The compilation of SDS's displayed is the intellectual property of Chemical Safety International Pty Ltd.

Copying of any SDS displayed is permitted for personal use only and otherwise is not permitted. In particular the SDS's displayed cannot be copied for the purpose of sale or licence or for inclusion as part of a collection of SDS without the express written consent of Chemical Safety International Pty Ltd.