

# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
SafeWork Australia Approved Code of Practice about the preparation of safety data sheets for hazardous chemicals (July 2020),  
which is an approved code of practice under section 274 of the Work Health and Safety Act

Issuing Date 04-Oct-2022

Revision Date 04-Oct-2022

Revision Number 1

## Section 1: Identification

### Product identifier

Product Name Trio DFF MCPA EC Herbicide

Product Code(s) APVMA Reg No.: 90953

### Other means of identification

Pure substance/mixture Mixture

### Recommended use of the chemical and restrictions on use

Recommended use Herbicide

Uses advised against Use only as directed on product label

### Details of manufacturer or importer

#### Supplier

CTS Chemicals Pty Ltd.  
Manning Buildings  
135 High Street Mall  
Fremantle WA  
6160 Australia  
1800 749 140

For further information, please contact

E-mail address regulatory@ctschemical.com.au

### Emergency telephone number

Emergency telephone number CHEMTREC (Australia): +61-290372994

## Section 2: Hazard(s) identification

### GHS Classification

Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitisation	Category 1
Reproductive toxicity	Category 1B
Specific target organ toxicity — single exposure	Category 3

### Label elements

Exclamation mark  
Health hazard

**Signal word**

DANGER

**Hazard statements**

Harmful in contact with skin  
 Harmful if inhaled  
 Causes skin irritation  
 Causes serious eye irritation  
 May cause an allergic skin reaction  
 May damage fertility or the unborn child  
 May cause respiratory irritation

**Precautionary Statements - Prevention**

Avoid breathing vapours or mists  
 Obtain special instructions before use  
 Do not handle until all safety precautions have been read and understood  
 Wear protective gloves/clothing and eye/face protection  
 Avoid breathing dust/fume/gas/mist/vapours/spray  
 Use only outdoors or in a well-ventilated area  
 Wash face, hands and any exposed skin thoroughly after handling  
 Contaminated work clothing must not be allowed out of the workplace

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 If eye irritation persists: Get medical advice/attention  
 IF ON SKIN: Wash with plenty of water and soap  
 Call a doctor if you feel unwell  
 Take off all contaminated clothing and wash it before reuse  
 If skin irritation or rash occurs: Get medical advice/attention  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing  
 Call a doctor if you feel unwell

**Precautionary Statements - Storage**

Store locked up  
 Store in a well-ventilated place. Keep container tightly closed

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other hazards which do not result in classification**

May be harmful if swallowed.  
 Very toxic to aquatic life with long lasting effects.

**Section 3: Composition/information on ingredients**

Chemical name	CAS No	Weight-%
2-Ethylhexyl (4-chloro-2-methylphenoxy)acetate	29450-45-1	40 - 50
1-Methyl-2-pyrrolidone	872-50-4	10 - 29
Diflufenican	83164-33-4	1 - 5
Non-hazardous ingredients	Proprietary	Balance

**Section 4: First aid measures****Description of first aid measures**

<b>General advice</b>	Show this safety data sheet to the doctor in attendance.
<b>Emergency telephone number</b>	Poisons Information Centre, Australia: 13 11 26
<b>Inhalation</b>	Remove to fresh air. IF exposed or concerned: Get medical advice/attention. Get medical attention immediately if symptoms occur. If symptoms persist, call a doctor. If breathing has stopped, give artificial respiration. Get medical attention immediately.
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
<b>Skin contact</b>	May cause an allergic skin reaction. Wash off immediately with soap and plenty of water for at least 15 minutes. If symptoms persist, call a doctor.
<b>Ingestion</b>	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.
<b>Self-protection of the first aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid breathing vapours or mists. Use personal protective equipment as required. See section 8 for more information.

