

## SAFETY DATA SHEET

### Section 1: Identification

|  |  |
|--|--|
| <b>Product Identifier:</b>                 | <b>ESTATE Herbicide</b>  |
| <b>Other Means of Identification:</b>      | <b>Proper Shipping Name:</b> Environmentally Hazardous Substance, Liquid, N.O.S. (diflufenican, MCPA)<br><i>Applicable only for marine and air transport</i><br><b>Product code:</b> A24907A |
| <b>Recommended Use:</b>                    | Herbicide  |
| <b>Details of manufacturer or importer</b> | <b>Syngenta Australia Pty Ltd</b><br><b>ABN 33 002 933 717</b>   |
| <b>Address:</b>                            | <b>Level 1, 2 Lyonpark Road</b><br><b>MACQUARIE PARK NSW 2113</b><br><b>AUSTRALIA</b>  |
| <b>Website:</b>                            | <a href="http://syngenta.com.au">syngenta.com.au</a>   |
| <b>Phone Number:</b>                       | <b>(02) 8014 5200</b>  |
| <b>Emergency Phone Number:</b>             | <b>24 hours - 1800 033 111</b>   |

### Section 2: Hazards identification

|  |  |
|--|--|
| <b>Classification of the Hazardous Chemical:</b> | Acute Toxicity (oral): Category 4<br>Skin corrosion/irritation: Category 2<br>Serious eye damage/eye irritation: Category 1<br>Hazardous to the aquatic environment (acute) Category 1<br>Hazardous to the aquatic environment (chronic) Category 1  |
| <b>Signal Word:</b>                              | Danger   |
| <b>Hazard Statement(s):</b>                      | H302 Harmful if swallowed<br>H315 Causes skin irritation.<br>H318 Causes serious eye damage.<br>H400 Very toxic to aquatic life.<br>H410 Very toxic to aquatic life with long lasting effects.   |
| <b>Precautionary statements</b>                  | <b>Prevention:</b><br>P264 Wash skin thoroughly after handling.<br>P270 Do not eat, drink or smoke when using this product.<br>P280 Wear protective gloves/eye protection/face protection.<br><b>Response:</b><br>P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTRE/ doctor if you feel unwell. Rinse mouth.<br>P302 + P352 IF ON SKIN: Wash with plenty of soap and water.<br>P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE/ doctor.<br>P332+P313 If skin irritation occurs: Get medical attention.<br>P362+P364 Take off contaminated clothing and wash before reuse.<br>P391 Collect spillage.<br><b>Disposal:</b><br>P501 Dispose of contents/container to an approved waste disposal plant. |
| <b>Hazard Symbols:</b>                           |  |

### Section 3: Composition and information on ingredients

| MIXTURE  |            |                   |
|--|------------|-------------------|
| Chemical Identity of Ingredients:                | CAS No     | Proportion (%w/w) |
| propane-1,2-diol                                 | 57-55-6    | >= 30 -< 60       |
| MCPA (ISO)                                       | 94-74-6    | >= 10 -< 30       |
| clopyralid (ISO)                                 | 1702-17-6  | >= 1 -< 3         |
| diflufenican (ISO)                               | 83164-33-4 | < 10              |
| other ingredients determined not to be hazardous |            | to 100            |

### Section 4: First aid measures

|   |  |
|---|--|
| <b>Description of Necessary First Aid Measures:</b> | <p>In case of poisoning by any exposure route get to a doctor or hospital quickly. Phone Poisons Information Centre on 131 126. Have the product label or SDS with you when calling or going for treatment.</p> <p><b>Ingestion:</b> If swallowed, seek medical advice immediately and show this container or label. DO NOT induce vomiting.</p> <p><b>Eye contact:</b> Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.</p> <p><b>Skin contact:</b> Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.</p> <p><b>Inhalation:</b> Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or Poison Information Centre immediately.</p> |
| <b>Symptoms Caused by Exposure:</b>                 | Poisoning symptoms in laboratory animals were non-specific.  |
| <b>Medical Attention and Special Treatment:</b>     | Treat symptomatically.   |

### Section 5: Fire fighting measures

|  |  |
|--|--|
| <b>Suitable Extinguishing Equipment:</b>                               | <p><b>Small fires:</b><br/>Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. DO NOT use a solid water stream as it may scatter and spread fire.</p> <p><b>Large fires:</b><br/>Use alcohol resistant foam or water spray. DO NOT use a solid water stream as it may scatter and spread fire</p> |
| <b>Specific Hazards Arising from the Chemical:</b>                     | As this product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion. Combustion or thermal decomposition will evolve toxic and irritant vapours. Exposure to decomposition products may be a hazard to health.                                    |
| <b>Special Protective Equipment and Precautions for Fire Fighters:</b> | <p>When fighting a major fire wear full protective clothing and self contained breathing apparatus.</p> <p>Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.</p>  |
| <b>Hazchem:</b>  | •3Z  |

