Product 69155 Sabakem Haloxyfop 520EC Herbicide

RLP APPROVED

Signal heading	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Product name	Sabakem® Haloxyfop 520EC Herbicide
Active constituent/s	520 g/L HALOXYFOP present as the haloxyfop-P methyl ester
Mode of action	GROUP A HERBICIDE
Statement of claims	For the post emergent control of a wide range of annual and perennial grass weeds in grain legume and oilseed crops, lucerne, medic and clover pasture and seed crops, forestry, bananas, citrus, grapes, pineapples, pome and stone fruit, pyrethrum, tropical fruit and nut crops as specified in the Direction for Use.
Net contents	1L, 5L, 10L, 20L, 110L
Name & address	Sabakem Pty Ltd ACN 151 682 138 1/395 — 399 Nepean Highway Frankston VIC 3199 Tel: 0448 888 960 www.sabakem.com
Directions for Use	
Restraints	RESTRAINTS: DO NOT apply to weeds which may be stressed (not actively growing) due to prolonged periods of extreme cold, moisture stress (waterlogged or drought affected), poor nutrition or previous herbicide treatment as reduced levels of control may result. DO NOT spray if rain is likely to occur within one hour.
Directions for Use (tables overleaf)	

DISPLAYED BY INFOPEST

***Table 1a*. Winter crops – Canola, Chickpeas, Faba beans, Field peas, Lentils, Linola, Linseed, Lupins, Lucerne, Vetch, Medic and Clover pastures or seed crops:**

WEEDS CONTROLLED	WEED GROWTH STAGE	RATE (mL/ha)		CRITICAL COMMENTS
		with Uptake† [1] Spraying Oil	with a non-ionic wetter [2]	
Annual ryegrass	2 to 4 leaf	75	100	**CANOLA, LINOLA AND LINSEED** DO NOT apply after the 8 leaf stage of the crop DO NOT apply after the commencement of stem elongation This means that application must not occur after the 8 leaf stage, or if stem elongation commences before the 8 leaf stage, application must not occur after stem elongation has commenced. DO NOT apply more than 1 application of herbicide containing haloxyfop per crop DO NOT apply after grazing [1] [2] See GENERAL INSTRUCTIONS, Spraying oils/wetters section. **FIELD PEAS AND CANOLA:** The only oil recommended for use with Sabakem® Haloxyfop 520EC is Uptake† Spraying Oil*. Sabakem® Haloxyfop 520EC + Lontrel 750 SG + Uptake† Spraying Oil are compatible and selective to canola. This tank-mix is also compatible with atrazine and selective to triazine tolerant canola. **LUPINS AND FIELD PEAS:** Mixtures with Brodal† or simazine may cause crop yellowing and separate applications are recommended. **CHICKPEAS, FABA BEANS, LENTILS AND VETCH, LINOLA, LINSEED:.** Broadleaf herbicides should not be added to Sabakem® Haloxyfop 520EC Herbicide. Apply Sabakem® Haloxyfop 520EC Herbicide and broadleaf herbicides at least a week apart. **LUCERNE, CLOVER OR MEDIC PASTURES:** If grazed or cut for hay immediately prior to treatment, delay application until all grasses have fully expanded leaves. Use 75 mL + spraying oil or 100 mL + wetter/ha. (See GENERAL INSTRUCTIONS, Spraying Oils/wetters section). If silver grass (*Vulpia spp.*) is present in pasture, simazine should be tank mixed with the higher rate of Sabakem® Haloxyfop 520EC plus a non-ionic wetter.
	Early Tillering	100	100	
Barley grass Brome grass Paradoxa grass Volunteer cereals	2 to 4 leaf	50	75	
	Early Tillering	75	100	
Wild oats WA, SA, Vic, Tas, Southern and Central NSW	2 to 4 leaf	37.5	50	
	Early Tillering	50	75	
Wild oats Northern NSW & Qld	2 to 4 leaf	50	75	
	Early Tillering	75	100	

***Table 1b*. Winter crop growth stage application windows**

Crop	Crop Growth Stage
Lucerne, Medic and Clover pastures or Seed crops	Apply from 2nd trifoliate leaf onwards. For *Erodium spp*. spraying, apply from cotyledon crop stage onwards.
Canola, Linola and Linseed	Apply from 2nd leaf to 8 leaf stage of crop growth. DO NOT apply after the commencement of stem elongation This means that application must not occur after the 8 leaf stage, or if stem elongation commences before the 8 leaf stage, application must not occur after stem elongation has commenced.
Chickpeas, Faba beans, Field peas, Lentils, Lupins, Vetch	Apply from 2nd leaf, 2nd node or 2nd branch to prior to flowering

