

Product Name: APPARENT CONCUSSION 540 K HERBICIDE
 APVMA Approval No: 80392/124029



Label Name:	APPARENT CONCUSSION 540 K HERBICIDE
Signal Headings:	Label A: CAUTION Label B: POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Constituent Statements:	Label A: ACTIVE CONSTITUENT: 540g/L GLYPHOSATE present as the POTASSIUM SALT Label B: ACTIVE CONSTITUENT: 540g/L GLYPHOSATE present as the POTASSIUM SALT ALSO CONTAINS: 60.5g/L DIETHYLENE GLYCOL
Mode of Action:	GROUP M HERBICIDE
Statement of Claims:	Non-selective herbicide for the control of many annual and perennial weeds according to the Directions for Use
Net Contents:	1L - 1000L
Restrains:	Restrains: DO NOT disturb weeds by cultivation, sowing or grazing for six hours of daylight following treatment of annual weeds and seven days for perennial weeds to ensure herbicide absorption, unless specified otherwise in critical comments.
Directions for Use:	This section contains file attachment.
Other Limitations:	

Withholding Periods:	<p>WITHHOLDING PERIODS: WHEAT & LEGUMES: DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION. ALL OTHER USES: NOT REQUIRED WHEN USED AS DIRECTED.</p>
Trade Advice:	
General Instructions:	<p>This section contains file attachment.</p>
Resistance Warning:	<p>RESISTANT WEEDS WARNING GROUP M HERBICIDE Apparent Concussion 540 K Herbicide is a member of the Glycines group of herbicides. Apparent Concussion 540 K Herbicide has the inhibition of EPSP synthase mode of action. For weed resistance management, Apparent Concussion 540 K Herbicide is a Group M herbicide. Some naturally occurring weed biotypes resistant to Apparent Concussion 540 K Herbicide and other Group M 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 Apparent Concussion 540 K Herbicide or other Group M herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, AIRR Apparent Pty Ltd accepts no liability for any losses that may result from the failure of Apparent Concussion 540 K Herbicide to control resistant weeds.</p>
Precautions:	
Protections:	<p>PROTECTION OF CROP, NATIVE AND OTHER NON-TARGET PLANTS Avoid contact with foliage, green bark or stems, canes, laterals, suckers, fresh wounds, exposed non-woody roots, flowers or fruit of crops, desirable plants and trees, since severe injury or destruction may result. 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. PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT DO NOT contaminate dams, rivers or streams with the product or used container. DO NOT apply to weeds growing in or over water. DO NOT spray across open bodies of water.</p>
Storage and Disposal:	<p>STORAGE AND DISPOSAL Store in the closed, original container in a cool, well ventilated area. DO NOT store for prolonged periods in direct sunlight. 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 deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government regulations. DO NOT burn empty containers or product.</p> <p>Envirodrum Containers: Store in the original sealed Envirodrum in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. DO NOT tamper with the Micro Matic valve or the security seal. DO NOT contaminate the drum with water or any water or any other foreign matter. After each use of the product, please ensure the Micro Matic</p>

coupler, delivery system and hoses are disconnected, triple rinsed with clean water and drained accordingly. When the contents of the drum have been used, please return the empty drum to the point of purchase. The drums remain the property of AIRR Apparent Pty Ltd.

Refillable Containers: Store in the closed original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. Storage must be secure so that contents cannot be tampered with. All locks and/or seals must be in order. If locks or seals are broken prior to initial use then the integrity of this product cannot be assured. If this occurs AIRR Apparent Pty Ltd should be notified immediately. This minibulk/bulk container is reusable and remains the property of AIRR Apparent Pty Ltd. DO NOT rinse empty container. Empty contents fully into application equipment. Close all valves and return to the point of supply for refill or storage. No other liquid, solid or pesticide product should be put into it. When empty return to AIRR Apparent Pty Ltd for cleaning, relabelling and refilling.

Safety Directions:

SAFETY DIRECTIONS

Will irritate the eyes. May irritate the nose and throat. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. When opening the container, preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist or equivalent clothing, elbow-length PVC or nitrile gloves and face shield or goggles. If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash gloves, face shield or goggles and contaminated clothing.

First Aid Instructions:

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126; New Zealand 0800 764 766.

