


## Section 1: Identification

Product name:	Patriot® 1
Other names:	Patriot® One Soluble concentrate containing 200 g/litre glufosinate-ammonium.
Recommended use:	A non-selective contact herbicide for the control of a wide range of grasses, broad leaf weeds and clovers in a variety of crop land and non-crop land situations.
Manufacturer/Importer details:	Agritrade 1 Robin Mann Place Christchurch Airport PO Box 292, Christchurch 8140  Phone: 03 372 0890
24 hour emergency contact:	0800 CHEMCALL (0800 243622)
National Poisons Centre:	0800 POISON (0800 764766)

## Section 2: Hazard identification

	Product is classified as hazardous according to the Hazardous Substances (Hazard Classification) Notice 2020 of the HSNO Act, 1996.
HSNO Approval:	HSR100830
Hazardous classification:	Skin irritation Category 2, Eye irritation Category 2, Reproductive toxicity Category 2, Specific target organ toxicity (repeated exposure) Category 1, Hazardous to soil organisms, Hazardous to terrestrial vertebrates, Hazardous to the aquatic environment chronic Category 3
Pictograms:	
Signal word:	<b>DANGER</b>
Hazard statements:	H315 Causes skin irritation H319 Causes serious eye irritation. H370 Causes damage to organs. H412 Harmful to aquatic life with long lasting effects. H422 Toxic to the soil environment. H433 Harmful to terrestrial vertebrates.
Prevention statements:	P103 Read label before use. P280 Wear protective gloves, protective clothing, eye and face protection. P264 Wash hands, arms and face thoroughly after handling.

Response statements:	<p>P270 Do not eat, drink or smoke when using this product. P260 Do not breathe spray mist. P273 Avoid release to the environment.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of soap and water. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P314 Get medical advice/attention if you feel unwell. P337+P313 If eye irritation persists: Get medical attention. P332 + P313 If skin irritation occurs: Get medical advice/attention P362 Take off contaminated clothing and wash before re-use. P391 Collect spillage.</p>
Storage statements:	No storage statements.
Disposal statement:	P501 Dispose of product and containers in accordance with local Regulations. See Section 13 for details.
Additional Label Requirements:	<p>Do not apply directly into or onto water. Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area. This substance must be applied only by ground-based application methods.</p>

**Section 3: Composition/information on ingredients**

Chemical identity of ingredients with health or environmental hazards:

<i>Ingredient</i>	<i>CAS No.</i>	<i>Proportion %w/w</i>
Glufosinate-ammonium	77182-82-2	18 -20
Propylene glycol monomethyl ether	107-98-2	<10
Other ingredients	Proprietary	10 – 30
Water	7732-18-5	To 100

**Section 4: First-aid measures**

First aid measures:	If medical advice is needed, have product container or label at hand. For advice contact National Poisons Centre 0800 POISON [0800 764 766] or a doctor.
Ingestion:	Do not induce vomiting. Rinse mouth. Call a POISON CENTRE or doctor if you feel unwell.
Inhalation:	Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTRE or doctor if you feel unwell.
Skin contact:	Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs get medical attention.
Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.

First aid facilities:	Provide eye baths and safety showers close to areas where product contact or splashing may occur.
Advice to doctor:	Treat symptomatically.
<b>Section 5: Fire-fighting measures</b>	
Flammability:	Non flammable.
Appropriate extinguishing media:	Extinguish fire with foam, dry powder, carbon dioxide or water spray.
Hazardous decomposition products:	In a fire, irritant and toxic fumes containing oxides of carbon, nitrogen, phosphorus and sulphur and other toxic substances may be generated.
Special protective equipment and precautions for fire-fighters:	In the event of fire, wear self-contained breathing apparatus. Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Prevent run-off from contaminating drains, sewers or waterways. Inform appropriate authorities immediately if product or run-off enters waterways.
HAZCHEM code:	2Z
<b>Section 6: Accidental release measures</b>	
Personal precautions:	Wear protective equipment; chemical resistant coveralls, boots, gloves, eye protection. Do not touch or walk through spilled material. Stop leak when safe to do so. Exclude all bystanders from the vicinity.
Environmental precautions:	Contain spill. Prevent product entering drains or waterways by activating emergency shut-off valves or using bunding. Inform appropriate authorities immediately if spill enters sewers or waterways. Prevent chemical contaminating soil.
Procedure for clean up:	Contain and recover liquid into a suitable labelled container for disposal. Absorb residue or small spills with suitable inert material, e.g. sand, vermiculite. Wash contaminated area with water and detergent, absorb and put in container for disposal. Dispose of contaminated waste at an approved facility.
<b>Section 7: Handling and storage</b>	
Safe handling:	Read label before use. Wear personal protective equipment. To be used only by suitably qualified person and in compliance with HSNO Controls.
Safe storage:	Keep out of reach of children. Store away from foodstuffs, seeds, fertilisers and human/animal health products. Storage must be in accordance with the current version NZS 8409 Management of Agrichemicals.
<b>Section 8: Exposure controls/personal protection</b>	

