

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

**TITAN**

# TRIFLURALIN 480

## SELECTIVE HERBICIDE

ACTIVE CONSTITUENT: 480g/L TRIFLURALIN  
SOLVENT: 480g/L LIQUID HYDROCARBON

GROUP **3** HERBICIDE

A pre-emergence herbicide for the control of annual grasses and broadleaf weeds in horticultural and agricultural crops as per the Directions for Use Table.

APVMA Approval No.: 56825/123213

Pack Size: 20L-1000L



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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**

1. FIELD CROPS						
SITUATION & CROP	WEEDS CONTROLLED	STATE	RATE/ SOIL TYPE			CRITICAL COMMENTS
			LIGHT	MED	HEAVY	
Adzuki Beans, Borlotti Beans, Cowpeas, Lablab, Mung Beans, Red Kidney Beans	See Weed Table A	QLD, NSW, ACT only	1.2-1.5L/ha	1.5L/ha	1.7L/ha	Apply from 4 weeks up to just prior to sowing. Refer to Incorporation Table Notes 3, 4 or 5 for suitable method of incorporation.
Barley	See Weed Table B	QLD only	800mL/ha			Apply to self-mulching and non self-mulching soils from 1-4 weeks before sowing. Sowing depth should be at least 5cm. Use cover harrows behind combine. Ground should be left flat. Refer to Incorporation Table Note 6 for suitable method of incorporation.
	See Weed Table C plus Brome Grass (suppression), Sand Fescue	SA only	1.25L/ha			Apply 1-4 weeks before sowing. Sowing depth should be at least 5cm. Use cover harrows behind combine. Ground should be left flat. DO NOT use pre-sowing on self-mulching soils as damage may occur from wheel tracking and poor control of Wild Oats. Refer to Incorporation Table Note 6 for method of incorporation.
Canola, Safflower	See Weed Table D	ALL STATES	1.2L/ha	1.5L/ha	1.7L/ha	Spray between 4 weeks and just before sowing takes place. Refer to Incorporation Table Notes 6 or 11 for suitable method of incorporation.
Chickpea	See Weed Table B plus Black Pigweed, Climbing Buckwheat (Black Bindweed) (suppression)	QLD only	1.25-1.7L/ha			Use 1.25L/ha when applying immediately prior to sowing. Use 1.7L/ha when applying to dry soil before the planting rain.
	Annual Ryegrass, Deadnettle, Wild Oats, Wireweed (Hogweed)	VIC only	800mL/ha plus 1.6L/ha Tri-allate 500g/L			Incorporate as per recommendations for wheat, barley and ritalce.
	See Weed Table E	SA only	1.25L/ha			Apply to level seedbed 0 to 4 weeks before sowing. Refer to Incorporation Table Note 6.
	See Weed Table A	NSW, ACT only	1.2-1.5L/ha	1.5L/ha	1.7L/ha	Apply from 4 weeks up to just prior to sowing. Refer to Incorporation Table Notes 3, 4 or 5 for suitable method of incorporation.
Cotton	See Weed Table D	QLD, NSW, ACT, WA only	1.2L/ha	1.7L/ha	2.3L/ha	Spray between 6 weeks and just before sowing takes place. Refer to Incorporation Table Notes 1 and 2 for method of incorporation.
Faba Beans	Annual Ryegrass, Barley Grass, Brome Grass (suppression), Capeweed, Corn Gromwell (Sheepweed), Fumitories, Geranium, Ivy Leaf Speedwell, Mustards, Soursob, Turnips, Wild Oats (Soil surface), Wireweed	SA, WA only	800mL/ha plus 1.1kg/ha TITAN Simazine 900 WG			Apply to bare moist soil and incorporate to a depth of 5cm just prior to sowing. Incorporation should be made within 4 hours of application. Application should not be made to ridged or excessively cloddy soil. For full reliable results, significant rainfall (20 or 30mm) is necessary within 2-3 weeks of application.
Legume Seed Crop Establishment - Annual Medics - Clover (Berseem, Red, Strawberry, Sub and White)	See Weed Table D	NSW, ACT, VIC, TAS, SA, WA only	1.2-1.7L/ha		1.7L/ha	<b>Autumn Sowing:</b> Use lower rates. Apply from 4 weeks to 7 days before sowing takes place. Refer to Incorporation Table Note 6 for method of incorporation. <b>Spring Sowing:</b> Use higher rates. Apply between 4 weeks and 3 days before sowing takes place. Refer to Incorporation Table Note 6 for method of incorporation. In both cases, seedling disease, cold weather, excessive moisture, high salt concentrations and drought could weaken crop seedlings and damage could occur from the use of this product. Temporary crop suppression could result.
Legume Seed Crop Establishment - Lucerne for hay and seed crop		ALL STATES				
Lentils	Annual Phalaris, Annual Ryegrass, Wild Oats, Wireweed	NSW, ACT only	800mL/ha	1.2L/ha		Apply 1 to 4 weeks before sowing.
	Annual Ryegrass, Barley Grass, Canary Grass, Fumitory - Red and White, Rough Poppy, Sand Fescue, Wireweed	SA only	1.25L/ha			

