



## COLIN CAMPBELL (CHEMICALS) PTY. LTD.

### SAFETY DATA SHEET

Date of Issue: 1 July 2021

#### 1) IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name:** CAMPBELL STATURE HERBICIDE  
**Other Names:** Mixture of MCPA (as iso octyl ester), bromoxynil (as octanoate) and diflufenican  
**Chemical Group:** Mixed  
**CAS No.:**  
**Recommended Use:** Herbicide for use on recreational turf.  
**Supplier Details:** Colin Campbell (Chemicals) Pty Ltd ABN 29 000 045 590  
5 Blackfriar Place  
Wetherill Park NSW 2164  
**Telephone:** (02) 9725 2544  
**Fax:** (02) 9604 7768  
**Email:** [ccesyd@campbellchemicals.com.au](mailto:ccesyd@campbellchemicals.com.au)  
**Website:** [www.campbellchemicals.com.au](http://www.campbellchemicals.com.au)  
**Contact:** Product Development Manager – (02) 9725 2544  
**Emergency Telephone Number:** 13 11 26 (Poisons Information Centre)

#### 2) HAZARDS IDENTIFICATION

**GHS classification:** Harmful by inhalation and if swallowed, irritating to eyes and skin, possible skin sensitiser, possible risk of harm to the unborn child.

**Signal Words:** WARNING

**Hazard Statements :** H227: Combustible liquid.  
H302: Harmful if swallowed.  
H315: Causes skin irritation.  
H317: May cause an allergic skin reaction.  
H320: Causes eye irritation.  
H332: Harmful if inhaled.  
H335: May cause respiratory irritation.  
H361: Suspected of damaging fertility or the unborn child.  
H411: Toxic to aquatic life with long lasting effects.

**General Precautionary Statements :** P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children  
P103 Read label before use.

**Pictograms :**





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<b>Precautionary statements</b>	P201: Obtain special instructions before use.
<b>Prevention:</b>	P202: Do not handle until all safety precautions have been read and understood.. 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. P271: Use only outdoors or in a well ventilated area. P272: Contaminated work clothing should not be allowed out of the workplace. P273: Avoid release to the environment. P281: Use personal protective equipment as required
<b>Precautionary statements</b>	P362: Take off contaminated clothing and wash before reuse.
<b>Response:</b>	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. P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313: If exposed or concerned: Get medical advice. P332+P313: If skin irritation occurs: Get medical advice. P333+P313: If skin irritation or rash 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.
<b>Storage :</b>	P402+P404: Store in a dry place. Store in a closed container. P410+P403: Protect from sunlight. Store in a well-ventilated place.
<b>Disposal:</b>	P501 Dispose of contents/container to an approved waste disposal plant.
<b>Other information :</b>	This product is classified as: Xn, Harmful. Xi, Irritating. N, Dangerous to the environment. F, Flammable. Hazardous according to the criteria of SWA. Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA and IMDG/IMSBC criteria. However, this is a C1 Combustible Liquid so must be stored and handled as specified in AS 1940 "The storage and handling of flammable and combustible liquids."

### 3) COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Concentration
MCPA (as the iso octyl ester)	29450-45-1	250g/L
Bromoxynil (as the octanoate)	1689-99-2	150g/L
Diflufenican	83164-33-4	25g/L
Other non-hazardous ingredients	secret	to 100



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#### 4) FIRST AID MEASURES

**If poisoning occurs, move out of dangerous area immediately contact a doctor or Poison Information Centre (Ph: 13 11 26) and follow the advice given.**

**Show this Safety Data Sheet to the doctor.**

<b>If inhaled:</b>	If symptoms of poisoning become evident, contact a Poisons Information Centre, or call a doctor at once. Remove source of contamination or move victim to fresh air. If breathing is difficult, oxygen may be beneficial if administered by trained personnel, preferably on a doctor's advice. DO NOT allow victim to move about unnecessarily. Symptoms of pulmonary oedema can be delayed up to 48 hours after exposure.
<b>In case of skin contact:</b>	Quickly and gently blot away excess liquid. Wash gently and thoroughly with warm water (use nonabrasive 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.
<b>In case of eye contact:</b>	Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 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.
<b>If swallowed:</b>	If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.
<b>First Aid facilities</b>	Ensure eye wash and safety shower are available.
<b>Medical Attention:</b>	Symptoms may be delayed. The first aid procedure should be established in consultation with a doctor responsible for industrial medicine.

