

MATERIAL SAFETY DATA SHEET

MACSPRED™ DISMISS ORNAMENTAL HERBICIDE

SECTION 1 – IDENTIFICATION

Product Name: Macspred Dismiss Ornamental Herbicide

Other names: None

Recommended Use: PRE-EMERGENT ORNAMENTAL HERBICIDE

Company: Macspred Pty Ltd
ABN 85 011 029 495

Address: 13 Kennedys Drive Delacombe, Ballarat VIC 3350

Telephone Number: (03) 5335 8522

Emergency Telephone Number: First Aid: 13 11 26 (Poisons Information Centre)
Transport Emergency: 000 (Police or Fire)

SECTION 2 - HAZARDS IDENTIFICATION

Hazards classification: Not classified as hazardous according to NOHSC List of Designated Hazardous Substances

Risk Phrases: None

Safety Phrases: None

ADG: This product is not classified a Dangerous Good under the Australian Dangerous Goods Code, 7th edition (ADG 7).

Poison Schedule: Unscheduled

Classification: SUSMP (Standard for Uniform Scheduling of Medicines and Poisons).

SECTION 3 - COMPOSITION

Ingredients

Chemical entity	CAS number	Proportion (%)
Oxyfluorfen	42874-03-3	< 10%
Oryzalin	19044-88-3	< 10%
calcium chloride	10043-52-4	< 10%
non-hazardous ingredients		> 60%

SECTION 4 – FIRST AID MEASURES

Swallowed:	If swallowed, do NOT induce vomiting. Contact a Poisons Information Centre, or call a doctor.
Skin:	If poisoning occurs, contact a Poisons Information Centre, or call a doctor at once. Remove contaminated clothing and immediately wash skin with soap and plenty of water. Wash contaminated clothing before reuse.
Eyes:	Immediately flush eyes with water for 15 minutes while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Seek medical attention.
Inhaled:	If symptoms of poisoning become evident, contact a Poisons Information Centre, or call a doctor at once. If inhaled, remove to fresh air. If not breathing, give artificial respiration. Seek medical attention.

First Aid Facilities: Provide eye wash and shower facilities.

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (Telephone: 13 11 26), and follow the advice given. Show this Material Safety Data Sheet to a doctor.

Advice to Doctor: No specific requirements. Treat symptomatically.

SECTION 5 – FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Dry chemical extinguisher or carbon dioxide (CO₂).

Hazards from Combustion Products:

None known, but protect against inhalation of combustion products by using approved self-contained breathing apparatus in positive pressure mode.

Precautions for Fire Fighters and Special Protective Equipment:

In the event of a fire, wear self-contained breathing apparatus.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Emergency Procedures:

Toxic to wildlife and fish. Do not allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean up. Keep out animals and unprotected persons.

Methods and Materials for Containment and Clean Up:

In the case of spillage, contain spilled material and sweep or shovel up. If suitable, return product to bag. Otherwise, vacuum, shovel or pump waste into an approved drum. To decontaminate spill area, tools and equipment, wash with a suitable solution (i.e. organic solvent, detergent, bleach or caustic) and add the solution to the drums of waste already collected. Label for contents. Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this MSDS and the label, instructions on the label prevail. Ensure legality of disposal by consulting applicable Federal, State, and Local regulations prior to disposal.

SECTION 7 – HANDLING AND STORAGE

Precautions for Safe Handling:

Read label. Avoid container breakage. Avoid contact with eyes and skin. Do not inhale dust or mist. If product on skin, immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this MSDS for details of personal protective equipment, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace.

Conditions for Safe Storage:

Store in the closed original container in a dry, cool, well-ventilated area, out of direct sunlight and away from children, animals, food, feedstuffs, seed and fertilisers. Check packaging – there may be further storage instructions on the label.

SECTION 8 – EXPOSURE CONTROLS

National Exposure Standards:

No exposure standards have been set for either active ingredient in this product.

Biological Limit Values:

None allocated.

Engineering Controls:

Use only with adequate ventilation. No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that dusts are minimised.

