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



## Fireball 400

### HERBICIDE

ACTIVE CONSTITUENT: 400 g/L FLUROXYPYR  
present as the METHYL HEPTYL ESTER  
SOLVENT: 316 g/L LIQUID HYDROCARBON  
100 g/L N-METHYL-2-PYRROLIDONE

GROUP

|

HERBICIDE

For the control of a wide range of broadleaf weeds in Fallow, Lucerne, Maize, Millets, Pastures, Poppies, Sorghum, Sugar Cane, Sweet Corn and Winter Cereals.

Also for the control of woody weeds in Agricultural Non-Crop areas, Commercial and Industrial areas, Forests, Pastures and Rights-of-way, as specified in the Directions for Use.

**IMPORTANT: Read this booklet before use.**

APVMA Approval No: 81917/105986

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DIRECTIONS FOR USE

RESTRAINTS:

**DO NOT** apply to plants which may be stressed (not actively growing) due to prolonged periods of extreme cold, moisture stress (water-logged or drought affected), poor nutrition, presence of disease, or previous herbicide treatment as reduced levels of control may result.

Thorough coverage of both foliage and stems, to the point of runoff, is essential for high volume applications (see **GENERAL INSTRUCTIONS**; application methods **WOODY WEEDS SITUATIONS** section).

DO NOT spray if rain is likely to occur within 1 hour.

**TABLE 1: Woody Weeds in Agricultural Non-Crop Areas and Rights-of-Way, Commercial and Industrial Areas, Forests and Pastures.**

• Legumes present at the time of spraying will be severely damaged.

HIGH VOLUME APPLICATION: Dilute product with water. See General Instructions – Application Method for application details			
Weeds Controlled	Weed Growth Stage	State	Rate mL/100 L Water
Bathurst burr, Noogoora burr	Seedlings and young plants up to 40 cm high	NSW, NT, Qld, WA only	38
Black bindweed (Climbing buckwheat)	Seedlings and young plants before flowering	NSW, Qld only	150
<i>Mimosa pigra</i>	Apply from mid to late summer	NT, WA only	
Common sensitive plant	Seedlings and young plants up to flowering	Qld, WA only	250
Bellyache bush		Qld, NSW, WA only	
Blackberry nightshade, Bokhara clover		NSW, Qld only	
Calltrop (yellow vine) ( <i>Tribulus terrestris</i> ) ( <i>T. micrococcus</i> )	Seedlings and young plants up to 30 cm diameter		
Cobblers pegs	Up to 15 cm high		
Cockspur thorn	Up to 3 m high		
Creeping lantana	At flowering		
Crofton weed, Mistflower	Seedlings and young plants up to flowering		
Docks ( <i>Rumex</i> spp.)	Seedlings and rosettes up to 30 cm high		
Hexham scent	Seedlings and young plants up to flowering	NSW, Qld only	250
Honey locust	Seedlings and young plants up to 2 m high		
Small flowered mallow (Marshmallow) ( <i>Malva parviflora</i> )	Seedlings and young plants up to flowering		
Yellowflower, Devil's claw	Seedlings and young plants up to flowering		
Lantana	Seedlings and regrowth 0.5 to 1.2 m high Plants and regrowth 1.2 to 2 m high		500
Blue heliotrope	Flowering		
Limebush	Infestations up to 1.5 m high only		
Madeira vine	Apply at time of active growth		250
Milkweed ( <i>Euphorbia heterophylla</i> )	3 leaf to flowering	Qld only	500
Common sowthistle	Seedlings and young plants up to bolting	NSW, Qld only	250
Mother-of-millions ( <i>Kalanchoe</i> spp.)	Seedling and young plants before flowering		300
Prickly acacia	Seedling and young plants up to 2 m high	Qld only	375
<i>Sida</i> spp.	Seedling and young plants up to flowering	NSW, NT, Qld, WA	500
Broadleaf Pepper tree ( <i>Schinus terebinthifolius</i> )	Mature leaves, fruiting	Qld only	250
Flannel weed ( <i>Sida cordifolia</i> )			
Snakeweed (Dark and light blue)	Seedling and young plants before flowering		375
Stinking Passion Flower	Established plants and regrowth	Qld, NT, WA	225
Wandering jew ( <i>Tradescantia albiflora</i> )	Young plants up to and including flowering	All States	750

Critical Comments
Add Uptake* Spraying Oil (see <b>General Instructions</b> ; Oils and surfactants).
Boom spray: Apparent Fireball 400 Herbicide at 0.3 L/ha + 0.4 L/ha of 2,4- D amine (625 g/L)
Apply to actively growing plants from October to April. Some regrowth may occur particularly when treating old woody plants with sparse canopies.
Repeat applications will be necessary to control subsequent germinations.
Add a surfactant (see <b>GENERAL INSTRUCTIONS</b> ; Oils and surfactants).
Add Uptake* Spraying Oil (see <b>GENERAL INSTRUCTIONS</b> ; Oils and surfactants). Consult Tropical Weeds Research Centre, Charters Towers, for specific advice on application.
Winter application only. Contact Alan Fletcher Research Station for more information.
Add Uptake* Spraying Oil (see <b>GENERAL INSTRUCTIONS</b> ; Oils and surfactants). Use 70 mL/15 L for a knapsack Some re-growth will usually occur and will require treatment.