#### 5) FIRE FIGHTING MEASURES

<b>Extinguishing media</b>	Use carbon dioxide, dry chemical, foam or water fog. Flammable Category 4 (GHS), C1 combustible (AS 1940)
<b>Hazard from combustion products</b>	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.
<b>Precautions for fighting fires</b>	Fire fighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715/1716). Keep unnecessary people away. If it can be done safely remove intact containers from the fire. Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of fire residues and contaminated fire extinguishing water in accordance with local regulations. Do not release contaminated water into the environment.



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**6) ACCIDENTAL RELEASE MEASURES**

In the event of a major spill, prevent spillage from entering drains or water courses. Evacuate the spill area and deny entry to unnecessary and unprotected personnel. Immediately call the Fire Brigade. 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 rubber, PVC, Viton. 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. Avoid using sawdust or other combustible material. Any electrical equipment should be non-sparking. Any equipment capable of building an electrostatic charge should be electrically grounded. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Can be slippery on floors, especially when wet. 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.

**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. Store in a cool, well ventilated area, and make sure that surrounding electrical devices and switches are suitable. Check containers periodically for leaks. Containers should be kept closed in order to minimise contamination and possible evaporation. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. If you keep more than 10000kg or L of Dangerous Goods of Packaging Group III, you may be required to license the premises or notify your Dangerous Goods authority. If you have any doubts, we suggest you contact your Dangerous Goods authority in order to clarify your obligations. Check packaging - there may be further storage instructions on the label.



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#### 8) EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Standards	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )
MCPA (as iso octyl ester)	Not set	Not set
Bromoxynil (as the octanoate)	Not set	Not set
Diflufenican	Not set	Not set

Exposure standard – Time Weighted Average (TWA) means the average airborne concentration of a particular substance when calculated over a normal eight hour working day, for a five-day working week.

The ADI for MCPA is set at 0.01mg/kg/day. The corresponding NOEL is set at 1.1mg/kg/day.

The ADI for Bromoxynil is set at 0.003mg/kg/day. The corresponding NOEL is set at 0.3mg/kg/day.

The ADI for Diflufenican is set at 0.2mg/kg/day. The corresponding NOEL is set at 16.3mg/kg/day.

ADI means Acceptable Daily Intake; NOEL means No-observable-effect-level. Data from Australian ADI List, Dec 2012. 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.

<b>Biological Limit Values</b>	None allocated
<b>Engineering Controls</b>	Control process conditions to avoid contact. Use in a well ventilated area only. If necessary use a fan.
<b>Personal Protective Equipment</b>	Eyes: 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. Clothing: Impervious overalls buttoned to the neck and wrists and a washable hat. Gloves: Polyvinyl alcohol or nitrile-butyl-rubber gloves. Before removing gloves clean them with soap and water. Respiratory: If inhalation is likely an AS/NZS 1715/1716 approved respirator should be worn.



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#### 9) PHYSICAL AND CHEMICALS PROPERTIES

<b>Appearance, Odour and Colour:</b>	Amber coloured liquid. Distinctive strong ester odour
<b>Specific Gravity:</b>	No data
<b>Melting Point:</b>	Not applicable
<b>Solubility (water):</b>	Emulsifiable
<b>Flash Point:</b>	>65°C
<b>Boiling Point:</b>	No data
<b>Vapour Pressure:</b>	No data
<b>Vapour Density:</b>	No data
<b>Percent Volatiles:</b>	No data
<b>Flammability Limits:</b>	<b>UFL:</b> No data
	<b>LFL:</b> No data
<b>Autoignition Temperature:</b>	No data
<b>Partition co-efficient, n-octanol/water</b>	No data

#### 10) STABILITY AND REACTIVITY

<b>Chemical stability:</b>	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.
<b>Conditions to avoid:</b>	Keep away from sources of sparks or ignition. Handle and open containers carefully. Any electrical equipment in the area of this product should be flame proofed. Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.
<b>Incompatible materials :</b>	Strong acids, strong bases, oxidising agents
<b>Hazardous decomposition products:</b>	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. May form hydrogen fluoride gas and other compounds of fluorine. Bromine and silicon compounds. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death
<b>Hazardous reactions:</b>	Stable under recommended storage conditions. No decomposition or hazardous polymerisation reactions if used as directed.