## Section 6: Accidental release measures

|   |   |
|---|---|
| <b>Personal Precautions, Protective Equipment and Emergency Procedures:</b> | In case of spillage it is important to take all steps necessary to <ul style="list-style-type: none"> <li>• Avoid eye and skin contact</li> <li>• Avoid contamination of waterways</li> </ul>   |
| <b>Environmental precautions:</b>   | Prevent further leakage or spillage if safe to do so.<br>Do not flush into surface water or sanitary sewer system.<br>If the product contaminates rivers and lakes or drains inform respective authorities.   |
| <b>Methods and Materials for Containment and Clean Up:</b>                  | Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).<br>Clean contaminated surface thoroughly.<br>Clean with detergents. Avoid solvents.<br>Retain and dispose of contaminated wash water. |

## Section 7: Handling and storage

|  |   |
|--|---|
| <b>Precautions for Safe Handling:</b>                                | Avoid inhalation of vapours and mists, and skin or eye contact. Use only in a well-ventilated area. Keep containers sealed when not in use. Prevent the build-up of mists or vapours in the work atmosphere. Maintain high standards of personal hygiene i.e., washing hands prior to eating, drinking, smoking or using toilet facilities. Avoid exposure. Do not handle until all safety precautions have been read and understood. |
| <b>Conditions for Safe Storage, Including any Incompatibilities:</b> | Store in a cool, dry, well-ventilated area, out of direct sunlight. Protect from freezing. Store in suitable, labelled containers. Keep containers tightly closed. Store away from incompatible materials. Ensure that storage conditions comply with applicable local and national regulations.  |

## Section 8: Exposure controls and personal protection

### ALWAYS READ AND FOLLOW THE LABEL INSTRUCTIONS AND WARNINGS

| Component                                | CAS number  | Exposure limit        | Value type | Source                          |
|--|---|-----------------------|------------|---------------------------------|
| propane-1,2-diol (vapour & particulates) | 57-55-6   | 474 mg/m <sup>3</sup> | TWA        | HCIS,<br>Safe Work<br>Australia |
|  |   | 150 ppm               | TWA        |                                 |
| propane-1,2-diol (particulates only)     | 57-55-6   | 10 mg/m <sup>3</sup>  | TWA        |                                 |
| clopyralid (ISO)                         | 1702-17-6   | 10 mg/m <sup>3</sup>  | TWA        | Supplier                        |
| diflufenican (ISO)                       | 83164-33-4  | 5.5 mg/m <sup>3</sup> | TWA        | Supplier                        |
| <b>Biological Limit Values:</b>          | No biological limit allocated   |                       |            |                                 |
| <b>Engineering Controls:</b>             | <p>THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THE PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.</p> <p>Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.</p> <p>The extent of these protection measures depends on the actual risks in use.</p> <p>Maintain air concentrations below occupational exposure standards.</p> <p>Where necessary, seek additional occupational hygiene advice.</p> |                       |            |                                 |

|                                       |  |
|---------------------------------------|--|
| <b>Personal Protective Equipment:</b> | The use of technical measures should always have priority over the use of personal protective equipment.<br>When selecting personal protective equipment, seek appropriate professional advice.<br>Personal protective equipment should comply with relevant national standards  |
| Respiratory protection                | When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.<br>Wear respiratory protective equipment when opening the container and preparing the product for use.<br>Respiratory protective equipment is not normally required when using the prepared product.  |
| Hand protection                       | Material: Nitrile rubber<br>Break through time: > 480 min<br>Glove thickness: 0.5 mm<br><br>Remarks: Wear protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other.<br>Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case.<br>Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. |
| Eye protection                        | Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.   |
| Skin and body protection              | Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.<br>Remove and wash contaminated clothing before re-use.<br>Wear as appropriate:<br>boots, overalls, washable hat, gloves.   |

