SAFETY DATA SHEET
According to Safe Work Australia

1. IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product Name: GENFARM DIFLU-MCPA SELECTIVE HERBICIDE
Other Means of Identification: Mixture
APVMA Number: 64997
Recommended Use of the Chemical and Restriction on Use: Agricultural herbicide

Details of Manufacturer or Importer:
Landmark Operations Limited
Suite 3, Level 1, Building B
11 Talavera Road
Macquarie Park NSW 2113
Phone Number: 02 9889 5400
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)

Signal Word
Danger

Hazard Statements
H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.
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.

(Contd. on page 2)
SAFETY DATA SHEET
According to Safe Work Australia

Product Name: GENFARM DIFLU-MCPA SELECTIVE HERBICIDE

Precautionary Statements
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 INHALED: Remove person to fresh air and keep comfortable for breathing.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P330 Rinse mouth.
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.
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.

<table>
<thead>
<tr>
<th>Hazardous Components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Characterization:</td>
<td>Mixtures</td>
</tr>
<tr>
<td>Description:</td>
<td>Mixture of substances listed below with nonhazardous additions.</td>
</tr>
<tr>
<td>Acetic acid, (4-chloro-2-methylphenoxy)-, 2-ethylhexyl ester</td>
<td>29450-45-1</td>
</tr>
<tr>
<td>MCPA, 2-ethylhexyl ester</td>
<td></td>
</tr>
<tr>
<td>Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2A, H319</td>
<td></td>
</tr>
<tr>
<td>2-Pyrrolidinone, 1-methyl-</td>
<td>872-50-4</td>
</tr>
<tr>
<td>Repr. 1B, H360; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335; Flam. Liq. 4, H227</td>
<td></td>
</tr>
<tr>
<td>Diflufenican</td>
<td>83164-33-4</td>
</tr>
<tr>
<td>Aquatic Chronic 3, H412</td>
<td></td>
</tr>
</tbody>
</table>

Additional information:
Liquid Hydrocarbon Solvent, CAS No. not supplied: 32.5%
Non hazardous emulsifiers, CAS No. not supplied: 10.5%

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.

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.

(Contd. on page 3)
SAFETY DATA SHEET
According to Safe Work Australia

Product Name: GENFARM DIFLU-MCPA SELECTIVE HERBICIDE

Eye Contact:
In case of eye contact, hold eyelids open and rinse with water for at least 15 minutes. Seek medical attention if symptoms occur.

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.

Symptoms Caused by Exposure:
Inhalation: Harmful if inhaled. May cause respiratory irritation.
Skin Contact: Harmful in contact with skin. Causes skin irritation, itchiness and reddening.
Eye Contact: Causes serious eye irritation, stinging and reddening.
Ingestion: Harmful if swallowed. May cause irritation, redenning and burning sensation to mouth and throat.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Water fog, foam, dry chemical or carbon dioxide.

Specific Hazards Arising from the Chemical:
Hazardous combustion products include oxides of carbon, nitrogen, oxides of nitrogen, other nitrogen compounds, hydrogen cyanide, oxides of phosphorous, other phosphorous compounds, hydrogen fluoride, other fluorine compounds, smoke and water.
Product is combustible.
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 approved respiratory protection, chemical resistant gloves, protective clothing and safety boots. 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. If absorbent material is not available or spill is too large, create a dike to stop spill from spreading. Collect the spilled material and place into a suitable container for disposal.

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. Use only outdoors or in a well-ventilated area.
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.
SAFETY DATA SHEET
According to Safe Work Australia

Product Name: GENFARM DIFLU-MCPA SELECTIVE HERBICIDE

(Contd. of page 3)

Conditions for Safe Storage:
Store in a cool, dry and well ventilated area. Keep in original container, tightly closed when not in use. Protect from heat, sparks, open flames, hot surfaces and direct sunlight. Keep away from strong oxidising agents, strong acids and strong bases.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Exposure Standards:</th>
</tr>
</thead>
<tbody>
<tr>
<td>872-50-4 2-Pyrrolidinone, 1-methyl-</td>
</tr>
<tr>
<td>NES STEL: 309 mg/m³, 75 ppm</td>
</tr>
<tr>
<td>TWA: 103 mg/m³, 25 ppm</td>
</tr>
<tr>
<td>Sk</td>
</tr>
</tbody>
</table>

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

Respiratory Protection:
Use an 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:
PVC or rubber gloves. See Australian/New Zealand Standard AS/NZS 2161 for more information. When selecting gloves for use against certain chemicals, the degradation resistance, permeation rate and permeation breakthrough time should be considered.

