

## Section 1 - Identification of The Material and Supplier

**Macspred Pty Ltd**  
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**Chemical nature:** Granular formulation containing oryzalin and oxyfluorfen  
**Trade Name:** **Macspred Dismiss Ornamental Herbicide**  
**APVMA Code:** 66102  
**Product Use:** Herbicide for ornamentals for use as described on the product label.  
**Creation Date:** **August, 2016**  
**This version issued:** **August, 2016** and is valid for 5 years from this date.  
**Poisons Information Centre: Phone 13 1126 from anywhere in Australia**

## Section 2 - Hazards Identification

### Statement of Hazardous Nature

This product is classified as: Xn, Harmful. Xi, Irritating. Hazardous according to the criteria of SWA.  
Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA or IMDG/IMSBC criteria.

**SUSMP Classification:** None allocated.

**ADG Classification:** None allocated. Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA or IMDG/IMSBC criteria.

**UN Number:** None allocated



### GHS Signal word: WARNING

Acute Toxicity Oral Category 4  
Serious eye damage/eye irritation Category 2B  
Specific Target Organ Toxicity - Single Exposure Category 3  
Hazardous to aquatic environment Short term/Acute Category 2

#### HAZARD STATEMENT:

H302: Harmful if swallowed.  
H320: Causes eye irritation.  
H335: May cause respiratory irritation.  
H401: Toxic to aquatic life.

#### PREVENTION

P261: Avoid breathing dusts.  
P262: Do not get in eyes, on skin, or on clothing.  
P264: Wash contacted areas thoroughly after handling.  
P270: Do not eat, drink or smoke when using this product.  
P273: Avoid release to the environment.  
P280: Wear protective gloves, protective clothing and eye or face protection.

#### RESPONSE

P335: Brush off loose particles from skin.  
P301+P312: IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.  
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313: If eye irritation persists: Get medical advice.  
P391: Collect spillage.  
P370+P378: In case of fire, use carbon dioxide, dry chemical.

## SAFETY DATA SHEET

**STORAGE**

P405: Store locked up.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

**DISPOSAL**

P501: Dispose of contents and containers as specified on the registered label.

**Emergency Overview**

**Physical Description & Colour:** Free-flowing, brown granules.

**Odour:** Mild odour.

**Major Health Hazards:** Oxyfluorfen is not harmful by ingestion, with reported oral LD<sub>50</sub> values of 5000 mg/kg in both rats and dogs, and 2700 to 5000 mg/kg in mice. It is also not harmful by dermal exposure; the LD<sub>50</sub> is greater than 5000 mg/kg in both rats and rabbits. It causes no skin irritation in rabbits, no skin sensitization in guinea pigs, and moderate eye irritation in rabbits. Harmful if swallowed, eye irritant.

**Section 3 - Composition/Information on Ingredients**

Ingredients	CAS No	Conc, g/kg	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )
Oxyfluorfen	42874-03-3	20g/kg	not set	not set
Oryzalin	19044-88-3	10g/kg	not set	not set
Calcium chloride	10043-52-4	<100	not set	not set
Other non hazardous ingredients	secret	to 100%	not set	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

**Section 4 - First Aid Measures**

**General Information:**

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

**Inhalation:** No first aid measures normally required. However, if inhalation has occurred, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

**Skin Contact:** Gently brush away excess particles. Irritation is unlikely. However, if irritation does occur, flush with lukewarm, gently flowing water for 5 minutes or until chemical is removed.

**Eye Contact:** Quickly and gently brush particles from eyes. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain medical attention immediately. Take special care if exposed person is wearing contact lenses.

**Ingestion:** If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.

**Section 5 - Fire Fighting Measures**

**Fire and Explosion Hazards:** The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

**Extinguishing Media:** In case of fire, use carbon dioxide, dry chemical.

**Fire Fighting:** When fighting fires involving significant quantities of this product, wear a splash suit complete with self contained breathing apparatus.

**Flash point:** Not flammable.

**Upper Flammability Limit:** No data.

**Lower Flammability Limit:** No data.

**SAFETY DATA SHEET**

**Autoignition temperature:** No data.

**Flammability Class:** No data.

## Section 6 - Accidental Release Measures

**Accidental release:** 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 Australian Standards relating to personal protective equipment. No special recommendations for clothing materials. Eye/face protective equipment should comprise, as a minimum, protective glasses and, preferably, goggles. If there is a significant chance that dusts are likely to build up in cleanup area, we recommend that you use a suitable dust mask. Otherwise, not normally necessary.

Stop leak if safe to do so, and contain spill. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Consider vacuuming if appropriate. 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 material may be found on the label. If there is any conflict between this SDS 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

**Handling:** Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this SDS for details of personal protective measures, 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.

**Storage:** Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Check packaging - there may be further storage instructions on the label.

## Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

Exposure limits have not been established by SWA for any of the significant ingredients in this product.

The ADI for Oxyfluorfen is set at 0.025mg/kg/day. The corresponding NOEL is set at 2.5mg/kg/day.