***Table 2a*. Lucerne, Medic and Clover seed crops and pastures. See *table 1b* for crop stages**

WEEDS CONTROLLED	WEED GROWTH STAGE	RATE (mL/ha) with Uptake™[1] Spraying Oil	CRITICAL COMMENTS
Prairie grass (*Bromus catharticus*)	Up to early tillering	100	*** See GENERAL INSTRUCTIONS, Spraying oils/wetters section.** [3]Use lower rate when growing conditions and crop or pasture competition are good and when weed populations are below 100 plants/m^2. Use the higher rate when weed populations are above 100 plants/m^2 or when crop or pasture competition is poor. **NOTE :** Storksbill may not be controlled if simazine or Broadstrike† are tank-mixed with Convict. **LUCERNE, CLOVER OR MEDIC PASTURES:** If grazed or cut for hay immediately prior to treatment delay application until all grasses have fully expanded leaves. Use 75 mL + spraying oil or 100 mL + wetter/ha. (See GENERAL INSTRUCTIONS, Spraying Oils/wetters section). If silver grass (*Vulpia* spp.) is present in pasture, simazine should be tank mixed with the higher rate of Sabakem® Haloxyfop 520EC Herbicide plus a non-ionic wetter.
Musky or ferny leaf Storksbill: **(***Erodium moschatum***)** Common Crowsfoot or Common Storksbill (*Erodium cicutarium*)	Up to 6 leaf or 5 cm diameter	50 – 75[3]	
Long or shiny leaf storksbill (*E. botrys*)	Up to 8 leaf or 5 cm diameter	75-100	

***Table 2b*. Lucerne, Medic and Clover seed crops only - not to be used for stockfeed. See *table 1b* for crop stages**

WEEDS CONTROLLED	WEED GROWTH STAGE	RATE (mL/ha) with Uptake™ Spraying Oil	CRITICAL COMMENTS
Couch grass (suppression), Rhodes grass (control)	Tillering seedlings	150 + 150[4]	[4]For best suppression of couch or control of Rhodes grass, make 2 applications of Sabakem® Haloxyfop 520EC Herbicide 2-4 weeks apart. Time second application to coincide with tillering stage of weeds and just after irrigation or significant rain. Only treat actively growing weeds which are not moisture stressed. Use these rates for control of couch and Rhodes grass
Couch grass (control) Rhodes grass (control)	Established stands	400 - 800	

Table 3a. Summer crops – Cotton, Cowpea, Lucerne, Mung bean, Navy beans, Peanuts, Soybeans, Sunflowers.

WEEDS CONTROLLED	WEED GROWTH STAGE	RATE (mL/ha) with Uptake†[1] Spraying Oil	CRITICAL COMMENTS
Australian millet	2 leaf to tillering up to 15 cm	150	[1] **See GENERAL INSTRUCTIONS, Spraying oils/wetters section.**
Barnyard grass	2 to 5 leaf	100	**NAVY BEANS, PEANUTS, SOYBEANS**: For broadleaf weed control, Sabakem® Haloxyfop 520EC Herbicide at 150mL/ha plus wetter may be tank mixed with Blazer™ (except on navy beans) or Basagran™ Tank mixtures may cause transient leaf spotting on the crop but do not normally affect yield. **DO NOT** tank mix broadleaf herbicides with Sabakem® Haloxyfop 520EC if grasses have begun tillering or if the grasses are under moisture stress. **DO NOT** add Uptake† Spraying Oil when mixing with Blazer† or Basagran†. **DO NOT** use Blazer† or Basagran† tank-mixes on cowpea.
	Tillering up to 15 cm	150	
Crowsfoot grass Green panic Johnson grass (rhizome)	2 leaf to tillering up to 15 cm	150	
Johnson grass (seedling) Liverseed grass (seedling) Mossman river grass	2 to 5 leaf	100	
	Tillering and up to 15 cm	150	
Summer grass	2 leaf to tillering up to 15 cm	150	
Volunteer cereals	2 to 4 leaf	100	
	Tillering up to 15 cm	150	

Table 3b. Summer crop growth stage application windows

Crop	Crop Growth Stage
Lucerne	Apply from 2nd trifoliate leaf onwards
Cowpea, Mung beans, Navy beans, Soybeans	Apply from 2nd leaf to flowering
Peanuts	Apply from 2nd leaf to pegging
Cotton	Apply from 2nd leaf to before the onset of flowering
Sunflowers	Apply from 2nd leaf to head initiation

