




Infosafe No™ 3NUNN Issue Date : September 2020 ISSUED by NUFARMNZ

Product Name **EMBLEM® FLO**

1. Identification

GHS Product Identifier	EMBLEM® FLO
Product Code	00851
Product Type	Selective herbicide
Company Name	Nufarm NZ
Address	6 Manu Street, Otahuhu Auckland 2024 New Zealand
Telephone/Fax Number	Tel: 0-9-270 4150
Emergency phone number	0800 651 911
E-mail Address	nzinfo@nufarm.com
Recommended use of the chemical and restrictions on use	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.

2. Hazard Identification

GHS classification of the substance/mixture	Classified as Dangerous Goods for transport according to the New Zealand Standard NZS 5433:2012 Transport of Dangerous Goods on Land.
Signal Word (s)	DANGER
Hazard Statement (s)	H302 Harmful if swallowed. H317 May cause an allergic skin reaction. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H361 Suspected of damaging fertility or the unborn child . H372 Causes damage to organs (liver) through prolonged or repeated exposure . H400 Very toxic to aquatic life. 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 label before use.
Pictogram (s)	Exclamation mark, Health hazard, Environment
	  
Precautionary statement – Prevention	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P264 Wash contaminated skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P272 Contaminated work clothing should not be allowed out of the workplace.

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Precautionary statement – Response	<p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P281 Use personal protective equipment as required.</p> <p>P285 In case of inadequate ventilation wear respiratory protection.</p> <p>P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of soap and water.</p> <p>P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/attention.</p> <p>P314 Get medical advice/attention if you feel unwell.</p> <p>P330 Rinse mouth.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/attention.</p> <p>P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P391 Collect spillage.</p> <p>P405 Store locked up.</p>
Precautionary statement – Storage	
Precautionary statement – Disposal	<p>P501 In the case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Regulations 2001. This may also include any method of disposal that must be avoided. See Section 13 for disposal details.</p>
Other Information	<p>6.1D acute toxicant, 6.5A respiratory sensitiser, 6.5B skin sensitiser, 6.8B reproductive or developmental toxicant, 6.9A target organ toxicant, 9.1A aquatic toxicant, 9.2A soil toxicant, 9.3B terrestrial vertebrate toxicant.</p>

3. Composition/information on ingredients

Ingredients	Name	CAS	Proportion
	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

4. First-aid measures

First Aid Measures	<p>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.</p>
Inhalation	<p>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.</p>
Ingestion	<p>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.</p>
Skin	<p>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.</p>
Eye contact	<p>Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary.</p> <p>Remove contact lenses, if present and easy to do.</p> <p>Seek medical assistance even if there are no immediate symptoms.</p>

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First Aid Facilities Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.

Advice to Doctor Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media Water fog, foam, carbon dioxide or dry chemical.

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 Temp. Information not available.

Other Information Location Certificate: Not applicable
Hazardous Atmosphere Zone: Not applicable
Number of Fire Extinguishers: Not applicable

6. Accidental release measures

Spills & 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.

7. Handling and storage

Handling and Storage 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 Loader'. For more information refer to the Hazardous Substances Property Controls Notice 2017. 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.

Precautions for Safe Handling Avoid skin and eye contact and inhalation of spray mist.
CERTIFIED HANDLER : Not Required.
TRACKING: Not Required
RECORD KEEPING: Records of use as described in the NZS 8409 Management of Agrichemicals must be kept.
BEWARE : Spray drift hazard. Apply this product carefully. Spray drift may cause serious damage to other desirable plants.
This product must not be applied onto or into water.

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

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quantity must be considered. For full details refer to the current NZS8409 Management of Agrichemicals and the HSNO Regulations.

8. Exposure controls/personal protection

Occupational exposure limit values	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
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.

9. Physical and chemical properties

Form	Liquid
Appearance	Beige
Odour	Information not available.
Decomposition Temperature	Information not available.
Freezing Point	Information not available.
Solubility in Water	Disperses in water.
Specific Gravity	1.245
pH	3.5 - 4.5 (1% in water)
Vapour Pressure	1.7 x 10 ⁻¹ mPa (25°C) (for Bromoxynil)
Vapour Density (Air=1)	Information not available.
Partition Coefficient: n-octanol/water	Kow logP = 1.04 (pH 7) (for Bromoxynil)
Flash Point	Not applicable.
Flammability	Not Flammable.
Auto-Ignition Temperature	Not applicable.
Flammable Limits - Lower	Not applicable.
Flammable Limits - Upper	Not applicable.
Initial boiling point and boiling range	Information not available.
Kinematic Viscosity	Information not available.
Other Information	(SC) Suspension Concentrate

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10. Stability and reactivity

Chemical Stability	Stable under normal conditions of handling and storage. Not an oxidiser.
Hazardous Decomposition Products	Thermal decomposition may yield oxides of carbon and nitrogen, and bromhydric acid.
Hazardous Polymerization	Not known to occur.

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat): 116.4mg/kg bw for bromoxynil butyrate
Acute Toxicity - Dermal	LD50 (rat): >2,000mg/kg bw for bromoxynil butyrate
Acute Toxicity - Inhalation	LC50 (rat): 1.216mg/L for bromoxynil butyrate
Skin Sensitisation	Contact sensitiser Respiratory sensitiser
Germ cell mutagenicity	Information not available.
Carcinogenicity	Information not available.
Reproductive Toxicity	Possible risk of harm to the unborn child.
STOT-repeated exposure	Causes damage to liver through prolonged or repeated exposure.
Aspiration Hazard	Information not available.
Chronic Effects	May cause damage to the liver from repeated oral exposure.
Serious eye damage/irritation	Mild irritant
Respiratory Irritation	Not a respiratory irritant.
Skin corrosion/irritation	Not a skin irritant.

12. Ecological information

Persistence and degradability	Bromoxynil butyrate is not persistent in water or soil. Hydrolysis: DT50 = 13d, pH7. Photolysis: DT50 = 0.25d, pH4. Soil: DT50 = 8d, field.
Acute Toxicity - Fish	LC50 (96h) = 0.032mg/L for bromoxynil butyrate
Acute Toxicity - Daphnia	EC50 (48h) = 0.208mg/L for bromoxynil butyrate NOEC (21d) = >0.026mg/L bromoxynil butyrate (long term)
Acute Toxicity - Algae	EC50 (72h) = 0.75mg/L for bromoxynil butyrate
Acute Toxicity - Other Organisms	Aquatic plants: EC50 (7d) = 0.13mg/L for bromoxynil butyrate Bobwhite Quail: LD50 = 420mg/kg bw for bromoxynil butyrate Mallard Duck: LD50 = 1,230mg/kg bw for bromoxynil butyrate

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.

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14. Transport information

Transport Information	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.
U.N. Number	3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (bromoxynil, 40.2%)
Transport hazard class(es)	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.

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 & Labelling	TOXIC * ECOTOXIC - keep out of reach of children
Hazard Rating Systems	NFPA/HMIS: 1-1-0

16. Other Information

Date of preparation or last revision of SDS	September 2016
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	SDS updated to GHS requirements.
Other Information	Supersedes SDS issued September 2016 ...End Of MSDS...

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