The ADI for Oryzalin is set at 0.1mg/kg/day. The corresponding NOEL is set at 12mg/kg/day. ADI means Acceptable Daily Intake; NOEL means No-observable-effect-level. Data from Australian ADI List, June 2014.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

**Ventilation:** This product should only be used where there is ventilation that is adequate to keep exposure below the TWA levels. If necessary, use a fan.

**Eye Protection:** 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.

**Skin Protection:** The information at hand indicates that this product is not harmful and that normally no special skin protection is necessary. However, we suggest that you routinely avoid contact with all chemical products and that you wear suitable gloves (preferably elbow-length) when skin contact is likely.

**Protective Material Types:** We suggest that protective clothing be made from the following materials: PVC.

**Respirator:** If there is a significant chance that dusts are likely to build up in the area where this product is being used, we recommend that you use a suitable dust mask. Use a P2 mask, designed for use against both mechanically and thermally generated particles e.g. metal fumes. Otherwise, not normally necessary.

Eyebaths or eyewash stations and safety deluge showers should, if practical, be provided near to where this product is being handled commercially.

## Section 9 - Physical and Chemical Properties:

**Physical Description & colour:** Free-flowing, brown granules.

**Odour:** Mild odour.

## SAFETY DATA SHEET

<b>Boiling Point:</b>	Not available.
<b>Freezing/Melting Point:</b>	65-82°C for oxyfluorfen, 141-142°C for oryzalin, no data for other components
<b>Volatiles:</b>	No data.
<b>Vapour Pressure:</b>	Negligible.
<b>Vapour Density:</b>	Not applicable.
<b>Density:</b>	Bulk density 1.4
<b>Water Solubility:</b>	Not soluble.
<b>pH:</b>	8.9 (1% in water).
<b>Volatility:</b>	No data.
<b>Odour Threshold:</b>	No data.
<b>Evaporation Rate:</b>	Not applicable.
<b>Coeff Oil/water Distribution:</b>	No data
<b>Viscosity:</b>	Not applicable.
<b>Autoignition temp:</b>	No data.

### Section 10 - Stability and Reactivity

**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:** Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

**Incompatibilities:** No particular Incompatibilities.

**Fire Decomposition:** Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. May form hydrogen fluoride gas and other compounds of fluorine. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

**Polymerisation:** This product will not undergo polymerisation reactions.

### Section 11 - Toxicological Information

**Toxicity:** An information profile for Oxyfluorfen is available at <http://extoxnet.orst.edu/pips/ghindex.html>

**Acute toxicity:** Oxyfluorfen is not harmful by ingestion, with reported oral LD<sub>50</sub> values of 5000 mg/kg in both rats and dogs, and 2700 to 5000 mg/kg in mice. It is also not harmful by dermal exposure; the LD<sub>50</sub> is greater than 5000 mg/kg in both rats and rabbits. It causes no skin irritation in rabbits, no skin sensitization in guinea pigs, and moderate eye irritation in rabbits. However, some formulated products may show severe skin and eye irritant properties, and may be skin sensitizers.

Laboratory studies on a similar but not identical formulation indicate that products of this type have a low toxicity, with a reported oral LD<sub>50</sub> of >5000 mg/kg in rats and a dermal LD<sub>50</sub> of >2000 mg/kg in rabbits.

**Chronic toxicity:** Effects on the liver have been observed in long-term feeding studies with rats, mice, and dogs.

**Reproductive effects:** It does not appear likely that Oxyfluorfen will cause reproductive effects in humans at likely levels of exposure.

**Teratogenic effects:** In a developmental study with rabbits, 30 mg/kg/day, the highest dose tested, produced an increase in fused sternal bones in the foetuses as well as toxic effects on the mothers. These data suggest Oxyfluorfen may have teratogenic effects, but only at very high doses.

**Mutagenic effects:** Mutagenicity tests on rats, mice and on bacterial cell cultures have produced mixed results. Due to the conflicting results, it is not possible to determine the mutagenic potential of Oxyfluorfen.

**Carcinogenic effects:** The data suggests that Oxyfluorfen is not carcinogenic.

**Organ toxicity:** The liver appears to be the main target organ, based on long-term feeding studies.

**Fate in humans and animals:** Because Oxyfluorfen is highly hydrophobic, it may have the potential to bioconcentrate in animal fatty tissues.

### Classification of Hazardous Ingredients

Ingredient	Risk Phrases
No ingredient mentioned in the HSIS Database is present in this product at hazardous concentrations.	

### SAFETY DATA SHEET

## Potential Health Effects

### Inhalation:

**Short Term Exposure:** Available data indicates that this product is not harmful. However product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort.

**Long Term Exposure:** Long term inhalation of high amounts of any nuisance dust may overload lung clearance mechanism. No data for health effects associated with long term inhalation.

### Skin Contact:

**Short Term Exposure:** Available data indicates that this product is not harmful. It should present no hazards in normal use. In addition product is unlikely to cause any discomfort in normal use. Repeated contact may lead to an allergic reaction.

