SAFETY DATA SHEET

According to
HSNO Hazardous Substances (Safety Data Sheets) Notice 2017

Section 1. Identification of the material and the supplier

Product:	**Performa Glyphosate 540SL**
Substance:	Soluble concentrate of Glyphosate
Chemical name:	IUPAC Name: N-(phosphonomethyl)glycine CA Name: N-(phosphonomethyl)glycine
Product Use:	Agricultural herbicide
Restriction of Use:	Refer to Section 15
New Zealand Supplier:	**Wholesale Seeds Limited**
Address:	5 Bryant Street Ashburton New Zealand
Telephone No:	+64 3 307 9260
Emergency No:	**0800 CHEMCALL (0800243 622)**
Manufacturer:	**Danken New Zealand Ltd**
Address:	P.O. Box 16194 Hornby Christchurch, 8441
Telephone:	0800 326 536
Emergency No:	**0086-572-6309016**
Date of SDS Preparation:	25 July 2024

Section 2. Hazards Identification

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval No: HSR100587

Pictograms

Signal Word: **Warning**

GHS Classification and Category	Hazard Code	Hazard Statement
Hazardous to the aquatic environment chronic Cat. 2	H411	Toxic to aquatic life with long lasting effects.

Prevention Code	Prevention Statement

P103	Read carefully and follow all instructions.
P273	Avoid release to the environment.

Response Code	Response Statement
P391	Collect spillage.

Storage Code	Storage Statement
None allocated	

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Wt%	CAS NUMBER.
Glyphosate (as the potassium salt)	47.5 (540g/L)	1071-83-6
Non hazardous	To bal	

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes — Rinse cautiously with water for 15 minutes. If eye irritation persists: Get medical advice.

If on Skin — Remove all contaminated clothing and shoes. Wash off skin immediately with soap and plenty of water. If poisoning occurs seek immediate medical attention and if more than 15 minutes from medical attention, give one Atropine tablet (0.5mg) every 5 minutes until dryness of mouth occurs.

If Swallowed — Wash out mouth thoroughly with water. Never give anything to the mouth of an unconscious person. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs. Seek medical attention if needed.

If Inhaled — Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Apply artificial respiration if not breathing. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms: Refer to Section 11.

Notes to Doctor: There is no specific antidote available. Treat symptomatically.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable
Hazards from products	Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx), oxides of phosphorus.
Suitable Extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Precautions for firefighters and special protective clothing	Wear protective clothing and self-contained breathing apparatus. Do not allow run-off from firefighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.
HAZCHEM CODE	**3Z**

Section 6. Accidental Release Measures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Absorb into sand, vermiculite or other suitable absorbent material. Place in suitable container for disposal. Dispose of in compliance with local and/or national regulations or as per Section 13.

Section 7. Handling and Storage

Precautions for Handling:

- Read carefully and follow all instructions.
- Avoid release to the environment.
- Avoid contact with eyes and skin. DO NOT inhale spray mist.
- When preparing spray and using the prepared spray wear: cotton overalls buttoned to the neck and wrist (or equivalent clothing), a washable hat, elbow-length PVC gloves. If using a hand directed sprayer, wear, in addition: waterproof trousers, boots.
- After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.
- After each day's use, wash gloves and contaminated clothing.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Keep out of reach of children.
- Store in the closed, original container in a cool, well ventilated area.
- DO NOT store for prolonged periods in direct sun light.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

	TWA		STEL	
Substance	**ppm**	**mg/m³**	**ppm**	**mg/m³**

No ingredients have exposure limits

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices APRIL 2022 13TH EDITION.

Engineering Controls
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wash hands before breaks and at the end of workday.

Acceptable Daily Intake (ADI):
JMPR: 1 mg/kg b.w. [2004]; EC: 0.3 mg/kg b.w. [2001]; EPA: proposed RfD 2 mg/kg b.w. [1993].
No-observable-effect-level (NOEL):
In 2 years feeding trials, no ill-effects were observed in rats receiving 410mg/kg diet daily (average) and, in 1 year feeding trials, no ill-effects were observed in dogs receiving 500mg/kg daily (highest dose treated). Lowest relevant NOAEL (2 year) for rats 31 mg/kg b.w. daily (EU).