1. FIELD CROPS – continued						
SITUATION & CROP	WEEDS CONTROLLED	STATE	RATE/ SOIL TYPE			CRITICAL COMMENTS
			LIGHT	MED	HEAVY	
Linseed	See Weed Table D	NSW, ACT, VIC, SA, WA only	1.2L/ha	1.5L/ha	1.7L/ha	Spray 2-4 weeks before sowing. Sowing depth should be 1.3 to 2.5cm. Deeper sowing may result in some stand reduction. Refer to Incorporation Table Note 6 for method of incorporation.
Lupins	See Weed Table D	ALL STATES	1.2L/ha	1.5L/ha	1.7L/ha	Spray between 4 weeks and just before sowing takes place. Refer to Incorporation Table Note 6 for method of incorporation. <b>WA only:</b> Use higher rate for heavier stubble coverage. Stubble coverage above 40-50% ground cover can reduce weed control below acceptable levels. Refer to Incorporation Table Note 13 for method of incorporation.
	Annual Grasses and Broadleaf Weeds	QLD, NSW, ACT, VIC only	800mL/ha plus 1.7kg/ha TITAN Simazine 900 WG			Use a low volume boom applying 50-100 litres spray mixture per hectare. Apply to bare moist soil and incorporate to a depth of 5cm just prior to sowing the crop. Incorporate within 4 hours of application. DO NOT apply to a ridged soil.
	Annual Ryegrass (suppression), Capeweed, Doublegee, Radish, Turnip, Wild Oats (Soil surface)	WA only	1.25L/ha plus 560-830g/ha TITAN Simazine 900 WG			Rate for Yellow Sands. Refer to Incorporation Table Notes 11, 12 or 13.
	As above plus Brome Grass (suppression)	WA only	1.25L/ha plus 1.1kg/ha TITAN Simazine 900 WG			Rate for all other soil types. Apply to bare moist soil and incorporate to a depth of 5cm just prior to sowing. Incorporation should be made within 4 hours of application. Application should not be made to ridged or excessively cloddy soil. For Simazine to be effective sufficient rainfall (20-30mm) to wet the soil through the weed root zone is necessary within 2-3 weeks of application. Results with Simazine can be variable if seasonal conditions are dry prior to sowing and Lupins are sown into dry or low moisture seed beds.
	Annual Ryegrass (suppression), Brome Grass, Capeweed, Doublegee, Wild Oats (Soil surface), Wild Radish, Wild Turnip		1.25L/ha plus 1.1kg/ha TITAN Diuron 900 WG			DO NOT use on white or grey sands as severe crop damage may result. Use tank mix of Diuron & Trifluralin where Annual Ryegrass is present. Apply at pre-sowing stage when using incorporation method in Incorporation Table Note 13. For Post-sowing of pre-emergent application, ensure seed is adequately covered with soil. Refer to Incorporation Table Note 12.
	See Weed Table E	SA only	1.25-1.7L/ha			Spray between 4 weeks and just before sowing takes place. Refer to Incorporation Table Note 6 for method of incorporation.
See Weed Table E plus Capeweed, Common Fumitory, Geranium, Ice Plant (suppression), Indian Hedge Mustard, Sheepweed, Shepherd's Purse, Toadrush, Soursob, Turnips	SA only	1.25-1.7L/ha plus 1.1-2.2kg/ha TITAN Simazine 900 WG			Use a low volume boom applying 50-100 litres spray mixture per hectare. Apply to bare moist soil and incorporate to a depth of 5cm just prior to sowing the crop. Incorporate within 4 hours of application. DO NOT apply to a ridged soil.	
See Weed Table F		ALL STATES	1.2L/ha	1.5L/ha	1.7L/ha	Spray between 4 weeks and just before sowing takes place. Refer to Incorporation Table Notes 3, 4 or 5 for suitable method of incorporation.
Navy Beans	See Weed Table F	ALL STATES	1.2L/ha	1.5L/ha	1.7L/ha	Spray between 4 weeks and just before sowing takes place. Refer to Incorporation Table Notes 6 or 11 for suitable method of incorporation.
Peanuts	See Weed Table D	QLD, WA only				
Peas		ALL STATES				
Pigeon Peas	Barnyard Grass, Canary Grass, Crowsfoot Grass, Pigweed, Redroot (Amaranthus), Spiny Burrgrass, Summer Grass, Wild Oats (Soil surface), Wireweed (Hogweed), Yellow Vine (Caltrop) (suppression) <u>From seed only:</u> Columbus Grass, Guinea Grass, Johnson Grass, Liverseed Grass	NSW, ACT only				Spray between 4 weeks and just before sowing. Refer to Incorporation Table Notes 3, 4 or 6 for suitable method of incorporation.