First Aid Warnings:

**DIRECTIONS FOR USE
CONSERVATION TILLAGE**

SITUATION	WEEDS	BOOM RATE Vol/ha	CRITICAL COMMENTS
SOUTHERN AUSTRALIA Prior to sowing a crop or pasture with full soil disturbance with a cultivation or sowing with a tyned implement	Barley Grass, Brome Grass, Volunteer cereals, Wild Oats	340-660mL pre-tillering 660-840mL post-tillering	Rate Selection: Use higher rates for advanced weed growth or when treating under cold/overcast conditions. Cultivation or planting may proceed from 1 hour of daylight after application to seedling annual weeds if a satisfactory seedbed can be created for crop germination and seedling establishment. Silvergrass: When treating dense infestations of Silvergrass, add Wetter TX and use water volumes of 70L/ha or more and small droplets to improve coverage. Perennial weeds: Apparent Concussion 540 K Herbicide will provide seasonal control and reduction in plant numbers. Control of Skeleton Weed requires addition of full soil disturbance at planting. In Tasmania, for perennial weeds use 1-2L/ha.
	Annual Phalaris, Annual Ryegrass, Silvergrass, Winter Grass	660-840mL pre-tillering 840mL-1L post-tillering	
	Calomba Daisy, Capeweed, Doublegee / Spiny Emex, Fumitory, Volunteer Lupins, Volunteer Peas	340-660mL less than 8cm diam/height 660mL-1L greater than 8cm diam/height	
	Amsinckia, Dock (seedling), Paterson's Curse, Saffron Thistle, Scotch Thistle, Spear Thistle, Variegated Thistle, Wild Turnip	660-840mL less than 12cm diameter 840mL-1L greater than 12cm diameter	
	Perennial Phalaris, Skeleton Weed, Sorrel, Sub clover	1L	
SOUTHERN AUSTRALIA To commence a fallow OR prior to planting a crop or pasture with an implement that gives minimal soil disturbance or prior to surface seeding of pastures	Barley Grass, Canary Grass, Wild Oats, Volunteer cereals	660mL-1L	Rate Selection: Use the lower rate on young weeds; increase to the higher rate where grasses reach full tillering or where broadleaf weeds reach stem elongation or budding. Use higher rates in spring and under cold conditions. In Tasmania use 1-2L/ha with the higher rate for control of perennial weeds. Pasture or Crop Establishment: DO NOT sow into excessive trash. Excessive plant residues may be removed by grazing after treatment. Planting may proceed from 1 hour of daylight after application to seedling annual weeds if a satisfactory seedbed can be created for crop germination and seedling establishment. Aerial (or Surface) Seeding: Delay seeding until trash level is reduced to allow for satisfactory placement of broadcast seed on the soil surface. Bathurst Burr: For mature weeds use the higher rate. Bentgrass: Use a rate of 1.7L/ha. Apply in late spring following initiation of seed head emergence. Follow-up with full disturbance with a tyned implement 10-21 days after spraying. Couch: Use the higher rate on dense infestations. Apply sequential treatments during summer and autumn. Repeat applications will be required for full control. For improved control, use in conjunction with cultivation. Dock, Flatweed: Use the maximum rate for full control. Hoary Cress: Use at a rate of 1L/ha. Treat from late rosette to early flowering. Kikuyu, Paspalum: Use the low rate for suppression, the high rate for control. Silvergrass: When treating dense infestations of Silvergrass, add Wetter TX and use water volumes of 70L/ha or more and small droplets to improve coverage. Soursob: Use at a rate of 1L/ha. Treat at tuber exhaustion.
	Annual Ryegrass, Brome Grass, Capeweed, Hoary Cress, Paterson's Curse, Saffron Thistle, Scotch Thistle, Silvergrass, Soursob, Spear Thistle, Variegated Thistle, Wild Mustard, Wild Radish, Wild Turnip, Wintergrass	1-1.3L	
	Bathurst Burr, Bentgrass, Couch, Dock, Erodium, Flatweed, Kikuyu, Plantain, Paspalum, Perennial Phalaris, Sorrel, Sub. Clover, Yorkshire Fog	1.25-2L	
	Poa Tussock	2-2.7L	
Pasture Topping	Annual Ryegrass	300-680mL	Remove livestock prior to application to allow even regrowth. Use lower rate if grasses are flowering and higher rate if at the milky dough stage. Apply to Capeweed and Calomba Daisy at flowering. DO NOT add Wetter TX. DO NOT apply to clover or medic crops intended for seed production.
	Barley Grass, Brome Grass, Capeweed, Silvergrass	200-300mL	
	Calomba Daisy	300mL	

