

# SAFETY DATA SHEET



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Issued: June 2019

## SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name: Di-Bak G Herbicide**

**Full Product Name:** Di-Bak G Herbicide.  
**Other Names:** Glyphosate.  
**Use:** Herbicide for control of weed trees and unwanted trees.  
**Company:** Bioherbicide Australia Pty Ltd  
**Address:** Building 8112 and 8113, The University of Queensland, Gatton Campus, Gatton, QLD 4343.  
**ACN/ABN:** 44 147 854 582  
**Telephone Number:** 0402437670  
**Emergency Contact:** 0402 437 670

## SECTION 2 HAZARDS IDENTIFICATION

**Not classified as hazardous according to criteria of Safe Work Australia\*.  
Not classified as a Dangerous Good according to the ADG Code.**

\* Under Safe Work Australia this product is not classified as a hazardous substance. Under the Globally Harmonised System (GHS) this product is a hazardous substance with the following classification:

**Globally Harmonised System (GHS) classification of the substance/mixture:**

Hazardous to the Aquatic Environment – Acute Hazard: Category 2.  
Hazardous to the Aquatic Environment – Long term hazard: Category 2.

**Signal Word:** *No signal word.*

**Hazard Statements:**

H401 Toxic to Aquatic life.  
H411 Toxic to Aquatic life with long lasting effects.

**Precautionary statements:**

*Prevention:*

P273 Avoid release to the environment.

*Response:*

P391 Collect spillage

*Disposal:*

P501 Dispose of contents/container in accordance with national regulations

**Pictogram:**



**SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS****Ingredients:**

<i>CHEMICAL</i>	<i>CAS NUMBER</i>	<i>PROPORTION</i>
Glyphosate present as the mono-ammonium salt	114370-14-8	700 g/kg
Other ingredients determined not to be hazardous		Balance

**SECTION 4 FIRST AID MEASURES****FIRST AID**

- Ingestion:** If swallowed do NOT induce vomiting. Give a glass of water. Rinse mouth thoroughly with water. If poisoning occurs, contact a Doctor or Poisons Information Centre. Phone 131 126.
- Eye contact:** Intact capsules are unlikely to be a hazard. If capsules break open gently brush granules away and hold eyes open and flood with clean water.
- Skin contact:** Intact capsules are unlikely to be a hazard. If capsules break open gently brush granules away and remove contaminated clothing. Wash skin with water. If skin is irritated, seek medical advice.
- Inhalation:** Intact capsules are unlikely to be a hazard. Remove to fresh air and observe until recovered. If effects persist, seek medical advice. Over-exposure by inhalation is unlikely.

**Advice to Doctor:** Treat symptomatically.

**SECTION 5 FIRE FIGHTING MEASURES**

**Specific Hazard:** Generally considered a low risk. Not flammable.

**Extinguishing media:** Not flammable. Low risk of explosion if involved in a fire. Extinguish fire using media suited to burning material. If possible, avoid using water as water dissolves the capsules releasing the chemical. If containers are ruptured contain all runoff.

**Hazards from combustion products:** Product is likely to decompose with strong heating and will emit toxic fumes. Firefighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or smoke.

**Precautions for fire-fighters and special protective equipment:** Isolate fire area. Evacuate downwind residents. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke or vapours generated.

**SECTION 6 ACCIDENTAL RELEASE MEASURES****Emergency procedures:**

In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum wear elbow-length chemical resistant gloves and goggles. Avoid direct contact with the contents of capsules. Do not wet capsules, as the outer coating will dissolve, exposing the chemical (glyphosate).

In the case of spillage, stop leak if safe to do so, and contain spill. If possible, capsules should be recovered and used for their intended use. Vacuum or shovel spilled material into an approved container and dispose of waste in compliance with relevant Local, State or Territory government regulations. Keep out animals and unprotected persons.

**Material and methods for containment and cleanup procedures:**

After spills and if capsules have ruptured, wash area preventing runoff from entering drains.



**SECTION 7 HANDLING AND STORAGE**

**Precautions for Safe Handling:** Avoid contact with eyes and skin. When using the product wear chemical resistant gloves. Wash hands after use.

**Conditions for Safe Storage:** Not classified as a Dangerous Good by the ADG. Store in the closed, original container in a well ventilated area away from children, animals, food, feedstuffs, seed and fertilisers. Do not store for prolonged periods in direct sunlight.

**SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION****Exposure Guidelines:**

Exposure guidelines have not been established for this product by Safe Work Australia.

**Biological Limit Values:**

No biological limit allocated.

**Engineering controls:**

Keep containers closed when not in use. No special engineering controls are required, however make sure that the work environment remains clean and tidy.

**Personal Protective Equipment (PPE):**

General: When using the product wear chemical resistant gloves. Wash hands after use.

Personal Hygiene: Avoid contact with eyes and skin. Clean water should be available for washing in case of eye or skin contamination. Wash skin before eating, drinking or smoking.

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Clear gelatine capsule filled with beige granules.
<b>Odour:</b>	No odour.
<b>Boiling point:</b>	No data.
<b>Freezing point:</b>	Not applicable.
<b>Solubility in Water:</b>	Soluble. Capsule will disintegrate in water. Granules are soluble.
<b>pH:</b>	No data.
<b>Flammability:</b>	Not flammable.
<b>Vapour pressure:</b>	No data.
<b>Corrosive hazard:</b>	Not corrosive.
<b>Explosive properties:</b>	Not explosive.
<b>Oxidizing properties:</b>	Not an oxidiser.
<b>Poison Schedule:</b>	This product is a Schedule 5 (S5) poison.
<b>Formulation type:</b>	Capsule.