## Section 9: Physical and chemical properties

|   |                    |                                |                        |
|---|--------------------|--------------------------------|------------------------|
| <b>Appearance:</b>  | Light brown liquid | <b>Boiling Point/Range:</b>    | Approx. 100°C          |
| <b>Odour:</b>   | Slight sweet smell | <b>Freezing/Melting Point:</b> | Not available          |
| <b>pH:</b>  | Approx. 10         | <b>Solubility:</b>             | Suspensible in water   |
| <b>Vapour Pressure:</b>                                     | Not available      | <b>Specific gravity:</b>       | 1.16                   |
| <b>Vapour Density:</b>                                      | Not available      | <b>Density:</b>                | 1.16 g/cm <sup>3</sup> |
| <b>Flash Point:</b>   | Not available      | <b>Explosive Properties:</b>   | Not explosive          |
| <b>Upper and Lower Flammable (Explosive) Limits in Air:</b> | Not available      | <b>Oxidising Properties:</b>   | Not oxidising          |
| <b>Auto Ignition Temperature:</b>                           | Not available      | <b>Combustibility:</b>         | Not combustible        |
| <b>Min. Ignition energy</b>                                 | Not available      | <b>Corrosiveness:</b>          | Not available          |

## Section 10: Stability and reactivity

|                            |  |
|----------------------------|--|
| <b>Reactivity:</b>         | No hazardous reactions by normal handling and storage. |
| <b>Chemical Stability:</b> | Stable at normal ambient temperature and pressure.     |

|  |  |
|--|--|
| <b>Possibility of Hazardous Reactions:</b> | No hazardous reactions by normal handling and storage. Hazardous polymerisation will not occur.  |
| <b>Conditions to Avoid:</b>                | No decomposition if used as directed.  |
| <b>Incompatible Materials:</b>             | Strong oxidising agents.   |
| <b>Hazardous Decomposition Products:</b>   | Thermal decomposition may result in the release of carbon monoxide, carbon dioxide, hydrogen fluoride, hydrogen chloride and oxides of nitrogen. |

## Section 11: Toxicological information

### Health Effects from Likely Routes of Exposure:

#### Acute toxicity

|                  |  |
|------------------|--|
| Oral toxicity:   | <p><i>Product:</i><br/>Acute toxicity estimate: 1,934 mg/kg (rat)<br/>Method: Calculation method</p> <p><i>MCPA:</i><br/>LD<sub>50</sub> (rat): 300 – 2,000 mg/kg</p> <p><i>Diflufenican:</i><br/>LD<sub>50</sub> (rat): &gt;5,000 mg/kg</p> <p><i>Clopyralid:</i><br/>LD<sub>50</sub> (rat): 3,738 mg/kg (male), 2,675 mg/kg (female)</p> |
| Dermal toxicity: | <p><i>MCPA:</i><br/>LD<sub>50</sub> (rat): &gt;2,000 mg/kg</p> <p><i>Diflufenican:</i><br/>LD<sub>50</sub> (rat): &gt;2,000 mg/kg</p> <p><i>Clopyralid:</i><br/>LD<sub>50</sub> (rat): &gt;2,000 mg/kg</p>   |
| Inhalation:      | <p><i>MCPA:</i><br/>LC<sub>50</sub> (rat) (4h): &gt;5 mg/L</p> <p><i>Diflufenican:</i><br/>LC<sub>50</sub> (rat) (4h): &gt;5.12 mg/L</p> <p><i>Clopyralid:</i><br/>LC<sub>50</sub> (rat) (4h): &gt;0.38 mg/L</p>   |
| Skin irritation: | Causes skin irritation   |
| Eye irritation:  | Irritant. Causes serious damage to eyes.   |
| Sensitisation:   | Product not considered a skin sensitiser based on components.  |

#### Chronic toxicity

|               |   |
|---------------|---|
| Mutagenicity: | <p><i>MCPA:</i><br/>Data indicates that MCPA is not mutagenic.</p> <p><i>Diflufenican:</i><br/>Animal testing did not show any mutagenic effects.</p> <p><i>Clopyralid:</i><br/>Clopyralid did not show mutagenic or genotoxic effects in animal experiments.</p> |
|---------------|---|

|  |   |
|--|---|
| Carcinogenicity:   | <i>MCPA:</i><br>MCPA is not considered carcinogenic based on weight of evidence.  |
|  | <i>Diflufenican:</i><br>No evidence of carcinogenicity in animal studies.   |
|  | <i>Clopyralid:</i><br>Clopyralid did not show carcinogenic effects in animal experiments.   |
| Reproductive and Developmental toxicity:                   | <i>MCPA:</i><br>MCPA did not adversely affect development.  |
|  | <i>Diflufenican:</i><br>No toxicity to reproduction.  |
|  | <i>Clopyralid:</i><br>Clopyralid did not interfere with reproduction in animal experiments. Clopyralid caused birth defects in test animals, but only at greatly exaggerated doses that were severely toxic to the mothers. No birth defects were observed in animals given clopyralid at doses several times greater than those expected during normal exposure. |
| Specific Target Organ Toxicity (STOT) - single exposure:   | The substance or mixture is not classified as specific target organ toxicant, single exposure.  |
| Specific Target Organ Toxicity (STOT) - repeated exposure: | The substance or mixture is not classified as specific target organ toxicant, repeated exposure.  |
| Aspiration hazard:   | Not an aspiration hazard.   |