Occupational exposure limits:	<i>Ingredient</i>	<i>CAS No.</i>	<i>WES-TWA</i>	<i>WES-STEL</i>
	Propylene glycol monomethyl ether	107-98-2	100ppm (369mg/m <sup>3</sup> )	150ppm (553 mg/m <sup>3</sup> )
Biological limit value:	None set as of WorkSafe's 12 <sup>th</sup> edition of WES and BEI values, published November 2020.			
Engineering controls:	Control process conditions to avoid contact. Use only in well-ventilated areas. If necessary, use local exhaust ventilation to keep airborne concentration below the exposure limits.			
Respiratory protection:	Wear half or full mask fitted with particle filter when mixing or applying spray.			
Hand protection:	Elbow length, chemical resistant gloves.			
Eye protection:	Face shield.			
Skin protection:	Overalls and PVC or rubber boots.			
General hygiene:	Do not eat, drink or smoke while using. Wash hands and exposed skin thoroughly with soap and water before meals and after work. Wash protective clothing daily after work.			
Personal Protection:	Further information on specific types of personal protective gear and related standards is available in Section 16.			

## Section 9: Physical and chemical properties

(a)	Appearance:	Blue to blue-green liquid.
(b)	Odour:	Weakly pungent.
(c)	Odour threshold:	Not available.
(d)	pH:	4.0 -6.0 (as concentrate) Not applicable.
(e)	Melting point/freezing point:	Not available
(f)	Initial boiling point and boiling range:	>93°C
(g)	Flash point:	Not available.
(h)	Flammability (solid, gas):	Not available.
(i)	Upper/lower flammability or explosive limits:	Not available
(j)	Vapour pressure:	Not available.
(k)	Vapour density:	1.09 - 1.11
(l)	Relative density:	Soluble in water.
(m)	Solubility:	Not available.
(n)	Partition coefficient: n-octanol/water:	Not available
(o)	Auto-ignition temperature:	Not available.

# Patriot® 1

(p)	Decomposition temperature:	Not available.
(q)	Kinematic viscosity:	Not applicable.
(r)	Particle characteristics	
<b>Section 10: Stability and reactivity</b>		
Stability of the substance:	Product is unlikely to react or decompose under normal conditions of storage and use. If you have any doubts, contact the supplier for advice on shelf-life properties.	
Conditions to avoid:	Avoid heat, flames, sunlight.	
Incompatible materials:	Strong acids, strong bases, strong oxidising agents. Ammonia may be evolved in the presence of alkalis.	
Hazardous decomposition products:	Ammonia. In a fire, oxides of carbon, nitrogen, phosphorus and sulphur may be emitted.	
<b>Section 11: Toxicological information</b>		
	Toxicity classifications determined by assessment of the components in the formulated mixture.	
a)	Acute toxicity:	Not classified.
b)	Aspiration hazard:	Not classified.
c)	Respiratory irritation:	Not classified.
d)	Skin corrosion / irritation:	Skin irritant.
e)	Serious eye damage / irritation:	Eye irritant.
f)	Respiratory or skin sensitisation:	Not classified.
g)	Germ cell mutagenicity:	Not classified.
h)	Carcinogenicity:	Not classified.
i)	Reproductive toxicity:	Not classified.
j)	Specific organ toxicity:	Causes damage to human target organs (kidney) or systems.
k)	Narcotic effects:	Not classified.
l)	Other adverse effects:	No information.
m)	Toxicological information for product:	Oral LD <sub>50</sub> (rat): 5000 mg/kg bw Dermal LD <sub>50</sub> (rat):2000 mg/kg bw Inhalation LC <sub>50</sub> (rat): 2.751 mg/L (4hr)
<b>Section 12: Ecological information</b>		
(a)	Aquatic ecotoxicity:	Ecotoxicological classifications determined by assessment of the active ingredient. Toxic to aquatic life with long lasting effects.