TABLE 1: Woody Weeds in Agricultural Non-Crop Areas and Rights-of-Way, Commercial and Industrial Areas, Forests and Pastures. (cont)

• Legumes present at the time of spraying will be severely damaged.

HIGH VOLUME APPLICATION: Dilute product with water. See General Instructions – Application Method for application details			
Weeds Controlled	Weed Growth Stage	State	Rate mL/100 L Water
Wattles (including <i>Acacia aulacocarpa</i> , <i>A. decora</i> , <i>A. harpophylla</i> , <i>A. leiocalyx</i> , <i>A. salicina</i> )	Seedling plants or regrowth 0.5 to 1.2 m high	NSW, Qld only	250
	Plants or regrowth 1.2 m to 2.0 m high only		500

TABLE 1: Woody Weeds in Agricultural Non-Crop Areas and Rights-of-Way, Commercial and Industrial Areas, Forests and Pastures. (cont)

BASAL BARK AND CUT STUMP APPLICATION: Dilute product with diesel. See General Instructions – Application Method for application details			
WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE L/100 L DIESEL
Celtis ( <i>Celtis sinensis</i> )	<b>Basal Bark only:</b> Young plants up to 2 m high and 20 cm basal diameter	Qld only	1.8
Chinee apple	Up to 15 cm basal diameter		1.5
Cockspur thorn	<b>Basal Bark only:</b> Up to 5 cm basal diameter	Qld, WA only	1
Mimosa bush ( <i>Acacia farnesiana</i> )	Up to 5 cm basal diameter		1.5
Prickly acacia	Up to 10 cm basal diameter	Qld only	750 mL
Honey locust	Plants up to 10 cm basal diameter	Qld, NSW only	750 mL
	Plants 10 to 20 cm basal diameter		1.5
	Plants >20 cm basal diameter		2.5
Sisal hemp ( <i>Agave</i> spp.)	All growth stages	Qld only	1.5
			5 mL undiluted product per plant

TABLE 1: Woody Weeds in Agricultural Non-Crop Areas and Rights-of-Way, Commercial and Industrial Areas, Forests and Pastures. (cont)

BROADCAST AND AERIAL APPLICATION: Dilute product with water. See General Instructions – Application Method for application details			
WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE mL/100 L water
<i>Mimosa pigra</i>	Actively growing plants	NT, WA only	1.5
LOW VOLUME, HIGH CONCENTRATE APPLICATION: Use a drench gun or gas-powered gun. See General Instructions – Application Method for application details			
WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE mL/100 L water
Limebush	Isolated bushes up to 1.2 m high only	NSW, Qld only	500 mL
Tree violet ( <i>Hymenanthera dentata</i> )	Apply from late flowering to green fruit up to 1.2 m high	NSW only	

TABLE 2: Established Grass Pastures

Weeds Controlled	Weed Growth Stage	State	Rate mL/100 L water
Blue billygoat weed, Common sensitive plant, Giant sensitive plant, Spinyhead sida	Apply before flowering	Qld, WA only	750 mL
St John's wort	Apply from bud to full bloom (usually late Nov to early Jan)	ACT, NSW and Vic only	1.5 L
Silverleaf nightshade	From onset of flowering to early berry-set (usually spring to mid-summer)	NSW only	375 mL or 190 mL + 1.2 – 1.6 L 2,4-D amine (625 g/L)

Critical Comments
Apply to actively growing plants when soil moisture is plentiful. Some regrowth may occur particularly when treating old woody plants with sparse canopies and under dry conditions.

CRITICAL COMMENTS
Treat stems from ground level to where multi-stemmed trunks branch.
With basal bark, treat circumference of stem to a height of 45 cm from the ground. Contact the Land Protection Branch, Department of Lands, Qld, for further information on Chinee Apple.
With basal bark, treat circumference of stem to a height of 45 cm from the ground. <b>For cut stump application</b> use a rate of 5 L/100 L diesel for all plant sizes. Contact the Land Protection Branch, Department of Lands, Qld, for further information on Honey Locust.
Treat as an overall spray. Contact The Land Protection Branch, Department of Lands, Qld for advice to control large infestations. Lever out centre of plant with crowbar and immediately treat the exposed cut area.

CRITICAL COMMENTS
Aerial application: Add Uptake Spraying Oil at the rate of 1 L/100 L spray mix. Apply to actively growing plants from mid to late summer. Contact the Department of Primary Industries and Fisheries, NT for further information.
CRITICAL COMMENTS
Apply a 50 mL dose per 5 m2 of bush surface area. Apply a 50 mL dose per cubic metre of bush.

Critical Comments
Add Uptake Spraying Oil at 1 L/ha
Some regrowth will occur. Treat regrowth the following season for best results. Use at least 200 L water/ha.
Add Uptake Spraying Oil at 1 L/ha. To ensure maximum effect, delay application until the majority of shoots have emerged. Follow-up treatment of regrowth is critical for best control.