**Long Term Exposure:** No data for health effects associated with long term skin exposure.

### Eye Contact:

**Short Term Exposure:** This product is an eye irritant. Symptoms may include stinging and reddening of eyes and watering which may become copious. Other symptoms may also become evident. If exposure is brief, symptoms should disappear once exposure has ceased. However, lengthy exposure or delayed treatment may cause permanent damage.

**Long Term Exposure:** No data for health effects associated with long term eye exposure.

### Ingestion:

**Short Term Exposure:** Significant oral exposure is considered to be unlikely. Available data shows that this product is harmful, and ingestion of large amounts may cause nausea and vomiting. This product is unlikely to cause any irritation problems in the short or long term.

**Long Term Exposure:** No data for health effects associated with long term ingestion.

### Carcinogen Status:

**SWA:** No significant ingredient is classified as carcinogenic by SWA.

**NTP:** No significant ingredient is classified as carcinogenic by NTP.

**IARC:** No significant ingredient is classified as carcinogenic by IARC.

## Section 12 - Ecological Information

This product is toxic to aquatic organisms. There is a high risk of bioaccumulation of oxyfluorfen in aquatic species. Oryzalin does not bioaccumulate.

**Effects on birds:** Oxyfluorfen is practically nontoxic to birds; the reported oral LD<sub>50</sub> values are greater than 2200 mg/kg in bobwhite quail, and greater than 4000 mg/kg in mallard duck. Oryzalin has a reported oral LD<sub>50</sub> of >1000 mg/kg in hens.

**Effects on aquatic organisms:** Oxyfluorfen is highly toxic to aquatic invertebrates, freshwater clams, oysters, aquatic plants, and fish. Oryzalin is also toxic to aquatic organisms, but is considered less toxic than oxyfluorfen.

Oxyfluorfen: LC<sub>50</sub> (96 h) Freshwater fish 0.2-0.4 mg/L, EC<sub>50</sub> (48 h) Daphnia magna 0.07 mg/L

Oryzalin: LC<sub>50</sub> (96 h) Bluegill fish 2.88 mg/L

**Effects on other organisms:** Oxyfluorfen is nontoxic to honeybees, with a reported oral LC<sub>50</sub> of greater than 10,000 ppm. There is no data available regarding the toxicity of oryzalin towards bees.

### Environmental Fate:

**Breakdown in soil and groundwater:** Oxyfluorfen is moderately persistent in most soil environments, with a representative field half-life of about 30 to 40 days. Oxyfluorfen is not subject to microbial degradation or hydrolysis. The main mechanism of degradation in soils may be photodegradation and evaporation/codistillation in moist soils. Oryzalin binds strongly to soil particles and usually remains within the top 15 cm of soil, where it is broken down microbially.

**Breakdown in water:** In water, Oxyfluorfen is rapidly decomposed by light. Because Oxyfluorfen is nearly insoluble in water and has a tendency to adsorb to soil, it will be sorbed to suspended particles or sediments. Oryzalin has a water solubility of 2.5 ppm (25 C, pH 7), and photodecomposition occurs rapidly in water.

**Breakdown in vegetation:** There is very little movement of Oxyfluorfen within treated plants. It is not readily metabolized by plants, but since it is not readily taken up by roots, residues in plants are generally very low. Residues of Oxyfluorfen accumulated in carrots and oats grown on previously treated fields, but not in cotton or lettuce. No data available regarding oryzalin.

## SAFETY DATA SHEET



### Section 13 - Disposal Considerations

**Disposal:** Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 <http://www.chemclear.com.au/> and for help with the disposal of empty drums, contact DrumMuster <http://www.drummuster.com.au/> where you will find contact details for your area.

### Section 14 - Transport Information

**UN Number:** This product is not classified as a Dangerous Good by ADG, IATA or IMDG/IMSBC criteria. No special transport conditions are necessary unless required by other regulations.

### Section 15 - Regulatory Information

**AICS:** All of the significant ingredients in this formulation are compliant with NICNAS regulations.

### Section 16 - Other Information

**This SDS contains only safety-related information. For other data see product literature.**

#### Acronyms:

<b>ADG Code</b>	Australian Code for the Transport of Dangerous Goods by Road and Rail (7 <sup>th</sup> edition)
<b>AICS</b>	Australian Inventory of Chemical Substances
<b>SWA</b>	Safe Work Australia, formerly ASCC and NOHSC
<b>CAS number</b>	Chemical Abstracts Service Registry Number
<b>Hazchem Code</b>	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
<b>IARC</b>	International Agency for Research on Cancer
<b>NOS</b>	Not otherwise specified
<b>NTP</b>	National Toxicology Program (USA)
<b>R-Phrase</b>	Risk Phrase
<b>SUSMP</b>	Standard for the Uniform Scheduling of Medicines & Poisons
<b>UN Number</b>	United Nations Number

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 MUST REVIEW THIS SDS 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.**

This SDS is prepared in accord with the SWA document "Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice" (Feb 2016)

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### SAFETY DATA SHEET