

Infosafe No™ 3NUNN Issue Date : October 2024 ISSUED by NUFARMNZ

Product Name **EMBLEM® FLO**

Section 1 - Identification

Product Identifier	EMBLEM® FLO
Product Code	00851
Product Type	Selective herbicide
Company Name	Nufarm NZ
Address	Central Park, Building 3, Level 4, 666 Great South Road Ellerslie Auckland 1051 New Zealand
Telephone/Fax Number	Tel: 0-9-270 4150
Emergency Phone Number	0800 651 911
Email	nzinfo@nufarm.com
Recommended uses and any restrictions on use or supply	A fast-acting contact broadleaf herbicide for use in maize, sweetcorn and popcorn.
Other Information	This SDS 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.

Section 2 - Hazard(s) Identification

GHS classification of the substance/mixture	Acute oral toxicity: Category 4 Respiratory sensitization: Category 1 Skin sensitization: Category 1 Reproductive toxicity: Category 2 Specific target organ toxicity - repeated exposure: Category 1 Hazardous to the terrestrial environment: Hazardous to soil organisms Hazardous to the terrestrial environment: Hazardous to terrestrial vertebrates Hazardous to the aquatic environment acute Category 1 Hazardous to the aquatic environment chronic Category 1
Signal Word (s)	DANGER
Hazard Statement (s)	H302 Harmful if swallowed. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H317 May cause an allergic skin reaction. H361 Suspected of damaging fertility or the unborn child. H372 Causes damage to liver through prolonged or repeated exposure. H410 Very toxic to aquatic life with long lasting effects. H421 Very toxic to the soil environment. H432 Toxic to terrestrial vertebrates.
Precautionary Statement – General	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read carefully and follow all instructions.
Pictogram (s)	Health hazard, Environment



Precautionary Statement – Prevention	P264 Wash hands and face thoroughly after handling. P270 Do not eat, drink or smoke while using this product. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P285 In case of inadequate ventilation wear respiratory protection. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves, protective clothing, eye protection and face protection.
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Precautionary Statement – Response	<p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P281 Use personal protective equipment as required.</p> <p>P260 Do not breathe dust/fume/gas/mist/vapors/spray.</p> <p>P273 Avoid release to the environment.</p> <p>P301+P312 IF SWALLOWED: Call a poison center or doctor/physician if you feel unwell.</p> <p>P330 Rinse mouth.</p> <p>P304+P341 IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor / physician.</p> <p>P302+P352 IF ON SKIN: wash with plenty f soap and water.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice / attention.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P308+P313 IF exposed or concerned: Get medical advice / attention.</p> <p>P314 Get medical advice if you feel unwell.</p> <p>P391 Collect spillage.</p>
Precautionary Statement – Storage	<p>P405 Store locked up.</p>
Precautionary Statement – Disposal	<p>P501 Dispose of contents/container to an approved landfill.</p>

Section 3 - Composition and Information on Ingredients

Chemical Characterization	Liquid		
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Bromoxynil (present as butyrate ester)	3861-41-4	250-500 g/L
	Bromoxynil	1689-84-5	1-10 g/L
	Bromoxynil (present as the octanoate ester)	1689-99-2	1-10 g/L
	Ingredients determined not to be hazardous	-	Balance

Section 4 - First Aid Measures

First-aid Measures	For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. Begin artificial respiration if the victim is not breathing. Use mouth-to-nose rather than mouth-to mouth. Obtain medical attention.
Inhalation	Remove patient to fresh air. Lay down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance immediately.
Ingestion	Never give anything by mouth to an unconscious person. If swallowed do NOT induce vomiting. For advice, contact the National Poisons Centre (0800 764 766). Seek medical assistance immediately.
Skin	Immediately flush body and clothes with large amounts of water. Remove contaminated clothing and footwear. Wash affected areas with soap and water. If a large area is affected seek medical assistance.
Eye	Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Remove contact lenses, if present and easy to do. Seek medical assistance even if there are no immediate symptoms.
First-aid Facilities	Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.
Advice to Doctor	Treat symptomatically.