TABLE 3: Sorghum, Maize, Millets and Sweet Corn (NSW and Qld only)

Crop	Crop Growth Stage	Weeds Controlled
Sorghum	Apply when secondary roots are present, from 4 fully expanded leaves (15 cm tall) up to boot (also see CRITICAL COMMENTS)	Annual ground Cherry, Wild gooseberry ( <i>Physalis</i> spp.)
		Apple-of-Peru
		Bathurst burr, Noogoora burr
Maize and Sweet corn	Apply when secondary roots are present, from 3 fully expanded leaves (10 cm tall) up to just before tasselling (see CRITICAL COMMENTS)	Pigweed ( <i>Portulaca oleracea</i> )
		Sesbania pea
Millets	Spray when secondary roots have developed, usually early to mid-tillering, and not later than before heads start to form at the base of tillers. (See CRITICAL COMMENTS)	Silverleaf nightshade (NSW only) <sup>(1)</sup>
		Starburr ( <i>Acnthospermum hispidum</i> ) (Qld only)
		Thornapples ( <i>Datura</i> spp.)
		Volunteer Sunflower
Sorghum, Maize & Sweet corn	Spray when secondary roots have developed, usually early to mid-tillering and not later than before heads start to form at the base of the tillers (See CRITICAL COMMENTS)	<i>Amaranthus</i> spp. Including: Boggabri weed, Dwarf amaranth, Green amaranth, Redshank, Anoda weed, Bladder ketmia, Black pigweed ( <i>Trianthema portulacastrum</i> ), Caltrope (yellow vine), Including <i>Tribulus terrestris</i> , <i>T. micrococcus</i> and <i>T. maximus</i> , Cowvine (peach vine) ( <i>Ipomoea lonchophylla</i> ), Hairy wandering jew ( <i>Commelina benghalensis</i> ), Mintweed
		<i>Euphorbia davidii</i>
		Volunteer peanuts

SWEET CORN: TASMANIA ONLY

Crop	Crop Growth Stage	Weeds Controlled
Sweet Corn only	3 to 5 leaf	Blackberry nightshade, Volunteer potatoes

Weed Growth Stage	Rate L/ha	Critical Comments
2 to 8 leaf Up to 15 cm tall	250 mL	<b>Sorghum:</b> From 8 leaf to boot stage, use dropper nozzles to prevent herbicide coming in contact with the crop's leaves and the growing point (meristem).
15 to 30 cm tall	375 mL	
Seedling plants Up to 15 cm tall		
2 to 8 leaf Up to 20 cm tall	250 mL	<b>Maize and Sweet Corn:</b> From 6 leaf to just before tasselling, use dropper nozzles to prevent the herbicides coming in contact with the crop's leaves and the growing point (meristem).
20 to 50 cm tall	375 mL	
Up to 10 cm diameter	250 mL	
10 to 30 cm diameter	375 mL	<b>Millets:</b> DO NOT use mixes with atrazine.  <sup>(1)</sup> This treatment may be slightly damaging to the crop. To minimise crop damage apply using dropper nozzles at <b>all crop stages</b> .
2 to 6 leaf Up to 10 cm tall	750 mL	
Full flower to early berry	375 mL + Uptake at 300 mL/100 L	
Up to 12 leaf and before flowering	750 mL or 375 mL + 1.6 L atrazine (600 g/L)	<b>Use the low rate</b> (250 mL + 1.2 L) when weeds are small (5 - 7 cm tall/diameter). <b>Use the high rate</b> (375 mL + 1.6 L) when the weeds are larger (7 – 15 cm tall/diameter). Apparent Fireball 400 Herbicide is generally more compatible with <b>Liquid atrazine products</b> (see <b>GENERAL INSTRUCTIONS</b> ; compatibility section). Add a surfactant (See <b>GENERAL INSTRUCTIONS</b> ; Oils and surfactants). <b>DO NOT</b> add an oil to mixtures of Apparent Fireball 400 Herbicide and atrazine.
2 to 8 leaf Up to 15 cm tall.	375 mL	
2 to 5 leaf Up to 20 cm tall.	500 mL	
Seedling plants up to 15 cm tall or rosettes up to 15 cm diameter	250 mL + 1.2 L of atrazine flowable (600 or 675 g/L) or 375 mL + 1.6 L of atrazine flowable (600 g/L or 1.1 kg of Atrazine 900 g/kg granules)	
Cotyledons to 4 nodes up to 15 cm	500 mL + 1.6 L atrazine flowable (600 g/L or 1.1 kg of Atrazine 900 g/kg granules)	
Up to 15 cm diameter	500 mL + 3.7 L atrazine flowable (600 g/L or 2.5 kg of Atrazine 900 g/kg granules)	