CONSERVATION TILLAGE – continued

SITUATION	WEEDS	RATE Vol/ha	CRITICAL COMMENTS
Seedhead Suppression	Bentgrass	240-420mL	Apply treatments late October to late November, before seedheads have emerged. Add Wetter TX. Use higher rate where growth is excessive. Graze hard after spraying.
SOUTHERN AUSTRALIA NSW,ACT,VIC,TASonly For control/suppression prior to establishing crops or improved pasture species	Serrated Tussock	2.7-4.0L	Apply to actively growing and stress free plants. Best results May to October. Application: Boom spray volume of 70L/ha or more is recommended to improve plant coverage. Also see Aerial Equipment . Surfactants: Addition of 200mL of Wetter TX to 100L of spraying solution may improve control of Serrated tussock. Site Preparation: Burning of Serrated tussock 10-12 months before spraying or slashing/heavy grazing (cell grazing) 2 weeks before spraying is essential for good results. (Note: Serrated tussock is almost indigestible and prolonged exposure can lead to starvation and death of stock). Rates: Use lower rate on Serrated tussock regrowth after burning (no residual dead foliage. Use higher rate on Serrated tussock that has been slashed or grazed (may contain some residual dead foliage).
For the prevention of seedhead emergence and seed formation	Serrated Tussock	500-840mL	Apply to actively growing and stress free plants. Best results obtained during mid-September – mid-October. Apply prior to any seedhead emergence. Also see Aerial Equipment . Surfactants: Addition of 200mL of Wetter TX to 100L of spraying solution may improve results. Rates: The lower rates will be less damaging to desirable pasture species. If seed-head emergence is imminent then higher rates will give better results.
NORTHERN AUSTRALIA In fallow or prior to planting a crop Cotton: Shielded Sprayers	Paradoxa Grass, Volunteer cereals, Wild Oats African Turnip Weed, Black Pigweed, Boggabri Weed, Caltrop (Yellow Vine), Deadnettle, Mintweed, Milk (Sow) Thistle, Stinkgrass (Lovegrass), Sweet Summer Grass, Variegated Thistle, Volunteer Sorghum	340-660mL 500-660mL up to 5 true leaves of 3cm in dia/height 660mL-1.35L greater than 5 true leaves of 3cm in dia/height	Rate Selection: Use the lower rates on young weeds and increase to the higher rates where weeds are dense or well developed. Dense infestations of some weeds eg. Barnyard Grass, Liverseed (Urochloa) Grass may need follow-up treatments for complete control. Tank Mixtures: Read and follow all label directions, restraints, plant-back periods, withholding periods, regional use restrictions and safety directions for the tank mix products. Tank mixes with atrazine may give unacceptable knockdown control of certain weeds. DO NOT apply the tank-mix for control of Barnyard Grass, Liverseed Grass or Milk Thistle. Ammonium sulphate may enhance knockdown weed control where tank mixtures of atrazine are used. Shielded Sprayers: Apply Apparent Concussion 540 K Herbicide to weeds growing between crop rows using a shielded sprayer. DO NOT apply in cotton less than 20cm high. DO NOT allow spray or spray drift to contact any part of the cotton plant as severe injury may result. Pasture or Crop Establishment: DO NOT sow into excessive trash. Excessive plant residues may be removed by grazing after treatment. Planting may proceed from 1 hour of sunlight after application to seedling annual weeds if a satisfactory seedbed can be created for crop germination and seedling establishment.
	Annual Ground Cherry, Barnyard Grass, Bathurst Burr, Bladder Ketmia, Button Grass, Camel (Afghan) Melon, Caustic Weed, Columbus Grass, Liverseed Grass, Mexican Poppy, Native Millet, New Zealand Spinach, Noogoora Burr, Pigweed (up to 25cm), Spear Thistle, Stinking Goosefoot, Thornapple (Datura), Turnip Weed, Wild/Prickly Lettuce, Wireweed	660mL-1.35L	
	Prickly Paddy Melon	640mL-1.3L plus 80mL Garlon* 600	DO NOT add crop oil.
	Climbing Buckwheat (less than 12 leaves), Couch, Johnson Grass	1.3-2L	Use the higher rate on plants at the flowering/seedhead stage. For Johnson Grass apply to plants with a minimum of 30cm new growth. For long term control of Couch and Johnson Grass, repeat applications will be required.
	Nutgrass (<i>Cyperus rotundus</i>)	2L followed by 2L	Make first application to actively growing plants when majority of plants have reached at least the 6-8 leaf stage but preferably later. Allow for maximum re-emergence before re-treating.
SUGAR CANE Inter-row spraying	Annual and perennial grasses and broadleaf weeds	1.2-5L	Apply to weeds growing between crop rows using a ground based hooded and shielded sprayer. Apply at early growth stage of crop, before formation of the cane. Apply no more than 3 applications, to maximum of 12L/ha per crop. DO NOT allow spray or spray drift to contact any part of the crop as severe injury may result.