## Section 12: Ecological information

|             |   |  |
|-------------|---|--|
| Ecotoxicity | <i>Toxicity to fish:</i>                                    | <i>MCPA:</i><br><i>Oncorhynchus mykiss</i> (rainbow trout):<br>LC <sub>50</sub> : 50 mg/L, 96 h  |
|             |   | <i>Diflufenican:</i><br><i>Oncorhynchus mykiss</i> (rainbow trout):<br>LC <sub>50</sub> : >0.1090 mg/L, 96 h                             |
|             |   | <i>Clopyralid:</i><br><i>Oncorhynchus mykiss</i> (rainbow trout):<br>LC <sub>50</sub> : 103.5 mg/L, 96 h                                 |
|             | <i>Toxicity to daphnia and other aquatic invertebrates:</i> | <i>MCPA:</i><br><i>Daphnia magna</i> (Water flea):<br>EC <sub>50</sub> : >190 mg/L, 48 h   |
|             |   | <i>Diflufenican:</i><br><i>Daphnia magna</i> (Water flea):<br>EC <sub>50</sub> : >0.24 mg/L, 48 h  |
|             |   | <i>Clopyralid:</i><br><i>Daphnia magna</i> (Water flea):<br>EC <sub>50</sub> : 225 mg/L, 48 h  |
|             | <i>Toxicity to algae:</i>                                   | <i>MCPA:</i><br><i>Myriophyllum spicatum</i> (Eurasian watermilfoil):<br>ErC <sub>50</sub> : 0.243 mg/L, 14 d<br>NOEC: 0.0305 mg/L, 14 d |
|             |   | <i>Raphidocelis subcapitata</i> (freshwater green alga):<br>EC <sub>50</sub> : >320 mg/L, 72 h   |

|  |   |
|--|---|
|  | <p><i>Navicula pelliculosa</i> (Freshwater diatom):<br/>EC<sub>50</sub>: 117 mg/L, 72 h</p> <p><i>Diflufenican</i>:<br/><i>Desmodesmus subspicatus</i> (green algae):<br/>EC<sub>50</sub>: 0.00045 mg/L, 72 h</p> <p><i>Ankistrodesmus falcatus</i>:<br/>ErC<sub>50</sub>: 0.000071 mg/L, 72 h<br/>EC<sub>10</sub>: 0.000029 mg/L, 72 h<br/>End point: Growth rate</p> <p><i>Clopyralid</i>:<br/><i>Raphidocelis subcapitata</i> (freshwater green alga):<br/>EC<sub>50</sub>: 6.9 mg/L, 72 h</p> |
| <b>Persistence and Degradability:</b>                | <p>This product is not readily biodegradable. It may accumulate in the soil or water.</p> <p><i>MCPA</i>: Readily biodegradable.</p> <p><i>Diflufenican</i>: Not readily biodegradable.</p> <p><i>Clopyralid</i>: Moderate to medium persistence in soil.</p>   |
| <b>Mobility in soil:</b>                             | <p><i>MCPA</i>:<br/>Highly mobile in soils.<br/>Dissipation time: &lt;7d<br/>Remarks: Product is not persistent.</p> <p><i>Diflufenican</i>:<br/>Slightly mobile in soils.<br/>Dissipation time: 128d<br/>Remarks: Product is not persistent.</p> <p><i>Clopyralid</i>:<br/>Moderate mobility in soil</p>   |
| <b>Bioaccumulative Potential:</b>                    | <p><i>MCPA</i>: Low bioaccumulation potential.<br/>Partition coefficient (n-octanol/water): log Pow: -0.71 (pH7)</p> <p><i>Diflufenican</i>: Bioaccumulates<br/>Partition coefficient (n-octanol/water): log Pow: 4.2 (20°C)</p> <p><i>Clopyralid</i>: Low bioaccumulation potential.</p>   |
| <b>Other adverse effects:</b>                        |   |
| <b>Results of PBT and vPvB assessment (product):</b> | <p>This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).</p>  |

