

POISON

**KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING**

TITAN

HERMES 520

HERBICIDE

ACTIVE CONSTITUENT: 520g/L HALOXYFOP present as the HALOXYFOP-P METHYL ESTER

GROUP 1 HERBICIDE

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 per Directions for Use table.

APVMA Approval No.: 61760/0714

Pack Size: 5L; 10L; 20L



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**IN A TRANSPORT EMERGENCY
DIAL 000
POLICE OR FIRE BRIGADE**

**TRANSPORT AND HANDLING
NOT A DANGEROUS GOOD
ACCORDING TO THE AUSTRALIAN
DANGEROUS GOODS (ADG) CODE
FOR TRANSPORT BY ROAD AND RAIL**

DIRECTIONS FOR USE

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.

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 Spray Oil ¹	With 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 TITAN Hermes 520 Herbicide is spray oil. Lupins and Field Peas: Mixtures with Diflufenican or Simazine may cause crop yellowing and separate applications are recommended. Chickpeas, Faba Beans, Lentils, Vetch, Linola and Linseed: Broadleaf herbicides should not be added to TITAN Hermes 520 Herbicide. Apply TITAN Hermes 520 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 75mL + spray oil or 100mL + wetter/ha. (see GENERAL INSTRUCTIONS, Spraying Oils/wetters section). If Silver Grass (<i>Vulpia</i> spp.) is present in pasture, Simazine should be tank mixed with the higher rate of TITAN Hermes 520 Herbicide 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 and 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 <i>Erodium</i> spp. spraying, apply from cotyledon crop stage onwards.
Canola, Linola and Linseed	Apply from 2 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 the 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 (<i>Bromus catharticus</i>)	Up to early tillering	100	¹ 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 TITAN Hermes 520 Herbicide. 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 75mL + spraying oil or 100mL + wetter/ha (see GENERAL INSTRUCTIONS, Spraying Oils/wetters section). If Silver Grass (<i>Vulpia</i> spp.) is present in pasture, simazine should be tank mixed with the higher rate of TITAN Hermes 520 Herbicide plus a non-ionic wetter.
Musky or Ferny Leaf Storksbill (<i>Erodium moschatum</i>), Common Crowsfoot or Common Storksbill (<i>Erodium cicutarium</i>)	Up to 6 leaf or 5cm diameter	50-75 ³	
Long or Shiny Leaf Storksbill (<i>E. botrys</i>)	Up to 8 leaf or 5cm 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 ¹ 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 TITAN Hermes 520 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 15cm	150	¹ See GENERAL INSTRUCTIONS, Spraying oils/wetters section. Navy Beans, Peanuts, Soybeans: For broadleaf weed control, TITAN Hermes 520 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 TITAN Hermes 520 Herbicide 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.
Barnyard Grass	2 to 5 leaf	100	
	Tillering up to 15cm	150	
Crowsfoot Grass, Green Panic, Johnson Grass (rhizome)	2 leaf to tillering up to 15cm	150	
Johnson Grass (seedling), Liverseed Grass (seedling), Mossman River Grass	2 to 5 leaf	100	
	Tillering up to 15cm	150	
Summer Grass	2 leaf to tillering up to 15cm	150	
	Tillering up to 15cm	150	
Volunteer Cereals	2 to 4 leaf	100	
	Tillering up to 15cm	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 ¹ 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	Perennial grasses: Couch, Rhodes Grass, Slender Rats Tail Grass	Established stands	400-800	¹ 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. Spot spray: Use 25mL to 50mL/100L of water. Use higher rate on late tillering mature grasses. Annual Grasses: Where treated in association with perennial grasses, these annual grasses will be controlled.
		Buffel Grass, Green Panic, Johnson Grass, Kikuyu, <i>Paspalum</i> spp., <i>Setaria</i> spp.	Vegetative to early tillering	200	
			Late tillering	400	
		Annual grasses: 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: <i>Pinus radiata</i> , <i>Eucalyptus</i> spp.					
Forestry: <i>Pinus pineaster</i>		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 Tasmania only: For <i>Erodium</i> spp. apply 75-100mL/ha if the main weed is <i>E. botrys</i> . Use 50-75mL/ha if either <i>E. cicutarium</i> or <i>E. moschatum</i> are the main weeds.
Pyrethrum		Barley Grass, Brome Grass, Rope Twitch, Barnyard Grass, <i>Erodium</i> spp., Volunteer Cereals	Vegetative to tillering	100-250	

Table 5. TITAN Hermes 520 Herbicide and Select* Herbicide tank-mixes – Canola, Chickpeas, Faba Beans, Field Peas, Lupins, Lentils

WEEDS CONTROLLED	WEED GROWTH STAGE	RATE (mL/ha)		CRITICAL COMMENTS
		TITAN Hermes 520 Herbicide	Select 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.

HARVESTING WITHHOLDING PERIODS:

NOT REQUIRED WHEN USED AS DIRECTED FOR: 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.

DO NOT HARVEST FOR MEDIC AND CLOVER SEED CROPS: 7 DAYS AFTER APPLICATION.