CONSERVATION TILLAGE – continued

SITUATION	WEEDS	RATE Vol/ha	CRITICAL COMMENTS
SUGAR CANE Ratoon sprayout QLD, NSW only	Sugar cane ratoon regrowth	4-6L	Apply under good growing conditions to actively growing ratoons 60-120cm tall. DO NOT apply if plants are under stress from waterlogging or low moisture. Use the lower rate for suppression or where cultivation is to follow. Use the higher rate for control.
Sorghum control	Grain Sorghum (pre-harvest)	1-1.35L	DO NOT apply if crop is under stress from low moisture, frost, cold or waterlogging. Apply when grain moisture is less than 25%. Use the higher rate where the crop has produced significant number of late tillers or where following crops will be established without further treatment. DO NOT apply to crops intended for seed production. Treatment may increase potential for crop lodging.
	Grain Sorghum (post-harvest)	660mL-1.35L	Slashed/Grazed stubble: Apply when fresh regrowth is at least 20cm high. Use the higher rate on standing stubble or where regrowth from slashed sorghum has advanced beyond 50cm in height.
Cotton Pre-harvest	Bathurst Burr, Noogoora Burr, Winter annual weeds	840mL-1.7L	Treatments may be applied alone or in tank mixtures with Dropp* or Harvade*. Apply when at least 60% of bolls are open. When tank mixed with defoliant, a slightly higher proportion of cotton leaf may be retained, particularly where the higher rate is used and the conditions are unfavourable for defoliation.
PRE-HARVEST APPLICATION to reduce viable seed set of weeds in: Field Peas (<i>Pisum sativum</i>), Faba Beans (<i>Vicia faba</i>)	Annual Ryegrass (<i>Lolium rigidum</i>)	320-680mL	Use lower rate if Ryegrass is flowering and higher rate if Ryegrass is at milky dough stage. Application should be made at or after crop maturity. Application before this time may significantly reduce yields (in practice losses in excess of 25% can occur). Apply when average seed moisture content is below 30%. For Faba Beans, this is indicated by pods going black, and for Field Peas by the pods going yellow. DO NOT harvest within 7 days after application. DO NOT use on crops intended for seed or sprouting.
PRE-HARVEST APPLICATION as harvest aid and weed control: Wheat (<i>Triticum aestivum</i>)	Annual weeds	900mL-1.8L	Apply to mature crop from late dough (28% moisture) onwards. The higher rate will be required when crops are heavy and leaf shading effects may occur. DO NOT harvest within 7 days after application. DO NOT use on crops intended for seed or sprouting. Where wheat is grown in rotation with any herbicide tolerant crop, management should be consistent with implementation of any management plan for herbicide tolerant crops.
PRE-HARVEST APPLICATION to desiccate crop as a harvest aid and weed control: Adzuki Beans Chickpeas Cowpea Faba Beans Field Peas Lentils Mungbeans Soybeans (Application to crops intended for seed production or sprouting may reduce germination to commercially unacceptable levels)	Annual weeds	680mL-1.8L	Apply with boom or by air. Use higher rates where crops or weeds are dense and where faster desiccation is required. Application should be made at or after crop maturity. Chickpeas and Lentils: Apply when physiologically mature and less than 15% green pods. Soybeans: Apply only after seed pods have lost all green colour and 80-90% of leaves have dropped. Mung Beans/ Adzuki and Cowpea: Apply to mature crops when pods are brown/black. Field Peas: Apply when seeds turn yellow and average seed moisture is below 30%. Faba Beans: Apply when pods turn black and average seed content is below 30%. DO NOT harvest within 7 days of application. Speed of crop desiccation is dependent on crop stage, growing conditions and weather conditions during and after application.
PRE-HARVEST APPLICATION to desiccate crop as a harvest aid and weed control: Chickpeas (Application to crops intended for seed production or sprouting may reduce germination to commercially unacceptable levels)	Annual weeds	500mL-1.1L plus 5g Ally* Herbicide	Apply by boom or by air. Apply when chickpeas are physiologically mature and less than 15% of green pods are present. Use higher rates where crops or weeds are dense and where faster desiccation is required. DO NOT harvest within 7 days of application. Speed of crop desiccation is dependent on crop stage, growing conditions and weather conditions during and after application.