Personal Protective Equipment:

Avoid contact with eyes and skin. DO NOT inhale dust or mist.

Eye Protection: Wear goggles when using this product. Emergency eye wash facilities are recommended in an area close to where this product is being used.

Skin Protection: When using this product, wear elbow length PVC gloves.

Respirator: If there is a significant chance that dusts are likely to build up in the area where this product is being used, it is recommended that a suitable dust mask be used.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Free-flowing, brown granules
Odour:	Mild
pH	8.9 (1% solution)
Melting Point (°C):	Oxyfluorfen 65°C -85°C; Oryzalin 141°C -142°C
Boiling Point (°C):	Not data available
Vapour Pressure:	Oxyfluorfen 2×10^{-6} ; Oryzalin $<1 \times 10^{-7}$
Vapour Density:	No data available
Bulk Density:	1.4
Solubility in Water (g/L):	Not Soluble

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: Stable at normal temperature storage conditions. Protect from moisture and heat.

Conditions to Avoid: Avoid temperatures above 200°C for prolonged periods to prevent slow decomposition. Keep in a cool place, preferably below 30°C.

Incompatible Materials: Strong oxidising agents.

Hazardous Decomposition Products: None known, but protect against inhalation of combustion products by using approved self-contained breathing apparatus in positive pressure mode.

Hazardous Reactions: This product is unlikely to undergo polymerisation processes.

SECTION 11 – TOXICOLOGICAL INFORMATION

Technical oxyfluorfen

Oral Toxicity:	LD ₅₀ Oral (ingestion) Rat = > 5000 mg/kg
Dermal Toxicity:	LD ₅₀ Dermal (skin contact) Rat > 3000 mg/kg Rabbit > 5000 mg/kg
Inhalation Toxicity:	LC ₅₀ Aerosol (4 hr inhalation) Rat > 5.4 mg/L
Skin Irritation:	Essentially non-irritating
Eye Irritation:	Essentially non-irritating
Sensitisation:	No data available
Mutagenicity:	No data available

Significant Data with Possible Relevance to Human Health

No data available

Technical oryzalin

Oral Toxicity:	LD ₅₀ Oral (ingestion) Rat = > 5000 mg/kg Mice = > 5000 mg/kg Cat = > 1000 mg/kg Dog = >1000 mg/kg Chicken = >1000 mg/kg
Dermal Toxicity:	LD ₅₀ Dermal Rabbits > 2000 mg/kg
Inhalation Toxicity:	LC ₅₀ Aerosol (4 hr inhalation) Rat > 3 mg/L
Skin Irritation:	Slightly irritating
Eye Irritation:	Slightly irritating
Sensitisation:	No skin sensitisation (guinea pig)
Chronic toxicity:	Rats fed a dietary level of about 2.5 mg/kg/day for 2 years exhibited blood changes, increased liver and kidney weights, inhibition of growth and decreased

survival. Repeated ingestion of large doses led to adverse changes in blood cell formation in dogs. Mice given dietary doses of about 200 mg/kg/day for 1 year exhibited decreased uterine and ovarian weights. Those exposed to doses of 75 mg/kg/day showed no observable effects.

Reproductive Effects:	There were no adverse effects on reproduction in a three-generation study of rats fed dietary concentrations of 12.5, 37.5 or 112.5 mg/kg/day, the highest dose test. Foetotoxic effects appeared at 12.5 mg/kg/day. It does not appear that oryzalin causes reproductive effects.
Teratogenic Effects:	There were no birth defects in the offspring of pregnant rats fed dietary concentrations as high as 112 mg/kg/day for three generations, nor in the offspring of pregnant rabbits given doses of 125 mg/kg/day, the highest dose tested. It appears that oryzalin is unlikely to cause teratogenic effects.
Mutagenic Effects:	Oryzalin was not mutagenic in several tests, including tests on live rats and mice, and on bacterial cell cultures. It does not appear that oryzalin is mutagenic.
Carcinogenic Effects:	When oryzalin was fed to rats in doses as high as 135 mg/kg/day for 2 years, there was an increase in the incidence of thyroid, mammary and skin tumours. Thyroid tumours and benign skin and mammary tumours occurred in rats fed a dietary level of 45 mg/kg/day for 2 years. However there were no tumours in mice fed doses as high as 548 mg/kg/day for 2 years. Because of these conflicting results, it is not possible to assess the carcinogenicity of oryzalin.
Organ Toxicity:	Oryzalin has shown systemic effects on the thyroid, liver and kidneys, as well as blood chemistry, in animals tests.
Fate in Humans and Animals	Oryzalin is moderately well-absorbed from the gastrointestinal tract, and rapidly metabolized and eliminated following absorption. When oryzalin was administered to male rats, 40% of the dose was excreted in the urine and 40% in the faeces within 3 days. Similar results were obtained in tests with rabbits, a steer and with Rhesus monkeys.

