

# SAFETY DATA SHEET

According to Safe Work Australia

Revision: 01.09.2016

## 1. IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

**Product Name:** 4FARMERS LV MCPA / DIFLUFENICAN SELECTIVE HERBICIDE

**Other Means of Identification:** Mixture

**Recommended Use of the Chemical and Restriction on Use:** Agricultural herbicide

**Details of Manufacturer or Importer:**

4Farmers Australia Pty Ltd  
70 McDowell Street  
Welshpool WA 6106

**Phone Number:** +61 8 9356 3446

**Emergency telephone number:** National Poison Information Centre: 13 11 26

## 2. HAZARDS IDENTIFICATION

**Hazardous Nature:**

Classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition). However if transported by Air or Sea, then the product is classed as Dangerous (Class 9 Environmentally Hazardous) by IATA and IMDG/IMSBC respectively. See details below and in Section 14 of this SDS.



health hazard

Repr. 1B                      H360 May damage fertility or the unborn child.

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environment

Aquatic Acute 1            H400 Very toxic to aquatic life.

Aquatic Chronic 1        H410 Very toxic to aquatic life with long lasting effects.

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Acute Tox. (Oral) 4        H302 Harmful if swallowed.

Skin Irrit. 2                H315 Causes skin irritation.

Eye Irrit. 2A                H319 Causes serious eye irritation.

STOT SE 3                 H335 May cause respiratory irritation.

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Flam. Liq. 4                H227 Combustible liquid.

**Signal Word** Danger

**Hazard Statements**

H227 Combustible liquid.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H360 May damage fertility or the unborn child.

H335 May cause respiratory irritation.

H410 Very toxic to aquatic life with long lasting effects.

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**Precautionary Statements**

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P273	Avoid release to the environment.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321	Specific treatment (see on this label).
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P330	Rinse mouth.
P370+P378	In case of fire: Use for extinction: CO <sub>2</sub> , powder or water spray.
P302+P352	IF ON SKIN: Wash with plenty of water.
P391	Collect spillage.
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container in accordance with local/regional/national regulations.

### 3 . COMPOSITION AND INFORMATION ON INGREDIENTS

**Chemical Characterization: Mixtures****Description:** Mixture of substances listed below with nonhazardous additions.**Hazardous Components:**

29450-45-1	Acetic acid, (4-chloro-2-methylphenoxy)-, 2-ethylhexyl ester MCPA, 2- ethylhexyl ester ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. (Oral) 4, H302; Acute Tox. (Dermal) 4, H312; Eye Irrit. 2A, H319	39.2%
103-09-3	2-ethylhexyl acetate Flam. Liq. 4, H227	31.0%
872-50-4	N-methyl-2-pyrrolidone ⚠ Repr. 1B, H360; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; Flam. Liq. 4, H227	15.8%
83164-33-4	Diflufenican Aquatic Chronic 3, H412	2.5%

### 4 . FIRST AID MEASURES

**Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if breathing problems develop.

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**Skin Contact:**

In case of skin contact, immediately remove contaminated clothing and wash affected areas with water and soap. Seek medical attention if symptoms occur.

**Eye Contact:**

In case of eye contact, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention.

**Ingestion:**

If swallowed, do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Do not give anything by mouth to an unconscious person. Seek immediate medical attention.

**Information for Doctor:**

Establish a patent airway with suction where necessary.

Watch for signs of respiratory insufficiency and assist ventilation as necessary.

Administer oxygen by non-rebreather mask at 10 to 15 L/min.

Monitor and treat, where necessary, for pulmonary oedema .

Acute toxic reactions to chlorophenoxy compounds are rare. The by-product of production, dioxin, may be implicated in subacute features such as hepatic enlargement, chloracne, neuromuscular symptoms and deranged porphyrin metabolism.

Monitor metabolic acidosis, hyperthermia, hyperkalaemia, myoglobinuria and hepatic/renal dysfunction. for 2,4-dichlorophenoxyacetic acid (2,4-D) and its derivatives

Gastric lavage if there are no signs of impending convulsions.

**Symptoms Caused by Exposure:**

Inhalation: May cause respiratory irritation, coughing, pain, choking and breathing difficulties.

Ingestion: Harmful if swallowed. May cause gastrointestinal discomfort, nausea, vomiting and diarrhoea.

## 5 . FIRE FIGHTING MEASURES

**Suitable Extinguishing Media:** Water fog, alcohol foam, dry chemical powder and carbon dioxide.

**Specific Hazards Arising from the Chemical:**

Hazardous combustion products include oxides of carbon and nitrogen, hydrogen chloride, phosgene, and other pyrolysis products.

Combustible liquid.

Closed containers may explode when exposed to extreme heat. Containers close to fire should be removed if safe to do so. Use water spray to cool fire exposed containers.

**Special Protective Equipment and Precautions for Fire Fighters:**

When fighting a major fire wear self-contained breathing apparatus and protective equipment.

## 6 . ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment and Emergency Procedures:**

Wear Safe Work Australia approved respiratory protection and full protective clothing. Evacuate all non-essential personnel from affected area. Do not breathe vapours. Ensure adequate ventilation. Extinguish all sources of ignition. Avoid sparks and open flames. No smoking.