**SECTION 10 STABILITY AND REACTIVITY**

**Chemical Stability:** Product is considered stable in ambient conditions for a period of at least 2 years after manufacture.

**Conditions to avoid:** DO NOT store for prolonged periods in direct sunlight.

**Incompatible materials:** Water, as water dissolves the capsules.

**Hazardous decomposition products:** This product is likely to decompose only after being exposed directly to fire. Hazardous decomposition products include oxides of carbon.

**Hazardous reactions:** Polymerisation will not occur.

**SECTION 11 TOXICOLOGICAL INFORMATION**

No specific data is available for this product as no toxicity tests have been conducted on this product. Information presented is our best judgement based on individual components. As with all products for which limited data is available, caution must be exercised through the use of protective equipment and handling procedures to minimise exposure.



**SECTION 11 TOXICOLOGICAL INFORMATION (Continued)****Potential Health Effects:****ACUTE EFFECTS**

- Swallowed:** Low acute toxicity. Direct ingestion may produce gastro-intestinal discomfort, nausea, vomiting and diarrhoea. Ingestion of a large quantity of the undiluted product may result in hypotension and pulmonary oedema. Acute Oral LD<sub>50</sub> > 5,000 mg/kg.
- Eye:** Intact capsules are unlikely to be a hazard. If capsule is opened the granules may cause physical irritation of the eyes.
- Skin:** Intact capsules are unlikely to be a hazard. If capsule is opened the granules may be irritating to the skin. Acute dermal LD<sub>50</sub> > 5,000 mg/kg.
- Inhaled:** Intact capsules are unlikely to be a hazard.

**Long Term Exposure:**

*Chronic toxicity:* 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. 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.

Glyphosate does not appear to be teratogenic, mutagenic or carcinogenic.

**SECTION 12 ECOLOGICAL INFORMATION**

**Environmental Toxicology:** Glyphosate is not harmful to wild birds. The dietary LC<sub>50</sub> in both mallards and bobwhite quail is greater than 4500 ppm. Technical glyphosate acid is practically nontoxic to fish and may be slightly toxic to aquatic invertebrates. The reported 96-hour LC<sub>50</sub> values for other aquatic species include greater than 10 mg/L in Atlantic oysters, 934 mg/L in fiddler crab, and 281 mg/L in shrimp. The 48-hour LC<sub>50</sub> for glyphosate in Daphnia (water flea), an important food source for freshwater fish, is 780 mg/L. Some formulations may be more toxic to fish and aquatic species due to the surfactants used in the formulation. There is a very low potential for glyphosate to build up in the tissues of aquatic invertebrates or other aquatic organisms. Glyphosate is nontoxic to honeybees. It's oral and dermal LD<sub>50</sub> is greater than 0.1 mg/bee. The reported contact LC<sub>50</sub> values for earthworms in soil are greater than 5000 ppm.

**Environmental Fate:** Glyphosate is moderately persistent in soil, with an estimated average half-life of 47 days. Reported field half-lives range from 1 to 174 days. It is strongly adsorbed to most soils, even those with lower organic and clay content. In water, glyphosate is strongly adsorbed to suspended organic and mineral matter and is broken down primarily by microorganisms. Its half-life in pond water ranges from 12 days to 10 weeks. Glyphosate may be translocated throughout the plant, including to the roots. It is extensively metabolized in some plants, while remaining intact in others.

**SECTION 13 DISPOSAL CONSIDERATIONS**

**Spills and Disposal:** Persons involved in cleanup require adequate skin protection - see Section 8. Keep out animals and unprotected persons. Keep material out of streams and sewers. Vacuum, shovel or pump waste into an approved drum. Dispose of the drums of wastes, including any decontamination solution in accordance with the requirements of Local or State Waste Management Authorities.

**Disposal of empty containers:** Triple-rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government regulations. Do not burn empty containers or product.



**SECTION 14 TRANSPORT INFORMATION**

**Road & Rail Transport:** This product is not classified as a Dangerous Goods under the Australian Code for the Transport of Dangerous Goods by Road.

**Marine and Air Transport:** Product is not classified as a Dangerous Goods under International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA).

**SECTION 15 REGULATORY INFORMATION**

Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is a schedule 5 poison.

This product is undergoing registration under the Agricultural and Veterinary Chemicals Code Act 1994. Product No. 87026.

This product is not classified as a Hazardous Substance under the criteria of Safe Work Australia.

This product is not classified as a Dangerous Good according to the ADG Code (7<sup>th</sup> Ed).

This product is not classified as a Dangerous Good according to International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA).

*Requirements concerning special training:*

Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

**SECTION 16 OTHER INFORMATION**

Issue Date: 10 June 2019. Valid for 10 years till 10 June 2024 (First Issue).

Key to abbreviations and acronyms used in this SDS:

ADG Code: Australian Dangerous Goods Code (for the transport of dangerous goods by Road and Rail).

Carcinogen: An agent which is responsible for the formation of a cancer.

Genotoxic: Capable of causing damage to genetic material, such as DNA.

Mutagenic: Capable of inducing a genetic mutation in an organism.

PPE: Personal protective equipment.

Teratogen: An agent capable of causing abnormalities in a developing foetus.

TWA: The Time Weighted Average airborne concentration over an eight-hour working day, for a five day working week over an entire working life.

Safe Work Australia: Formally known as Australian Safety & Compensation Council (ASCC) which was formally known as the National Occupational Health & Safety Commission (NOHSC).

References

1. "Hazardous Chemicals Information System". Safe Work Australia HCIS website. (2019).
2. "Classifying Hazardous Substances" Safe Work Australia. August 2018.
3. Globally Harmonized System of Classification and Labelling of Chemicals (GHS). United Nations, 2009.

*This SDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.*

*If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.*

End SDS