SITUATION	CRITICAL COMMENTS
	Read Application Checklist before using See Annual, Perennial and Woody weeds sections below for most appropriate rate.
GENERAL WEED CONTROL For general weed control in Domestic areas (Home gardens), Commercial, Industrial and Public Service areas. Agricultural buildings and other farm situations. For specific weeds refer to the appropriate Weeds Controlled table.	For the control of many grasses and broadleaf weeds. Rate: 7.0mL per litre of water. Apply when weeds are actively growing. Apply to ensure complete and uniform wetting of foliage. Visible symptoms may take from 3 to 7 days to develop.
AGRICULTURAL AREAS	Apparent Concussion 540 K Herbicide may be used for control of annual and perennial and woody weeds as directed, in agricultural land prior to sowing of any edible or non-edible crop, but not prior to transplanting tomato seedlings.
DRY DRAINS and CHANNELS ONLY	DO NOT apply to weeds growing in or over water. DO NOT spray across open bodies of water, and do not allow spray to enter the water. DO NOT allow water to return to dry channels and drains within 4 days of application.
FORESTS	This product may be used prior to establishment of nurseries, for site preparation prior to planting and amongst established trees using a directed or shielded spray, or using selective wiper equipment. DO NOT allow wiper surface to contact any part of the tree. DO NOT allow spray or spray drift to contact foliage or green bark of desirable trees, since severe injury may result.
NON-AGRICULTURAL AREAS Around buildings, Commercial and Industrial areas, Domestic and public service areas, rights-of-way.	Apparent Concussion 540 K Herbicide does not provide residual weed control. For residual weed control, Apparent Concussion 540 K Herbicide may be tank-mixed with certain residual herbicides. Refer to Tank Mixtures/Compatibility .
TREE AND VINE CROPS Avocado, Banana, Blueberries, Citrus fruit, Custard apples, Duboisia, Figs – dessert, Guava, Hops, Kiwifruit, Litchi, Mango, Monstera fruit, Nuts (including almond, pecan, macadamia, pistachio and walnut), Olives, Pawpaw, Persimmons, Pome fruit, Raspberries, Stone fruit, Tea, Vineyards.	Apply as directed or shielded spray or using wiper equipment. DO NOT apply as a spray near trees or vines less than 3 years old unless they are effectively shielded from spray and spray drift. DO NOT allow wiper surface to contact any part of the tree, vine or palm. Citrus fruit, Litchi, Nuts, Olives and Pome fruit & Vineyards: DO NOT allow spray or spray drift to contact green bark or stems, canes, laterals, suckers, fresh wounds, foliage or fruit. Hops: Apply in winter, prior to crop emerging from dormancy. Tea: Apply a maximum 2.7L/ha by shielded boom or directed off-centre nozzle or 340mL/100L by directed handgun or knapsack to avoid application to the crop. All other crops: DO NOT allow spray or spray drift to contact any part of the plant including the trunk. Caution: Where split bark on Kiwifruit and greens stems on Pawpaw occur, extreme care is required.

