

SAFETY DATA SHEET

According to Safe Work Australia

1 . IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product Name: GENFARM HALOXYFOP 520 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 . 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)



environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

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



Acute Tox. 4 H302 Harmful if swallowed.

Signal Word Warning

Hazard Statements

H302 Harmful if swallowed.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

P273 Avoid release to the environment.

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P330 Rinse mouth.

P391 Collect spillage.



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:

| | | |
|------------|--|-----|
| 72619-32-0 | methyl (R)-2-(4-(3-chloro-5-trifluoromethyl-2-pyridyloxy)phenoxy) propionate | 52% |
| |  Aquatic Acute 1, H400; Aquatic Chronic 1, H410;  Acute Tox. 4, H302 | |

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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. Do not give anything by mouth to an unconscious person. Seek immediate medical attention.

Symptoms Caused by Exposure:

Inhalation: May be harmful if inhaled, causing similar symptoms to ingestion. May cause mild irritation.

Skin Contact: May cause skin irritation, itchiness and reddening.

Eye Contact: May cause eye irritation, stinging, reddening and watering.

Ingestion: Harmful if swallowed. May cause loss of appetite and damage to liver and kidneys.

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, water and smoke.

Combustible liquid Class 1.

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

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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:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Engineering Controls: Ensure adequate ventilation of the working area.

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: | Brown |
| Odour: | Solvent-like |
| Odour Threshold: | No information available |
| pH-Value: | No information available |
| Melting point/Melting range: | No information available |
| Initial Boiling Point/Boiling Range: | 202 °C (at 100 KPa (solvent)) |
| Flash Point: | 92 °C (Pensky Martin closed cup) |
| Flammability: | Combustible liquid Class 1 |
| Auto-ignition Temperature: | No information available |
| Decomposition Temperature: | No information available |
| Explosion Limits: | |
| Lower: | No information available |
| Upper: | No information available |
| Vapour Pressure at 25 °C: | 0.00171 Pa (active ingredient) |
| Relative Density at 20 °C: | 1.16 |
| Vapour Density: | No information available |
| Evaporation Rate: | No information available |
| Solubility in Water: | Emulsifies into water. |

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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.

Hazardous Decomposition Products:

Oxides of carbon, nitrogen, nitrogen oxides, other nitrogen compounds, hydrogen cyanide, hydrogen chloride, other chlorine compounds, hydrogen fluoride, other fluorine compounds, water and smoke.

11 . TOXICOLOGICAL INFORMATION

Toxicity:

LD₅₀/LC₅₀ Values Relevant for Classification:

72619-32-0 methyl (R)-2-(4-(3-chloro-5-trifluoromethyl-2-pyridyloxy)phenoxy) propionate

Oral LD₅₀ 393 mg/kg (rat)

Dermal LD₅₀ >5000 mg/kg (rabbit)

111-90-0 2-(2-ethoxyethoxy)ethanol

Oral LD₅₀ 5500 mg/kg (rat)

Dermal LD₅₀ 8500 mg/kg (rabbit)

Acute Health Effects

Inhalation: May be harmful if inhaled, causing similar symptoms to ingestion. May cause mild irritation.

Skin: May cause skin irritation, itchiness and reddening.

Eye: May cause eye irritation, stinging, reddening and watering.

Ingestion: Harmful if swallowed. May cause loss of appetite and damage to liver and kidneys.

Skin Corrosion / Irritation: Based on classification principles, the classification criteria are not met.

Serious Eye Damage / Irritation: Based on classification principles, the classification criteria are not met.

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

Specific Target Organ Toxicity (STOT) - Single Exposure:

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

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. Prolonged exposure may cause reduced weight gain, increased liver weight, decreased thyroid weight, decreased serum cholesterol and kidney damage.

Existing Conditions Aggravated by Exposure: No information available

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Additional toxicological information:

The Australian Acceptable Daily Intake (ADI) for haloxyfop for a human is 0.0003 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.03 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: Haloxyfop is non-toxic to bees and birds:

Aquatic toxicity:

72619-32-0 methyl (R)-2-(4-(3-chloro-5-trifluoromethyl-2-pyridyloxy)phenoxy) propionate

LC₅₀ 96- >1000 mg/L (fish)

Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: Haloxyfop - half-life in soil is 55 - 100 days.

Bioaccumulative Potential: No information available

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

IMDG, IATA

Not regulated

UN3082

Proper Shipping Name

ADG

IMDG, IATA

Not regulated

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains methyl (R)-2-(4-(3-chloro-5-trifluoromethyl-2-pyridyloxy)phenoxy)propionate), MARINE POLLUTANT

Dangerous Goods Class

ADG Class:

IMDG Class:

Not regulated

9 Miscellaneous dangerous substances and articles
Miscellaneous dangerous substances and articles.

Packing Group:

ADG

IMDG, IATA

Not regulated

III

Marine pollutant:

Yes

Symbol (fish and tree)

EMS Number:

F-A,S-F

Hazchem Code:

.3Z

Special Provisions:

179, 274, 331, 335, AU01

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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:

| | |
|------------|--|
| 72619-32-0 | methyl (R)-2-(4-(3-chloro-5-trifluoromethyl-2-pyridyloxy)phenoxy) propionate |
| 111-90-0 | 2-(2-ethoxyethoxy)ethanol |

Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) - Poison Schedule:
Poisons Schedule: 6

16 . OTHER INFORMATION

Date of Preparation or Last Revision: 13.08.2015

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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