1. FIELD CROPS – continued						
SITUATION & CROP	WEEDS CONTROLLED	STATE	RATE/ SOIL TYPE			CRITICAL COMMENTS
			LIGHT	MED	HEAVY	
Soybeans	See Weed Table F	ALL STATES	1.2L/ha	1.7L/ha	2.3L/ha	Spray between 4 weeks and just before sowing takes place. Refer Incorporation Table 3, 4 or 5 for suitable method of incorporation.
Sugarcane	See Weed Table D	QLD, NSW, ACT only		2.3L/ha 3.0L/ha		Use lower rate for Early Season and higher rate for Late Season. Apply to plant cane after emergence to “out of hand” stage. Apply to ratoon cane immediately after harvest. Refer to Incorporation Table Notes 3, 7 or 10 for suitable method of incorporation.
Sunflowers	See Weed Table D	ALL STATES	1.2L/ha	1.5L/ha	1.7L/ha	Spray between 4 weeks and just before sowing takes place. Refer to Incorporation Table Notes 3, 4 or 5 for method of incorporation.
Tobacco	Button Grass, Crowsfoot Grass, Love Grass, Pigweed, Red Natal Grass, Rhodes Grass, Summer Grass	QLD only	800mL/ha	1.2L/ha	–	Apply to soil 3-4 weeks prior to transplanting. The longer period to be used for applications made during June and July. Incorporate to a depth of 10cm.
	Crowsfoot Grass	NSW, ACT only		1.2L/ha		Apply to light sandy soil 14 to 21 days before transplanting. DO NOT incorporate to a depth greater than 6cm. Apply to loam (medium soil) 14 to 21 days before transplanting. DO NOT incorporate to a depth of greater than 6cm.
Vetch	Annual Ryegrass, Brome Grass (suppression), Deadnettle, Rough Poppy, Speedwell, Sheepweed, Three Cornered Jack, Wild Oats (Soil surface), Wireweed, Yellow Burr Weed	SA, WA only		1.7L/ha		Apply to level seedbed 0 to 4 weeks before sowing. Refer to Incorporation Table Note 6 for method of incorporation.
Wheat	See Weed Table B	QLD only		800mL/ha		On non self-mulching soils apply 1-4 weeks before sowing. Sowing depth should be at least 5cm. Use cover harrows behind combine. Ground should be left flat. On self-mulching soils, as above except apply more than 4 weeks before sowing to prevent crop damage. Refer to Incorporation Table Note 6 for method of incorporation.
Wheat, Triticale	Annual Phalaris	NSW, ACT only		800mL/ha plus 20g/ha chlorsulfuron		If possible, spray and incorporate into the soil in one operation. If this is not possible incorporation should take place within 4 hours of spraying. Delay may cause inferior weed control.
Wheat, Barley, Triticale	Annual Ryegrass, <i>Phalaris</i> spp., Wireweed (Hogweed)	NSW, ACT, VIC, WA only		800mL/ha		<b>Pre-sowing only:</b> Apply 1-4 weeks before sowing. Sowing depth should be at least 5cm. Use cover harrows behind combine. Ground should be left flat. DO NOT use pre-sowing on selfmulching soils as damage may occur from wheel tracking and poor control of Wild Oats. Refer to Incorporation Table Note 6 for method of incorporation.
	Canary Grass	VIC only				
	Fumitory	WA only				
	Annual Ryegrass, Canary Grass, <i>Phalaris</i> spp., Wireweed (Hogweed)	VIC only				<b>Pre-sowing:</b> Apply more than 4 weeks before sowing to prevent crop damage. <b>Post-sowing (self-mulching soils):</b> Apply within 2 days after sowing to well prepared seedbed. Refer to Incorporation Table Note 6 for suitable method of incorporation.
Wheat, Rye, Triticale	See Weed Table C	SA only				Apply 1-4 weeks before sowing. Sowing depth should be at least 5cm. Use cover harrows behind combine. Ground should be left flat. DO NOT use pre-sowing on selfmulching soils as damage may occur from wheel tracking and poor control of Wild Oats. Refer to Incorporation Table Note 6 for method of incorporation.