**Most important symptoms and effects, both acute and delayed**

<b>Symptoms</b>	Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.
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**Indication of any immediate medical attention and special treatment needed**

<b>Note to doctors</b>	May cause sensitisation in susceptible persons. Treat symptomatically.
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**Section 5: Firefighting measures****Suitable Extinguishing Media**

<b>Suitable extinguishing media</b>	Dry chemical, CO2, water spray or regular foam.
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<b>Unsuitable extinguishing media</b>	None known based on information supplied.
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**Specific hazards arising from the chemical**

<b>Specific hazards arising from the chemical</b>	Product is or contains a sensitizer. May cause sensitisation by skin contact. Fire may produce irritating, corrosive and/or toxic gases.
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**Special protective actions for fire-fighters**

<b>Special protective equipment and precautions for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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**Section 6: Accidental release measures****Personal precautions, protective equipment and emergency procedures**

<b>Personal precautions</b>	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid breathing vapours or mists.
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<b>Other information</b>	Refer to protective measures listed in Sections 7 and 8.
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<b>For emergency responders</b>	Use personal protection recommended in Section 8.
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**Environmental precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. Avoid release to the environment. Keep out of drains, sewers, ditches and waterways.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers. Clean contaminated surface thoroughly.

**Precautions to prevent secondary hazards**

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Section 7: Handling and storage****Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. Remove contaminated clothing and shoes. Avoid breathing vapours or mists.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up. Keep/store only in original container. Protect from direct sunlight. Keep away from food, drink and animal feedingstuffs.

**Incompatible materials** Strong oxidising agents. Zinc. Aluminium. Copper. Tin.

**Section 8: Exposure controls and personal protection****Control parameters****Exposure Limits**

Chemical name	Australia	New Zealand	ACGIH TLV
1-Methyl-2-pyrrolidone 872-50-4	TWA: 25 ppm TWA: 103 mg/m <sup>3</sup> STEL: 75 ppm STEL: 309 mg/m <sup>3</sup>	TWA: 25 ppm TWA: 103 mg/m <sup>3</sup> STEL: 75 ppm STEL: 309 mg/m <sup>3</sup> Skin	-
Chemical name	European Union	United Kingdom	Germany DFG
1-Methyl-2-pyrrolidone 872-50-4	TWA: 40 mg/m <sup>3</sup> TWA: 10 ppm * STEL: 20 ppm STEL: 80 mg/m <sup>3</sup>	TWA: 10 ppm TWA: 40 mg/m <sup>3</sup> STEL: 20 ppm STEL: 80 mg/m <sup>3</sup> Sk*	TWA: 20 ppm TWA: 82 mg/m <sup>3</sup> Peak: 40 ppm Peak: 164 mg/m <sup>3</sup> *

**Biological occupational exposure limits**

Chemical name	Australia	ACGIH	European Union
1-Methyl-2-pyrrolidone 872-50-4	-	100 mg/L - urine (5-Hydroxy-N-methyl-2-pyrrolidone) - end of shift	-

**Appropriate engineering controls**

<b>Engineering controls</b>	Showers Eyewash stations Ventilation systems.
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**Individual protection measures, such as personal protective equipment**

<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin and body protection</b>	Wear suitable protective clothing. Long sleeved clothing.
<b>Hand protection</b>	Wear suitable gloves. Impervious gloves.
<b>Respiratory protection</b>	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
<b>Environmental exposure controls</b>	Local authorities should be advised if significant spillages cannot be contained. Prevent product from entering drains. Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways.
<b>Thermal hazards</b>	No information available.

**Section 9: Physical and chemical properties****Information on basic physical and chemical properties**

<b>Appearance</b>	
Physical state	Liquid
Colour	Amber to brown
Odour	Mild
Odour threshold	No information available

**Values**

<b>pH</b>		<b>Remarks • Method</b>
<b>Melting point / freezing point</b>		No data available
<b>Initial boiling point and boiling range</b>		No data available
<b>Flash point</b>		No data available
<b>Evaporation rate</b>		No data available
<b>Flammability</b>		No data available
<b>Flammability Limit in Air</b>		
Upper flammability or explosive limits		No data available
Lower flammability or explosive limits		No data available
<b>Vapour pressure</b>		No data available
<b>Vapour density</b>		No data available
<b>Relative density</b>	1.00	
<b>Water solubility</b>	Completely soluble	
<b>Solubility(ies)</b>		No data available
<b>Partition coefficient</b>		No data available
<b>Autoignition temperature</b>		No data available
<b>Decomposition temperature</b>		No data available
<b>Kinematic viscosity</b>		No data available
<b>Dynamic viscosity</b>		No data available