SITUATION	RATE	CRITICAL COMMENTS
ANNUAL WEEDS Amaranth, Barley Grass, Barnyard Grass, Bathurst Burr, Brome Grass, Caltrop, Canary Grass, Capeweed, Chickweed, Cobbler's Pegs, Deadnettle, Doublegee, Fumitory, Ground Cherry, Hedge Mustard, Lesser Swinecress, Liverseed Grass, Mintweed, Noogoora Burr, Paradoxa Grass, Paterson's Curse, Pigweed, Potato weed, Ryegrass, Saffron Thistle, Silvergrass, Sow Thistle, Spear Thistle, Spiny Burrgrass, Spurge, Sub. Clover, Thornapple, Variegated Thistle, Volunteer Cereals, Wild Mustard, Wild Oats, Wild Turnip, Winter Grass	Boom: 1.35-2L/ha Handgun: 330-480mL per 100L Knapsack: 50-70mL per 15L	Apply to weeds whenever they are not subject to stress due to drought or frost. Use higher rate on weeds over 15cm in height or diameter or where dense weed cover limits spray coverage. Use higher spot spraying rate when applying less than 5L spray per 100sqm. Apparent Concussion 540 K Herbicide does not provide residual weed control. Repeat treatments may be necessary to control later germinating weeds. For residual control of annual weeds, Apparent Concussion 540 K Herbicide may be tank-mixed with certain residual herbicides. See Tank Mixtures in the General Instructions for directions. DO NOT use an atrazine tank-mix for control of Barnyard Grass or Liverseed Grass.
PERENNIAL WEEDS Artichoke Thistle, African Lovegrass, Bent Grass, Carpet Grass, Cocksfoot, Flatweed, Johnson Grass, Kangaroo Grass, Kikuyu, Nutgrass (<i>Cyperus rotundus</i>), Paspalum, Phalaris, Plantains, Poa Tussock, Prairie Grass, Qld Blue Grass, Red-leg Grass, Rhodes Grass, Rope Twitch, Sorrel, Soursob, Yorkshire Fog Grass	Boom: 2-4L/ha Handgun: 470-660mL per 100L Knapsack: 70-100mL per 15L	Control of established perennials is best obtained when plants are at the seedhead stage. In general best control of winter growing perennials is obtained with application during winter-spring. Best control of summer growing perennials is obtained with application late summer and autumn. For Nutgrass in cultivated situations apply sequential low rate treatments when Nutgrass has a minimum of 6-8 leaves. Use higher rate in uncultivated situations. For Rhodes grass, Rope Twitch, Prairie Grass, Qld Blue Grass, Johnson Grass, Kangaroo Grass, Kikuyu, Red-leg Grass, Paspalum and Sorrel, use the higher rate only.
Blady Grass, Bracken, Couch, Guinea Grass, *Paragrass, Silverleaf Nightshade, *Water Couch * use on dry drains and channels only (see Situations critical comments above).	Boom: 6L/ha Handgun: 870mL-1.35L per 100L Knapsack: 130-200mL per 15L	For Bracken add Pulse* at 200mL/100L spray mix. Best control of Couch in WA and SA is obtained with spring treatment. Most effective control of couch in the Eastern states is obtained with summer and autumn treatments. In cultivated situations use sequential treatments of 1.9-4.3L/ha for control. Use higher rate only for Silverleaf Nightshade.

SITUATION	RATE	CRITICAL COMMENTS
WOODY WEEDS Bamboo, Bitou Bush, Boneseed, Boxthorn, Crofton Weed, Gorse, Groundsel Bush, Lantana, Mistflower	Handgun: 330- 660mL per 100L Knapsack: 50-100mL per 15L	Apply to actively growing plants. DO NOT apply to drought stressed plants. Further treatment may be necessary to restrict seedling re-establishment. Bamboo: apply when foliage/regrowth is 1-2m tall, use the higher rate only. Bitou Bush/Boneseed: apply higher rates on bushes >1.5m. Best results are achieved when treated at peak flower during winter. Boxthorn: minimum rate is 470mL for handgun and 70mL for knapsack. Groundsel bush: apply higher rate on bushes greater than 2m. DONOT apply in winter. Minimum rate is 510mL for handgun and 75mL for knapsack. Gorse: always add Pulse at 200mL/100L of spray mix, use higher rate only. Lantana: use higher rate only. Addition of Pulse (200mL/100L) may improve control. Boxthorn Gorse, Lantana: removal of bushes (after complete brownout), pasture improvement or further treatment are recommended to control seedlings and/or re-growth.
Blackberry, Chinese Shrub, <i>Eucalyptus</i> spp. (seedlings <2m), Hawthorn Bush, Pampas Grass, Sifton Bush, Sweet Briar, Willow (<2m)	Handgun: 660- 870mL per 100L Knapsack: 100-140mL per 15L	Apply to actively growing plants. Removal of bushes (after complete brownout), pasture improvement or further treatments are recommended to control seedlings and/or regrowth. Blackberry: apply from flowering to leaf fall, use higher rate on old dense infestations >2m high. In Tasmania, do not treat bushes bearing mature fruit. Chinese Scrub: use higher rates on bushes >1m. <i>Eucalyptus</i> spp.: add Pulse at 200mL/100L of spray mix. Hawthorn, apply from flowering to leaf fall, use higher rates on bushes greater than 2m. Pampas Grass: allow regrowth to reach 1m, best results apply after flowering. Sifton bush: use higher rates on bushes greater than 1m. Sweet Briar: apply from flowering to leaf fall, use 1-1.35L/100L, and 150-200mL/100L, use higher rates on bushes greater than 1.5m.