SECTION 12 – ECOLOGICAL INFORMATION

Technical oxyfluorfen -

Highly toxic to wildlife and fish. DO NOT contaminate ponds, irrigation channels, drains, streams, rivers or waterways with the chemical or used containers.

Ecotoxicity:

Fish Toxicity: Acute LC₅₀ (Rainbow trout *Oncorhynchus mykiss*) = 0.41 mg/L
Acute LC₅₀ (Channel catfish *Ictalurus punctatus*) = 0.4 mg/L
Acute LC₅₀ (Bluegill *Lepomis macrochirus*) = 0.2 mg/L

Daphnia Toxicity: EC₅₀ (48 h) = 0.07 mg/L

Bird Toxicity: LD₅₀ > 2000 mg/kg
LC₅₀ > 5000 ppm

Bee Toxicity: No data available

Other: LC₅₀ earthworm (*Eisenia foetida*) > 1000 mg/kg

Environmental Fate, Persistence and Degradability: Biodegradation under aerobic laboratory conditions is below detectable limits (BOD₂₀ or BOD₂₈ is < 2.5%).
Biodegradation reached in Closed Bottle Test (OECD Test No. 301D) after 28 days is 1.2%.

Mobility: No data available

Technical oryzalin -

Ecotoxicity:	
Fish Toxicity:	Acute LC ₅₀ (Bluegill <i>Lepomis macrochirus</i>) = 2.88 mg/L
Persistence and Degradability Breakdown in Water:	No breakdown of oryzalin by hydrolysis was observed at pH 5, 7 and 9. Based on its behaviour in soil, breakdown by microbial processes is probably slow in the aquatic environment due to low levels of oxygen and low microbial activity. Photodegradation may be significant in the upper portions of the water column.
Breakdown in Vegetation:	Oryzalin is readily absorbed via the roots, and plant metabolism of oryzalin is minimal.
Mobility:	No data available

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal Methods, including Disposal of Containers:

Special Precautions for Landfill or Incineration:

DO NOT dispose of undiluted chemicals on site. Puncture or shred and deliver empty packaging for appropriate disposal 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 bags or product .

SECTION 14 - TRANSPORT INFORMATION

This product is not classified as a dangerous good according to the Australian Dangerous Goods Code, 7th edition.

SECTION 15 – REGULATORY INFORMATION

Hazard Classification:	Not classified as hazardous according to the criteria of the National Occupational Health & Safety Commission (NOHSC)
SUSMP:	Unscheduled
APVMA:	Registered according to the Agricultural and Veterinary Chemicals act 1988. APVMA Product No. 66102.

SECTION 16 –OTHER INFORMATION

Prepared September 2011

Literary references:

- 1) Standard for the Uniform Scheduling of Medicines and Poisons – Commonwealth Department of Health and Aging
- 2) Australian Inventory of Chemical Substances (AICS)

Acronyms:

ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail
AICS	Australian Inventory of Chemical Substances
APVMA	Australian Pesticides & Veterinary Medicines Authority
CAS number	Chemical Abstracts Service Registry Number
NOHSC	National Occupational Health and Safety Commission

SUSMP

Standard for the Uniform Scheduling of Medicines & Poisons

THIS MSDS 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 MUST REVIEW THIS MSDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS

OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.