Section 5 - Firefighting Measures

Suitable Extinguishing Media	Water fog, foam, carbon dioxide or dry chemical.
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Special protective equipment for fire-fighters	Full protective clothing and self-contained breathing apparatus.
Specific Methods	Keep up wind. Do not allow washings to reach sewage or effluent systems.
Hazchem Code	2X
Decomposition Temperature	Information is not available.
Other Information	Location Certificate: Not applicable Hazardous Atmosphere Zone: Not applicable Number of Fire Extinguishers: Not applicable

Section 6 - Accidental Release Measures

Spills and Disposal	Wear protective clothing. Clear area of unprotected personnel. Contain spill and absorb with sand, soil or absorbent granules. If spill does enter waterways contact the local authority. Collect in an appropriate sealable container for disposal in an approved landfill. Wash area with water and absorb with further inert material and collect in sealable container for disposal.
Personal Protection	For appropriate personal protective equipment (PPE), refer Section 8.
Environmental Precautions	Prevent from entering drains, waterways or sewers. This product is a herbicide and spills can damage crops, pastures and desirable vegetation.

Section 7 - Handling and Storage

Precautions for Safe Handling	Do not handle until all safety precautions have been read and understood. The person mixing or applying Emblem FLO must be a 'Qualified Contractor' or 'Qualified Person'. The spray mixture may also be prepared by a 'Qualified Loader'. It is the duty of the PCBU that a person who uses, handles, manufactures or stores a hazardous substance (including hazardous waste) is provided information, instruction and training in accordance with Regulation 4.5 of the Health and Safety at work (Hazardous Substances) Regulations 2017. Avoid skin and eye contact and inhalation of spray mist. This product must not be applied onto or into water. BEWARE: Spray drift hazard. Apply this product carefully. Spray drift may cause serious damage to other desirable plants. CERTIFIED HANDLER: Is not required. TRACKING: Is not required. RECORD KEEPING: Records of use, as described in NZS 8409 Management of Agrichemicals, must be kept if 3kg or more of Emblem FLO is applied within 24 hours. Records must be kept for a minimum of 3 years from application date.
Conditions for safe storage, including any incompatibilities	Keep out of reach of children. Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs, fertilisers, pesticides and seeds. Storage must be in accordance with NZS 8409 Management of Agrichemicals. Stores containing 100L of Emblem FLO require secondary containment and are subject to signage, and more than 100L require emergency response plans.
Other Information	Aggregate Storage Volume Thresholds: When stored with substances of the same hazard classification the aggregate quantity must be considered. For full details refer to the current NZS8409 Management of Agrichemicals and the HSNO Regulations.

Section 8 - Exposure Controls and Personal Protection

Occupational Exposure Limits (OEL)	No exposure limits (WES, TEL or EEL's) have been specifically assigned for this product. The following ADE and PDE values have been set for bromoxynil butyrate: ADE = 0.01 mg/kg bw/day PDE food = 0.007 mg/kg bw/day PDE water = 0.002 mg/kg bw/day PDE other = 0.001 mg/kg bw/day
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Appropriate 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 PVC or rubber apron, elbow length PVC gloves, faceshield or safety goggles, a NIOSH approved half face mask with organic vapour cartridge + dust/mist prefilter, cotton overalls buttoned to the neck and wrist, and boots.
Hygiene Measures	Do not eat, drink or smoke while using. Remove protective clothing and wash hands and face thoroughly before meals and after work. Wash protective clothing daily after work.

Section 9 - Physical and Chemical Properties

Form	Liquid
Appearance	Beige liquid.
Odour	Information is not available.
Decomposition Temperature	Information is not available.
Melting Point	194-195°C for active ingredient bromoxynil.
Boiling Point	Decomp. from c.270°C for active ingredient bromoxynil.
Solubility in Water	Disperses in water.
Specific Gravity	1.245
pH	3.5 - 4.5 (1% in water)
Vapour Pressure	1.7×10^{-1} mPa (25°C) for active ingredient bromoxynil.
Vapour Density (Air=1)	Information is not available.
Odour Threshold	Information is not available.
Partition Coefficient: n-octanol/water	Kow logP = 1.04 (pH 7) for active ingredient bromoxynil.
Flash Point	Information is not available.
Flammability	Not Flammable.
Auto-ignition Temperature	Information is not available.
Flammable Limits - Lower	Information is not available.
Flammable Limits - Upper	Information is not available.
Kinematic Viscosity	Information is not available.
Particle Characteristics	Information is not available.
Other Information	(SC) Suspension Concentrate

Section 10 - Stability and Reactivity

Chemical Stability	Stable under normal conditions of handling and storage. Not an oxidiser.
Conditions to Avoid	Crop injury may occur if Emblem FLO is tank mixed with other products. Do not mix with other products or formulations unless crop safety is known. Consult with a Nufarm representative before mixing.
Incompatible Materials	DO NOT mix Emblem FLO with adjuvants, spraying oils, any foliar fertilisers, trace elements, EC, EW, any other oil based formulations or with phenoxy herbicides.