Occupational protective clothing (depending on conditions in which it has to be used, in particular as regards the period for which it is worn, which shall be determined on the basis of the seriousness of the risk, the frequency of exposure to the risk, the characteristics of the workstation of each worker and the performance of the protective clothing). See Australian/New Zealand Standard AS/NZS 4501 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

<table>
<thead>
<tr>
<th>Appearance:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form: Liquid</td>
</tr>
<tr>
<td>Colour: Dark brown</td>
</tr>
<tr>
<td>Odour: Ester-like</td>
</tr>
<tr>
<td>Odour Threshold: No information available</td>
</tr>
<tr>
<td>pH-Value: No information available</td>
</tr>
<tr>
<td>Melting point/Melting range: No information available</td>
</tr>
<tr>
<td>Initial Boiling Point/Boiling Range: 176-200 °C</td>
</tr>
<tr>
<td>Flash Point: &gt;66 °C</td>
</tr>
<tr>
<td>Flammability: Combustible Liquid Class 1</td>
</tr>
<tr>
<td>Auto-ignition Temperature: 321 °C (hydrocarbon solvent)</td>
</tr>
<tr>
<td>Decomposition Temperature: No information available</td>
</tr>
<tr>
<td>Explosion Limits:</td>
</tr>
<tr>
<td>Lower: 0.8 Vol %</td>
</tr>
<tr>
<td>Upper: 6.7 Vol %</td>
</tr>
<tr>
<td>Vapour Pressure: No information available</td>
</tr>
<tr>
<td>Relative Density at 20 °C: 0.995</td>
</tr>
</tbody>
</table>

(Contd. on page 5)
SAFETY DATA SHEET
According to Safe Work Australia

Product Name: GENFARM DIFLU-MCPA SELECTIVE HERBICIDE

Vapour Density: No information available
Evaporation Rate: No information available
Solubility in Water: Emulsifies into water.

10. STABILITY AND REACTIVITY

Possibility of Hazardous Reactions:
Hazardous polymerisation will not occur. May produce an exothermic reaction in contact with strong acids or bases.

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: Strong oxidising agents, strong acids and strong bases.

Hazardous Decomposition Products:
Oxides of carbon, nitrogen, oxides of nitrogen, other nitrogen compounds, hydrogen cyanide, oxides of phosphorous, other phosphorous compounds, hydrogen fluoride, other fluorine compounds, smoke and water.

11. TOXICOLOGICAL INFORMATION

Toxicity:

<table>
<thead>
<tr>
<th>LD₅₀/LC₅₀ Values Relevant for Classification:</th>
</tr>
</thead>
<tbody>
<tr>
<td>872-50-4 2-Pyrrolidinone, 1-methyl-</td>
</tr>
<tr>
<td>Oral  LD₅₀   3914 mg/kg (rat)</td>
</tr>
<tr>
<td>Dermal LD₅₀  8000 mg/kg (rabbit)</td>
</tr>
<tr>
<td>29450-45-1 Acetic acid, (4-chloro-2-methylphenoxy)-, 2-ethylhexyl ester MCPA, 2- ethylhexyl ester</td>
</tr>
<tr>
<td>Oral  LC₅₀/4 h &gt;5.11 mg/L (rat)</td>
</tr>
<tr>
<td>83164-33-4 Diflufenican</td>
</tr>
<tr>
<td>Inhalation LC₅₀/4 h &gt;5.12 mg/L (rat)</td>
</tr>
</tbody>
</table>

Acute Health Effects
Inhalation: Harmful if inhaled. May cause irritation.
Skin: Harmful in contact with skin. Causes skin irritation, itchiness and reddening.
Eye: Causes serious eye irritation, stinging and reddening. Prolonged exposure or delayed treatment may cause permanent eye damage.
Ingestion: Harmful if swallowed. May cause irritation, reddening and burning sensation to mouth and throat.