***Table 4*. Annual and Perennial grasses and *Erodium* spp. in Orchard, Vine and Plantation crops, Forestry, and Pyrethrum.**

CROPS	CROP GROWTH STAGE	WEEDS CONTROLLED	WEED GROWTH STAGE	RATE (mL/ha) with Uptake™ Spraying Oil	CRITICAL COMMENTS
Orchard, vine and plantation Crops including: Apples Avocado Banana Blueberry Citrus Custard apple Feijoa Grapevines Guava Kiwifruit Litchi (Lychee) Longan Mango Nashi Nut trees Passionfruit Paw paw Pear Persimmon Pineapple Rambutan Stone fruit	All growth stages	<u>Perennial grasses</u>: Couch Rhodes grass Slender rats tail grass	Established stands	400 – 800	**See GENERAL INSTRUCTIONS, Spraying oils/wetters section.** Spray should be directed to the base of the tree or vine avoiding contact with fruit and foliage.
		Buffel grass Green panic Johnson grass Kikuyu *Paspalum spp* *Setaria spp*	Vegetative to early tillering	200	**Spot spray:** Use 25 mL to 50 mL/100 L of water. Use higher rate on late tillering mature grasses.
			Late tillering	400	**Annual Grasses:** Where treated in association with perennial grasses, these annual grasses will be controlled.
Forestry: *Pinus radiata* *Eucalyptus* spp.		<u>Annual grasses:</u> Annual ryegrass Barley grass Barnyard grass Brome grass Crowsfoot grass Lesser canary grass Liverseed grass Mossman river grass Paradoxa grass Summer grass Volunteer cereals Wild oats	2 leaf to tillering	200	
Forestry: *Pinus pineaster*		Annual grasses as above	Vegetative to tillering	125 - 250	**Forestry:** For annual grasses apply lowest rate to newly emerged grasses, increasing the rate as they develop.
Pyrethrum		Barley grass Brome grass Rope twitch Barnyard grass *Erodium* spp. Volunteer cereals	Vegetative to tillering	100 - 250	**Pyrethrum Tasmania only**: For *Erodium spp* apply 75-100mL/ha if the main weed is *E. botrys.* Use 50 - 75 mL/ha if either *E. cicutarium* or *E. moschatum* are the main weeds.

Table 5. Sabakem® Haloxyfop 520EC and Clethodim Herbicide tank-mixes – Canola, Chickpeas, Faba beans, Field peas, Lupins, Lentils

WEEDS CONTROLLED	WEED GROWTH STAGE	RATE (mL/ha)		CRITICAL COMMENTS
		Sabakem® Haloxyfop 520EC	Clethodim Herbicide	
FOP/DIM susceptible Annual ryegrass + Volunteer barley Volunteer wheat Brome grass Wild oats Barley grass Phalaris	2 to 4 leaf	25	150	**See GENERAL INSTRUCTIONS, Spraying oils/wetters section.** Use Uptake Spraying Oil at 500mL/100L or Hasten® at 1L/100L. Apply at the same crop growth stages as those in Table 1b Winter Crops. **Lentils:** Apply up to 7 node-early branching crop growth stage only. **Lupins:** Not for Qld.
	Early tillering	38	150	
FOP resistant Annual ryegrass + Volunteer barley Volunteer wheat Brome grass Wild oats Barley grass Phalaris	2 to 4 leaf	25	200	
	Early tillering	38	250	

NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION

Other limitations	
Withholding Period/s	**WITHHOLDING PERIODS** **HARVEST:** **Canola, Chickpeas, Cotton, Cowpea, Faba Beans, Field Peas, Lentils, Linola, Linseed, Lupins, Mung Beans, Navy Beans, Orchard crops, Peanuts, Plantation crops, Soybeans, Sunflowers, Vetch or Vine crops.** **NOT REQUIRED WHEN USED AS DIRECTED** **Medic and Clover seed crops:** **DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION** **GRAZING AND STOCK FOOD:** **DO NOT GRAZE OR CUT FOR STOCK FOOD FOR:** **Canola, Chickpeas, Cotton, Cowpea, Faba Beans, Field Peas, Lentils, Linola, Linseed, Lupins, Mung Beans, Navy Beans, Peanuts, Soybeans, Sunflowers and Vetch:** **DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 28 DAYS AFTER APPLICATION** **Lucerne:** **DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 21 DAYS AFTER APPLICATION** **Medic and Clover Pasture:** **DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION** **COTTON GIN TRASH MUST NOT BE FED TO ANIMALS**.