**Other information**

Softening point	No information available
Molecular weight	No information available
VOC content	No information available
Liquid Density	No information available
Bulk density	No information available
Particle characteristics	No information available

**Section 10: Stability and reactivity****Reactivity**

Reactivity	None under normal use conditions.
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**Chemical stability**

Stability	Stable under normal conditions.
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Explosion data	
Sensitivity to mechanical impact	None.

Sensitivity to static discharge	None.
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**Possibility of hazardous reactions**

Possibility of hazardous reactions	None under normal processing.
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**Conditions to avoid**

Conditions to avoid	Incompatible materials.
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**Incompatible materials**

Incompatible materials	Strong oxidising agents. Zinc. Aluminium. Copper. Tin.
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**Hazardous decomposition products**

Hazardous decomposition products	None known based on information supplied.
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**Section 11: Toxicological information****Acute toxicity****Information on likely routes of exposure****Product Information**

Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Harmful by inhalation. (based on components).
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
Skin contact	Specific test data for the substance or mixture is not available. May cause sensitisation by skin contact. Causes skin irritation. (based on components). Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. May be harmful if swallowed.

**Symptoms** Itching. Rashes. Hives. Redness. May cause redness and tearing of the eyes. Coughing and/ or wheezing.

**Numerical measures of toxicity - Product Information**  
**Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document:

ATEmix (dermal) 2,000.00 mg/kg

ATEmix (inhalation-dust/mist) 2.8194 mg/l

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
2-Ethylhexyl (4-chloro-2-methylphenoxy)acetate	= 1300 mg/kg ( Rat )	> 2000 mg/kg ( Rat )	> 5.05 mg/L ( Rat ) 4 h
1-Methyl-2-pyrrolidone	= 3914 mg/kg ( Rat )	= 8 g/kg ( Rabbit )	> 5.1 mg/L ( Rat ) 4 h
Diflufenican	= 2 g/kg ( Rat )	= 2000 mg/kg ( Rat )	-

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Classification based on data available for ingredients. Causes skin irritation.

**Serious eye damage/eye irritation** Classification based on data available for ingredients. Causes serious eye irritation.

**Respiratory or skin sensitisation** May cause an allergic skin reaction.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

**Reproductive toxicity** Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage fertility or the unborn child.

**STOT - single exposure** May cause respiratory irritation. May cause drowsiness or dizziness.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

**Section 12: Ecological information**

**Ecotoxicity**

**Aquatic ecotoxicity** Very toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
2-Ethylhexyl (4-chloro-2-methylphenoxy)acetate	EC50: =0.46mg/L (72h, Pseudokirchneriella subcapitata) EC50: =0.43mg/L (96h, Pseudokirchneriella subcapitata)	LC50: 3.2 - 4.6mg/L (96h, Lepomis macrochirus) LC50: =3.2mg/L (96h, Oncorhynchus mykiss) LC50: >0.55mg/L (96h, Lepomis macrochirus)	-	EC50: =0.29mg/L (48h, Daphnia magna)
1-Methyl-2-pyrrolidone	EC50: >500mg/L (72h, Desmodesmus subspicatus)	LC50: =832mg/L (96h, Lepomis macrochirus) LC50: =1072mg/L (96h,	-	EC50: =4897mg/L (48h, Daphnia magna)

		Pimephales promelas) LC50: =1400mg/L (96h, Poecilia reticulata)		
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**Terrestrial ecotoxicity**