2. FIELD CROPS: PRE-SOWING OR INCORPORATED BY SOWING (IBS)				
SITUATION & CROP	WEEDS	STATE	RATE	CRITICAL COMMENTS
Wheat, Barley, Triticale and Canola <sup>1</sup>	Annual Ryegrass, Wireweed, <i>Phalaris</i> spp., Fumitory, Sand Fescue ( <i>Vulpia fasciculata</i> ), Winter Grass ( <i>Poa annua</i> ), Paradoxa Grass (Canary Grass) ( <i>Phalaris paradoxa</i> ), Corn Gromwell (Sheepweed) ( <i>Buglossoides arvensis</i> ), Rough Poppy ( <i>Papaver hybridum</i> )  <u>Suppression Soil Surface:</u> Wild Oats, Brome Grass ( <i>Bromus diandrus</i> ), Silver Grass ( <i>Vulpia bromoides</i> ), Barley Grass ( <i>Hordeum leporinum</i> ), Cereal Oats ( <i>Avena sativa</i> ), Three Cornered Jack (Double Gee) ( <i>Emex australis</i> ), Caltrop (Bullhead & Yellow Vine) ( <i>Tribulus terrestris</i> ), Yellow Burr Weed ( <i>Amsinckia</i> spp.), Deadnettle ( <i>Lamium amplexicaule</i> ), Speedwell ( <i>Veronica</i> spp.)	QLD, NSW, VIC, TAS <sup>2</sup> , SA, WA only	1.5-3L/ha	Use only with knife/blade points and presswheels – refer to table 13 for method of incorporation. Use higher rates on light sandy and sandy loam soils. DO NOT use on heavy soils. Use higher rates for heavier stubble coverage and high weed density situations. Stubble coverage above 40-50% ground cover can reduce weed control below acceptable levels. Suppression of Brome Grass and Barley Grass may be reduced in medium to high weed density situations. Higher rates are likely to provide improved suppression of Brome Grass, Wild Oats, Cereal Oats, Barley Grass and Silver Grass. Control of deep germinating/late germinating weeds may be reduced. To maintain crop safety attention to sowing speed and soil throw is required. Avoid throwing treated soil into adjacent sowing furrows. This is especially critical at higher use rates. Avoid sites that water log or where furrow walls may collapse as crop establishment and vigour may be reduced. Application can occur 0-24 hours prior to incorporation by sowing. For best results apply as close as possible to sowing (within 12 hours). Application 12-24 hours before sowing may be more adversely affected by above average soil moisture, warm winter temperatures and high weed seed densities. These factors individually or combined may reduce final weed control. Avoid sowing sensitive crops into areas treated with 2-3L/ha if dry or drought conditions have persisted since application.  1 Canola variety 44C73 has shown some heightened sensitivity and therefore higher rates should be used with caution when sowing this variety.  2 DO NOT plant oilseed poppies when a detectable residue of Trifluralin is present in the soil. Levels as low as 0.02ppm may interact with other unfavourable factors (moisture, stress, disease etc.) to reduce poppy growth and vigour.
Wheat, Barley, Triticale and Canola <sup>1</sup>	Annual Ryegrass, Wireweed, <i>Phalaris</i> spp., Fumitory, Wild Oats, Cereal Oats, Sand Fescue ( <i>Vulpia fasciculata</i> ), Silver Grass ( <i>Vulpia bromoides</i> ), Winter Grass ( <i>Poa annua</i> ), Paradoxa Grass (Canary Grass) ( <i>Phalaris paradoxa</i> ), Corn Gromwell (Sheepweed) ( <i>Buglossoides arvensis</i> ), Rough Poppy ( <i>Papaver hybridum</i> )  <u>Suppression Soil Surface:</u> Brome Grass ( <i>Bromus diandrus</i> ), Barley Grass ( <i>Hordeum leporinum</i> ), Three Cornered Jack (Double Gee) ( <i>Emex australis</i> ), Caltrop (Yellowvine & Bullhead) ( <i>Tribulus terrestris</i> ), Yellow Burr Weed ( <i>Amsinckia</i> spp.), Deadnettle ( <i>Lamium amplexicaule</i> ), Speedwell ( <i>Veronica</i> spp.)	QLD, NSW, VIC, TAS <sup>2</sup> , SA, WA only	1.5-2.0L/ha plus 1.6-2.0L/ha TITAN Tri-Allate 500 EC	Use only with knife/blade points and presswheels – refer to table 13 for method of incorporation. Use higher rates on light sandy and sandy loam soils. DO NOT use on heavy soils, which are non-wetting or are likely to become clumpy or cloddy as they may suffer reduced weed control. Use higher rates for heavier stubble coverage and high weed density situations. Stubble coverage above 40-50% ground cover can reduce weed control below acceptable levels. Suppression of Brome Grass and Barley Grass may be reduced in medium to high weed density situations. Higher rates are likely to provide improved control levels of Brome Grass, Wild Oats, Cereal Oats, Barley Grass and Silver Grass. Control of deep/late germinating weeds may be reduced. Insufficient incorporation of TITAN Tri-Allate 500 EC will reduce Wild Oat control. Control may be poor in the first years of practising no-till/min till. To maintain crop safety attention to sowing speed and soil throw is required. Avoid throwing treated soil into adjacent sowing furrows. This is especially critical at higher use rates and in cereals. Avoid sites that water log or where furrow walls may collapse as crop establishment & vigour may be reduced. Incorporate within 6 hours to ensure the effectiveness of TITAN Tri-Allate 500 EC is retained.
Chickpeas	Annual Ryegrass, Wireweed, <i>Phalaris</i> spp., Fumitory	WA only	1.25-1.7L/ha plus 1.1kg/ha TITAN Simazine 900 WG	Incorporate as per Incorporation Table 13.