Trade Advice	
General instructions	**MIXING** • Add water to the spray tank to 10 cm above the level of agitation and ensure the agitation device is working vigorously. (There must be a minimum of 100 L of water in the tank before any pesticide is added.) • If tank mixing, firstly, add any soluble liquid formulations (e.g. Lontrel† herbicide) and allow agitation for approximately one minute. • Then add Sabakem® Haloxyfop 520EC at the point where agitation is strongest. (**Do not add Sabakem® Haloxyfop 520EC Herbicide through a strainer or sieve**). Allow further agitation for one minute. • Half fill the spray tank. • If using wettable powder or water dispersible granules, or other emulsifiable concentration formulations (e.g. Lorsban† 750WG or Le-Mat†, these should be **added after the Sabakem® Haloxyfop 520EC Herbicide** to the half full spray tank ensuring vigorous agitation. • Finally add Uptake† Spraying Oil or approved alternate spraying oil/wetter. (*See section on spraying oils/wetters*) and continue filling the tank to the required volume maintaining agitation at all times. • Only mix sufficient solution for immediate use. Sabakem® Haloxyfop 520EC Herbicide and any other tank mixes should be applied immediately for best results. **SPRAYING OILS/WETTERS** **[1] Spraying Oils:** It is essential to add an adjuvant to Sabakem® Haloxyfop 520EC Herbicide . Best results will be achieved with Uptake† Spraying Oil at 0.5 L/100 L of spray solution. Alternatively, other oils plus a non-ionic wetter may also be used. When other crop spraying oils are used, mix at 1 L/100 L *and add a non-ionic wetter (surfactant) at 200 mL/100 L* of spray solution. **Use of an oil is not always recommended**. See Critical Comments for specific situation recommendations. **[2] Non-ionic Wetters:** When Uptake† or other oils are not used, a 100% concentrate non-ionic wetting agent such as BS-1000† at 200 mL/100 L must be used along with the higher rate of Sabakem® Haloxyfop 520EC Herbicide as specified in the Directions for Use. Where water volumes of less than 50 L/ha are used, **DO NOT** use less than 250 mL/ha of Uptake† or 500 mL/ha for oils other than Uptake† or less than 100 mL/ha of wetter. **Canola, lucerne, medic and clover pastures and seed crops:** When tank mixing Sabakem® Haloxyfop 520EC Herbicide with Lontrel† herbicides (canola only) or Broadstrike† (lucerne, clover and medics), use Uptake† Spraying Oil with the lower rates of Sabakem® Haloxyfop 520EC or a wetting agent with the higher rates of Sabakem® Haloxyfop 520EC Herbicide unless otherwise specified. When mixing Sabakem® Haloxyfop 520EC Herbicide with other broadleaf herbicides on these crops, DO NOT use an oil use a wetter instead. **Field peas and canola:**

The oil recommended is Uptake† Spraying Oil. Hasten† is also recommended for use with tank-mixtures of Sabakem® Haloxyfop 520EC Herbicide and Select† Herbicide™.

For canola, Sabakem® Haloxyfop 520EC Herbicide + Lontrel† 750 SG + Uptake† Spraying Oil are compatible and selective to canola. This tank-mixture is also compatible with atrazine or simazine and selective to triazine tolerant canola.

Navy Beans, Peanuts, Soybeans:

When mixing with Blazer† or Basagran† DO NOT add spraying oil to these mixtures. **DO NOT** use these tank-mixes on cowpea.

COMPATIBILITY:

Ground use only: Sabakem® Haloxyfop 520EC Herbicide can be tank mixed with:

Insecticides:	Dimethoate Chlorpyrifos 500 EC Insecticide Lorsban† 750 WG Insecticide Omethoate
Herbicides:	atrazine Basagran† Blazer† Broadstrike† Herbicide Clopyralid herbicide Lontrel† 750SG MCPA ester (LVE) - ***DO NOT*** *exceed 700 mL/ha of MCPA LVE* Oryzalin Clethodim Herbicide simazine Fluroxypyr 200 Herbicide
Fungicides:	Dithane DF† Dithane Rainshield
Trace elements:	magnesium sulphate zinc sulphate

Sabakem® Haloxyfop 520EC Herbicide is NOT COMPATIBLE with 2,4-D or MCPA as sodium or amine salts.

Aerial use: No product other than a recommended crop oil or wetter should be mixed with Sabakem® Haloxyfop 520EC Herbicide when applied by air except for addition of Lontrel† Forestry Herbicide for use in forestry and Lontrel 750 SG for use in canola only.

