SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product:	**POLARIS ACCELERATE HERBICIDE**
Chemical Name of Active Ing:	540g/L glyphosate present as the potassium salt in the form of a soluble concentrate
Product Use:	Herbicide
Restriction of Use:	Refer to Section 15
New Zealand Supplier:	ADAMA New Zealand Ltd
Address:	Level 1/93 Bolt Road Tahunanui, Nelson
Telephone:	+64 3 543 8275
Emergency Telephone:	**0800 764 766 (National Poison Centre)**
Date of SDS Preparation:	28 May 2019

Section 2. Hazards Identification

This substance is hazardous according to the *Hazardous Substances (Classification) Notice 2017*

EPA Approval No: HSR100923

Pictograms

Corrosive

Ecotoxic

Signal Word: **DANGER**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.3B	H316	Causes mild skin irritation.	Skin Irrit. 3
8.3A	H318	Causes serious eye damage.	Eye Corr. 1
9.1B	H411	Toxic to aquatic life with long lasting effects.	Aquatic Chronic 2

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P310	Immediately call a POISON CENTER or doctor/physician.

P391	Collect spillage.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.

Storage Code	**Storage Statement**
None allocated	

Disposal Code	**Disposal Statement**
P501	Wherever possible completely use material by using according to label instructions. Dispose of unwanted product and wastes from spillages as hazardous substances in accordance with local and national regulations using a licensed waste disposal company. Triple rinse containers and add rinsate to spray tank before puncturing and offering for recycling or landfill. Do not allow product to enter waterways. Do not burn product or container.

Section 3. Composition / Information on Ingredients

Ingredients	Wt %	CAS NUMBER.
Glyphosate (as potassium salt)	540g/L	70901-20-1
Other non-hazardous ingredients	<100g/L	-
Water	To bal	7732-18-5

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes — Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice.

If on Skin — Take off contaminated clothing and wash before re-use. Wash with plenty of soap and water. If skin irritation or rash occurs: get medical advice/attention.

If Swallowed — Do not induce vomiting. Wash out mouth with water and drink several glasses of 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. Call a POISON CENTER or doctor/physician if you feel unwell.

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:

Ingestion: Not applicable.
Inhalation: Not applicable.
Skin: Causes mild skin irritation.
Eye: Causes serious eye damage.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable / Not combustible.
Hazards from combustion products	Only small quantities of decomposition products are expected from this product at temperatures normally achieved in a fife. This will occur after heating to dryness.

	Fire decomposition products from this product are likely to be irritating if inhaled.
Suitable Extinguishing media	Use extinguishing media suited to burning materials. If a significant quantity of this product is involved in a fire, call the fire brigade.
Precautions for firefighters and special protective clothing	Full protective clothing and self-contained breathing apparatus.
HAZCHEM CODE	**3Z**

Section 6. Accidental Release Measures

In the event of a major spill, prevent spillage from entering drains or water courses. Wear full protective clothing including eye/face protection. All skin areas should be covered. See below under Personal Protection regarding personal protective equipment. Suitable materials for protective clothing include rubber, PVC, Viton. Eye/face protective equipment should comprise as a minimum, protective goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the New Zealand Standards mentioned below (section 8). Otherwise, not normally necessary.

Environmental precautions
In the event of a major spill, prevent spillage from entering into drains and water courses.

Methods and material for containment and cleaning up
Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large to if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Full details regarding disposal of used containers, spillage and unused materials may be found on the label. If there is any conflict between the Safety data sheet and the label, instructions on the label prevail. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

Section 7. Handling and Storage

Precautions for Handling:
- Read label before use.
- Avoid release to the environment.
- Do not smoke, drink or eat while using.
- Wear protective clothing as detailed in Section 8.

Precautions for Storage:
- Store away from incompatible materials listed in Section 10.
- Store in the original, unopened container in a cool, dry place, out of direct sunlight and away from stockfeed or foodstuffs.
- As a Class 9 Substance with Ecotoxicity Classifications, storage of POLARIS ACCELERATE Herbicide must be carried out in such a manner as to prevent contamination of waterways. It is recommended that The New Zealand Standard for the Management of Agrichemicals (NZS8409) is followed as a means of meeting the secondary containment provisions of the HSNO Emergency Management Regulations.
- Keep out of reach of children.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA ppm	TWA mg/m3	STEL ppm	STEL 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 NOV 2017 9TH EDITION.

Engineering Controls

No special ventilation requirements are normally necessary for this product.

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 and Skin	Prevent skin contact by wearing impervious gloves, clothes and preferable apron. Make sure that all skin areas are covered.
Respiratory	Usually no respirator is necessary when using this product but is recommended.
General	When handling do not eat, drink or smoke. Wash hands thoroughly after handling. Wash clothing separately before re-use.

