



## Section 1 - Identification Of The Material And Supplier

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**Chemical nature:** Haloxyfop is a 2-(4-aryloxyphenoxy) propionic acid derivative, present as the P-methyl ester.

**Trade Name:** **Firepower 900 Herbicide**

**APVMA Code:** to be advised

**Product Use:** Agricultural herbicide for use as described on the product label.

**Creation Date:** **May, 2017**

**This version issued:** **February, 2023** and is valid for 5 years from this date.

**Poisons Information Centre: Phone 13 1126 from anywhere in Australia**

## Section 2 - Hazards Identification

### Statement of Hazardous Nature

**SUSMP Classification:** S6

**ADG Classification:** Class 9: Miscellaneous dangerous goods.

**UN Number:** 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains Haloxyfop).



### GHS Signal word: **WARNING.**

Acute toxicity (oral) - category 4

Skin irritation – category 2

Eye irritation – category 2A

Hazardous to the aquatic environment (acute) - category 1

Hazardous to the aquatic environment (chronic) - category 1

### HAZARD STATEMENT:

H302: Harmful if swallowed.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H361d: Suspected of damaging the unborn child.

H410: Very toxic to aquatic life with long lasting effects.

### PREVENTION

P102: Keep out of reach of children.

P210: Keep away from heat, sparks, open flames and hot surfaces. - No smoking.

P262: Do not get in eyes, on skin, or on clothing.

P264: Wash contacted areas thoroughly after handling.

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

P273: Avoid release to the environment.

P280: Wear protective gloves, protective clothing and eye or face protection.

### RESPONSE

P362: Take off contaminated clothing and wash before reuse.

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

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332+P313: If skin irritation occurs: Get medical advice.

P337+P313: If eye irritation persists: Get medical advice.

P370+P378: In case of fire, use carbon dioxide, dry chemical, foam, water fog.

### STORAGE

## SAFETY DATA SHEET

P410: Protect from sunlight.

P402+P404: Store in a dry place. Store in a closed container.

P403+P235: Store in a well-ventilated place. Keep cool.

#### DISPOSAL

P501: Dispose of contents and containers as specified on the registered label.

### Emergency Overview

**Physical Description & Colour:** Clear amber liquid.

**Odour:** Slight aromatic odour.

**Major Health Hazards:** For Haloxyfop-methyl the oral LD<sub>50</sub> is 393 mg/kg for rats. The LD<sub>50</sub> is greater than 5,000 mg/kg for rabbits whose skin is exposed to Haloxyfop-methyl. Haloxyfop-ethoxyethyl has an oral LD<sub>50</sub> of 518-531 mg/kg for rats. The dermal LD<sub>50</sub> is greater than 2000 mg/kg for rats and greater than 5,000 mg/kg for rabbits. Both Haloxyfop forms are non-irritating to skin and do not cause skin sensitization. They are mild eye irritants. The symptoms of toxicity in rats are reduced food intake and reduced food consumption. They may also cause liver and kidney damage. This product is irritating to skin, causes serious eye irritation and is harmful if swallowed. Suspected of damaging the unborn child.

### Section 3 - Composition/Information On Ingredients

Ingredients	CAS No	Conc, %	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )
Haloxyfop P-methyl ester	72619-32-0	900g/L	not set	not set
2-ethylhexanol	104-76-7	10-30	not set	not set
Other non hazardous ingredients	secret	to 100	not set	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

### Section 4 - First Aid Measures

#### General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

**Inhalation:** No first aid measures normally required. However, if inhalation has occurred, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

**Skin Contact:** Wash gently and thoroughly with warm water (use non-abrasive soap if necessary) for 10-20 minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts) and completely decontaminate them before reuse or discard. If irritation persists, repeat flushing and seek medical attention.

**Eye Contact:** Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain medical attention immediately. Take special care if exposed person is wearing contact lenses.

**Ingestion:** If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.

### Section 5 - Fire Fighting Measures

**Fire and Explosion Hazards:** This product is classified as a C1 combustible product. There is no risk of an explosion from this product under normal circumstances if it is involved in a fire. Violent steam generation or eruption may occur upon application of direct water stream on hot liquids. Vapours from this product are heavier than air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures. They may also flash back considerable distances.

Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

**Extinguishing Media:** Try to contain spills, minimise spillage entering drains or water courses.

**Fire Fighting:** If a significant quantity of this product is involved in a fire, call the fire brigade. There is little danger of a violent reaction or explosion if significant quantities of this product are involved in a fire. Recommended personal protective equipment is full fire kit and breathing apparatus.

**Flammability Class:** Not flammable (GHS); C1 combustible (AS 1940)

### SAFETY DATA SHEET

## Section 6 - Accidental Release Measures

**Accidental release:** In the event of a major spill, prevent spillage from entering drains or water courses. Wear full protective clothing including eye/face protection. All skin areas should be covered. See below under Personal Protection regarding Australian Standards relating to personal protective equipment. Suitable materials for protective clothing include rubber, PVC. Eye/face protective equipment should comprise as a minimum, protective goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned below (section 8). Otherwise, not normally necessary.

Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this SDS and the label, instructions on the label prevail. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

## Section 7 - Handling And Storage

**Handling:** Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

**Storage:** Note that this product is combustible and therefore, for Storage, meets the definition of Dangerous Goods in some states. If you store large quantities (tonnes) of such products, we suggest that you consult your state's Dangerous Goods authority in order to clarify your obligations regarding their storage.

Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. Some liquid preparations settle or separate on standing and may require stirring before use. Check packaging - there may be further storage instructions on the label.

## Section 8 - Exposure Controls And Personal Protection

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

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

<b>SWA Exposure Limits</b>	<b>TWA (mg/m<sup>3</sup>)</b>	<b>STEL (mg/m<sup>3</sup>)</b>
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Exposure limits have not been established by SWA for any of the significant ingredients in this product.

The ADI for Haloxyfop P is set at 0.0003mg/kg/day. The corresponding NOEL is set at 0.03mg/kg/day. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from Australian ADI List, March 2016.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

**Ventilation:** This product should only be used in a well ventilated area. If natural ventilation is inadequate, use of a fan is suggested.

**Eye Protection:** Protective glasses or goggles should be worn when this product is being used. Failure to protect your eyes may cause them harm. Emergency eye wash facilities are also recommended in an area close to where this product is being used.

**Skin Protection:** Prevent skin contact by wearing impervious gloves, clothes and, preferably, apron. Make sure that all skin areas are covered. See below for suitable material types.

**Protective Material Types:** We suggest that protective clothing be made from the following materials: rubber, PVC.

**Respirator:** Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above. Otherwise, not normally necessary.

Eyebaths or eyewash stations and safety deluge showers should be provided near to where this product is being used.

## Section 9 - Physical And Chemical Properties:

**Physical Description & colour:** Clear amber liquid.

**Odour:** Slight aromatic odour.

### SAFETY DATA SHEET

<b>Boiling Point:</b>	Not available.
<b>Flash point:</b>	115°C
<b>Upper Flammability Limit:</b>	No data.
<b>Lower Flammability Limit:</b>	No data.
<b>Autoignition temperature:</b>	No data.
<b>Freezing/Melting Point:</b>	No specific data. Liquid at normal temperatures.
<b>Volatiles:</b>	No data.
<b>Vapour Pressure:</b>	No data.
<b>Vapour Density:</b>	No data.
<b>Specific Gravity:</b>	1.21-1.25 at 20°C
<b>Water Solubility:</b>	Emulsifiable.
<b>pH:</b>	3.0-5.0 (1% v/v aqueous mixture).
<b>Volatility:</b>	No data.
<b>Odour Threshold:</b>	No data.
<b>Evaporation Rate:</b>	No data.
<b>Coeff Oil/water Distribution:</b>	No data
<b>Particle Characteristics:</b>	Not applicable to liquids.

## Section 10 – Stability and Reactivity

**Reactivity:** This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

**Conditions to Avoid:** Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

**Incompatibilities:** strong acids, strong bases, strong oxidising agents.

**Fire Decomposition:** Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. Hydrogen chloride gas, other compounds of chlorine. Hydrogen fluoride gas and other compounds of fluorine. Water. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

**Polymerisation:** This product will not undergo polymerisation reactions.

## Section 11 - Toxicological Information

**Toxicity: Acute Toxicity:** For Haloxyfop-methyl the oral LD<sub>50</sub> is 393 mg/kg for rats. The dermal LD<sub>50</sub> is greater than 5,000 mg/kg for rabbits. Haloxyfop-ethoxyethyl has an oral LD<sub>50</sub> of 518-531 mg/kg for rats. The dermal LD<sub>50</sub> is greater than 2000 mg/kg for rats and greater than 5,000 mg/kg for rabbits. Both Haloxyfop forms are non-irritating to skin and do not cause skin sensitization. They are mild eye irritants. The symptoms of toxicity in rats are reduced food intake and reduced food consumption. They may also cause liver and kidney damage.