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11) TOXICOLOGICAL INFORMATION

Persons sensitised to Bromoxynil should avoid contact with this product.

<b>Inhalation :</b>	<b>Short term exposure:</b> Available data shows that this product is harmful, but symptoms are not available. In addition product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort. <b>Long Term exposure:</b> No data for health effects associated with long term inhalation.				
<b>Skin contact:</b>	<b>Short term exposure:</b> Classified as a potential sensitiser by skin contact. Exposure to a skin sensitiser, once sensitisation has occurred, may manifest itself as skin rash or inflammation, and in some individuals this reaction can be severe. In addition product is a skin irritant. Symptoms may include itchiness and reddening of contacted skin. Other symptoms may also become evident, but all should disappear once exposure has ceased. <b>Long Term exposure:</b> No data for health effects associated with long term skin exposure.				
<b>Eye contact:</b>	<b>Short term exposure:</b> 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. <b>Long Term exposure:</b> No data for health effects associated with long term eye exposure.				
<b>Ingestion:</b>	<b>Short term exposure:</b> Significant oral exposure is considered to be unlikely. Available data shows that this product is harmful, but symptoms are not available. However, this product is an oral irritant. Symptoms may include burning sensation and reddening of skin in mouth and throat. Other symptoms may also become evident, but all should disappear once exposure has ceased. <b>Long Term exposure:</b> No data for health effects associated with long term ingestion.				
<b><u>Chronic toxicity:</u></b>					
<b>Mutagenicity:</b>	No data.				
<b>Teratogenicity:</b>	No data				
<b>Reproductive effects:</b>	Bromoxynil is a SWA Class 3 Reproductive risk, possible risk of harm to the unborn child.				
<b>Carcinogenicity:</b>	No significant ingredient is classified as carcinogenic by SWA, NTP or IARC.				
<b>Organ toxicity:</b>	There is no data to hand indicating any particular target organs.				
<b><u>Acute toxicity:</u></b>	<table><tr><td>Ingredient</td><td>Risk Phrases</td></tr><tr><td>Bromoxynil</td><td>&gt;=5%Conc&lt;25%: Xn; R63; R20; R43</td></tr></table>	Ingredient	Risk Phrases	Bromoxynil	>=5%Conc<25%: Xn; R63; R20; R43
Ingredient	Risk Phrases				
Bromoxynil	>=5%Conc<25%: Xn; R63; R20; R43				



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**MCPA:** LD50 Oral, Rat 700-1160mg/kg

LD50 Oral, Mouse = 550-800mg/kg

LD50 Dermal, Rat = 1000mg/kg

LD50 Dermal, Rabbit = >4000mg/kg

**Chronic toxicity:** Dietary levels of approximately 50 mg/kg/day and 125 mg/kg/day over 7 months caused reduced feeding rates and retarded growth rates in rats. White blood cell counts and ratios were not affected, but some reductions in red blood cell counts and haemoglobin did appear to be associated with exposure to MCPA at oral dose levels of approximately 20 mg/kg/day. In the same study, oral doses of approximately 5 mg/kg/day caused increased relative kidney weights, and oral doses of approximately 20 mg/kg/day caused increased relative liver weights.

Another study in rats showed no effects on kidney or liver weights over an unspecified period at oral doses of 60mg/kg/day, but oral doses of 150 mg/kg/day did cause reversible increases in these weights over a course of 3 months. Very high dermal doses of 500 mg/kg/day caused reduced body weight, and even higher dermal doses of 1000 and 2000 mg/kg/day resulted in increased mortality and observable changes in liver, kidney, spleen, and thymus tissue.

