



## MATERIAL SAFETY DATA SHEET

### Section 1 - Identification of Chemical Product and Company

<b>United Farmers Co-operative Company Limited</b> 2 Birksgate Rd Rous Head North Fremantle , WA 6160 <b>United Farmers Cooperative A/Hrs EMERGENCY : 1800 705 766</b>	<b>Phone: 08 9430 2222</b> <b>Fax: 08 9430 2233</b> <a href="http://www.unitedfarmers.com.au">http://www.unitedfarmers.com.au</a>
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**Substance:** MCPA is an aryloxyalkanoic acid derivative.  
**Trade Name:** United Farmers MCPA 500  
**Other Names:** None  
**Product Code:** 58513  
**Product Use:** Agricultural herbicide for use as described on the product label.  
**Creation Date:** August, 2005  
**Revision Date:** October, 2005

### Section 2 - Hazards Identification

#### Statement of Hazardous Nature

This product is classified as: Hazardous according to the criteria of NOHSC Australia.

Not a Dangerous Good according to the Australian Dangerous Goods (ADG) Code.

**Risk Phrases:** R20/21/22. Harmful by inhalation, in contact with skin, and if swallowed.

**Safety Phrases:** S2, S13, S20, S38, S24/25, S36/37. Keep out of reach of children. Keep away from food, drink and animal feeding stuffs. When using, do not eat or drink. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin and eyes. Wear suitable protective clothing and gloves.

**SUSDP Classification:** S6

**ADG Classification:** None allocated. Not a Dangerous Good under the ADG Code.

**UN Number:** None allocated

### Emergency Overview

**Physical Description & Colour:** Clear red-brown liquid.

**Odour:** Mild amine odour.

**Major Health Hazards:** Symptoms of MCPA poisoning in humans from very high acute exposure could include slurred speech, twitching, jerking and spasms, drooling, low blood pressure, and unconsciousness. harmful by inhalation, in contact with skin, and if swallowed.

### Potential Health Effects

#### Inhalation

**Short Term Exposure:** Significant inhalation exposure is considered to be unlikely. Available data shows that this product is harmful, but symptoms are not available.

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

#### Skin Contact:

**Short Term Exposure:** Available data shows that this product is harmful, but symptoms are not available. However product is unlikely to cause any discomfort in normal use.

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

#### Eye Contact:

**Short Term Exposure:** Exposure via eyes is considered to be unlikely. This product is believed to be not irritating to eyes.

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

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## 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. 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:

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

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

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

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## Section 3 - Composition/Information on Ingredients

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Ingredients	CAS No	Conc, %	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )
MCPA, dimethylamine salt	2039-46-5	50	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 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 should not be exceeded for more than 15 minutes and should not be repeated for 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.

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## Section 4 - First Aid Measures

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### 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 MSDS with you when you call.

**Inhalation:** 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.

**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.

**Eye Contact:** First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

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

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## Section 5 - Fire Fighting Measures

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**Fire and Explosion Hazards:** There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

This product is likely to decompose only after heating to dryness, followed by further strong heating.

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

**Extinguishing Media:** Not Combustible. Use extinguishing media suited to burning materials.

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

**Flash point:** Does not burn.

**Upper Flammability Limit:** Does not burn.

**Lower Flammability Limit:** Does not burn.

**Autoignition temperature:** Not applicable - does not burn.

**Flammability Class:** Does not burn.

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## Section 6 - Accidental Release Measures

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**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 rubber, PVC. 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

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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).

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 MSDS 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 MSDS 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**, Industrial Clothing: **AS2919**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

### Exposure Limits

#### TWA (mg/m<sup>3</sup>)

#### STEL (mg/m<sup>3</sup>)

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

The ADI for MCPA is set at 0.01mg/kg/day. The corresponding NOEL is set at 1.1mg/kg/day. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from Australian ADI List, Dec 2004.

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:** No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that vapours and mists are minimised.

**Eye Protection:** Eye protection is not normally necessary when this product is being used. However, if in doubt, wear suitable protective glasses or goggles.

**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:** We suggest that protective clothing be made from the following materials: rubber, PVC.

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

Safety deluge showers should, if practical, be provided near to where this product is being used.