3. VEGETABLES, ORCHARDS AND VINEYARDS							
CROP	WEEDS CONTROLLED	STATE	RATE/ SOIL TYPE			CRITICAL COMMENTS	
			LIGHT	MED	HEAVY		
Carrots	See Weed Table F	ALL STATES	1.2L/ha	1.7L/ha	2.3L/ha	Spray between 4 weeks and just before sowing takes place. Refer to Incorporation Table Notes 3, 4 or 5 for suitable method of incorporation.	
Cauliflower		QLD, VIC only					
Chicory		VIC only					
Green beans		ALL STATES	1.2L/ha	1.5L/ha	1.7L/ha		
Orchards & vineyards		QLD, VIC, TAS, SA, WA only	1.2L/ha	1.7L/ha	2.3L/ha		Apply to new planting during pre-plant cultivation. Apply to established crops in spring after weeds and green manure crop has been ploughed into ground. Refer to Incorporation Table Notes 8 or 9 for suitable method of incorporation.
Direct Seeded only: Broccoli, Brussels Sprouts, Cabbage		ALL STATES					Spray between 4 weeks and just before sowing takes place. Refer to Incorporation Table Notes 3, 4 or 5 for suitable method of incorporation.
Transplants only: Broccoli, Cabbage, Cauliflowers, Tomatoes							