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Hazardous Decomposition Products	Thermal decomposition may yield oxides of carbon and nitrogen, and bromhydric acid.
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Section 11 - Toxicological Information

Acute Toxicity - Oral	LD50 (rat) 116mg/kg for bromoxynil butyrate.
Acute Toxicity - Inhalation	LC50 (rat) 1216mg/m ³ for bromoxynil butyrate.
Acute Toxicity - Dermal	LD50 (rat) >2000mg/kg for bromoxynil butyrate.
Skin Corrosion/Irritation	Not a skin irritant (rabbits) for bromoxynil butyrate.
Serious Eye Damage/Irritation	Not a eye irritant (rabbits) for bromoxynil butyrate.
Respiratory Sensitisation	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sensitisation	May cause an allergic skin reaction.
Germ Cell Mutagenicity	Information is not available.
Carcinogenicity	Information is not available.
Reproductive Toxicity	Suspected of damaging fertility or the unborn child.
STOT - Single Exposure	Information is not available.
STOT - Repeated Exposure	Causes damage to liver through prolonged or repeated exposure.
Aspiration Hazard	Information is not available.
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: Aust Govt Dept. of APVMA, 'ADI List', Edition 1/2024).

Section 12 - Ecological Information

Persistence and Degradability	In lab.soil, DT50 <1d. Degraded by hydrolysis and debromination to less toxic substances such as hydroxybenzoic aci for active ingredient bromoxynil.
Mobility	Information is not available.
Bioaccumulative Potential	Information is not available.
Acute Toxicity - Fish	LC50 (96h) rainbow trout = 0.0322mg/L for bromoxynil butyrate.
Acute Toxicity - Daphnia	EC50 (48h) = 0.208mg/L for bromoxynil butyrate.
Acute Toxicity - Algae	EbC50 (72h) = 0.75mg/L for bromoxynil butyrate.

Section 13 - Disposal Considerations

Product Disposal	Dispose of product only by using according to the label, or at an approved landfill.
Container Disposal	Triple rinse empty container and add rinsate to the spray tank. Recycle empty container. Otherwise crush and bury in a suitable landfill.

Section 14 - Transport Information

Transport Information	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.
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 Product Name **EMBLEM® FLO**

UN Number	3082
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (bromoxynil)
Hazard Class	9
Hazchem Code	2X
Packaging Method	-
Packing Group	III
EPG Number	-
IERG Number	47
IMO Marine Pollutant	Yes. Environmentally Hazardous Substance mark required.
IMDG EMS	F-A, S-F
Other Information	Do not carry this product on a passenger service vehicle. Segregation: Check the latest Land Transport Rule Dangerous Goods Rule 45001 for additional information. Sea transport may require additional segregation. Refer NZS5433 sea segregation for details.

Section 15 - Regulatory Information

National and or International Regulatory Information	Registered pursuant to the ACVM Act 1997, No. P8362 See www.foodsafety.govt.nz for registration conditions Approved pursuant to the HSNO Act 1996, Approval Code HSR100575 See www.epa.govt.nz for approval controls.
Packaging and Labelling	READ SAFETY DIRECTIONS BEFORE OPENING OR USING KEEP OUT OF REACH OF CHILDREN

Section 16 - Any Other Relevant Information

Date of preparation or last revision of SDS	September 2020.
Contact Person/Point	IN AN EMERGENCY, DIAL 111 - FIRE OR POLICE 24Hr Tollfree Emergency No: 0800 651 911 24Hr Emergency No: National Poisons Centre Phone: 0800 764 766
Revisions Highlighted	Various changes and updates made to the document to comply with GHS7. ...End Of MSDS...

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