# Patriot® 1

(b)	Soil ecotoxicity	Very toxic in the soil environment.
(c)	Terrestrial vertebrate ecotoxicity:	Harmful to terrestrial vertebrates.
(d)	Terrestrial invertebrate ecotoxicity:	Not classified.
(e)	Persistence and degradability:	Glufosinate-ammonium is very soluble in water and is hydrolytically and photolytically stable. This product is considered to not be readily biodegradable.
(f)	Potential to be bioaccumulative:	Glufosinate-ammonium does not accumulate in the fatty tissues of fish or other animals.
(g)	Mobility in soil.	Product is soluble in water.
(h)	Ecotoxicological information for glufosinate-ammonium:	Sheepshead minnow LC <sub>50</sub> (96 hr) 13.1 mg/L <i>Daphnia magna</i> EC <sub>50</sub> (48 hr): 15 mg/L <i>Lemna gibba</i> EC <sub>50</sub> (72 hr) 1.5 mg/L Japanese quail LC <sub>50</sub> : >5000mg/kg (8-day dietary)

## Section 13: Disposal considerations

Product disposal:	Dispose of this product only by using according to the label or through Agrecovery chemical disposal or similar approved service. Do not allow material to contaminate ground water system or surface water.
Container disposal:	Triple rinse container and add residue to spray tank. Recycle clean, empty container through Agrecovery if possible or bury in an approved landfill. Do not use container for any other purpose. Avoid contamination of any water supply or stream with product or empty container.

## Section 14: Transport information

UN number:	Not applicable.
UN proper shipping name:	Not applicable.
UN class:	Not applicable.
Packing group:	III
HAZCHEM:	2Z
Marine pollutant:	No
Special precautions:	-

## Section 15: Regulatory information

HSNO:	Approved substance under the HSNO Act 1996.
Substance approval number:	HSR100830.
Tolerable exposure limit / environmental exposure limit:	None set. See <a href="http://www.epa.govt.nz">www.epa.govt.nz</a>
HSNO controls:	
Additional controls:	The substance must not be applied onto or into water. The substance must only be applied via ground based application methods
Additional information:	Refer to WorkSafe for additional information on controls in the workplace; <a href="http://www.worksafe.govt.nz">www.worksafe.govt.nz</a> .

ACVM:	Registered under the Agricultural Compounds Veterinary Medicines Act 1997.
Registration number:	P9924
Conditions of registration:	See <a href="http://www.foodsafety.govt.nz">www.foodsafety.govt.nz</a>
<b>Section 16: Other information</b>	
Date of issue:	5/03/2022
Reason for reissue:	Update of SDS to incorporate changes from EPA GHS changes
Replaces:	-
Information references:	Supplier Safety Data Sheet NZ EPA Approved hazardous substances databases. Workplace Exposure Standards and Biological Exposure Indices
Abbreviations:	ACVM: Agricultural Chemicals and Veterinary Medicines Group Bw: Bodyweight. HSNO: Hazardous substances and New Organisms Act 1996 (HSNO Act) EPA: Environmental Protection Authority of New Zealand CAS Number: Chemical Abstracts Service Number LD50: Lethal Dose 50% (Population) LC50: Lethal Concentration 50% (Population) WES-TWA: Workplace exposure standards – Time-weighted average WES-STEL: Workplace exposure standards – Short-term exposure limit
Personal Protection Standards:	The following Standards provide general advice regarding safety clothing and equipment: Respiratory equipment: <b>AS/NZS 1715</b> , Protective Gloves: <b>AS 2161</b> , Occupational Protective Clothing: <b>AS/NZS 4501</b> , Industrial Eye Protection: <b>AS1336</b> and <b>AS/NZS 1337</b> , Occupational Protective Footwear: <b>AS/NZS2210</b>

The data provided in this safety data sheet is based on current knowledge and experience. The purpose of this document is to describe the product in terms of its safety requirements. The above details do not imply any guarantee concerning composition, properties or performance of the product.