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

WEED TABLES					
TABLE A	TABLE B	TABLE C	TABLE D	TABLE E	TABLE F
Annual Ryegrass	Annual Ryegrass	Annual Ryegrass	Black Pigweed (QLD only)	Annual Ryegrass	Annual Ryegrass
Barnyard Grass	Paradoxa Grass (Canary Grass)	Deadnettle	Crab Grass	Barley Grass	Barnyard Grass
Caltrop	Wild Oats (Soil surface)	Suppression of	Mossman River Grass (Innocent Weed)	Brome Grass	Caltrop (Bullhead, Yellow Vine)
Crab Grass	Wireweed (Hogweed)	Fumitory - Red & White	Pigweed	Canary Grass	Canary Grass
Fumitory		<i>Phalaris</i> spp.	Redroot (Amaranthus)	Cereal Oats	Crab Grass
Suppression of Paradoxa Grass (Canary Grass)		Rough Poppy	Redshank (Prince of Wales Feather)	Deadnettle	Mossman River Grass (Innocent Weed)
Pigweed		Wireweed	Summer Grass	Suppression of Fumitory - Red & White	Pigweed
Redroot (Amaranthus)		Yellow Burr Weed	Wild Oats (Soil surface)	Rough Poppy	Redroot (Amaranthus)
Wild Oats (Soil surface)			Winter Grass	Sand Fescue	Redshank (Prince of Wales Feather)
Winter Grass			Wireweed (Hogweed)	Speedwell	Summer Grass
Wireweed			<u>From Seed only:</u> Annual Ryegrass	Three Cornered Jack	Wild Oats (Soil surface)
			Barnyard Grass	Wild Oats (Soil surface)	Summer Grass
			Canary Grass	Wireweed	Wild Oats (Soil surface)
			Caltrop (Bullhead/Yellow Vine)	Yellow Burr Weed	Winter Grass
			Columbus Grass		Wireweed (Hogweed)
			Fumitory		<u>From seed only:</u> Columbus Grass
			Guinea Grass		Guinea Grass
			Johnson Grass		Johnson Grass
			Liverseed Grass (Urochloa)		Liverseed Grass (Urochloa)
			<i>Phalaris</i> spp.		

## GENERAL INSTRUCTIONS

THIS PRODUCT MUST BE INCORPORATED INTO THE SOIL WITHIN 4 HOURS OF APPLICATION.

INCORPORATION TABLE		
Note	Situation	Critical Comments
1.	Prior to furrowing out	Two workings at an angle required using Offset or Tandem disc harrows.
2.	After furrowing out	Two workings required using Go-Devil discs or Lilliston cultivators set at 10cm depth.
3.	Rotary Hoe	One working required at 5-7.5cm depth. Sugar Cane 7.5-13cm depth.
4.	Offset or Tandem Disc Harrows (preferably with spiked harrows in tandem)	Two workings at an angle required at 7.5-15cm depth at 6.5-10km/hr.
5.	Heavy Diamond or Stump Jump Harrows	Weighted 20-30kg per section at 10-13km/h speed. Then cross work with offset or tandem disc harrows set at 7.5-15cm depth at 6.5-10km/hr.
6.	Weighted Heavy Diamond or Stump Jump Harrows	Weighted 20-30kg per section at 10-13km/hr. Cross work with combine at 5-7.5cm depth at 10-13km/hr.
7.	Disc Ratoon Cultivator	Two workings required with discs and cultivator set at 7.5-13cm depth.
8.	Offset or Tandem Disc Harrows	Set at 7.5-15cm depth. A second disking is required working in the opposite direction with discs set to throw treated soil into tree or vine row.
9.	Rotary Hoe	One working required at 5-10cm depth.
10.	Offset Discs (Bumpers)	Two workings required at depth of 7.5-13cm.
11.	Incorporation by Sowing (IBS)	On suitably prepared seedbed with heavy diamond harrows trailing or as a separate operation.
12.	Post-sowing/Pre-emergence	Use heavy diamond harrows, cross working at right angles to the direction of sowing.
13.	Incorporation by Sowing (IBS) with Knife or Blade Points (A knife or blade point is 12mm or less, has no wings, inverted T or blade, and is generally placed on a minimum 8 inch tyne spacing.)	DO NOT attempt this method of incorporation on poorly prepared, clumpy or cloddy soils. Use press wheels to avoid dragging treated soil back into the seed furrow. Maintain slow to moderate speed to ensure that soil throw is not into adjacent furrows. <b>Warning:</b> Knife or blade point systems can result in poor weed control in the seed furrow as chemical displacement from this zone occurs. Stubble coverage above 40-50% ground cover can reduce weed control below acceptable levels.