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

GENERAL INSTRUCTIONS

PRODUCT INFORMATION

Apparent Concussion 540 K Herbicide is a non-volatile, non-selective, water soluble liquid herbicide for the control of annual and perennial grasses and broadleaf weeds in a wide range of agricultural and non-agricultural use situations. Apparent Concussion 540 K Herbicide may be used for weed control on agricultural land prior to sowing any edible or non-edible crop, but not prior to transplanting tomato seedlings.

When applying this product prior to transplanting crops into plastic mulch, care must be taken to remove residues of this product from the plastic prior to transplanting. Residues can be removed by 2cm of natural rainfall or by applying water via a sprinkler irrigation system.

Apparent Concussion 540 K Herbicide is absorbed by plant foliage and green stems. It is inactivated immediately in the soil and does not provide residual weed control. This product moves through the plant from the point of contact to and into the root system. Initial visible effects on annual weeds take 3 to 7 days, but may not be noticeable for 2 to 3 weeks under cool cloudy conditions or on some perennial weeds.

CROP ESTABLISHMENT

Apparent Concussion 540 K Herbicide is recommended for control of emerged weeds prior to crop establishment. Cultivation and/or planting operations which provide conditions suitable for crop emergence and establishment are required following herbicide application. Where heavy weed growth is present or soil conditions are unsuitable, planting should be delayed to allow for decay of weeds and/or development of more favourable soil conditions for the formation of a suitable seedbed.

Incorporation of green or decaying vegetation may retard crop emergence under cold, wet conditions. Vegetation may be reduced by grazing and weed decay may be assisted by cultivation to leave trash on the surface.

MIXING

Apparent Concussion 540 K Herbicide mixes readily with water. Reduced results may occur if water is used containing; suspended clay or organic matter, eg. from dams, streams and irrigation channels, or high levels of calcium, magnesium or bicarbonate ions.

DO NOT mix, store or apply this product in galvanised steel or unlined steel containers or spray tanks, since a highly flammable gas mixture may be formed. Use stainless steel, aluminium, brass, copper, fibreglass, plastic or plastic lined containers or spray tanks. Spray tanks, pumps, lines and nozzles should be thoroughly rinsed with clean water following application.

Ensure the sprayer is free of any residues of previous spray materials prior to mixing. Use spray solutions promptly as a gradual loss of activity may occur over a period of days following spray preparation.

MIXING INSTRUCTIONS

1. Fill the spray tank 1/3 to 1/2 full with clean water and start agitation.
 2. Where ammonium sulphate is recommended, add liquid Spraymate Liase at 2L/100L spray solution and mix thoroughly.
 3. Add recommended herbicide/insecticide/additive to the spray tank and mix thoroughly.
 4. Add Apparent Concussion 540 K Herbicide and the remaining water. Mix thoroughly.
 5. Add surfactant, if required, near the end of the filling process to minimise foaming.
 6. Always maintain adequate agitation during application and use the tank mix promptly.
- Clean all equipment after use by washing thoroughly with clean water.

TANK MIXTURES

Apparent Concussion 540 K Herbicide may be tank-mixed with the following herbicides, insecticides and adjuvants. Read and follow all label directions, restraints, plantback periods and withholding periods, and safety directions for the tank-mix products. In multiple product tank mixes a minimum water volume of 50L/ha is recommended and local advice should be sought. Correct mixing order is important as is good in-tank agitation when application/spraying is occurring.

Herbicides: 2,4-D ester, 2,4-D IPA, atrazine flowable or granular, carfentrazone, chlorsulfuron, dicamba, imazapic, LVE MCPA, metsulfuron-methyl, oryzalin/trifluralin, oxyfluorfen, pendimethalin, simazine flowable or granular, sulfometuron methyl, triasulfuron, tri-allate, triclopyr, tribenuron.

The addition of oxyfluorfen at 75mL/ha to recommended rates of Apparent Concussion 540 K Herbicide prior to planting winter cereals will improve the knockdown of certain weeds.

This product is compatible with the following insecticides: dimethoate, fenitrothion, phosmet, omethoate, chlorpyrifos, fenitrothion ULV and emulsifiable concentrates of dimethoate and fenitrothion. Other insecticides have not been tested.

Adjuvants – Wetter TX: Wetter TX is recommended for the control of Silvergrass and Annual Ryegrass in late winter and spring. Wetter TX is not a general purpose surfactant and should only be used where recommended.

Rate: 200mL/100L spray solution.

Adjuvants – Pulse Penetrant: Pulse Penetrant is recommended for the control of Bracken and many woody weeds.

Rate: 200mL/100L spray solution.