Section 9 Physical and Chemical Properties

Appearance	Dark Blue Viscous liquid
Odour	No odour
Odour Threshold	Not applicable
Coefficient pH	Not applicable
Boiling Point	>105^{o}C
Melting /Freezing Point	Below 0^{0}C
Flash Point	Not applicable
Flammability	Not flammable
Upper and Lower Exposure Limits	Not applicable
Vapour Pressure	2.37 kPa at 20◦C (water vapour pressure)
Density	Not applicable.
Solubilities	Completely soluble in water
Coeff Oil/water distribution:	Not applicable
Auto-ignition Temperature	Not applicable
Kinematic viscosity mm2/s 40 °C	Not applicable
Particle Characteristics	Not applicable
Volatiles	Water component

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Reactivity	This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.
Conditions to Avoid	This product should be kept in a cool place, preferably below 30 ºC. Keep containers tightly closed. Keep containers and surrounding areas well ventilated.
Incompatible Materials	strong acids, strong bases, strong oxidizing agents, corrosive to milk steel, galvanized steel and zinc.
Hazardous Decomposition Products	Only small quantities of decomposition products are expected from this product at temperatures normally achieved in a fire. This will only occur after heating to dryness. Caron dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. Oxides of phosphorus and other phosphorus compounds. Water, potassium compounds. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable
Dermal	Not applicable
Inhalation	Not applicable
Skin	Causes mild skin irritation.
Eye	Causes severe eye damage.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Not applicable.

Section 12. Ecotoxicological Information

HSNO Classes: 9.1B = Toxic to aquatic life. This product may cause long term adverse effects to he aquatic environment.

Ecotoxicity:
Birds: LD50 bobwhite quail: >3850mg/kg
Fish: LC50 bluegill sunfish (Lepomis macrochirus): 5.8-14mg/L
LC50 carp (Cyprinus carpio): 19.7mg/L
LC50 fathead minnow (Pimephales promelas): 9.4mg/L
LC50 rainbow trout (Oncorhynchus mykiss): 8.2-26mg/L
Bees: LD50>400µ/bee

Persistence and degradability	This product is not readily biodegradable.
Bioaccumulation	No data available.
Mobility in Soil	Likely to degrade slowly in the soil or water and not cause long term problems. This product is unlikely to be mobile

	in soils.
Other adverse effects	No data available
Precautions	Do not allow to enter waterways.

Section 13. Disposal Considerations

Disposal Method: Triple rinse empty container and add rinsate to spray tank. Burn in an appropriate incinerator, if circumstances such as wind direction permit. Otherwise crush or puncture and bury in a suitable landfill, or if appropriate, recycle. Avoid contamination of any water supply with product or empty container.

Precautions and methods to avoid:
Avoid contamination of any water supply with product or empty container.

Section 14 Transport Information

This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2012

Road and Rail Transport

UN No:	3082
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, (Glyphosate 54%)

Air Transport

UN No:	3082
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, (Glyphosate 54%)

Marine Transport

UN No:	3082
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S, (Glyphosate 54%)
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 hazardous according to the Hazardous Substances (Classification) Notice 2017

EPA Approval Code: HSR100923
HSNO Classification: 6.3B, 8.3A, 9.1B

Refer to EPA website www.epa.govt.nz for controls document - HSR100923

HSW (HS) Regulations 2017	Trigger Quantity
Signage Trigger Quantities (Schedule 3)	1000L (9.1B)
Emergency Response Plan (Schedule 5)	1000L (9.1B)
Secondary Containment (Schedule 5)	1000L (9.1B)
Tracking (Schedule 26)	Not required
HSW(Hazardous substance) Regulations Part 4 Certified Handlers and supervision and training of workers	HSW Reg 4.5 – 4.6 Information, instruction, training and supervision.
HSNO Additional Controls (Restrictions of use)	
77A The maximum level of an impurity in the technical grade active material for this substance is set.	The maximum level of formaldehyde in the glyphosate component of Polaris Accelerate Herbicide shall not exceed 1.3 g/kg. The maximum level of N-nitroso-N-phosphonomethylglycine in the glyphosate component of Polaris Accelerate Herbicide shall not exceed 1.0 mg/kg
Hazardous Property Controls Notice 2017	
HPC Notice Part 4 Clause 47	Equipment for class 9 substances must be appropriate
HPC Notice Part 4 Clause 48	Records of application of class 9 pesticides and plant growth regulators
HPC Notice Part 3	Hazardous substances in a place other than a workplace
HPC Notice Part 4 Subpart A	Site and storage controls for class 9 substances
HPC Notice Part 4 Subpart C	Qualifications required for application of class 9 Pesticides
ACVM Act and Regulations	
ACVM Approval No See www.foodsafety.govt.nz for registration controls	P8864

Section 16 Other Information

Glossary

EC50	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
LC50	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD50	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 Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

This document has been issued by TCC (NZ) Ltd and serves as their Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TCC (NZ) Ltd or obtained from third party sources and is believed to represent the current state of

knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer. While TCC (NZ) have taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, TCC (NZ) Ltd accept no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS

The information herein is given in good faith, but no warranty, express or implied is made.

Please contact the ADAMA, if further information is required.

Issue Date: 28 May 2019 Review Date: 28 May 2024