

SAFETY DATA SHEET

HERALD®

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND COMPANY

1.1 Identifiers

Product name: **Herald®**
 Other Name(s): 520g/L Haloxyfop-p as the methyl ester in the form of an emulsifiable concentrate

1.2 Recommended use of the chemical and restrictions on use

Product Use: A selective post emergence herbicide for the control of grass weeds and storksbill in many broadleaf crops, orchards and forestry.

1.3 Supplier contact details:

Company name: Grosafe Chemicals Limited
 Address: 20 Jean Batten Drive Mt Maunganui, 3116
 Telephone: 0800 220 002
 Email: info@grosafe.co.nz

Emergency telephone number (24 hour) 0800 CHEMCALL (0800 243 622)

SECTION 2: HAZARD IDENTIFICATION

2.1 Classification of the substance

Hazardous substance according to Hazardous Substances and New Organisms (HSNO) Act 1996
 HSNO Approval: HSR100054

Hazard Classifications: Flammable liquid Category 4, Acute oral toxicity Category 4, Aspiration hazard Category 1, Eye irritation Category 2, Specific target organ toxicity (repeated exposure) Category 2, Hazardous to terrestrial vertebrates; Hazardous to the aquatic environment acute Category 1; Hazardous to the aquatic environment chronic Category 1.

2.2 Label elements:

Pictograms:



Signal Word: DANGER

Hazard statements:

H227	Combustible liquid
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H373	May cause damage to organs through prolonged or repeated oral exposure.
H400	Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects.
Harmful to terrestrial vertebrates.

Precautionary statements:

Prevention

P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking.
P364 Wash hands and exposed skin after handling.
P260 Do not breathe fumes/mist/vapour/spray.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves, protective clothing and eye/face protection.

Response

P301 + P310 IF SWALLOWED: IMMEDIATELY call a POISON CENTRE or doctor.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314 Get medical advice/attention if you feel unwell.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P330 Rinse mouth.
P331 Do NOT induce vomiting.
P391 Collect spillage.
P370 + P378 In case of fire use water fog, foam, carbon dioxide or dry chemical to extinguish.

Storage

P403 Store in a well-ventilated place
P405 Store locked up.

Disposal

P501 Dispose of contents/container in accordance with local regulations.

Additional labelling statements required under Hazardous Substances (Labelling) Notice 2017

Do not apply directly into or onto water.

Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS	Proportion %w/w
Haloxypop-p-methyl	72619-32-0	540.2g/L
Aromatic Hydrocarbon	64742-94-5	30-50%
Other ingredients that do not contribute to the hazard classifications of this product	-	Balance up to 1L

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General Information: For advice, or if you feel unwell, call NATIONAL POISONS CENTRE (0800 POISON) for advice. Have product container or label at hand.

IF SWALLOWED: Do NOT induce vomiting. IMMEDIATELY call a POISON CENTRE or doctor.

IF ON SKIN: Wash with plenty of soap and water.

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 INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing. Get medical advice if you feel unwell.

Medical attention and special treatment

Treat symptomatically. No symptoms relating to exposure are expected.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Suitable extinguishing media

Water fog, foam, carbon dioxide or dry chemical.

5.2 Specific hazards arising from this chemical

On burning will emit toxic fumes. During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

5.3 Precautions in connection with fire

Isolate fire area. Evacuate downwind. Firefighters to wear self-contained breathing apparatus and suitable protective clothing if risk to of exposure to vapour or smoke. Keep containers cool by spraying with water. Do not breathe or contact smoke, gases or vapours generated. Contain all run off.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Have this SDS available. In the event of an accidental spill, wear full protective clothing including respiratory, gloves and eye/face protection. Wash contaminated personal protective equipment and clothing, and dry before re-use.

6.2 Environmental precautions

Prevent spillage from entering drains or waterways. If contamination of drains, streams, watercourses, etc. is unavoidable, advise the local water authority.

6.3 Methods and materials for containment and cleaning up

Contain spilled material. For small liquid spills, use absorbent material such as sand, soil, vermiculite and recover into labelled drums that can be sealed for safe disposal. For large liquid spills, recover liquid into labelled containers then absorb remaining liquid and transfer to drums for disposal. Clean area with water and detergent. Dispose of contaminated materials to approved landfill in accordance with local regulations.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Read the product label before use. Wear protective eye protection/face protection, protective gloves and protective clothing. Wash hands and any exposed skin thoroughly after handling.

