

1. Identification

Product

Product name	Knock out Extra
Product code	none
ACVM registration number	P10203
HSNO approval	HSR100587
UN number	3082
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Glyphosate 54%)
DG class	9
Packing group	III
Hazchem code	3Z
Uses	A non-residual, non-selective herbicide for weed control prior to planting crops and pasture, prior to harvesting some crops and for general weed control in horticulture, agriculture, and forestry.

Company Details – Importer

Company Address	AgStar New Zealand Pty Ltd 4 Putakitaki Street, Lincoln, Christchurch 7608 New Zealand
Telephone	027 483 9756

Company Details – Distributor

Company Address	Farmlands Co-operative Society Limited 535 Wairakei Road, Burnside, Christchurch 8053
Telephone	0800 200 600

24h EMERGENCY CONTACT: 0800 243 622 (0800 CHEMCALL)
NATIONAL POISON CENTRE: 0800 764 766

2. Hazard Identification

Approval

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR100587). The substance has been classified as hazardous according to the criteria in the Hazardous substances (Hazard Classification) Notice 2020.

GHS 7 Classes

Chronic aquatic category 2

Hazard Statements

H411 - Toxic to aquatic life with long lasting effects.

SYMBOLS



Other Classifications

There are no other classifications that are known to apply.

Precautionary Statements

Prevention	P103 - Read label before use. P273 - Avoid release to the environment.
Response	P391 - Collect spillage.
Storage	no storage statement
Disposal	P501 - Dispose of contents/container in accordance with local/regional/national/international regulation.

3. Composition / Information on Ingredients

Component	CAS/ Identification	Concentration
Glyphosate Acid*	1071-83	540g/L
Potassium hydroxide*	1310-58-3	150g/L
ingredients not contributing to GHS classes	mixture	balance

This results in a Glyphosate potassium salt (CAS number 70901-12-1) equivalent to ~ 660g/L.

This is a commercial product whose exact ratio of components may vary slightly. Trace quantities of impurities are also likely.

4. First Aid

General Information

If medical advice is needed, have product container or label at hand. You should call the National Poisons Centre if you feel that you may have been harmed or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service).

Recommended first aid facilities

Ready access to running water is recommended. Accessible eyewash is recommended.

Exposure

Swallowed

Do NOT induce vomiting. Rinse mouth. In case of symptoms, contact the National Poisons Centre or a Doctor.

Eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin contact

Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs get medical attention.

Inhaled

Generally, inhalation of spray/vapours is unlikely to result in adverse health effects. If coughing, dizziness or shortness of breath is experienced, remove the patient to fresh air immediately. If patient is unconscious, place in the recovery position (on the side) for transport and contact a doctor.

Advice to Doctor

Treat symptomatically

5. Firefighting Measures

Fire and explosion hazards: Suitable extinguishing substances:

There are no specific risks for fire/explosion for this chemical. It is non-flammable. Carbon dioxide, extinguishing powder, foam.

Unsuitable extinguishing substances:

Unknown.

Products of combustion:

Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.

Protective equipment:

Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and eye protection.

Hazchem code:

3Z

6. Accidental Release Measures

Containment

If greater than 1000L is stored, secondary containment and emergency plans to manage any potential spills must be in place. In all cases design storage to prevent discharge to storm water.

Emergency procedures

In the event of a large spillage alert the fire brigade to location and give brief description of hazard. Stop the source of the leak, if safe to do so. Wear protective equipment to prevent skin, eye and respiratory exposure. Clear area of any unprotected personnel. Contain using sand, earth or vermiculite. Prevent by whatever means possible any spillage from entering drains, sewers, or water courses. (If this occurs contact your regional council immediately).

Clean-up method	Use absorbent (soil, sand or other inert material). Rags are not recommended for the clean-up of spills, as they may create fire or environmental hazard. Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.
Disposal	Mop up and collect recoverable material into labelled containers for recycling or salvage. Recycle containers wherever possible. This material may be suitable for approved landfill. Dispose of only in accord with all regulations.
Precautions	Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation.