### MIXING

This product is an emulsifiable concentrate that mixes readily with water. Add the recommended amount of product to the spray tank while filling with water. Apply the prepared mixture at a rate of 70-450L of water/ha (broadcast basis) dependent on soil type.

Ensure adequate agitation is maintained throughout the spraying operation. DO NOT leave the prepared spray for long periods without agitation.

### CONDITIONS FOR BEST RESULTS

This product must be thoroughly incorporated as recommended. Soil should be well worked and free of weeds at the time of application. Product effectiveness may be reduced by inadequate incorporation, high organic matter, excess clods, crop or trash residues, stones or other foreign matter and in areas of unnaturally high weed seed population such as header tracks or livestock rest areas.

Trifluralin is volatile and disappears from exposed surfaces. Rate of loss is increased by high temperatures, wind or warm moist soil. Under hot conditions, spray and incorporate into the soil in one operation, if possible. Delay in incorporation may cause inferior weed control. Use properly calibrated standard low-pressure (170-340kPa) boom type sprayer with fan tips.

### INTEGRATED WEED MANAGEMENT

The use of Integrated Weed Management techniques, in conjunction with TITAN Trifluralin 480 Selective Herbicide, is always preferable. Agronomic practices that reduce the weed seed bank in the soil prior to the use of TITAN Trifluralin 480 Selective Herbicide will result in higher weed control levels. Failure to use Agronomic and Integrated Weed Management practices that reduce the weed seed bank in the soil will result in higher weed seed populations. Paddocks with excessively high weed seed banks may have sufficient weed numbers surviving such that final weed control may be considered below a commercially acceptable level and additional herbicide treatments may be necessary. The use of Integrated Weed Management techniques will also reduce the potential for the development or survival of Group 3 herbicide resistant weed biotypes.

### WILD OATS

Germinating wild oat seeds lying on soil surface will be controlled. Therefore, specific oat control is only possible with shallow cultivation. Poor control will occur on self-mulching soils and all soil types where deep cultivation is practised.

### COMPATIBILITY

The following products are compatible with TITAN Trifluralin 480 Selective Herbicide:

**Herbicides:** Chlorsulfuron 750 DF, Diuron 900 DF, Metribuzin 750 DF, Paraquat 250, Simazine 900 DF, Tri-Allate 500 EC, Triasulfuron 750 WDG

**Insecticides:** Chlorpyrifos 500 EC

#### Note:

- As products vary from manufacturer to manufacturer, a small-scale compatibility test should be carried out before mixing in the spray tank.
- Observe any mixing sequence instructions for tank mix products.

### EQUIPMENT MAINTENANCE AND USAGE

Spray tanks, pumps, lines and nozzles should be thoroughly rinsed several times with clean water after use. TITAN Boom Spray Cleaner is suitable for removing Trifluralin stains.

### RESISTANT WEED WARNING

TITAN Trifluralin 480 Selective Herbicide is a member of the dinitroaniline group of herbicides. TITAN Trifluralin 480 Selective Herbicide has the inhibitors of tubulin formation mode of action. For weed resistance management TITAN Trifluralin 480 Selective Herbicide is a Group 3 herbicide. Some naturally occurring weed biotypes resistant to TITAN Trifluralin 480 Selective Herbicide and other Group 3 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 TITAN Trifluralin 480 Selective Herbicide or other Group 3 herbicides.

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 TITAN Trifluralin 480 Selective Herbicide to control resistant weeds.

**Re-Entry Period:** DO NOT allow entry into treated areas until the spray has dried, unless wearing cotton overalls buttoned to the neck and wrist (or equivalent clothing) and chemical resistant gloves. Clothing must be laundered after each day's use.

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

DO NOT use in high winds. DO NOT exceed rates specified, to avoid crop damage. DO NOT plant sensitive grasses such as oats, sorghum, millets, *Phalaris* spp., ryegrass or wheat for 12 months following the use of this product except where wheat follows wheat or other winter crops.