**Chronic Toxicity:** No Information Available.

**Reproductive Effects:** In rats, oral doses of 10 and 50 mg/kg/day of Haloxyfop-ethoxyethyl from days 6 to 16 of pregnancy reduced the number of live offspring per litter and caused vaginal bleeding in the mother.

**Teratogenic Effects:** Oral doses of 50 mg/kg/day of Haloxyfop-ethoxyethyl in rats between days 6 and 16 of pregnancy caused developmental abnormalities in the offspring's urinogenital system and death to the foetus. Oral doses of 7.5 mg/kg/day of Haloxyfop-methyl given to rats from days 6 to 15 of pregnancy caused delayed bone formation in the offspring.

**Mutagenic Effects:** No information is currently available.

**Carcinogenic Effects:** Studies show that 0.1 mg/kg/day of Haloxyfop-methyl for two years, the highest dose tested, does not cause cancer in rats. Similarly, 0.6 mg/kg/day for two years, (highest dose tested), is not carcinogenic to mice.

**Organ Toxicity:** Doses of 100 mg/kg/day of Haloxyfop-methyl caused kidney damage in adult rats. Doses of 0.6 mg/kg/day for 2 years in mice caused reduced body weight gains and increased liver weights in mice. In dogs, 5 mg/kg/day causes a significant decrease in serum cholesterol, as well as a decrease in thyroid weight.

**Fate in Humans and Animals:** In rats, Haloxyfop-ethoxyethyl undergoes metabolism to Haloxyfop which is excreted in faeces and urine.

There is no data to hand indicating any particular target organs.

### Classification of Hazardous Ingredients

Ingredient	Health Hazard Statement Codes
Haloxyfop P	H302, H410
<ul style="list-style-type: none"> <li>Acute toxicity (oral) - category 4</li> <li>Hazardous to the aquatic environment (acute) - category 1</li> </ul>	

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- Hazardous to the aquatic environment (chronic) - category 1

2-ethylhexanol

H332, H314, H361d

- Acute toxicity – category 4
- Skin corrosion – category 1
- Reproductive toxicity – category 2

### Potential Health Effects

#### Inhalation:

**Short Term Exposure:** Available data indicates that this product is not harmful. However product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort.

**Long Term Exposure:** No data for health effects associated with long term inhalation.

#### Skin Contact:

**Short Term Exposure:** Available data indicates that this product is not harmful. It should present no hazards in normal use. Product is irritating to skin. Symptoms may include itchiness and reddening of contacted skin. Other symptoms may also become evident, but all should disappear once exposure has ceased.

**Long Term Exposure:** No data for health effects associated with long term skin exposure.

#### Eye Contact:

**Short Term Exposure:** This product causes serious eye irritation. Symptoms may include stinging and reddening of eyes and watering which may become copious. Other symptoms may also become evident. If exposure is brief, symptoms should disappear once exposure has ceased, but prolonged exposure may result in eye damage.

**Long Term Exposure:** No data for health effects associated with long term eye exposure.

#### Ingestion:

**Short Term Exposure:** Significant oral exposure is considered to be unlikely. Available data shows that this product is harmful, but symptoms are not available. However, this product is an oral irritant. Symptoms may include burning sensation and reddening of skin in mouth and throat. Other symptoms may also become evident, but all should disappear once exposure has ceased.

**Long Term Exposure:** No data for health effects associated with long term ingestion.

#### Carcinogen Status:

**SWA:** No significant ingredient is classified as carcinogenic by SWA.

**NTP:** No significant ingredient is classified as carcinogenic by NTP.

**IARC:** No significant ingredient is classified as carcinogenic by IARC.

## Section 12 - Ecological Information

Very toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment.