Weed Growth Stage	Rate L/ha	Critical Comments
3 to 5 leaf	500 mL	

**TABLE 4: Winter Cereals (Wheat, Barley, Oats and Triticale)**

Crop Growth Stage	Weeds Controlled	Weed Growth Stage
Apply from 3 leaf to flag (Zadoks 13 to 39)	Bedstraw ( <i>Galium tricornutum</i> )	1 to 3 whorl
	Cleavers ( <i>Galium aparine</i> )	
	Black bindweed (Climbing buckwheat)	2 to 4 leaf 2 to 6 leaf
	Common sowthistle ( <i>Sonchus oleraceus</i> )	2 to 5 leaf
	Deadnettle	2 to 6 leaf
	Spiny emex (Doublegee, Three cornered jack)	2 to 4 leaf
	Prickly lettuce	2 to 5 leaf
	Volunteer lupins	2 to 8 leaf
	Volunteer potato	10 to 15 cm tall
	Wireweed	2 to 3 leaf
	Bittercress ( <i>Coronopus didymus</i> ), Mustards, Shepherd's purse, turnip weed, Wild radish, Wild turnip	Up to 8 leaf and up to 15 cm diameter

**TABLE 5: Summer Fallow**

Weeds Controlled	Weed Growth Stage	State
Annual ground cherry, Wild gooseberry ( <i>Physalis</i> spp.)	2 to 8 leaf, up to 15 cm tall	NSW, Qld only
Bathurst burr, Noogoora burr	2 to 8 leaf, up to 20 cm tall	NSW, Qld, Vic, WA only
Bellvine	Pre-flowering	NSW, Qld only
Bladder ketmia	4 to 8 leaf, up to 10 cm tall	
Cowvine (Peach vine) ( <i>Pomoea lanchophylla</i> )	2 to 10 leaf up to 10 cm diameter	
Calatrop (yellow vine), including <i>Tribulus terrestris</i> , <i>T. maximus</i> and <i>T. microcus</i>	Up to 15 cm diameter	
Pigweed ( <i>Portulaca oleracea</i> )	Up to 10 cm diameter Up to 60 cm diameter	
Polymeria pusilla	2 to 10 leaf up to 20 cm diameter	NSW, Qld, WA only
Rhynchosia	Seedlings to early flowering	
Smallflower mallow or Marshmallow ( <i>Malva parviflora</i> )	Up to 8 leaf up to 20 cm diameter	
Thornapples ( <i>Datura</i> spp.)	2 to 8 leaf up to 15 cm diameter	
Sesbania pea	2 to 6 leaf up to 10 cm tall	NSW Qld only
Perennial Ground Cherry ( <i>Physalis virginiana</i> ) (w)	Bud to early flowering up to 20 cm tall	

State	Rate L/ha	Critical Comments
Vic, SA, WA	500 mL	<sup>(1)</sup> <b>Add either Uptake or a surfactant (see GENERAL INSTRUCTIONS: Oils and surfactants).</b>
NSW, Vic only		
NSW, Qld only	250 mL <sup>(1)</sup>	Useful suppression only.
	375 mL or 250 mL + 5 g Metsulfuron methyl <sup>(1)</sup>	<b>Mixtures:</b> Mixing partners with Apparent Fireball 400 Herbicide may reduce crop selectivity. Apply at crop growth stages according to the mixing partner's recommendation.
	500 mL	
	750 mL or 250 mL + 5 g Metsulfuron methyl <sup>(1)</sup>	
NSW, SA, Qld, WA		
NSW, Qld, Tas, Vic, WA	500 mL	
NSW, Vic, WA only	750 mL	
WA and Tas only		Plants 15 to 30 cm tall will only be suppressed.
NSW, Qld, SA, Tas, Vic, WA		
NSW and Qld only	250 mL + 5 g Metsulfuron methyl <sup>(1)</sup>	
Qld, NSW, Vic, SA, Tas, WA	250 mL to 1.5 L + Metsulfuron methyl <sup>(1)</sup> or Eclipse <sup>(1)</sup> or MCPA LVE or MCPA amine	The Apparent Fireball 400 Herbicide rate depends on what other weeds are present as listed above. See <b>Mixtures:</b> comment above. Metsulfuron methyl (600 g/kg) @ 5 g/ha (this mix does not control wild radish). Eclipse @ 5 - 7 g/ha (use the 5 g rate on turnip weed only). MCPA LVE (500 g/L) @ 700 mL/ha. MCPA Amine (500 g/L) @ 1.0 L/ha.

Rate L/ha	Critical Comments
375 mL <sup>(2)</sup>	<sup>(1)</sup> Add Uptake* Spraying Oil (see <b>GENERAL INSTRUCTIONS;</b> Oils and surfactants).
250 mL + 1.2 L Glyphosate 450	When mixing with Glyphosate 450 to control both grass and broadleaf weeds, refer to the Glyphosate 450 label for use rates and adjuvants recommended for the grasses (see <b>GENERAL INSTRUCTIONS;</b> compatibility section).
250 mL + 1.0 L Glyphosate 450	<sup>(2)</sup> Delay treatment until the maximum number of shoots have emerged, but before the onset of fruiting (late summer). DO NOT treat plants showing symptoms from previous treatment. Use the high rate when longer term weed control (6 - 10 months) is required and delay planting crops during this period. The low rate will require follow-up treatments.
375 mL <sup>(1)</sup>	
375 mL + 1.0 L Glyphosate 450	
500 mL <sup>(1)</sup> or 250 mL + 1.2 L Glyphosate 450	
500 mL <sup>(1)</sup> or 190 mL + 800 mL Glyphosate 450	
500 mL <sup>(1)</sup>	
375 mL (f) or 250 mL + 1.2 L Glyphosate 450	
750 mL (f) or 250 mL + 1.2 L Glyphosate 450	
750 mL or 1.5 L <sup>(1)</sup>	