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DO NOT plant oilseed poppies when a detectable residue of Trifluralin is present in the soil. Levels as low as 0.02ppm may interact with other unfavourable factors (moisture, stress, disease, etc.) to reduce poppy growth and vigour. DO NOT apply to orchards and vineyards after first flush of growth or when residues can lodge on or in fruit.

Reduced germination of wheat and barley may occur due to a combination of the following circumstances and the use of this product:

- Short coleoptile cultivars
- Use of seed dressings (except Vitavax)
- Shallow or uneven seedling depth

**Drift Warning:** DO NOT apply under meteorological conditions or from spraying equipment which could be expected to cause spray drift onto nearby susceptible plants, adjacent crops, crop lands or pastures.

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

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

#### STORAGE AND DISPOSAL

Store in the closed original container in a dry, cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. DO NOT store below 5°C. Extended storage below 5°C can result in the formation of crystals on the bottom of the container. If crystallisation does occur, store the container on its side at room temperature and rock occasionally until crystals redissolve. Ensure any crystals are dissolved before adding to the spray tank. DO NOT store near food, feedstuffs, fertiliser or seed.

**Non-refillable/recyclable containers:** This container can be recycled if it is clean, dry, free of visible residues and has the *drumMUSTER* logo visible. Triple rinse container for disposal. Dispose of rinsate by adding to the spray tank. DO NOT dispose of undiluted chemicals on-site. Wash outside of the container and the cap. Store cleaned container in a sheltered place with cap removed. It will then be acceptable for recycling at any *drumMUSTER* collection or similar container management site. The cap should not be replaced but may be taken separately. If not recycling, break, crush or puncture and deliver empty packaging for appropriate disposal 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.

**Recyclable containers:** DO NOT tamper with the dry valves or security seal. DO NOT contaminate the drum with water or any other foreign matter. After each use of the product ensure that the dry valve coupler, delivery system and hoses are disconnected, triple rinsed with clean water and drained. Add the rinsings to the spray tank. When the drum is empty close all valves and return to the point of purchase. The drum remains the property of TITAN AG Pty Ltd and must be returned.

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

#### SMALL SPILL MANAGEMENT

DO NOT touch or walk through spilled material. Wear face shield or goggles, overalls buttoned to the neck and wrist, chemical resistant gloves and footwear. Stop leak when safe to do so. Dam area and prevent entry into waterways, and drains.

**Small spills/leaks:** Absorb with material such as sand, soil or sawdust. Collect spilled product and place in sealable container for disposal. Spill residues may be cleaned using water and detergent. Contain and absorb wash water for disposal. Absorb and collect washings and place in the same sealable container for disposal. Dam the area of large spills and report them to TITAN AG Pty Ltd.

#### SAFETY DIRECTIONS

Harmful if swallowed. Poisonous if inhaled. Will damage eyes. May irritate the nose and throat. Will irritate the skin. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. DO NOT inhale vapour or spray mist. When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length chemical resistant gloves, goggles and half facepiece respirator. When using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow-length chemical resistant gloves. If product or spray in eyes, wash it out immediately with water. If product or spray on skin, immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, goggles, respirator and if rubber wash with detergent and warm water, and contaminated clothing.

#### FIRST AID

If poisoning occurs contact a Doctor or Poisons Information Centre. Phone Australia 131126; New Zealand 0800 764 766. If swallowed, DO NOT induce vomiting.

#### SAFETY DATA SHEET

Additional information is listed in the safety data sheet (SDS). A safety data sheet for TITAN Trifluralin 480 Selective Herbicide is available from TITAN AG Pty Ltd on request. Call Customer Service on (02) 9999 6655 or visit [www.titanag.com.au](http://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. May cause an allergic skin reaction. Suspected of causing cancer. Very toxic to aquatic life with long lasting effects. **Precautionary Statement:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing dust/fume/gas/mist/vapours/spray. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Specific treatment (see on this label). IF exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray. IF ON SKIN: Wash with plenty of water. Collect spillage. Take off contaminated clothing and wash it before reuse. Store locked up. Store in a well-ventilated place. Keep cool. Dispose of contents/container in accordance with local/regional/national regulations.

