## 1 Identification

**Product Name:** GENFARM OXYFLUORFEN 240 EC HERBICIDE  
**Other Means of Identification:** Mixture  
**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 Hazard(s) 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)

### Hazard Symbols

- **health hazard**
  - Toxic To Reproduction 1B **H360D** May damage the unborn child.  
  - Aspiration Hazard **H304** May be fatal if swallowed and enters airways.

### environment

- Aquatic Chronic 2 **H411** Toxic to aquatic life with long lasting effects.

- Skin Corrosion/Irritation 2 **H315** Causes skin irritation.  
- Serious Eye Damage/Irritation 2A **H319** Causes serious eye irritation.  
- STOT SE 3 **H335** May cause respiratory irritation.  
- Aquatic Acute 2 **H401** Toxic to aquatic life.

**Signal Word** Danger

**Hazard Statements**

- H315 Causes skin irritation.  
- H319 Causes serious eye irritation.  
- H360D May damage the unborn child.  
- H335 May cause respiratory irritation.  
- H304 May be fatal if swallowed and enters airways.  
- H411 Toxic to aquatic life with long lasting effects.

**Precautionary Statements**

- **P201** Obtain special instructions before use.  
- **P202** Do not handle until all safety precautions have been read and understood.  
- **P261** Avoid breathing dust/fume/gas/mist/vapours/spray.

(Contd. on page 2)
Safety Data Sheet
according to WHS Regulations

Printing date 04.10.2018
Revision: 04.10.2018

Product Name: GENFARM OXYFLUORFEN 240 EC HERBICIDE

(Contd. of page 1)

P264 Wash hands thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P321 Specific treatment (see on this label).
P331 Do NOT induce vomiting.
P302+P352 IF ON SKIN: Wash with plenty of water.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P312 Call a POISON CENTER/doctor if you feel unwell.
P362+P364 Take off contaminated clothing and wash it before reuse.
P333+P313 If skin irritation occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P391 Collect spillage.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
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>CAS: 64742-94-5 Solvent naphtha (petroleum), heavy arom.</td>
<td>Aspiration Hazard 1, H304</td>
</tr>
<tr>
<td>CAS: 42874-03-3 Oxyfluorfen</td>
<td>Aquatic Acute 1, H400; Aquatic Chronic 1, H410</td>
</tr>
<tr>
<td>CAS: 872-50-4 N-methyl-2-pyrrolidone</td>
<td>Toxic To Reproduction 1B, H360D; Skin Corrosion/Irritation 2, H315; Serious Eye Damage/Irritation 2A, H319; STOT SE 3, H335; Flammable Liquids 4, H227</td>
</tr>
</tbody>
</table>

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.

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

Ingestion:
If swallowed, do not induce vomiting. Immediately rinse mouth with water. Give a glass of water. 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.

(Contd. on page 3)
Symptoms Caused by Exposure:
Inhalation: May cause respiratory irritation.
Skin Contact: Causes skin irritation, itchiness and reddening.
Eye Contact: Causes serious eye irritation, stinging, reddening and watering. Prolonged exposure or delayed treatment may cause permanent eye damage.
Ingestion: May cause irritation, reddening and burning sensation to mouth and throat. May be fatal if swallowed and enters airways.

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, nitrogen oxides, other nitrogen compounds, hydrogen cyanide, hydrogen chloride, other chlorine compounds, hydrogen fluoride, other fluorine compounds, smoke and water.
Combustible liquid Class 2.
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. Collect the spilled material and place into a suitable container for disposal. Wash spill area, preventing runoff from entering drains.

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 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

Exposure Standards:
CAS: 872-50-4 N-methyl-2-pyrrolidone
NES STEL: 309 mg/m³, 75 ppm
TWA: 103 mg/m³, 25 ppm
Sk

(Contd. on page 4)
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
Appearance:
Form: Liquid

Colour: Clear, amber coloured

Odour: Sweet, characteristic

Odour Threshold: No information available

pH-Value: 7.2-7.5

Melting point/freezing point: -24 °C (2-pyrrolidone, 1-methyl-)

Initial Boiling Point/Boiling Range: 202 °C (at 100 KPa)

Flash Point: 100 °C (SCC)

Flammability: Combustible liquid Class 2

Auto-ignition Temperature: ~350 °C

Decomposition Temperature: No information available

Explosion Limits:
Lower: 1.3 %
Upper: 12 %

Vapour Pressure at 20 °C: 0.04 kPa (2-pyrrolidone, 1-methyl-)

Relative Density: ~1.08

Vapour Density: ~5

Evaporation Rate: No information available

Solubility in Water: Emulsifies into water.