**Environmental Precautions:**

In the event of a major spill, prevent spillage from entering drains or water courses.

**Methods and Materials for Containment and Cleaning Up:**

Stop leak if safe to do so and absorb spill with sand, earth, vermiculite or some other absorbent material. Collect the spilled material and place into a suitable container for disposal.

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### 7 . HANDLING AND STORAGE

**Precautions for Safe Handling:**

Use of safe work practices are recommended to avoid eye or skin contact and inhalation of vapours. Food, beverages and tobacco products should not be stored or consumed where this material is in use. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

**Conditions for Safe Storage:**

Store in a cool, dry and well ventilated area. Keep container tightly closed when not in use. Protect from heat, sparks, open flames and other sources of ignition. Keep away from strong oxidising agents and acids.

### 8 . EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Exposure Standards:****872-50-4 N-methyl-2-pyrrolidone**

NES	STEL: 309 mg/m <sup>3</sup> , 75 ppm TWA: 103 mg/m <sup>3</sup> , 25 ppm Sk
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**Engineering Controls:**

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapour below occupational exposure standards.

**Respiratory Protection:**

Use a Safe Work Australia approved vapour respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapour, inadequate ventilation, development of respiratory tract irritation) and engineering controls are not feasible. See Australian Standards AS/NZS 1715 and 1716 for more information.

**Skin Protection:**

Elbow-length PVC gloves, cotton overall buttoned to the neck and wrist, safety boots and a washable hat. See Australian Standards AS/NZS 2161, 2210.1 and 2210.2 for more information.

**Eye and Face Protection:**

Eye and face protectors for protection against splashing materials or liquids. See Australian/New Zealand Standard AS/NZS 1337 for more information.

### 9 . PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:**

<b>Form:</b>	Liquid
<b>Colour:</b>	Dark brown
<b>Odour:</b>	Strong ester odour
<b>Odour Threshold:</b>	No information available
<b>pH-Value:</b>	6 - 7
<b>Melting point/Melting range:</b>	No information available
<b>Initial Boiling Point/Boiling Range:</b>	176-200 °C (hydrocarbon solvent)
<b>Flash Point:</b>	>66 °C
<b>Flammability:</b>	Combustible Liquid Class 1
<b>Auto-ignition Temperature:</b>	321 °C (hydrocarbon solvent)
<b>Decomposition Temperature:</b>	No information available
<b>Explosion Limits:</b>	
<b>Lower:</b>	0.8 Vol % (hydrocarbon solvent)
<b>Upper:</b>	6.7 Vol % (hydrocarbon solvent)

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<b>Vapour Pressure:</b>	No information available
<b>Relative Density:</b>	1.005
<b>Vapour Density:</b>	No information available
<b>Evaporation Rate:</b>	No information available
<b>Solubility in Water:</b>	Emulsifies with water.

## 10 . STABILITY AND REACTIVITY

**Possibility of Hazardous Reactions:** Hazardous polymerisation will not occur.

**Chemical Stability:** Stable at ambient temperature and under normal conditions of use.

**Conditions to Avoid:** Heat, sparks, open flames, hot surfaces and direct sunlight.

**Incompatible Materials:**

Esters react with acids to liberate heat along with alcohols and acids.

Strong oxidising acids may cause a vigorous reaction with esters that is sufficiently exothermic to ignite the reaction products.

Flammable hydrogen is generated by mixing esters with alkali metals and hydrides.

**Hazardous Decomposition Products:** Oxides of carbon and nitrogen, hydrogen chloride and phosgene.

## 11 . TOXICOLOGICAL INFORMATION

**Toxicity:**

**LD<sub>50</sub>/LC<sub>50</sub> Values Relevant for Classification:**

**103-09-3 2-ethylhexyl acetate**

Oral	LD <sub>50</sub>	3000 mg/kg (rat)
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**872-50-4 N-methyl-2-pyrrolidone**

Oral	LD <sub>50</sub>	3914 mg/kg (rat)
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Dermal	LD <sub>50</sub>	8000 mg/kg (rabbit)
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**Acute Health Effects**

**Inhalation:** May cause respiratory irritation, coughing, pain, choking and breathing difficulties.

**Skin:** Causes skin irritation.

**Eye:** Causes serious eye irritation.

**Ingestion:** Harmful if swallowed. May cause gastrointestinal discomfort, nausea, vomiting and diarrhoea.

**Skin Corrosion / Irritation:** Causes skin irritation.

**Serious Eye Damage / Irritation:** Causes serious eye irritation.

**Respiratory or Skin Sensitisation:** No sensitising effects known.

**Germ Cell Mutagenicity:** Based on classification principles, the classification criteria are not met.

**Carcinogenicity:** This product does NOT contain any IARC listed chemicals.

**Reproductive Toxicity:** May damage fertility or the unborn child.

**Specific Target Organ Toxicity (STOT) - Single Exposure:** May cause respiratory irritation.

**Specific Target Organ Toxicity (STOT) - Repeated Exposure:**

Based on classification principles, the classification criteria are not met.