Skin Corrosion / Irritation: Causes skin irritation.

Serious Eye Damage / Irritation: Causes serious eye damage.

Respiratory or Skin Sensitisation: Based on classification principles, the classification criteria are not met.

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:
Suspected of damaging fertility or the unborn child.
1-methyl-2-pyrrolidone is classified by Safe Work Australia as Toxic to Reproduction Category 2.

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.

Chronic Health Effects:
Prolonged exposure or delayed treatment may cause permanent eye damage. May cause liver, kidney and skin damage.

Existing Conditions Aggravated by Exposure: No information available

Additional toxicological information:
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:
LD50 > 2150 mg/kg (Bobwhite quail)
LD50 > 4000 mg/kg (Mallard duck)

Aquatic toxicity:

<table>
<thead>
<tr>
<th>compound</th>
<th>EC₅₀ (mg/L)</th>
<th>LC₅₀ (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid, (4-chloro-2-methylphenoxy)-, 2-ethylhexyl ester</td>
<td>&gt;190</td>
<td>&gt;392</td>
</tr>
<tr>
<td>MCPA, 2-ethylhexyl ester</td>
<td>&gt;50-560</td>
<td>&gt;150</td>
</tr>
</tbody>
</table>

29450-45-1 Diflufenican

<table>
<thead>
<tr>
<th>EC₅₀</th>
<th>LC₅₀</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;10</td>
<td>&gt;240</td>
</tr>
</tbody>
</table>

83164-33-4 Diflufenican

<table>
<thead>
<tr>
<th>EC₅₀</th>
<th>LC₅₀</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;10</td>
<td>&gt;240</td>
</tr>
</tbody>
</table>

Very toxic to aquatic life with long lasting effects.

Persistence and Degradability:
Product is biodegradable.
MCPA is biodegradable: Half-life in soil: <7 days.
Diflufenican is not easily biodegradable: Half-life in soil: 85.6-282 days, depending on soil type.
1-methly-2-pyrrolidone is biodegradable.

Bioaccumulative Potential: Diflufenican bioconcentration factor: 1.596

Mobility in Soil: No information available
Other adverse effects: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods and Containers: Dispose according to applicable local and state government regulations.
SAFETY DATA SHEET
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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 UN 3082

Proper Shipping Name
ADG Not regulated
IMDG ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Acetic acid, (4-chloro-2-methylphenoxy)-, 2-ethylhexyl ester) MARINE POLLUTANT
IATA ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Acetic acid, (4-chloro-2-methylphenoxy)-, 2-ethylhexyl ester)

Dangerous Goods Class
ADG Class: Not regulated
IMDG Class: 9 Miscellaneous dangerous substances and articles.

Packing Group:
ADG Not regulated
IMDG, IATA III

Marine pollutant: Yes
Symbol (fish and tree)

EMS Number: F-A,S-F
Hazchem Code: .3Z

Special Provisions: 179, 274, 331, 335, AU01
Limited Quantities: 5L

Packagings & IBCs - Packing Instruction: P001, IBC03, LP01
Packagings & IBCs - Special Packing Provisions: PP1
Portable Tanks & Bulk Containers - Instructions: T7
Portable Tanks & Bulk Containers - Special Provisions: 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
872-50-4 2-Pyrrolidinone, 1-methyl-
83164-33-4 Diflufenican

Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) - Poison Schedule:
Poisons Schedule: 5

(Contd. of page 6)
SAFETY DATA SHEET
According to Safe Work Australia

Product Name: GENFARM DIFLU-MCPA SELECTIVE HERBICIDE

16. OTHER INFORMATION

Date of Preparation or Last Revision: 24.07.2015
Prepared by: MSDS.COM.AU Pty Ltd
www.msds.com.au

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
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC₅₀: Lethal concentration, 50 percent
LD₅₀: 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)

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”
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