**Bromoxynil:** LD50 Oral, Rat 190mg/kg

LD50 Oral, Guinea Pig = 63mg/kg

LD50 Oral, Rabbit = 260mg/kg

LD50 Dermal, Rabbit = >2000mg/kg

**Chronic toxicity:** In one documented case of chronic exposure (about 1 year) of humans to Bromoxynil, workers showed symptoms of weight loss, fever, vomiting, headache, and urinary problems. Studies have shown that Bromoxynil has no effect on rats given dietary doses of 15 and 50 mg/kg/day for 90 days. Doses up to 5 mg/kg/day for 2 years had no impact on blood chemistry or urine.

**Diflufenican:** No available data.

**Sensitisation:**

Bromoxynil is Classed by SWA as a potential sensitiser by skin contact.

**12) ECOLOGICAL INFORMATION**

Toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment. This product is biodegradable. It will not accumulate in the soil or water or cause long term problems.

**MCPA:**

**Effects on birds:** MCPA is moderately toxic to wildfowl; the LD50 of MCPA in bobwhite quail is 377 mg/kg.

**Effects on aquatic organisms:** MCPA is only slightly toxic to freshwater fish, with reported LC50 values ranging from 117 to 232 mg/L in rainbow trout. MCPA is practically nontoxic to freshwater invertebrates, and estuarine and marine organisms.

**Effects on other organisms:** It is nontoxic to bees, with a reported oral LD50 of 104µg/bee.

**Environmental Fate:**

**Breakdown in soil and groundwater:** MCPA and its formulations are rapidly degraded by soil microorganisms and it has low persistence, with a reported field half-life of 14 days to 1 month, depending on soil moisture and soil organic matter. MCPA and its formulations show little affinity for soil.





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**Breakdown in water:** It is relatively stable to light breakdown, but can be rapidly broken down by microorganisms. In rice paddy water, MCPA is almost totally degraded by aquatic microorganisms in under 2 weeks.

**Breakdown in vegetation:** MCPA is readily absorbed and translocated in most plants. It is actively broken down in plants, the major metabolite being 2-methyl-4-chlorophenol.

**Bromoxynil:**

**Effects on birds:** Bromoxynil is highly toxic to pheasants (LD50 of 50 mg/kg) and is moderately toxic to hens (LD50 of 240 mg/kg), quail (LD50 of 100 mg/kg), and mallard ducks (LD50 of 200 mg/kg).

**Effects on aquatic organisms:** Bromoxynil is very highly toxic to moderately toxic to freshwater fish; the potassium salt of Bromoxynil has an LC50 of 5.0 mg/L in harlequin fish, 0.46 mg/L in goldfish, and 0.063 mg/L in catfish. Bromoxynil has an LC50 of 0.05 mg/L in rainbow trout.

**Effects on other organisms:** Bromoxynil is not toxic to bees.

**Environmental Fate:**

**Breakdown in soil and groundwater:** Bromoxynil has a low persistence in soil. In sandy soil, the half-life is about 10 days. Degradation in clay was slower, with half of the Bromoxynil degraded to its metabolites in about a 2-week period at 25°C. The persistence of the compound is also slightly longer in peat field soils than in the sandy soils. The evidence suggests that, while Bromoxynil is broken down by some soil bacteria, it may inhibit the action of other bacteria that promote the formation of nitrite by a process called nitrification.

**Breakdown in water:** No data are currently available.

**Breakdown in vegetation:** The herbicide works by disrupting the plants ability to produce energy for cell-related activities. It is not readily translocated throughout the plant once it has been absorbed.

**Diflufenican:**

No available data.

**13) DISPOSAL CONSIDERATIONS**

This product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used containers. Triple or preferable pressure rinse containers before disposal. Add rinsings to the mixing tank. Do not dispose of undiluted chemical on-site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

**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.

**15) REGULATORY INFORMATION**

**AICS:** All of the significant ingredients in this formulation are compliant with NICNAS regulations. The following ingredients: MCPA (as iso octyl ester), Bromoxynil (as the octanoate), are mentioned in the SUSMP.

Registered under the Agricultural and Veterinary Chemicals Act 1988 (Commonwealth) Australian Pesticides and Veterinary Medicines Authority approval number: 90249



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<b>16) OTHER INFORMATION</b>
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Date of revision : 1 July 2021

Reason for revision : New product.

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 the how the product will be handled and used in the workplace including in conjunction with other products.

**END OF SDS**