APPLICATION

Apply Sabakem® Haloxyfop 520EC Herbicide in sufficient water to obtain good coverage. It should be applied by an accurately calibrated ground rig or aircraft delivering droplets with a VMD of 200-300 microns.

The following spray volumes are recommended.

Ground application 50-150 L/ha

	Aerial application 30 L/ha minimum **Use higher water volume** in orchards and in dense crops where the weeds may be shielded by the crop canopy. **CLEANING SPRAY EQUIPMENT** If broadleaf herbicides, particularly sulfonylureas, have been used in the spray equipment at any time prior to Sabakem® Haloxyfop 520EC Herbicide, particular care should be taken to follow the directions on the relevant broadleaf herbicide label for equipment cleaning, or damage to susceptible crops may occur. After using Sabakem® Haloxyfop 520EC Herbicide, empty the tank completely and drain the whole system. Thoroughly wash inside the tank using a pressure hose, drain the tank and clean any filters in the tank, pump, line and nozzles. **To rinse.** After cleaning the tank as above, quarter fill the tank with clean water and circulate through the pump, lines, hoses and nozzles. Drain and repeat the rinsing procedure twice. **To decontaminate.** Before spraying cereals , maize, sorghum or other sensitive crops, wash the tank and rinse the system as above. Then quarter fill the tank and add an alkali detergent (e.g. SURF®, Cold water Surf Concentrate, DynamoMatic concentrate, OMO® or DRIVE®) at 500mL/100 L of water or the powder equivalent at 500 g/100 L of water, and circulate throughout the system for at least fifteen minutes. Drain the whole system. Remove filters and nozzles and clean them separately. Finally flush the system with clean water and allow to drain. Chlorine based cleaners are not recommended. **Rinse water should be discharged onto a designated disposal area, or if this is unavailable, onto unused land away from desirable plants and water sources.**
Resistance warning	**RESISTANT WEEDS WARNING** **GROUP A HERBICIDE** Sabakem® Haloxyfop 520EC Herbicide is a member of the aryloxyphenoxy propionate group of herbicides. The product has the acetyl CoA carboxylase inhibitor mode of action. For weed resistance management this product is a Group A herbicide. Some naturally occurring weed biotypes resistant to the product and other inhibitors of acetyl CoA carboxylase herbicides may exist through normal genetic variability in any weed population. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by the product or other inhibitors of acetyl CoA carboxylase. Since the occurrence of resistant weeds is difficult to detect prior to use, Sabakem Pty Ltd accepts no liability for any losses that may result from the failure of the product to control resistant weeds. Strategies to minimise the risk of herbicide resistance are available. Contact your farm chemical supplier, consultant, local Department of

	Agriculture, or Primary Industries, or Sabakem representative.
Precautions	
Protections	**PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS** • Sabakem® Haloxyfop 520EC Herbicide damages cereals and grasses. • **DO NOT** apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures. • Cereal crops or grasses planted within twelve weeks of application may be damaged by the residual effects of Sabakem® Haloxyfop 520EC Herbicide , particularly on light and red soils. **PROTECTION OF LIVESTOCK** **DO NOT** graze or cut treated crops for stock food except as specified under withholding periods. **PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT** • Sabakem® Haloxyfop 520EC Herbicide is toxic to fish. • **DO NOT** contaminate streams, rivers or waterways with the chemical or used container.
Storage & disposal	**STORAGE AND DISPOSAL** • Store in the 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 seeds. • Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. • If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available. bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt. • **SMALL SPILL MANAGEMENT** Wear protective equipment (see SAFETY DIRECTIONS). Apply absorbent material such as earth, sand, cat litter or clay granules to the spill. When absorption is complete, sweep up material and contain in a refuge vessel for disposal (see STORAGE AND DISPOSAL section). If necessary wash the spill area with an alkali detergent and water and absorb this wash liquid for disposal as described above.

Safety Directions	**SAFETY DIRECTIONS** Harmful if swallowed. Will irritate the eyes and skin. Avoid contact with the eyes and skin. When opening the container, preparing the spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and face shield or goggles. After each day's use, wash gloves, face shield or goggles and contaminated clothing. Wash hands after use.
First Aid	**FIRST AID** If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia: 13 11 26. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.
MSDS	**MATERIAL SAFETY DATA SHEET** Additional information is listed on the Material Safety Data Sheet which is available from the supplier.

The following is for APVMA use only:

APVMA approval no.	**APVMA No: 69155/0714**