STOCK FOOD WITHHOLDING PERIODS:

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: 28 DAYS AFTER APPLICATION.

LUCERNE: 21 DAYS AFTER APPLICATION.

MEDIC AND CLOVER PASTURE: 7 DAYS AFTER APPLICATION.

COTTON GIN TRASH MUST NOT BE FED TO ANIMALS.

GENERAL INSTRUCTIONS

MIXING

Add water to the spray tank to 10cm above the level of agitation and ensure the agitation device is working vigorously. (There must be a minimum of 100L 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 TITAN Hermes 520 Herbicide at the point where agitation is strongest. DO NOT add Hermes 520 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 TITAN Hermes 520 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. TITAN Hermes 520 Herbicide and any other tank mixes should be applied immediately for best results.

SPRAYING OILS/WETTERS

* **Spraying Oils:** It is essential to add an adjuvant to TITAN Hermes 520 Herbicide. Best results will be achieved with Uptake® Spraying Oil at 0.5L/100L of spray solution. Alternatively, other oils plus a non-ionic wetter may also be used. When other crop spraying oils are used, mix at 1.0L/100L and add a non-ionic wetter (surfactant) at 200mL/100L of spray solution. Use of an oil is not always recommended. See Critical Comments for specific situation recommendations.

† **Non-ionic Wetters:** When Uptake or other oils are not used, a 100% concentrate non-ionic wetting agent such as BS-1000* at 200mL/100L must be used along with the higher rate of TITAN Hermes 520 Herbicide as specified in the Directions For Use. Where water volumes of less than 50L/ha are used, DO NOT use less than 250mL/ha of Uptake or 500mL/ha for oils other than Uptake or less than 100mL/ha of wetter.

CANOLA, LUCERNE, MEDIC AND CLOVER PASTURES AND SEED CROPS

When tank mixing TITAN Hermes 520 Herbicide with Lontrel herbicides (Canola only) or Broadstrike (Lucerne, Clover and Medics), use Uptake Spraying Oil with the lower rates of TITAN Hermes 520 Herbicide or a wetting agent with the higher rates of TITAN Hermes 520 Herbicide unless otherwise specified. When mixing TITAN Hermes 520 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 TITAN Hermes 520 Herbicide and Select Herbicide. For Canola, TITAN Hermes 520 Herbicide + Lontrel 750SG + 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: TITAN Hermes 520 Herbicide can be tank mixed with:

Insecticides: dimethoate, Lorsban* 500 EC Insecticide, Lorsban* 750WG Insecticide, omethoate

Herbicides: atrazine, Basagran*, Blazer*, Broadstrike* Herbicide, Lontrel* Herbicide, Lontrel* 750SG, MCPA ester (LVE) (DO NOT exceed 700mL/ha of MCPA LVE), Oryzalin, Select* Herbicide, simazine, Starane* 200 Herbicide

Fungicides: Dithane DF*, Dithane Rainshield Fungicide

Trace elements: magnesium sulphate, zinc sulphate

TITAN Hermes 520 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 TITAN Hermes 520 Herbicide when applied by air except for addition of Lontrel Forestry Herbicide for use in forestry and Lontrel 750SG for use in Canola only.



APPLICATION

Apply TITAN Hermes 520 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: 50-150L/ha

Aerial application: 30L/ha minimum

Use higher water volumes 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 TITAN Hermes 520 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 TITAN Hermes 520 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/100L of water or the powder equivalent at 500g/100L 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.

RESISTANT WEEDS WARNING

TITAN Hermes 520 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 TITAN Hermes 520 Herbicide is a Group 1 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, TITAN AG 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 TITAN AG Pty Ltd.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

TITAN Hermes 520 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 TITAN Hermes 520 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

TITAN Hermes 520 Herbicide is toxic to fish. DO NOT contaminate streams, rivers or waterways with the chemical or used container.

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 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 500mm 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 refuse 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

Harmful if swallowed. Will irritate the eyes and skin. Avoid contact with the eyes and skin. When opening container, preparing 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

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126; New Zealand 0800 764 766. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

SAFETY DATA SHEET

Additional information is listed in the safety data sheet (SDS). A safety data sheet for TITAN Hermes 520 Herbicide is available from TITAN AG Pty Ltd on request. Call Customer Service on (02) 9999 6655 or visit www.titanag.com.au

CONDITIONS OF SALE

TITAN AG Pty Ltd shall not be liable for any loss injury damage or death whether consequential or otherwise whatsoever or howsoever arising whether through negligence or otherwise in connection with the sale supply use or application of this product. The supply of this product is on the express condition that the purchaser does not rely on TITAN AG's skill or judgment in purchasing or using the same and every person dealing with this product does so at his own risk absolutely. No representative of TITAN AG Pty Ltd has any authority to add to or alter these conditions.

Additional statements required by Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia: Combustible liquid. Harmful if swallowed. Very toxic to aquatic life with long lasting effects. Precautionary Statements: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. In case of fire: Use CO₂, powder or water spray to extinguish. Collect spillage. Store in a well-ventilated place. Dispose of contents/container in accordance with local/regional/national regulations.

* Other trademarks