7. Handling & Storage

Storage	Keep out of reach of children. Store in the original, tightly closed container, in a secure place away from feed or foodstuffs. Storage of 1000L or more requires signage, secondary containment and an emergency response plan. When stored appropriately this product should show no significant degradation for two years from the date of manufacture. Contact your supplier for further information about the use of product that is older than this.
Handling	Avoid contact with incompatible substances as listed in Section 10. Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements. Avoid contact with eyes and skin. Avoid inhalation of spray mist. When handling, mixing or applying, wear overalls, boots, gloves and eye protection. Clean protective equipment daily after work. Do not eat, drink or smoke while using. Remove protective clothing and wash hands and face thoroughly before meals and after work. Read label carefully before mixing and diluting. All spray equipment, including pumps, spray tanks, lines and nozzles should be thoroughly washed with water after each day of spraying.

8. Exposure Controls / Personal Protective Equipment

Workplace Exposure Standards

A workplace exposure standard (WES) has not been established by WorkSafe NZ for this product. There is a general limit of 3mg/m³ for respirable particulates and 10mg/m³ for inhalable particulates when limits have not otherwise been established.

NZ Workplace Exposure Std	Ingredient	WES-TWA	WES-STEL
	Glyphosate	not established	not established

Engineering Controls

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety at Work Act (2015) and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016. Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

Personal Protective Equipment

General		Personal Protective Equipment (PPE) should not be used as the primary means of exposure protection, except in the event of an accident or emergency situation or where all other means of protection have proven to inadequate. Clean PPE after use or dispose of as appropriate. Store PPE for re-use in a clean place. Regular training on the correct use of PPE should be provided. In particular the correct fitting and use of respirators and where applicable the cleaning of respirators should be undertaken.
Eyes		Avoid contact with eyes. Use safety glasses and or chemical splash goggles if splashes are possible, e.g. when mixing/diluting. Select eye protection in accordance with AS/NZS 1337.
Skin		Protective gloves are recommended. Rubber or nitrile gloves are recommended. Protective gloves or suitably resistant material must comply with AS 2161. Replace frequently. Gloves should be checked for tears or holes before use. Protective clothing must comply with AS 2919, AS3765.1 or AS3765.2. PVC or rubber boots must comply with AS/NZS 2210.2 and selected and maintained in accordance with AS/NS2210.1

Respiratory

A respirator when airborne concentrations approach the WES (section 8). Respirators must have filters appropriate to the duty and comply with AS/NZS1716 and selected, used and maintained in accordance with AS/NS 1715. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order. Fit testing and clear guidelines and training for use and maintenance of PPE are necessary.

WES Additional Information

Not applicable

9. Physical & Chemical Properties

Appearance	clear blue liquid
Odour	characteristic odour
Odour Threshold	no data
pH	4.5-6.5 (1% aqueous solution)
Freezing/melting point	no data
Boiling Point	>100°C @760mmHg
Flashpoint	non flammable
Flammability	non flammable
Upper & lower flammable limits	no LEL or UEL
Vapour pressure	no data
Vapour density	no data
Specific gravity/density	no data
Solubility	miscible in water
Partition coefficient	no data
Auto-ignition temperature	no data
Decomposition temperature	no data
Viscosity	no data
Particle Characteristics	free from suspended matter and sediment

10. Stability & Reactivity

Stability	Stable
Conditions to be avoided	Containers should be kept closed in order to avoid contamination. Keep from extreme heat and open flames.
Incompatible groups	Strong acids, strong alkalis. Steel, galvanised steel.
Substance Specific Incompatibility	none known
Hazardous decomposition products	Oxides of carbon.
Hazardous reactions	none known

11. Toxicological Information

Summary

IF SWALLOWED: may irritate throat.
 IF IN EYES: may cause eye irritation if not washed from eye immediately.
 IF ON SKIN: skin irritation may occur.
 IF INHALED: respiratory irritation may occur.:

Supporting Data

Acute	Oral	Using LD ₅₀ 's for ingredients, the Acute Toxicity Estimate (ATE) (oral) for the mixture is >2,000 mg/kg.
	Aspiration	This mixture is not considered an aspiration hazard.
	Dermal	Using LD ₅₀ 's for ingredients, the Acute Toxicity Estimate (ATE) (dermal) for the mixture is >2,000 mg/kg.
	Inhaled	Using LD ₅₀ 's for ingredients, the Acute Toxicity Estimate (ATE) (inhalation) for the mixture is >5mg/L/4h.
	Eye	The mixture is not considered to be an eye irritant.

Chronic	Skin	The mixture is not considered to be a skin irritant.
	Sensitisation	No ingredient present at concentrations > 0.1% is considered a sensitizer.
	Mutagenicity	No ingredient present at concentrations > 0.1% is considered a mutagen.
	Carcinogenicity	No ingredient present at concentrations > 0.1% is considered a carcinogen.
	Reproductive / Developmental	No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation.
	Systemic	No ingredient present at concentrations > 1% is considered a target organ toxicant.
	Aggravation of existing conditions	None known.

12. Ecological Information

Summary

Toxic to aquatic life with long lasting effects. In all cases prevent run-off to drains, sewers and waterways. Use this product carefully. Do not contaminate aquatic environments with product, spray drift or empty container. Non-selective herbicide - toxic to plants. Avoid contact with foliage or green stems of fruit or crops, desirable plants and trees, since severe injury or death may occur.

Beware: Spray drift hazard. Apply this product carefully. Spray drift may cause serious damage to other desirable plants. Do not allow drift to occur outside the target area.

If accidental spraying occurs, immediately wash spray off foliage with plenty of water to minimise damage. Do not apply concentrate product directly onto or into water. Follow label instructions.

Supporting Data

Aquatic	Using EC ₅₀ 's for ingredients, the calculated EC ₅₀ for the mixture is between 1 mg/L and 10 mg/L. Data considered includes: Glyphosate Algae: Acute: 1.2mg/L (96hr, Skeletonema costatum (diatom)). Chronic: EC ₅₀ 0.77ppm (7 days, Marine diatom), Fish: Acute: 45mg/L (96hr, Bluegill sunfish), Chronic: NOEC 52mg/L (Salmo gairdnerii)
Bioaccumulation	Not bioaccumulative. BCF (aquatic species); 0.63 dimensionless. LogP = <-3.2 (low)
Degradability	Biodegradable. DT ₅₀ (soil) 12 days (typical), not biodegradable in water
PBT and vPvB assessment	This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
Soil toxicity and mobility	EPA NZ has not classified the mixture as ecotoxic to soil organisms. Mobility in soil is dependent on temperature, soil type, moisture, pH and presence of organic matter.
Terrestrial vertebrate	EPA NZ has not classified the mixture as ecotoxic to terrestrial vertebrates. See acute toxicity.
Terrestrial invertebrate	EPA has not classified the mixture as ecotoxic to terrestrial invertebrates. EPA does not consider glyphosate potassium toxic to bees. However sublethal exposure to glyphosate may impact honey bees.
Biocidal	Herbicide. Glyphosate potassium is a broad-spectrum, non-selective systemic herbicide that exhibits high phytotoxicity.
Environmental Exposure Limits (EEL)	An EEL _{water} has been set for glyphosate. The EEL value is 0.37 mg/L.

13. Disposal Considerations

Restrictions	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
Disposal method	Disposal of this product must comply with the Hazardous Substances (Disposal) Notice 2017 and the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment.
Contaminated packaging	Disposal of contaminated packaging must comply with the Hazardous Substances (Disposal) Notice 2017 clause 12. Ensure that the package is rendered incapable of containing any substance and is disposed in a manner that is consistent with the requirements of the substance it contained and the material of the package. Ensure container is completely empty. Triple rinse container and add residue to mixture. Recycle containers if possible through an agrichemical recycling service, otherwise bury in an approved land fill. Otherwise crush and bury in a suitable land fill.