7.2 Conditions for safe storage

Store locked up in the tightly closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. DO NOT store near feedstuffs, fertilisers or seed. Do not store near heat or flame. Stores containing 500 L or more of Intrepid must have at least 2 fire extinguishers.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Occupational exposure limit values

No exposure limit established

8.2 Biological limit values

No exposure limits allocated.

8.3 Engineering controls

Use in well-ventilated areas only. Use local exhaust at all process locations. Ventilate all transport vehicles prior to unloading. Keep containers closed when not in use. Refer to relevant regulations for further information concerning ventilation requirements.

8.4 Personal protective equipment (PPE)

The following Standards provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: **AS/NZS 4501**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

Eye/Face Protection: Wear protective glasses, goggles or face shield when mixing or applying product.

Skin Protection: Wear impervious gloves, coat, trousers, waterproof hat. Ensure all skin areas are covered.

Respirator: Where product is being sprayed and a mist could be produced, a respirator should be worn. It should be fitted with a cartridge suitable for agricultural chemicals.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Amber liquid
Odour	Not available
Odour threshold	Not available
pH	6.0 – 8.0
Melting/Freezing Point	<0°C (approximate)
Boiling Point /Range	Not available
Flash point	92°C (PMCC)
Flammability (solid, gas)	Liquid
Upper/lower flammability or explosive limits	No data
Vapour Pressure	0.328 mPa at 25°C for haloxyfop-P-methyl
Vapour density	No data
Specific gravity	1.088 g/ml
Solubility	Emulsifies in water
Partition Co-efficient n-octanol/water	No data
Auto-ignition temperature	No data
Decomposition temperature	No data
Viscosity	No data
Particle characteristics	No data

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity and stability

Stable under normal conditions of storage and handling.

10.2 Conditions to Avoid

Do not store for prolonged periods in direct sunlight.

10.3 Incompatible materials

Explosives (class 1), oxidising gases, oxidising liquids, oxidising solids, organic peroxides

10.4 Hazardous decomposition products

Product is unlikely to decompose until heated to dryness. On further heating will emit unidentified toxic fumes.

10.5 Possibility of hazardous reactions

No special considerations. Not known to polymerise.

10.6 Hazardous Polymerisation

No information available.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Health hazard information

The product is classified for health hazards according to an assessment of information on product components.

11.2 Toxicological information

Acute toxicity:	Classified as acute oral toxicant.
Aspiration hazard:	Classified as aspiration toxicant.
Respiratory irritation:	Not classified.
Skin corrosion/irritation	Not classified.
Serious eye damage/irritation	Eye irritant.
Respiratory or skin sensitisation	Not classified
Germ cell mutagenicity:	No ingredients in product identified as presumed or suspected mutagens.
Carcinogenicity	No ingredients in product identified as presumed or suspected carcinogens.
Reproductive toxicity	No ingredients in product identified suspected of damaging fertility or the unborn child.
Specific target organ toxicity – single/repeated exposure	Classified as specific target organ toxicant (repeated exposure)
Narcotic effects	Product contains no ingredient identified as causing narcotic effects.

11.3 Toxicological data

No data for formulated product. The following data is for the active ingredient, haloxyfop-P-methyl.

Acute oral LD50:	300mg/kg in the rat
Acute dermal LD50:	> 2000mg/kg in the rat
Acute inhalation LC50:	No information available

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity

This product is classified as Hazardous to the aquatic environment acute Category 1; Hazardous to the aquatic environment chronic Category 1; Hazardous to terrestrial vertebrates.

No data available for formulated product. The following data is for the active ingredient, haloxyfop-P-methyl.

Aquatic life : LC50 (96 hr) for rainbow trout is 0.7 mg/L. EC50 (48hr) for daphnia is 6.12 mg/L.

Algae - EC50 (5d) for *Navicula pelliculosa* is 1.72 mg/L

Birds: LD50 for bobwhite quail is 414 mg/L

Bees: Not toxic to bees LD50 >100 µg/bee.

Soil organisms: Earthworms: 14 day LC₅₀ >1343 mg/kg

12.2 Persistence and degradability

Non-persistent (haloxyfop-p-methyl) DT_{50} (typical) 0.5

12.3 Mobility

No data available.