**Aspiration Hazard:** Based on classification principles, the classification criteria are not met.

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**Chronic Health Effects:**

Prolonged or repeated skin contact may cause skin sensitisation.  
Chronic overexposure may cause liver and kidney damage and weight loss.

**Existing Conditions Aggravated by Exposure:** No information available**Additional toxicological information:**

The Australian Acceptable Daily Intake (ADI) for diflufenican for a human is 0.2 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 16.3 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Comm. Dept. of Health and Ageing Office of Chemical Safety, 'ADI List', June 2014).

The Australian Acceptable Daily Intake (ADI) for MCPA for a human is 0.01 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 1.1 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Comm. Dept. of Health and Ageing Office of Chemical Safety, 'ADI List', June 2014).

The Australian Acceptable Daily Intake (ADI) for diflufenican for a human is 0.2 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 16.3 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Comm. Dept. of Health and Ageing Office of Chemical Safety, 'ADI List', June 2014).

## 12 . ECOLOGICAL INFORMATION

**Ecotoxicity:** Diflufenican is slightly toxic to birds and non toxic to bees.**Aquatic toxicity:**

Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

**Persistence and Degradability:**

MCPA has low persistence. Half-life is 14 days to 1 month.  
Half-life for diflufenican is 105-210 days.

**Bioaccumulative Potential:** No information available**Mobility in Soil:** Diflufenican has low mobility.

## 13 . DISPOSAL CONSIDERATIONS

**Disposal Methods and Containers:** Dispose according to applicable local and state government regulations.**Special Precautions for Landfill or Incineration:**

Please consult your state Land Waste Management Authority for more information.

## 14 . TRANSPORT INFORMATION

**UN Number****ADG**

Not regulated

**IMDG, IATA**

3082

**Proper Shipping Name****ADG**

Not regulated

**IMDG, IATA**ENV IRONMENTALLY HAZARDOUS SUBSTANCE,  
LIQUID, N.O.S. (diflufenican)**Dangerous Goods Class****ADG Class:**

Not regulated

**IMDG Class:**

9 Miscellaneous dangerous substances and articles.

**Packing Group:****ADG**

Not regulated

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<b>IMDG, IATA</b>	III
<b>Marine pollutant:</b>	Yes Symbol (fish and tree)
<b>EMS Number:</b>	F-A,S-F
<b>Hazchem Code:</b>	•3Z
<b>Special Provisions:</b>	179, 274, 331, 335, AU01
<b>Limited Quantities:</b>	5L
<b>Packagings &amp; IBCs - Packing Instruction:</b>	P001, IBC03, LP01
<b>Packagings &amp; IBCs - Special Packing Provisions:</b>	PP1
<b>Portable Tanks &amp; Bulk Containers - Instructions:</b>	T4
<b>Portable Tanks &amp; Bulk Containers - Special Provisions:</b>	TP1, TP29

## 15 . REGULATORY INFORMATION

### Australian Inventory of Chemical Substances:

29450-45-1	Acetic acid, (4-chloro-2-methylphenoxy)-, 2-ethylhexyl ester MCPA, 2- ethylhexyl ester
90438-79-2	Acetic acid, C6-8-branched alkyl esters
103-09-3	2-ethylhexyl acetate
872-50-4	N-methyl-2-pyrrolidone
83164-33-4	Diflufenican

### Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) - Poison Schedule:

Poisons Schedule: 5

## 16 . OTHER INFORMATION

**Date of Preparation or Last Revision:** 01.09.2016

### Abbreviations and acronyms:

ADG: Australian Dangerous Goods  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 LC<sub>50</sub>: Lethal concentration, 50 percent  
 LD<sub>50</sub>: Lethal dose, 50 percent  
 IARC: International Agency for Research on Cancer  
 STEL: Short Term Exposure Limit  
 TWA: Time Weighted Average  
 NES: National Exposure Standard (Safe Work Australia - Workplace Exposure Standards For Airborne Contaminants)  
 Flam. Liq. 4: Flammable liquids – Category 4  
 Acute Tox. (Oral) 4: Acute toxicity – Category 4  
 Skin Irrit. 2: Skin corrosion/irritation – Category 2  
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A  
 Repr. 1B: Reproductive toxicity – Category 1B  
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
 Aquatic Acute 1: Hazardous to the aquatic environment, short-term (Acute). Category 1  
 Aquatic Chronic 1: Hazardous to the aquatic environment, long-term (Chronic). Category 1  
 Aquatic Chronic 3: Hazardous to the aquatic environment, long-term (Chronic). Category 3

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## **Disclaimer**

This SDS is prepared in accord with the Safe Work Australia document "Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals - December 2011"

The information contained in this material safety data sheet is provided in good faith and is believed to be accurate at the date of issuance. 4Farmers Australia Pty Ltd makes no representation of the accuracy or comprehensiveness of the information and to the full extent allowed by law excludes all liability for any loss or damage related to the supply or use of the information in this material safety data sheet. The user is cautioned to make their own determinations as to the suitability of the information provided to the particular circumstances in which the product is used.