**TABLE 5: Summer Fallow (cont)**

Weeds Controlled	Weed Growth Stage	State
Silverleaf nightshade	Full flower to early berry-set (usually Dec – Feb)	NSW only
Volunteer peanuts	Up to 15 cm diameter	Qld only
Volunteer sunflowers	2 to 5 leaf up to 20 cm	NSW, Qld only

**TABLE 6: Winter Fallow**

Weeds Controlled	Weed Growth Stage	State
Bedstraw ( <i>Galium tricornutum</i> )	Up to 5 whorl	Vic, SA, WA only
Cleavers ( <i>Galium aparine</i> )		NSW, Vic only
Black bindweed (Climbing buckwheat)	2 to 8 leaf up to 10 cm diameter	NSW, Qld only
Common sowthistle ( <i>Sonchus oleraceus</i> )	2 to 5 leaf up to 10 cm diameter	
Prickly lettuce		
Spiny emex (Doublegee, Three cornered jack)	2 to 8 leaf	
Wireweed	2 to 3 leaf up to 10 cm tall	

**TABLE 7: Sugar Cane (Qld, NSW, NT and WA only)**

Crop Stage Growth	Weeds Controlled	Weed Growth Stage
From early tillering to maturity	Balsam pear, Blackberry nightshade, Blue billygoat weed, Centro, Cowpea, Giant sensitive plant, Lablab bean, Noogoora burr, Phasey bean, Pinkburr, Prickly African Cucumber, Spinyhead sida, Sinking passion flower (seedlings only)	Apply from 2 to 3 leaf until flowering
	Bellvine, Morning glory, Red or pink convolvulus, Star-of-Bethlehem	
	Stinking passion flower	Established or ratoon plants with at least 1.0 m of regrowth
	Milkweed ( <i>Euphorbia heterophylla</i> )	Seedlings and young plants up to flowering.

**TABLE 8: Lucerne (NSW only)**

Crop Stage Growth	Weeds Controlled	Weed Growth Stage
Established crops at least eighteen months old	Annual ground cherry, Bathurst burr, Noogoora burr, Wild gooseberry	2 to 8 leaf up to 15 cm high
	Pigweed	Up to 10 cm diameter

**TABLE 9: Poppies (Tas only)**

Crop Stage Growth	Weeds Controlled	Weed Growth Stage
4 to 6 leaf	Cleavers, Fumitory Shepherd's purse, Wireweed	2 to 6 leaf
8 to 10 leaf	Common sowthistle, Prickly lettuce	2 to 5 leaf
	Black nightshade	Cotyledon to 4 leaf.
	Fumitory	6 to 10 leaf
	Volunteer potato	From tuber initiation to flower bud.

Rate L/ha	Critical Comments
375 mL or 190 mL + 1.2 – 1.6 L 2,4-D amine (625 g/L)	Add Uptake Spraying Oil at the rate of 1 L/100 L spray mixture. To ensure maximum effect, delay application until the majority of shoots have emerged. Follow-up treatment will be required to control regrowth and is critical for optimum control. If wanting to prevent seed set, repeat applications may be needed in the same season, although this does not lead to better long term control.
500 mL + 3.7 L atrazine flowable (600 g/L)	Add a surfactant (see <b>GENERAL INSTRUCTIONS</b> ; Oils and surfactants). Important: see <b>GENERAL INSTRUCTIONS</b> ; compatibility section).
500 mL	Add Uptake Spraying Oil (see <b>GENERAL INSTRUCTIONS</b> ; Oils and surfactants section).

Rate mL/100 L water	Critical Comments
500 mL <sup>(1)</sup>	<sup>(1)</sup> Add Uptake Spraying Oil (see <b>GENERAL INSTRUCTIONS</b> ; Oils and surfactants section).
375 mL <sup>(1)</sup>	<sup>(2)</sup> Add Uptake or a surfactant (see <b>GENERAL INSTRUCTIONS</b> ; Oils and surfactants section).
500 mL <sup>(1)</sup> or 250 mL + 600 mL Glyphosate 450	When mixing with Glyphosate 450 to control both grass and broadleaf weeds, refer to the Glyphosate 450 label for use rates and adjuvants recommended for the grasses (see <b>GENERAL INSTRUCTIONS</b> ; Compatibility Section).
750 mL <sup>(1)</sup> or 250 mL <sup>(2)</sup> + 5 g Metsulfuron methyl (600 g/kg)	
750 mL <sup>(1)</sup> or 250 mL <sup>(2)</sup> + 5 g Metsulfuron methyl (600 g/kg) or 0.5 <sup>(2)</sup> + 0.6 Glyphosate 450	