14. Transport Information

Land Transport Rule: Dangerous Goods 2005 - NZS 5433:2020

Transport according to NZS 5433 (Transport of Hazardous Substances on Land). Considered a dangerous good for transport.

UN number:	3082	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Glyphosate 54%)
Class(es)	9	Packing group:	III
Precautions:	Marine Pollutant	Hazchem code:	3Z

IMDG

UN number:	3082	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Glyphosate 54%)
Class(es)	9	Packing group:	III
Precautions:	Marine Pollutant	EMS	F-A, S-F

IATA

UN number:	3082	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Glyphosate 54%)
Class(es)	9	Packing group:	III
Precautions:	Marine Pollutant		

15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR100587. All ingredients appear on the New Zealand Inventory of Chemicals NZIoC.

Specific Controls

Key workplace requirements are:

SDS	To be available within 10 minutes in workplaces storing any quantity.
Inventory	An inventory of all hazardous substances must be prepared and maintained.
Packaging	All hazardous substances should be appropriately packaged including substances that have been decanted, transferred or manufactured for own use.
Labelling	Must comply with the Hazardous Substances (Labelling) Notice 2017.
Emergency plan	Required if > 1000L is stored.
Certified handler	Not required.
Tracking	Not required.
Bunding & secondary containment	Required if > 1000L is stored.
Signage	Required if > 1000L is stored.
Location compliance certificate	Not required.
Flammable zone	Not required.
Fire extinguisher	Not required.
Hazardous Property Controls Variation	The maximum application rate of this substance shall be 12.3L/ha. See label for details. Where the substance is applied onto or into water and the water has the potential to leave the place containing the application area, clauses 62, 63 and 64 of the Hazardous Property Controls Notice apply as if the substance has a hazard classification of hazardous to the aquatic environment acute Category 1.

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health and Safety at Work Act 2015 and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, local Council Rules and Regional Council Plans.
ACVM registration number: P10203

16. Other Information

Abbreviations

Approval Code	Approval HSR100587, Controls, EPA. www.epa.govt.nz
CAS Number	Unique Chemical Abstracts Service Registry Number
EC₅₀	Median effect concentration, being a statistically derived concentration of a substance that can be expected to cause an adverse effect in 50% of organisms; or a 50% reduction in growth or in the growth rate of organisms.
EPA	Environmental Protection Authority (New Zealand)
GHS	Globally Harmonised System of Classification and Labelling of Chemicals, 7 th revised edition, 2017, published by the United Nations.
HAZCHEM Code	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HSNO	Hazardous Substances and New Organisms (Act and Regulations)
IARC	International Agency for Research on Cancer
LEL	Lower Explosive Limit
LD₅₀	Median Lethal Dose – dose which is fatal to 50% of a test population (usually rats).
LC₅₀	Median Lethal Concentration – concentration in air which is fatal to 50% of a test population (usually rats)
NZIoC	New Zealand Inventory of Chemicals
STEL	Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded
STOT RE	Specific Target Organ Toxicity – Repeated Exposure
STOT SE	Specific Target Organ Toxicity – Single Exposure
TWA	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
UEL	Upper Explosive Limit
UN Number	United Nations Number
WES	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed during work hours (usually 8 hours, 5 days a week). The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the worker's breathing zone.

References

Data	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID).
Controls	EPA notices, www.epa.govt.nz , Health and Safety at Work (Hazardous Substances) Regulations 2017, www.legislation.govt.nz
WES	The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – www.worksafe.govt.nz .
Other References:	Suppliers SDS

Review

Date	Reason for review
January 2026	Not applicable - New SDS

Disclaimer

This SDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The SDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the SDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The likely GHS 7 classifications for this SDS have been estimated based on general information from the supplier (e.g., hazard, toxicological). This SDS is copyright Datachem and must not be copied, edited or used for other than intended purpose. To contact the SDS author, email info@datachem.co.nz or phone: +64 21 1040951.