Chemical name	Earthworm	Avian	Honeybees
2-Ethylhexyl (4-chloro-2-methylphenoxy)acetate	-	Dietary Toxicity: LC50 > 5620 ppm (Anas platyrhynchos 5 Days) Source: IUCLID Dietary Toxicity: LC50 > 5620 ppm (Colinus virginianus 5 Days) Source: IUCLID Dietary Toxicity: NOEC = 562 ppm (Anas platyrhynchos 5 Days) Source: IUCLID Dietary Toxicity: NOEC = 1780 ppm (Colinus virginianus 5 Days) Source: IUCLID	-
1-Methyl-2-pyrrolidone	-	Acute Oral Toxicity: LD50 = 2212 mg/kg (Colinus virginianus) Source: IUCLID	-

**Persistence and degradability**

**Persistence and degradability** No information available.

**Bioaccumulative potential****Bioaccumulation****Component Information**

Chemical name	Partition coefficient
2-Ethylhexyl (4-chloro-2-methylphenoxy)acetate	4.49
1-Methyl-2-pyrrolidone	-0.46

**Mobility**

**Mobility** No information available.

**Other adverse effects**

**Other adverse effects** No information available.

**Section 13: Disposal considerations****Waste treatment methods**

**Waste from residues/unused products** Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.



**Contaminated packaging** Do not reuse empty containers.

See section 8 for more information

## Section 14: Transport information

### ADG

Not Regulated / Non-Hazardous

Shipment by ground via road or rail within Australia is not regulated in IBCs or packagings not exceeding 500 kg(L) per Australian Special Provision AU01

### IATA

**UN number or ID number**

UN3082

**UN proper shipping name**

Environmentally hazardous substances, liquid, n.o.s.

**Transport hazard class(es)**

9

**Packing group**

III

**ERG Code**

9L

**Special Provisions**

A97, A158, A197

**Description**

UN3082, Environmentally hazardous substances, liquid, n.o.s. (2-Ethylhexyl (4-chloro-2-methylphenoxy)acetate, Diflufenican), 9, III

### IMDG

**UN number or ID number**

UN3082

**UN proper shipping name**

ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S.

**Transport hazard class(es)**

9

**Packing group**

III

**EmS-No**

F-A, S-F

**Special Provisions**

274, 335, 969

**Marine pollutant**

P

**Description**

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (2-Ethylhexyl (4-chloro-2-methylphenoxy)acetate, Diflufenican), 9, III, Marine pollutant

**Transport in bulk according to Annex II of MARPOL and the IBC Code**

No information available

## Section 15: Regulatory information

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

### National regulations

#### Australia

See section 8 for national exposure control parameters

### Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Classified as a scheduled poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

**Poison Schedule Number** 5

### Australian Pesticides and Veterinary Medicines Authority (APVMA)

**APVMA Registered Chemical Number** 90953

### Australian Industrial Chemicals Introduction Scheme (AICIS)

Chemical name	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
2-Ethylhexyl (4-chloro-2-methylphenoxy)acetate - 29450-45-1	Contact supplier for inventory compliance status	-

Chemical name	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
1-Methyl-2-pyrrolidone - 872-50-4	Present	-
Diffufenican - 83164-33-4	Contact supplier for inventory compliance status	-

**Illicit Drug Precursors/Reagents**

This product does not contain any substance(s) on the Illicit Drug Precursors/Reagents list.

**National pollutant inventory**

Subject to reporting requirement

Chemical name	National pollutant inventory
1-Methyl-2-pyrrolidone - 872-50-4	20 MW Threshold category 2b total 60000 MWH Threshold category 2b total 1 tonne/h Threshold category 2a total 25 tonne/yr Threshold category 1a total 400 tonne/yr Threshold category 2a total 2000 tonne/yr Threshold category 2b total

**International Inventories**

Contact supplier for inventory compliance status

**International Regulations**

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

**Section 16: Other information**

<b>Issuing Date</b>	04-Oct-2022
<b>Revision Date</b>	04-Oct-2022
<b>Revision Note</b>	Initial Release.

**Key or legend to abbreviations and acronyms used in the safety data sheet**

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEGL(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
Australian Industrial Chemicals Introduction Scheme (AICIS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme  
Organisation for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

**Disclaimer**

**The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text**

**End of Safety Data Sheet**