Rate L/ha	Critical Comments
Ground: 650 mL Aerial: 750 mL	For optimal weed control, delay application until just before the "close-in" stage. <b>Aerial application:</b> Apply in not less than 60 L/ha water and add Uptake Spraying Oil at 1 L/100 L spray mixture. <b>Ground application:</b> Apply in 100 – 400 L/ha water and add Uptake Spraying Oil at 300 mL/100 L of spray mixture.
As above + 800 mL 2,4-D amine (625 g/L)	
<b>High volume:</b> 225 mL/100 L water <b>Knapsack:</b> 35 mL/15 L water	Thoroughly wet plants to the point of run-off.
1.5 L or 1.15 L + 3.3 L atrazine flowable (600 g/L)	Better control will be achieved with the atrazine mixture. Delay application until just before the cane reaches the "close-in" stage. This will improve control and minimise the number of seedlings that germinate.

Rate L/ha	Critical Comments
250 mL	To minimise crop injury and to maximise weed control, cut, slash or heavily graze the lucerne before application. Wherever possible, irrigate before application to stimulate weed growth. DO NOT treat crops growing on sandy or stony soils. DO NOT treat crops after the summer growing season (after end of March). To broaden the spectrum of weeds controlled, Apparent Fireball 400 Herbicide can be mixed with 2,4-DB Amine.

Rate L/ha	Critical Comments
500 mL	DO NOT apply Apparent Fireball 400 Herbicide to poppies later than the 8 to 10 leaf growth stage as a reduction of alkaloid content could occur.
500 mL + 5 L Asulox	
500 mL	
750 mL	
	This rate will provide season long control of volunteer potato, but will not control all daughter tubers and will only suppress potatoes over 15 cm tall.

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

WITHHOLDING PERIOD:  
CROPS AND PASTURES: DO NOT GRAZE FAILED CROPS AND TREATED PASTURES OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION.  
POPPIES: DO NOT SPRAY POPPIES LATER THAN 10 WEEKS BEFORE HARVEST.  
OTHER CROPS: NOT REQUIRED WHEN USED AS DIRECTED.

MINIMUM RECROPPING PERIODS

PLANT-BACK PERIODS FOR CROPS FOLLOWING THE APPLICATION OF APPARENT Fireball 400 HERBICIDE FOR RATES UP TO 750 mL/ha			
RATE L/ha	190 mL	375 mL	750 mL
CROP	DAYS		
Barley	7	7	7
Wheat	7	7	7
Chickpea	7	7	7
Cotton	14	14	28
Soybean	7	7	14
Sunflower	7	7	7
Maize	7	7	7
Sorghum	7	7	7

**NOTE:** Before using Apparent Fireball 400 Herbicide in tank mixes with other herbicides, check the plant-back information on all product labels. The time between spraying and planting will be determined by the most residual product, i.e. the product with the longest plant-back period.

GENERAL INSTRUCTIONS

MIXING

Apparent Fireball 400 Herbicide may be mixed with water or diesel.  
Mix only sufficient chemical for each day's use and avoid storing.

**Mixing in Water:** Half fill the spray tank with water and add the required quantity of Apparent Fireball 400 Herbicide and complete filling. Agitate continuously to ensure thorough mixing before and during application.

**Mixing in Diesel:** Half fill the tank with diesel and add the required quantity of Apparent Fireball 400 Herbicide. Add the remainder of the diesel and agitate or shake to mix contents.

**Tank mixtures:** Wettable powder or dry flowable formulations (e.g. water dispersible granules) should be added to the spray tank first, followed by suspension concentrates (flowables), water soluble salts and then emulsifiable concentrate formulations (Apparent Fireball 400 Herbicide). Add spraying oils and surfactants (wettters) last.

OILS AND SURFACTANTS

Oils

Where specified use only Uptake Spraying Oil at the rate of 500 mL/100 L of spray mix. When using less than 100 L/ha spray volume, ensure a minimum of 250 mL/ha of Uptake is used, unless 1 L/100 L or 1 L/ha is specified.

Surfactants (wettters)

Use a 100% concentrate non-ionic surfactant such as BS1000\* at 100 mL/100 L of spray mix where required.

COMPATIBILITY

Apparent Fireball 400 Herbicide is compatible with the herbicides listed. Follow any regional restrictions, and all directions and restrictions on the label, of any chemical mixed with Apparent Fireball 400 Herbicide.  
Atrazine (see below), Glyphosate 360, Metsulfuron methyl (600 g/kg), Glyphosate 450, Broadstrike, Topik 240 EC (see below), Eclipse, Tordon 75-D, Diclofop methyl, Tordon 242, Triclopyr (600 g/L), Touchdown, Lontrel, 2,4-D, MCPA, 2,4-DB, Puma S.

ATRAZINE

AVOID USING HARD WATER WHEREVER POSSIBLE.