12.4 Bioaccumulative Potential

Low potential (haloxyfop-p-methyl) BCF ($l\ kg^{-1}$) 17

12.5 Other adverse effects

This product may cause serious damage to non-target terrestrial plants.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Product Disposal

Dispose of this product only by using according to the label, or through a Chemical Recovery service or other licensed hazardous waste disposal facility.

13.2 Container Disposal

Triple rinse empty container and add rinsate to spray tank. Submit clean empty container to an Agrecovery® depot for recycling. Alternatively, puncture and dispose of at an approved landfill.

13.3 Precautions

Do not allow product or empty container to enter waterways.

13.4 Disposal methods to avoid

Do not burn empty container. Do not allow product or empty container to enter waterways.

SECTION 14: TRANSPORT INFORMATION

Road and Rail Transport:

Classified as Dangerous Goods for the transport according to the New Zealand Standard NZS 5433:2012 Transport of Dangerous Goods on Land.

Marine Transport (IMO/IMDG):

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Air Transport (ICAO/IATA):

Classified as Dangerous Good by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulation for transport by air.

UN Number:	3082
UN Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (haloxyfop-P-methyl)
Transport hazard class(es)	9
Packing Group:	III
Hazchem	3Z
Special Precautions for User:	Not available
IMDG Marine pollutant:	Yes
Transport in Bulk:	Not available

SECTION 15: REGULATORY INFORMATION

Hazardous substance according to Hazardous Substances (Hazard Classification) Notice 2020.

Approval number: HSR100054.

Hazardous classifications: Flammable liquid Category 4, Acute oral toxicity Category 4, Aspiration hazard Category 1, Eye irritation Category 2, Specific

target organ toxicity (repeated exposure) Category 2, Hazardous to terrestrial vertebrates; Hazardous to the aquatic environment acute Category 1; Hazardous to the aquatic environment chronic Category 1.

HSW (HS) Regulations 2017	Trigger Quantity
Certified Handler	Not required
Qualifications	Qualifications needed for mixing or loading this substance in preparation for application. Refer to Schedule 10 of the Hazardous Substances (Hazardous Property Controls) Notice 2017.
Location Certificate	Not required
Signage Trigger Quantity (Schedule 3)	100 L
Emergency Response Plan (Schedule 5)	100 L
Secondary Containment (Schedule 16)	100 L
Tracking (Schedule 26)	Not required
Tolerable Exposure Level (TEL)	None set
Environmental Exposure Level (EEL)	0.84 µg/L
International Agreements	Not applicable
Additional information:	Refer to HS Notices (www.epa.govt.nz) and HSW HS Regulations (www.worksafe.govt.nz)
ACVM registration:	Registered pursuant to the Agricultural Compounds and Veterinary Medicines Act 1997; registration number P010163.

SECTION 16: OTHER INFORMATION

16.1 Date of preparation or last revision of SDS

SDS issued	03 September 2024
SDS supersedes	N/A
Reason issued	Initial SDS

16.2 ABBREVIATIONS

ADI	Acceptable Daily Intakes
CAS number	Chemical Abstracts Service Registry Number
CCID	Chemical Classification Identification Database
EPA	Environmental Protection Authority
ErC₅₀	Half maximal Effective Concentration
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
HSNO	Hazardous Substances and New Organisms
HS	Health and Safety
HSR	Hazardous Substances Register
IARC	International Agency for Research on Cancer
LC₅₀	Median Lethal Concentration
LD₅₀	Median Lethal Dose
SDS	Safety Data Sheets

NOAEL	No Observable Adverse Effect Level
NOEL	No Observable Effect Level
NOS	Not otherwise specified
STEL	Short Term Exposure Limit
SWA	Safety Work Australia
TWA	Time-Weighted Average
UN Number	United Nations Number

16.3 REFERENCES

Manufacturer information
EPA CCID and Approved Substance databases
University of Hertfordshire Pesticides Properties Database

16.4 OTHER

Herald® is a registered trademark of Grosafe Chemicals Ltd

Information contained in this Safety Data Sheet is provided in good faith and is believed to be correct at the date hereof. However, it's expected that individuals receiving the information will exercise independent judgement in determining its appropriateness for a particular purpose. Grosafe Chemicals Ltd makes no representation whatsoever as to the accuracy or comprehensiveness of the information and to the full extent allowed by law excludes all liability whatsoever, whether with respect to negligence or otherwise, and no responsibility as permitted by law for any loss or damage arising from or connection with the supply or use of the information in this Safety Data Sheet.

End of Safety Data Sheet