

## Section 1 - Identification of The Material and Supplier

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**Chemical nature:** Emulsifiable concentrate containing picloram (as the hexyloxypropylamine salt) and triclopyr (as the butoxyethyl ester)

**Trade Name:** **Macspred Trichloram Herbicide**

**APVMA Code:** 83470

**Product Use:** Agricultural herbicide for use as described on the product label.

**Creation Date:** **May, 2017**

**This version issued:** **May, 2017** 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:** S6

**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

Skin Irritation Category 2

Eye irritation Category 2B

#### HAZARD STATEMENT:

H302: Harmful if swallowed.

H315: Causes skin irritation.

H320: Causes eye irritation.

#### PREVENTION

P261: Avoid breathing fumes, mists, vapours or spray.

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.

P280: Wear protective gloves, protective clothing and eye or face protection.

#### RESPONSE

P362: Take off contaminated clothing and wash before reuse.

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.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

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.

P337+P313: If eye irritation persists: Get medical advice.

P370+P378: In case of fire, use carbon dioxide, dry chemical, foam, water fog.

#### STORAGE

P410: Protect from sunlight.

## SAFETY DATA SHEET

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:** Liquid. No data regarding colour.

**Odour:** No data.

**Major Health Hazards:** There is no documented history of human intoxication by Picloram, so symptoms of acute exposure are difficult to characterize. Irritating to eyes and skin, harmful if swallowed.

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

Ingredients	CAS No	Conc, g/L	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )
Picloram (as hexyloxypropylamine salt)	1918-02-1	100	10	not set
Triclopyr (as butoxyethanol ester)	64700-56-7	300	not set	not set
Diethylene glycol monoethyl ether	111-90-0	400-500	not set	not set
Other non hazardous ingredients	secret	to 1 L	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:** Wash gently and thoroughly with warm water (use non-abrasive soap if necessary) for 10-20 minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts) and completely decontaminate them before reuse or discard. If irritation persists, repeat flushing and seek medical attention.

**Eye Contact:** 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, foam or water fog.

**Fire Fighting:** If a significant quantity of this product is involved in a fire, call the fire brigade.

**Flash point:** No data

**Upper Flammability Limit:** No data.

**Lower Flammability Limit:** No data.

**Autoignition temperature:** No data.

**Flammability Class:** No data.

**SAFETY DATA SHEET**

## 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. Suitable materials for protective clothing include no specific manufacturer recommendations. Use impermeable gloves with care. 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 Australian Standard mentioned below (section 8). Otherwise, not normally necessary.

Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or 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 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. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

**Storage:** This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. Some liquid preparations settle or separate on standing and may require stirring before use. 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**.

SWA Exposure Limits	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )
Picloram	10	not set

The ADI for Picloram is set at 0.07mg/kg/day. The corresponding NOEL is set at 7mg/kg/day. ADI means Acceptable Daily Intake; NOEL means No-observable-effect-level. Data from Australian ADI List, March 2016.

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:** Prevent skin contact by wearing impervious gloves, clothes and, preferably, apron. Make sure that all skin areas are covered. See below for suitable material types.

**Protective Material Types:** There is no data that enables us to recommend any type except that it should be impermeable.

**Respirator:** Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above. 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.

## SAFETY DATA SHEET

## Section 9 - Physical and Chemical Properties:

<b>Physical Description &amp; colour:</b>	Liquid. No data regarding colour.
<b>Odour:</b>	No data.
<b>Boiling Point:</b>	Not available.
<b>Freezing/Melting Point:</b>	No specific data. Liquid at normal temperatures.
<b>Volatiles:</b>	No data.
<b>Vapour Pressure:</b>	No data.
<b>Vapour Density:</b>	No data.
<b>Specific Gravity:</b>	1.16
<b>Water Solubility:</b>	Emulsifiable.
<b>pH:</b>	No data.
<b>Volatility:</b>	No data.
<b>Odour Threshold:</b>	No data.
<b>Evaporation Rate:</b>	No data.
<b>Coeff Oil/water Distribution:</b>	No data
<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:** Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

**Incompatibilities:** acids, bases.

**Fire Decomposition:** Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. May form nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

**Polymerisation:** Polymerisation reactions are unlikely; they are not expected to occur.

## Section 11 - Toxicological Information

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

**Acute toxicity:** Picloram is practically nontoxic via ingestion, with reported oral LD<sub>50</sub> values of greater than 5000mg/kg to 8200mg/kg in rats, 2000 to 4000mg/kg in mice, and approximately 2000mg/kg in rabbits. The reported dermal LD<sub>50</sub> in rabbits is greater than 4000mg/kg, a level which produced no mortality or toxic signs. This indicates slight toxicity via the dermal route as well. Technical Picloram is reported to cause no skin and moderate eye irritation in the rabbit, and to cause no skin sensitization in the guinea pig. Some formulations have caused mild or slight skin irritation and skin sensitization in test animals. The technical grade is moderately toxic by inhalation, with a reported 4-hour inhalation LC<sub>50</sub> of greater than 0.35mg/L. Formulated products may show a lesser toxicity via this route.