Where hard water cannot be avoided, the addition of CALGON water conditioning agent to the spray tank at 100 g/100 L water, before adding any herbicide may improve compatibility.

AGITATION IS VERY IMPORTANT WHEN MIXING APPARENT Fireball 400 HERBICIDE AND ATRAZINE.

Apparent Fireball 400 Herbicide plus atrazine tank mixes must be agitated vigorously and continuously during mixing and application. After mixing DO NOT allow to stand without agitation. Ensure that the time from mixing to the end of application is not more than 2 hours. If settling out occurs re-suspension is difficult, even with vigorous agitation. Agitation using only the pump's by-pass is usually inadequate, particularly with larger tanks (more than 2000 L). Additional mechanical agitation will be necessary in large tanks, computer sprayers and mixing tanks. When additional surfactant is required, add a 100% concentrate non-ionic surfactant at 100 mL/100 L of spray mix. DO NOT use a spraying oil when tank mixing Apparent Fireball 400 Herbicide and atrazine.



**TOPIK 240 EC**

Always use Uptake Spraying Oil with Apparent Fireball 400 Herbicide + Topik 240 EC tank-mixes at 500 mL/100 L of spray mix with a minimum of 250 mL/ha.

DO NOT mix Apparent Fireball 400 Herbicide with Topik 240 EC if the grass weeds are not actively growing. Always use the maximum label rate of Topik 240 EC for the appropriate grass growth stage.

DO NOT use Apparent Fireball 400 Herbicide at more than 0.75 L/ha in tank mixes with Topik 240 EC.

**GLYPHOSATE 450**

When mixing Apparent Fireball 400 Herbicide with Glyphosate 450 to control both grass and broadleaf weeds, refer to the Glyphosate 450 label for use rates and adjuvants recommended for the grasses.

DO NOT use Glyphosate 450 at less than 1.2 L/ha in tank mixes with Apparent Fireball 400 Herbicide, when barnyard grass, buttongrass, crowfoot grass, native millet and liverseed grass are the target species.

**APPLICATION METHODS AND WATER RATES**

**BROADCAST APPLICATION IN CROPPING, PASTURE AND FALLOW SITUATIONS**

**A. Ground application (Boom)**

Apply Apparent Fireball 400 Herbicide with an accurately calibrated boom sprayer, in at least 50 L/ha water (100 - 400 L/ha for sugar cane).

Flat nozzles are recommended using pressures in the range 200 to 300 kPa.

Set the boom at a height to ensure a double overlap of the nozzle patterns.

**B. Ground directed application (Dropper nozzles)**

To minimise crop effects, dropper nozzles should be used in sorghum when the crop is beyond the 8 leaf growth stage and in maize and sweet corn when the crop is beyond the 6 leaf growth stage.

Adjust the nozzles to direct the spray into the base of the crop and away from the leaves and the growing point.

See manufacturers' directions for setting up and calibration of dropper nozzles.

**C. Aerial application**

Apply in a minimum volume of at least 35 L/ha water (60 L/ha in sugarcane).

Use equipment calibrated to produce droplets with an average diameter (Volume Mean Diameter; VMD) of 250 – 350 microns.

DO NOT apply when the temperature is above 30°C, when there is no wind or when the wind is blowing toward susceptible crops.

DO NOT use human flaggers unless they are protected by engineering controls such as enclosed cabs.

**WOODY WEED SITUATIONS**

Weeds must be actively growing to attain optimal effect. Delay the treatment of regrowth following bulldozing, slashing, burning, ploughing or a previous chemical treatment until it has at least 1 metre of new, vigorous, growth.

**A. High Volume Application**

**Hand Gun**

Apply the recommended mix to obtain full coverage of leaves and stems using a number 6 – 8 tip at 700 to 1500 kPa. To obtain good coverage, a spray volume of 1500 to 4000 L/ha (15 to 40 L/100 m<sup>2</sup>) is required per infested hectare.

Ensure thorough coverage to the point of runoff.

**Knapsack**

Knapsack sprayers may be used on smaller infestations where penetration and coverage of the canopy is easier to achieve. Use the same use rate and spray techniques as for handgun application.

**B. Low Volume, High Concentrate Application**

**Drench Gun or Gas-Powered Gun**

Apply the recommended mixture uniformly across the foliage by applying 50 mL shots to cover 4 to 5 m<sup>2</sup> of surface area of plant. This is approximately equivalent to 20 droplets per cm<sup>2</sup> of the leaf surface. Use a marking agent as recommended by the equivalent manufacturer to check spray coverage.

**C. Basal Bark and Cut Stump Application**

**Basal Bark**

DO NOT apply to wet stems as this can repel the diesel mixture.

Spray or paint the recommended mixture around the base of each stem from ground level to a height of at least 30 cm from the ground, wetting the bark to the point of runoff.

Apply with a paint brush or a pressure sprayer with an approximate lance and solid cone nozzle. If using spray equipment use low pressures (< 200 kPa) sufficient to form a cone of spray.

Old rough bark will require more spray than smooth or young thin bark.

**Cut Stump**

Apply the recommended mixture liberally to the freshly cut stump immediately after cutting.