**Effects on Birds:** Haloxyfop-methyl and Haloxyfop-ethoxyethyl are practically non-toxic to birds. The oral LD<sub>50</sub> is greater than 2,150 mg/kg for mallard ducks. The dietary LC<sub>50</sub> (8 day) is greater than 5,620 mg/kg for bobwhite quail.

**Effects on Aquatic Organisms:** Haloxyfop-methyl is practically non-toxic to fish. The LC<sub>50</sub> ranges from 96 to greater than 1000 mg/kg. Haloxyfop-ethoxyethyl is moderately to highly toxic to fish. The LC<sub>50</sub> (96 hour) is 0.54 mg/l for fathead minnows, 0.28 mg/l for bluegill sunfish, and 1.8 mg/l for rainbow trout. The LC<sub>50</sub> (48 hours) for Daphnia is 4.64 mg/l.

**Effects on Other Animals (Nontarget species):** Haloxyfop is not toxic to bees. The contact and oral LD<sub>50</sub> (48 hours) is 100 micrograms Haloxyfop/bee.

#### ENVIRONMENTAL FATE

**Breakdown of Chemical in Soil and Groundwater:** Haloxyfop-ethoxyethyl is converted to Haloxyfop in soil. The half-life of Haloxyfop-ethoxyethyl is greater than one day on silty clay loam at 20°C. The half-life of Haloxyfop in soil is 55-100 days depending on the soil. Leaching is moderate.

**Breakdown of Chemical in Surface Water:** The half-life of Haloxyfop in water is 33 days for Haloxyfop at pH 5, 5 days at pH 7, and a few hours at pH 9.

**Breakdown of Chemical in Vegetation:** No information is currently available.

## Section 13 - Disposal Considerations

**Disposal:** Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 <http://www.chemclear.com.au/> and for help with the disposal of empty drums, contact DrumMuster <http://www.drummuster.com.au/> where you will find contact details for your area.

### SAFETY DATA SHEET

## Section 14 - Transport Information

Not subject to the ADG Code when transported by Road or Rail in Australia, in packages 500kg(L) or less; or IBCs, but classed as Dangerous by IATA and IMSBC when carried by Air or Sea transport (see details below).

**UN Number:** 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains Haloxyfop).

**Hazchem Code:** •3Z

**Special Provisions:** 179, 274, 331, 335, AU01

**Limited quantities:** ADG 7 specifies a Limited Quantity value of 5 L for this class of product.

**Dangerous Goods Class:** Class 9: Miscellaneous Dangerous Goods.

**Packing Group:** III

**Packing Instruction:** P001, IBC03, LP01

Class 9 Miscellaneous Dangerous Goods shall not be loaded in the same vehicle or packed in the same freight container with Dangerous Goods of Class 1 (Explosives).

## Section 15 - Regulatory Information

**AIC:** All of the significant ingredients in this formulation are compliant with AICIS regulations.

The following ingredient: Haloxyfop, is mentioned in the SUSMP.

## Section 16 - Other Information

**This SDS contains only safety-related information. For other data see product literature.**

### Acronyms:

<b>ADG Code</b>	Australian Code for the Transport of Dangerous Goods by Road and Rail, 7th Edition
<b>AIC</b>	Australian Inventory of Industrial Chemicals
<b>CAS number</b>	Chemical Abstracts Service Registry Number
<b>Hazchem Code</b>	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
<b>IARC</b>	International Agency for Research on Cancer
<b>SWA</b>	Safe Work Australia, formerly ASCC and NOHSC
<b>NOS</b>	Not otherwise specified
<b>NTP</b>	National Toxicology Program (USA)
<b>SUSMP</b>	Standard for the Uniform Scheduling of Medicines & Poisons
<b>UN Number</b>	United Nations Number

### Contact Points:

Call Adama on (02)9431 7800 and ask for the technical manager.

Fax: (02)9431 7700

<b>Police and Fire Brigade:</b>	<b>Dial 000</b>
<b>Emergency contact:</b>	<b>1800 033 111 (24 hours)</b>

**If ineffective: Dial Poisons Information Centre  
(13 1126 from anywhere in Australia)**

THIS SDS 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 MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS. OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.

This SDS is prepared in accord with the SWA document "Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice" (July 2020) and GHS Revision 7  
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## SAFETY DATA SHEET