Adjuvants – Spraymate Liase (Ammonium Sulphate): Spraymate* Liase may be used as an adjuvant to alleviate the adverse effects of high levels of calcium, magnesium or bicarbonate ions in water. Add Spraymate Liase to water first at 2L/100L spray solution.

APPLICATION

Boom Equipment

For boom application, a spray volume of 80L/ha or less is recommended for optimum performance. Nozzles and pressure settings should be selected to deliver a MEDIUM or MEDIUM-COARSE size droplet at the target. The use of nozzle and/or pressure settings that produce VERY FINE or FINE droplets should be avoided as these are prone to loss or drift. In multiple product tank mixes a minimum water volume of 50L/ha is recommended and local advice should be sought. Correct mixing order is important as is good in-tank agitation when application is occurring. For shielded applications a spray volume of 80L/ha or less is recommended using nozzle types and pressure settings to deliver a COARSE size droplet at the target. Crop damage may result if spray drift occurs through incorrect nozzle and/or pressure selection, inadequate shielding and/or wind strength, high evaporation rates or excessive ground speed.

Wiper Equipment

Wiper Equipment (eg. ropewick, canvas, felt or carpet applicators) may be used to apply Apparent Concussion 540 K Herbicide. Avoid contact with desirable vegetation. Operate wiper equipment a minimum of 10cm above crop or pasture. Weeds should be at least 15cm above the crop or pasture at time of application. Speed of travel should be no greater than 8km/hr. Best results are achieved at lower speeds and where two applications are made in opposite directions (double pass). Where weeds are of variable height, or occur in dense infestations or clumps, some plants may not be contacted by the herbicide solution. In these cases repeat treatment may be necessary.

Rate: Mix 700mL Apparent Concussion 540 K Herbicide with 2.3 litres of clean water. Adjust flow to suit equipment.

Aerial Equipment

Apparent Concussion 540 K Herbicide may be applied by aircraft for control of weeds in forests, cropland or pasture prior to establishment of crops, new pastures or new forest plantings and for pre-harvest application to sorghum and cotton crops up to a maximum rate of 2.7L/ha where specified by the label. DO NOT apply treatments by aircraft in situations where drift onto sensitive crops and pastures is likely to occur.

Apply treatments using boom or Micronair equipment using a spray volume of not less than 20L/ha and using settings to produce a **MEDIUM-COARSE spray quality**. Swath width should be set to take into account aircraft type, wind conditions and target height. Swath width will need to be reduced to avoid stripping under light wind conditions and/or application to tall, dense targets eg pre-harvest application treatments in heavy crop stubble. Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove herbicide residues.

Application on Hilly Terrain

Increase water volume to 30-80L/ha and increase droplet size to a **COARSE SPRAY QUALITY** to optimise deposition of spray output onto weeds.

Air Temperature and Relative Humidity

DO NOT apply Apparent Concussion 540 K Herbicide by aircraft when temperature is above 30°C. Increase water volume to at least 30L/ha when temperature rises above 25°C. Avoid application when relative humidity falls below 35%.

AVOID DRIFT

DO NOT apply treatments with spraying equipment or under weather conditions which are likely to cause spray drift onto nearby susceptible crops, pastures or other sensitive plants. DO NOT apply treatments under light winds (less than 4km/hr) or inversion conditions or where wind speed exceeds 12km/hr.

APPLICATION CHECKLIST

- DO NOT treat weeds under poor growing conditions due to moisture stress, waterlogging, severe frosting, insect damage etc. Reduced performance may also occur where weeds are covered with dust or silt.
- DO NOT add surfactants, adjuvants or other pesticides except as specifically directed on this label.
- Rainfall occurring within 1 hour of application which causes run-off may require re-treatment. Rainfastness is reduced if weeds are not actively growing, under stress or conditions of low light intensity/darkness. The addition of Wetter TX may improve rainfastness on winter annual weeds.
- A Withholding Period for grazing is not required. However, it is recommended that grazing of treated plants be delayed to ensure herbicide uptake. Certain plants such as Soursob, Variegated Thistle, Sorghum and Johnson Grass, may be naturally toxic to stock when eaten in large quantities under certain conditions. Where plants are known to be toxic, grazing should be delayed until complete browning of treated plants has occurred.
- Apply treatments to weeds that have at least one true leaf (broadleaf weeds) or two leaves (grasses) to provide an adequate surface area for herbicide uptake.
- If heavy grazing has occurred, allow regrowth to 6-8cm before spraying and use the higher rates recommended.