Partition Coefficient (n-octanol/water): No information available

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: Strong oxidising agents, strong acids and strong bases.
**11 Toxicological Information**

**Toxicity:**

| CAS: 872-50-4 N-methyl-2-pyrrolidone | |
| Oral | LD₅₀ 3914 mg/kg (rat) |
| Dermal | LD₅₀ 8000 mg/kg (rabbit) |

| CAS: 42874-03-3 Oxyfluorfen | |
| Oral | LD₅₀ 2700- 5000 mg/kg (mice) |
| | 5000 mg/kg (dog) |
| | 5000 mg/kg (rat) |
| Dermal | LD₅₀ >5000 mg/kg (rat) |
| | >5000 mg/kg (rabbit) |

**Acute Health Effects**

**Inhalation:** May cause respiratory irritation.

**Skin:** Causes skin irritation, itchiness and reddening.

**Eye:** Causes serious eye irritation, stinging, reddening and watering.

**Ingestion:**

May cause irritation, reddening and burning sensation to mouth and throat. May be fatal if swallowed and enters airways.

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

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

**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:**

2-Pyrrolidinone, 1-methyl- is classified by Safe Work Australia as Toxic to Reproduction Category 2. 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:** May be fatal if swallowed and enters airways.

**Chronic Health Effects:**

Prolonged exposure or delayed treatment may cause permanent eye damage. Prolonged exposure may cause liver damage.

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

**Additional toxicological information:**

The Australian Acceptable Daily Intake (ADI) for oxyfluorfen for a human is 0.025mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 2.5 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: Oxyfluorfen is non-toxic to bees and birds.

Aquatic toxicity: Very toxic to aquatic life with long lasting effects.

Persistence and Degradability:
Oxyfluorfen is biodegradable and has a moderate persistence. Half-life in soil is 30-40 days.

Bioaccumulative Potential:
The product has low to moderate potential for bioaccumulation in aquatic organisms.

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.

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: UN3082

Proper Shipping Name
ADG: Not regulated
IMDG, IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains oxyfluorfen), MARINE POLLUTANT

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: T4
Portable Tanks & Bulk Containers - Special Provisions: TP1, TP29
15 Regulatory Information

Australian Inventory of Chemical Substances:

CAS: 64742-94-5 Solvent naphtha (petroleum), heavy arom.
CAS: 42874-03-3 Oxyfluorfen
CAS: 872-50-4 N-methyl-2-pyrrolidone

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

16 Other Information

Date of Preparation or Last Revision: 04.10.2018
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
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
NEX: National Exposure Standard (Safe Work Australia - Workplace Exposure Standards For Airborne Contaminants)
Flammable Liquids 4: Flammable liquids – Category 4
Flammable Liquids 2: Flammable liquids – Category 2
Skin Corrosion/Irritation 2: Skin corrosion/irritation – Category 2
Serious Eye Damage/Irritation 2A: Serious eye damage/eye irritation – Category 2A
Toxic To Reproduction 1B: Reproductive toxicity – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aspiration Hazard 1: Aspiration hazard – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment, short-term (Acute). Category 1
Aquatic Acute 2: Hazardous to the aquatic environment, short-term (Acute). Category 2
Aquatic Chronic 1: Hazardous to the aquatic environment, long-term (Chronic). Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment, long-term (Chronic). Category 2

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 - February 2016”
The information contained in this safety data sheet is provided in good faith and is believed to be accurate at the date of issuance. Landmark Operations Limited 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. MSDS.COM.AU Pty Ltd is not in a position to warrant the accuracy of the data herein. 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.