## Section 9 - Physical and Chemical Properties:

<b>Physical Description &amp; colour:</b>	Clear red-brown liquid.
<b>Odour:</b>	Mild amine odour.
<b>Boiling Point:</b>	Boils at about 100°C at 100kPa.
<b>Freezing/Melting Point:</b>	Approximately 0°C.
<b>Volatiles:</b>	Up to 50%
<b>Vapour Pressure:</b>	No data.
<b>Vapour Density:</b>	No data.
<b>Specific Gravity:</b>	1.13 approx
<b>Water Solubility:</b>	Completely soluble.
<b>pH:</b>	No data.

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<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>	Not applicable - does not burn.

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## Section 10 - Stability and Reactivity

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**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:** strong acids, strong bases, strong oxidising agents.

**Fire Decomposition:** This product is likely to decompose only after heating to dryness, followed by further strong heating. Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas. Water. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death. Hydrogen cyanide poisoning signs and symptoms are weakness, dizziness, headache, nausea, vomiting, coma, convulsions, and death. Death results from respiratory arrest. Hydrogen cyanide gas acts very rapidly; symptoms and death can both occur quickly.

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

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## Section 11 - Toxicological Information

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

**Acute toxicity:** MCPA acid is harmful via ingestion, with reported oral LD<sub>50</sub> values for the technical product in rats ranging from 700 mg/kg to 1160 mg/kg and ranging in mice from 550 to 800 mg/kg. It is harmful via the dermal route as well, with reported dermal LD<sub>50</sub> values ranging from greater than 1000 mg/kg in rats to greater than 4000 mg/kg in rabbits.

**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 60 mg/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.

**Reproductive effects:** A two-generation rat study at doses of up to 15 mg/kg/day affected reproductive function. It is unlikely that humans will experience these effects under normal exposure conditions.

**Teratogenic effects:** Offspring of pregnant rats fed low to moderate doses of MCPA (20 to 125 mg/kg) on days 6 to 15 of gestation, had no birth defects. Teratogenic effects in humans are unlikely at expected exposure levels.

**Mutagenic effects:** MCPA is reportedly weakly mutagenic to bone marrow and ovarian cells of hamsters, but negative results were reported for other mutagenic tests. It appears that the compound poses little or no mutagenic risk.

**Carcinogenic effects:** All of the available evidence on MCPA indicates that the compound does not cause cancer. Forestry and agricultural workers occupationally exposed to MCPA in Sweden did not show increased cancer incidence.

**Organ toxicity:** Target organs identified in animal studies include the liver, kidneys, spleen, and thymus. Farm worker exposure has resulted in reversible anaemia, muscular weakness, digestive problems, and slight liver damage.

**Fate in humans and animals:** MCPA is rapidly absorbed and eliminated from mammalian systems. Rats eliminated nearly all of a single oral dose within 24 hours, mostly through urine with little or no metabolism. Humans excreted about half of a 5 mg dose in the urine within a few days. No residues were found after day 5.

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## Section 12 - Ecological Information

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**Effects on birds:** MCPA is moderately toxic to wildfowl; the LD<sub>50</sub> of MCPA in bobwhite quail is 377 mg/kg.

**Effects on aquatic organisms:** MCPA is only slightly toxic to freshwater fish, with reported LC<sub>50</sub> 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 LD<sub>50</sub> of 104µg/bee.

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## 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.

**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.

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## Section 13 - Disposal Considerations

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**Disposal:** Instructions concerning the disposal of this product and its containers are given on the product label. These should be carefully followed.

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## Section 14 - Transport Information

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**ADG Code:** This product is not classified as a Dangerous Good. No special transport conditions are necessary unless required by other regulations.

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## Section 15 - Regulatory Information

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**AICS:** All of the significant ingredients in this formulation are to be found in the public AICS Database. The following ingredient: MCPA is mentioned in the SUSDP.

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## Section 16 - Other Information

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**This MSDS 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
<b>AICS</b>	Australian Inventory of Chemical Substances
<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>NOHSC</b>	National Occupational Health and Safety Commission
<b>NOS</b>	Not otherwise specified
<b>NTP</b>	National Toxicology Program (USA)
<b>R-Phrase</b>	Risk Phrase
<b>SUSDP</b>	Standard for the Uniform Scheduling of Drugs & Poisons
<b>UN Number</b>	United Nations Number

**National Poisons Information Centre: Dial 13 1126 from anywhere in Australia**

**United Farmers Cooperative A/Hrs  
EMERGENCY : 1800 705 766**

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.

This MSDS is prepared in accord with the NOHSC document "National Code of Practice for the Preparation of Material Safety Data Sheets" 2nd Edition [NOHSC:2011(2003)]

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