SAFETY DATA SHEET

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

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

Full Product Name: Di-Bak AM Herbicide.
Other Names: Aminopyralid + Metsulfuron-methyl.
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: 0402 437 670
Emergency Contact: 0402 437 670

SECTION 2 HAZARDS IDENTIFICATION

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

* Not subjected to the ADG code when transported in Australia by Road or Rail in packages 500 kg (L) or less; or in IBC's (refer to SP AU01). However, if transported by Air or Sea, this provision does not apply. Then the product is classed as a Dangerous Good (Class 9 Environmentally Hazardous) by IATA and IMDG respectively. See Section 14 of this SDS for details.

Globally Harmonised System (GHS) classification of the substance/mixture:
Hazardous to the Aquatic Environment – Long Term (Chronic) Hazard: Hazard Category 1.

Signal Word: DANGER.

Hazard Statements:
H410 Very 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:

CHEMICAL	*CAS NUMBER*	*PROPORTION*
Aminopyralid present as the potassium salt	566191-87-5	375 g/kg
Metsulfuron-methyl	74223-64-6	300 g/kg
Kaolin	1332-58-7	<10%
Picloram	1918-02-1	<1%
Titanium dioxide	13463-67-7	< 1%
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 until product is removed.

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 until product is removed. 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.

Extinguishing media: 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.

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: 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:
The following Exposure Guidelines have been established for components of this this product by Safe Work Australia.

Atmospheric Contaminant	Exposure Standard (TWA)	STEL
Kaolin	10 mg/m³	-
Picloram	10 mg/m³	-
Titanium dioxide	10 mg/m³	-

TWA = Time-weight Average STEL = Short Term Exposure Limit

These exposure standards are unlikely to be exceeded with normal use of this product.

Biological Limit Values:
No biological limit allocated.

Engineering controls:
Keep containers closed when not in use. Do not open capsules. 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

Appearance: Clear gelatine capsule filled with brown granules.
Odour: No odour.
Boiling point: No data.
Freezing point: Not applicable.
Solubility in Water: Soluble. Capsule will disintegrate in water. Granules will disperse in water.
pH: No data.
Flammability: Not flammable.
Vapour pressure: No data.
Corrosive hazard: Not corrosive.
Explosive properties: Not explosive.
Oxidizing properties: Not an oxidiser.
Poison Schedule: This product is a Schedule 6 (S6) poison.
Formulation type: 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: Product decomposes above melting temperature. Generation of gas during decomposition can cause pressure in closed systems

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.

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_{50} > 5,000 mg/kg.

Eye: Intact capsules are unlikely to be a hazard. If capsule is opened the granules may cause physical and chemical 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_{50} > 5,000 mg/kg.

Inhaled: Intact capsules are unlikely to be a hazard. LC_{50} (dust) > 5.12 mg/L/4 hours.

Long Term Exposure:

Carcinogenicity: For the active ingredients: Did not cause cancer in laboratory animals. A risk assessment has been conducted for this product and has shown, that under normal handling, the minor components will not pose a hazard.

Teratogenicity: For the active ingredients: Did not cause birth defects or any other foetal effects in laboratory animals.

Reproductive toxicity: For the active ingredients: In animal studies, did not interfere with reproduction.

Mutagenicity: In vitro genetic toxicity studies were negative.

Aspiration Hazard: Based on physical properties, not likely to be an aspiration hazard.

SECTION 12 ECOLOGICAL INFORMATION

Environmental Toxicology: Acute toxicity to fish: Material is very highly toxic to aquatic organisms on an acute basis (LC_{50}/EC_{50} < 0.1 mg/L in the most sensitive species). LC_{50}, *Oncorhynchus mykiss* (rainbow trout), semi-static test, 96 Hour, > 120 mg/L. **Acute toxicity to aquatic invertebrates:** EC_{50}, *Daphnia magna* (Water flea), static test, 48 Hour, > 100 mg/L. **Acute toxicity to algae/aquatic plants:** ErC_{50}, *Pseudokirchneriella subcapitata* (green algae), static test, 72 Hour, Growth rate inhibition, 1.49 mg/L. EC_{50}, Lemna gibba, semi-static test, 7 d, Growth rate inhibition, 0.00209 mg/L.
Toxicity to Above Ground Organisms: Material is practically non-toxic to birds on an acute basis (LD_{50} > 2000 mg/kg). Oral LD_{50}, *Colinus virginianus* (Bobwhite quail), > 2250 mg/kg. Oral LD_{50}, *Apis mellifera* (bees), 48 d, > 214 micrograms/bee, contact LD_{50}, (48 d) > 200micrograms/bee.

Environmental Fate: Aminopyralid is not considered to be readily biodegradable. No appreciable degradation is expected for metsulfuron-methyl. No data available for the product.

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: Rinse containers before disposal. 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



SECTION 13 DISPOSAL CONSIDERATIONS (Continued)

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 exempt from classification as a Dangerous Good in packs less than 500 kg (L) or less; or in IBC's under the Australian Code for the Transport of Dangerous Goods by Road and Rail. For bulk shipments this product is a class 9, UN 3077. (See special provision AU01).

Marine and Air Transport: Di-Bak AM Herbicide is classified as a Marine Pollutant according to International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA). If transporting by sea or air the following Dangerous Goods Classification applies:-
UN 3077, Class 9 (Miscellaneous Dangerous Goods), Packing Group III, Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Contains Metsulfuron -methyl (38%). Hazchem code 2Z. Hazard Identification Number (HIN) 90. Australian Standards Initial Emergency Response Guide No. 47.

SECTION 15 REGULATORY INFORMATION

Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is a Schedule 6 poison.
This product is undergoing registration under the Agricultural and Veterinary Chemicals Code Act 1994.
This product is 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 (7th Ed).
This product is not classified as a Dangerous Good according to the ADG Code in packages 500 kg (L) or less; or in IBC's (refer to SP AU01). However, if transported by Air or Sea, this provision does not apply. This product is 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: 25 March 2021. Valid for 5 years till 25 March 2026 (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. (2021).
2. "Classifying Hazardous Substances" Safe Work Australia. August 2018.
3. Globally Harmonized System of Classification and Labelling of Chemicals (GHS). United Nations, 2017 (7th Ed).

SECTION 16 OTHER INFORMATION (Continued)

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