### Section 13: Disposal considerations

|                          |   |
|--------------------------|---|
| <b>Disposal Methods:</b> |   |
| Waste from residues:     | <p>Do not contaminate ponds, waterways or ditches with chemical or used container.<br/>Do not dispose of waste into sewer.<br/>Where possible recycling is preferred to disposal or incineration.<br/>If recycling is not practicable, dispose of in compliance with local regulations.</p> |
| Contaminated packaging:  | <p>Non-returnable containers:<br/>Triple rinse containers.<br/>Add rinsings to spray tank.</p>  |

|  |  |
|--|--|
|  | <p>If recycling, replace cap and return clean containers to recycler or designated collection point. Containers marked with the drumMUSTER container logo can be taken to a drumMUSTER collection site (02 6206 6868, www.drummuster.org.au). Empty containers can be landfilled, when in accordance with the local regulations. If no landfill is available, bury the containers below 500 mm 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.</p> <p>Returnable containers:<br/>Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.</p> |
|--|--|

## Section 14: Transport information

|                                 |   |  |                |
|---------------------------------|---|--|----------------|
| <b>LAND TRANSPORT<br/>ADG</b>   | Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to the Australian Code for the Transport of Dangerous Goods (ADG). This applies when transported by road or rail in packagings that do not incorporate a receptacle exceeding 500 kg(L) or IBCs per ADG Special Provision AU01. |  |                |
| <b>UN Number:</b>               | 3082  | <b>Packing Group:</b>                    | III            |
| <b>UN Proper Shipping Name:</b> | Environmentally Hazardous Substance, Liquid, N.O.S. (diflufenican, MCPA)  | <b>Special Precautions for User:</b>     | None allocated |
| <b>Transport Hazard Class:</b>  | 9   | <b>Hazchem or Emergency Action Code:</b> | •3Z            |
| <b>Subsidiary Risk:</b>         | None allocated  |  |                |

|                                 |  |  |                  |
|---------------------------------|--|--|------------------|
| <b>SEA TRANSPORT<br/>IMDG</b>   |  |  |                  |
| <b>UN Number:</b>               | 3082   | <b>Packing Group:</b>                                | III              |
| <b>UN Proper Shipping Name:</b> | Environmentally Hazardous Substance, Liquid, N.O.S. (diflufenican, MCPA) | <b>EmS Code:</b>                                     | F-A<br>S-F       |
| <b>Transport Hazard Class:</b>  | 9  | <b>Environmental hazards for Transport Purposes:</b> | Marine pollutant |
| <b>Subsidiary Risk:</b>         | None allocated   |  |                  |

|                                     |  |  |      |
|-------------------------------------|--|--|------|
| <b>AIR TRANSPORT<br/>IATA - DGR</b> |  |  |      |
| <b>UN Number:</b>                   | 3082   | <b>Packing Group:</b>                            | III  |
| <b>UN Proper Shipping Name:</b>     | Environmentally Hazardous Substance, Liquid, N.O.S. (diflufenican, MCPA) | <b>Packing instruction (cargo aircraft):</b>     | 964  |
| <b>Transport Hazard Class:</b>      | 9  | <b>Packing instruction (passenger aircraft):</b> | Y964 |
| <b>Subsidiary Risk:</b>             | None allocated   | <b>Environmentally hazardous:</b>                | Yes  |

## Section 15: Regulatory information

|                                  |       |
|----------------------------------|-------|
| <b>APVMA Product Number:</b>     | 95166 |
| <b>Poisons Schedule (SUSMP):</b> | 5     |



## Section 16: Any other relevant information

**Date of preparation or last revision:** 5 November 2024

**Source of Data:** The information provided in this SDS is sourced from Syngenta internal studies which have been conducted according to Regulatory requirements including OECD and CIPAC Guidelines and EC Directives. A comprehensive package of toxicological and environmental data for the active ingredients of this product has been submitted to the government health and environment authorities and has been evaluated by expert toxicologists and environmental scientists.

**Note:** Use this product in accordance with the container label directions

**CONTACT POINT: Regulatory & Stewardship Manager, Syngenta Australia Pty Ltd**  
(02) 8014 5200  
**24 HOURS EMERGENCY CONTACT: 1800 033 111**

This Safety Data Sheet 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 how the product will be handled and used in the workplace including in conjunction with other products.  
If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

### **DISCLAIMER**

This product complies with the specifications in its statutory registration. Implied terms and warranties are excluded. Syngenta's liability for breach of the express or any non-excludable implied warranty is limited to product replacement or purchase price refund. The purchaser must determine suitability for intended purpose and take all proper precautions in the handling, storage and use of the product including those on the label and/or safety data sheet failing which Syngenta shall have no liability.

® Registered trademark of a Syngenta Group Company