**Chronic toxicity:** Male mice receiving Picloram at dietary doses of 1000 to 2000mg/kg/day over 32 days showed no clinical signs of toxicity nor changes in blood chemistry, but females did show decreased body weight and increased liver weights. Liver effects were also seen in rats at very high doses of 3000mg/kg/day over an exposure period of 90 days, and above 225mg/kg/day for 90 days. Dogs, sheep, and beef cattle fed low levels of Picloram for a month experienced no toxic effects. The ester and triisopropanolamine salt showed low toxicity in animal tests. Picloram may show additive effects if mixed with other herbicides such as 2,4-D.

**Reproductive effects:** In multi-generational studies, pregnant rats exposed during critical periods of gestation to doses of about 180mg/kg/day of Picloram showed no changes in fertility. Picloram does not appear to cause reproductive toxicity.

**Teratogenic effects:** No teratogenic effects were seen in the offspring of pregnant rats exposed during gestation to 400mg/kg/day of the acid or potassium salt, or to 1000mg/kg/day of the ester or other salt. It appears that Picloram is not teratogenic.

**Mutagenic effects:** One test has shown that Picloram is mutagenic (to the bacterium *Saccharomyces cerevisiae*) and another test has shown that it is not mutagenic (Ames test). In tests for unscheduled DNA synthesis and structural chromosome aberrations, the results were also negative. These data suggest that Picloram is either non-mutagenic or weakly mutagenic.

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**Carcinogenic effects:** Mice fed average doses of 18mg/kg/day or 30mg/kg/day for 80 weeks and observed for another 10 weeks did not display any carcinogenic effects. These data suggest that Picloram is non-carcinogenic or weakly carcinogenic.

**Organ toxicity:** Animal studies show the target organs for Picloram to be the liver and kidneys.

**Fate in humans and animals:** Picloram was rapidly absorbed through the gastrointestinal tract in studies using human volunteers, and was excreted unchanged in the urine. Half of the product was excreted within a day or so. Skin absorption is minimal. Rats showed similar results, with administered doses excreted virtually unchanged in urine and faeces within 48 hours.

### Classification of Hazardous Ingredients

Ingredient	Risk Phrases
Triclopyr	Conc>=25%: Xn; R22

### 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:** No data for health effects associated with long term inhalation.

**Skin Contact:**

**Short Term Exposure:** This product is a skin irritant. Symptoms may include itchiness and reddening of contacted skin. Other symptoms may also become evident, but if treated promptly, all should disappear once exposure has ceased.

**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, but symptoms are not available. However, this product may be irritating to mucous membranes but is unlikely to cause anything more than transient discomfort.

**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:** Picloram is Class 3 - unclassifiable as to carcinogenicity to humans.

See the IARC website for further details. A web address has not been provided as addresses frequently change.

### Section 12 - Ecological Information

**Effects on birds:** Picloram is slightly to practically nontoxic to birds; the acute oral LD<sub>50</sub> is greater than 2000 to 5000mg/kg in ducks, pheasants and quail, with no mortality seen at even the highest levels.

**Effects on aquatic organisms:** Picloram is slightly to moderately toxic to fish and aquatic invertebrates. The 48-hour LC<sub>50</sub> in Daphnia is 50mg/L, indicating moderate toxicity. Most salts are of similar or lesser toxicity, but the isooctyl ester may be highly toxic. The reported 96-hour LC<sub>50</sub> for the isooctyl ester in rainbow trout is 4mg/L, and in channel catfish is 1.4mg/L. Other LC<sub>50</sub> values in aquatic invertebrates ranged from 10 to 68mg/L. Picloram is not expected to accumulate appreciably in aquatic organisms; the measured bioconcentration factor in bluegill sunfish was less than 0.54.

**Effects on other organisms:** The compound is nontoxic to bees.

**Environmental Fate:**

**Breakdown in soil and groundwater:** Picloram is moderately to highly persistent in the soil environment, with reported field half-lives from 20 to 300 days and an estimated average of 90 days. Photodegradation is significant only on the soil surface and volatilization is practically nil.

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**Breakdown in water:** In laboratory studies, sunlight readily broke down Picloram in water, with a half-life of 2.6 days. Herbicide levels in farm ponds were 1mg/L directly following spraying, and decreased to 0.01mg/L within 100 days, primarily due to dilution and the action of sunlight.

**Breakdown in vegetation:** Picloram is readily absorbed by plant roots, less so by the foliage, and is readily translocated throughout plants. It remains stable and intact in plants.

### 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. The following ingredient: Triclopyr, is mentioned in the SUSMP.

### 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>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