Apply by spraying or painting the cut surface and sides of the stump.

Best results are obtained when the stems are cut less than 15 cm above the ground.

**CLEANING SPRAY EQUIPMENT**

Rinse water should be discharged onto a designated disposal area or, if this is unavailable, onto wasteland away from desirable plants and water courses.

**Cleaning equipment after using water-based sprays:**

**Rinsing:** After using Apparent Fireball 400 Herbicide, empty the tank completely and drain the whole system.

Thoroughly wash inside the spray unit using a pressure hose. Drain and clean any filters in the tank, pump, lines, hoses and nozzles.

After cleaning the tank as above, quarter fill the clean water and circulate through the pump, lines and nozzles.

Drain and repeat the rinsing procedure twice.

**Decontamination (before spraying cotton and other sensitive crops; see PROTECTION OF CROPS):** Wash the tank and rinse the system as above. Then quarter fill the tank and add an alkali detergent (e.g. liquid SURF, OMO, DRIVE) at 500 mL/100 L of water or the powder equivalent at 500 g/100 L 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.

**Cleaning equipment after using diesel-based sprays:**

On completion of spraying, use a degreaser such as Caltex Kwik-D-Grease to remove traces of diesel from the sprayer. Rinse tank and spray through nozzles with water to remove degreaser. Then quarter fill the tank and add an alkali detergent (e.g. liquid SURF, OMO, DRIVE) at 50 mL/10 L of water or the powder equivalent at

50 g/10 L. Shake sprayer to circulate the washing solution throughout the sprayer, then spray the solution through the nozzles. Rinse well with clean water to remove the detergent.

To clean brushes and containers, spray liberally with degreaser. Hose off with clean water and repeat using detergents as above.

DO NOT use this equipment for any other purpose.

**RESISTANT WEEDS WARNING**

**GROUP I HERBICIDE**

Apparent Fireball 400 Herbicide is a member of the pyridine group of herbicides. Apparent Fireball 400 Herbicide has the disruptors of plant cell growth mode of action. For weed resistance management the product is a Group I Herbicide.

Some naturally occurring weed biotypes resistant to the product and other Group I herbicides may exist through normal genetic variability in any weed population. The resistant individual can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by this product or other Group I herbicides.

Since the occurrence of resistant weeds is difficult to detect prior to use, Apparent Pty Ltd. accepts no liability for any loss that may result from the failure of this product to control resistant weeds.

Strategies to minimize the risk of herbicide resistance are available. Contact your farm chemical supplier, consultant, local Department of Agriculture, or Apparent representative.

**PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS**

Susceptible crops include, but are not limited to clovers, cotton, fruit, hops, lupins, ornamentals, peas, pine trees, potatoes, navy beans, safflower, shade trees, soybeans, sunflower, tobacco, tomatoes, vegetables and vines.

Apparent Fireball 400 Herbicide can be damaging to susceptible crops during both growing and dormant periods. Grasses are normally unaffected by Apparent Fireball 400 Herbicide and establish quickly after treatment.

Transitory damage can occur on some species particularly those that spread by stolons such as couch grass (*Cynodon dactylon*), Kikuyu grass and carpet grass (*Axonopus* sp.)

DO NOT allow spray to drift onto susceptible crops, shade trees and *Pinus* spp.

DO NOT use under weather conditions or from spraying equipment which could cause spray to drift onto nearby susceptible plants.

**PROTECTION OF LIVESTOCK**

DO NOT graze stock or cut treated crops or plants for food except as specified under withholding periods.

Poisonous plants may become more palatable after spraying therefore stock should be kept out of the area until the plants have died down.

DO NOT allow stock to re-enter paddocks containing treated poisonous plants, until the plants have died down.

**PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT**

DO NOT contaminate streams, rivers or waterways with the chemical or used containers.

Alongside waterways, treat only noxious weeds and poisonous plants.

**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 food, feedstuffs, fertilisers, seeds, insecticides, fungicides or other pesticides.

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 500 mm 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.

**Refillable containers:**

Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

**SMALL SPILL MANAGEMENT**

Wear protective equipment (See **SAFETY DIRECTIONS**). Apply absorbent material such as earth, sand, clay granules or cat litter to the spill. Sweep up material for disposal when absorption is completed 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 the wash liquid for disposal.

**SAFETY DIRECTIONS**

Avoid contact with 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, a face shield or goggles. Wash hands after use.

After each day's use, wash gloves, face shield or goggles and contaminated clothing.

**FIRST AID**

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia: 13 11 26. If swallowed, do NOT induce vomiting. Give a glass of water. If in eyes wash it out immediately with water.

**SAFETY DATA SHEET**

Additional information is listed on the Safety Data Sheet which is available from the supplier.

**CONDITIONS OF SALE**

The use of Apparent Fireball 400 Herbicide being beyond the control of the manufacturer no warranty expressed or implied is given by Apparent Pty Ltd regarding its suitability, fitness or efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and Apparent Pty Ltd accepts with no responsibility for any consequences whatsoever resulting from the use of this product.

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