Personal Protection Equipment

Eyes	Protective glasses or goggles should be worn when this product is being used. Failure to protect your eyes may cause them harm. Emergency eye wash facilities are also recommended in an area close to where this product is being used.
Hands	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
Skin	Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory	Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
General	Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Section 9 Physical and Chemical Properties

Appearance	Liquid
Colour	Blue
Odour	Not available
Odour Threshold	Not available
pH	4.0 – 7.0
Boiling Point	Not available
Melting Point	Not available
Freezing Point	Not available
Flash Point	Not available
Flammability	Not flammable
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Density	About 1.36g/ml
Water Solubility	Not available
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Kinematic Viscosity	Not available
Particle Characteristics	Not available
Foam persistent	60ml max after 1min

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Possibility of hazardous reactions	Not available
Conditions to Avoid	Excessive heat and direct sunlight.
Incompatible Materials	Strong oxidizing agents, Metals, Bases.
Hazardous Decomposition Products	Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx), oxides of phosphorus.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable. Rats: LD50 >2000 mg/kg
Dermal	Not applicable. Rats: Acute percutaneous LD50>2000mg/kg.
Inhalation	Not applicable. Rats:LC50 (4 h)> 2.43 mg/L air
Eye	Not applicable.
Skin	Not applicable.

Chronic Effects:

Carcinogenicity	Not applicable. Rats given oral doses of up to 400 mg/kg/day did not show any signs of cancer, nor did dogs given oral doses of up to 500 mg/kg/day or mice fed glyphosate at doses of up to 4500 mg/kg/day. It appears that glyphosate is not carcinogenic.
Reproductive Toxicity	Not applicable. Laboratory studies show that glyphosate produces reproductive changes in test animals very rarely and then only at very high doses (over 150 mg/kg/day). It is unlikely that the compound would produce reproductive effects in humans.
Teratogenic Effects	Not applicable. Teratogenic effects In a teratology study with rabbits, no developmental toxicity was observed in the fetuses at the highest dose tested (350 mg/kg/day). Rats given doses up to 175 mg/kg/day on days 6 to 19 of pregnancy had offspring with no teratogenic effects, but other toxic effects were observed in both the mothers and the fetuses. No toxic effects to the fetuses occurred at 50 mg/kg/day. Glyphosate does not appear to be teratogenic.
Germ Cell Mutagenicity	Not applicable. Glyphosate mutagenicity and genotoxicity assays have been negative. These included the Ames test, other bacterial assays, and the Chinese Hamster Ovary (CHO) cell culture, rat bone marrow cell culture, and mouse dominant lethal assays. It appears that glyphosate is not mutagenic.
Aspiration	Not applicable.
STOT/SE	Not applicable. Some microscopic liver and kidney changes, but no observable differences in function or toxic effects, have been seen after lifetime administration of glyphosate to test animals.
STOT/RE	Not applicable.
Chronic	Studies of glyphosate lasting up to 2 years, have been conducted with rats, dogs, mice, and rabbits, and with few exceptions no effects were observed. For example, in a chronic feeding study with rats, no toxic effects were observed in rats given doses as high as 400 mg/kg/day. Also, no toxic effects were observed in a chronic feeding study with dogs fed up to 500 mg/kg/day, the highest dose tested

Section 12. Ecotoxicological Information

Toxic to aquatic life with long lasting effects.

Product:	
Persistence and degradability	In soil (field), DT50 1–130 d, depending on edaphic and climatic conditions. In water, DT50 varies from a few to 91 d. Photodegradation in natural water occurs, DT50 33–77 d; no substantial photodegradation in soil was recorded over 31 d. In a lab. whole system with water and sediment, DT50 27–146 d (aerobic), 14–22 d (anaerobic). The major metabolite in soil and water is aminomethylphosphonic acid.
Bioaccumulation	Low potential.
Mobility in Soil	Slightly mobile.

Individual component information:

Route	**Species**	**Duration**	Value LC50/EC50
Aquatic, fish	Trout	96 hr	>1227 mg a.e./l.
Aquatic, Crustacean	Daphnia	48 hr	>1227 mg a.e./l.
Aquatic, Algae	green algae (Selenastrum capricornutum)	72hr (static)	EbC50 = 35 mg a.e./l, ErC50 = 54 mg a.e./l.
Bees		48 hr	(contact and oral) >100 g a.e./bee.

Section 13. Disposal Considerations

Disposal Method:
Triple or preferably pressure rinse containers before disposal. Add rinsing to spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection paint. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill 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. Dispose of washings, contaminated materials, used absorbents and other waste materials as directed by local regulations.
Precautions or methods to avoid: Avoid release to the environment.

Section 14 Transport Information

This product is classified as a Dangerous Good for transport in NZ ; NZS 5433:2020 and SNZ HB 5433:2021

Road, Rail, Sea and Air Transport

UN No	3082
Class - Primary	9
Packing Group	III
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S
Marine Pollutant	Yes
Special Provisions	If the product's individual container is below 5L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

Section 15 Regulatory Information

This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval Code: HSR100587

HSW (HS) Regulations 2017 and EPA Notices	Trigger Quantity
Certified Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	1000L
Emergency Response Plan	1000L
Secondary Containment	1000L
Restriction of Use	Only use for the intended purpose.

Section 16 Other Information

Glossary

Cat	Category
EC_{50}	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC_{50}	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD_{50}	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices April 2022 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

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