

# TITAN Amine 450 Herbicide

## GENERAL INSTRUCTIONS FOR ALL 2,4-D PRODUCTS BEARING A SUSPENDED OR CANCELLED LABEL

**This is a phenoxy herbicide that can cause severe damage to native vegetation and susceptible crops such as cotton, grapes, tomatoes, oilseed crops and ornamentals.**

### INSTRUCTIONS FOR PERSONS WHO POSSESS, HAVE CUSTODY OF OR USE THE CANCELLED OR SUSPENDED PRODUCT

A person who possesses, has custody of or uses a product bearing a cancelled or suspended label referred to in the above Tables 1 and 2 in accordance with the instructions contained in this notice, is taken to have been issued with a permit under section 45B(3) of the Agvet Code to possess, have custody of or use the product bearing the cancelled or suspended label in accordance with those instructions.

The instructions in this notice form part of the amended label instructions for a 2,4-D product bearing a cancelled or suspended label.

Use of a 2,4-D product bearing a cancelled or suspended label may only take place in accordance with:

- the instructions appearing on the cancelled or suspended label attached to the product; and
- the general instructions in this notice; and
- the instructions in this notice which correspond to the product's specific group.

### POSSESSION OR CUSTODY

A person may possess the product bearing the cancelled or suspended label referred to in the above tables in accordance with its label instructions for 12 months from the Date of Cancellation or Date of Suspension.

### USE, SUPPLY OR OTHERWISE DEAL WITH

A person may use the product bearing the cancelled or suspended label referred to in Table 1 or 2 according to its label instructions, including any conditions relating to shelf life or expiry date, and the instructions in this notice, for 12 months from the Date of Cancellation or Date of Suspension.

### INSTRUCTIONS FOR USE

Use of a 2,4-D product bearing a suspended or cancelled label may only take place in accordance with:

- the instructions appearing on the suspended or cancelled label attached to the product; and
- the instructions in this notice.

In the event of any inconsistency between the instructions appearing on the suspended or cancelled label for a product and the instructions in this notice, the instructions in this notice are to prevail to the extent of the inconsistency.

These instructions do not authorise any person to use a 2,4-D product bearing a suspended or cancelled label:

- in any situation; or
- at any time; or
- in any state or territory;

if the person would not be authorised to use the product in that situation, at that time, or in that state or territory under the instructions appearing on the suspended or cancelled label attached to the container for the product.

### INSTRUCTIONS FOR SUPPLY

A person may supply, or cause to be supplied, at wholesale or retail level the product bearing a cancelled or suspended label referred to in Tables 1 and 2, for 12 months from the Date of Cancellation or Date of Suspension.

The supply of the product bearing a cancelled or suspended label may only take place in accordance with the following conditions (new supply instructions):

- For products manufactured prior to 1 October 2020: at the time of supply, the supplier must provide to the person taking possession or custody of the product bearing a suspended or cancelled label a copy of these instructions.

Or

- For products manufactured on or after 1 October 2020: either a copy of these instructions or the current approved label must be securely affixed to each container of the product.

### WARNING—CONTRAVENTIONS

After the day that is 12 months from the Date of Cancellation or Date of Suspension it will be an offence against the Agvet Code to have possession or custody of the products bearing the cancelled or suspended labels with the intention to supply, or to supply the cancelled or suspended products bearing the cancelled or suspended labels. It is an offence to possess, have custody of, use, or otherwise deal with the products bearing the cancelled or suspended labels listed in Tables 1 and 2 in a manner that contravenes the above instructions.

### CONSEQUENCES OF FAILING TO COMPLY WITH INSTRUCTIONS

Failing to comply with the instructions in this notice or the instructions detailed in the Gazette amounts to an offence under section 45C(5) of the Agvet Code and may result in civil penalty proceedings under section 45C(7) of the Agvet Code.

### APVMA CONTACT

For any enquiries or further information about this matter, please contact: Chemical Review Australian Pesticides and Veterinary Medicines Authority GPO Box 3262 Sydney NSW 2001 Phone: +61 2 6770 2400

Email: chemicalreview@apvma.gov.au

### DIRECTIONS FOR USE

#### Restraints:

DO NOT apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. The buffer zones in the relevant buffer zone tables below provide guidance but may not be sufficient in all situations. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.

DO NOT allow bystanders to come into contact with the spray cloud.

DO NOT apply unless the wind speed is between 3 and 15 kilometres per hour at the application site during the time of application.

DO NOT apply if there are surface temperature inversion conditions present at the application site during the time of application. These conditions exist most evenings one to two hours before sunset and persist until one to two hours after sunrise.

### Recognising a surface temperature inversion

A surface temperature inversion is likely to be present if:

- mist, fog, dew or a frost have occurred
- smoke or dust hangs in the air and moves sideways, just above the ground surface
- cumulus clouds that have built up during the day collapse towards evening
- wind speed is constantly less than 11 km/hr in the evening and overnight
- cool off-slope breezes develop during the evening and overnight
- distant sounds become clearer and easier to hear
- aromas become more distinct during the evening than during the day.

### Spray timing

- Spray during the day wherever possible. Vertical mixing of the air makes surface temperature inversions unlikely and will reduce the risk of drift caused by surface temperature inversions.

- There is a very low risk of surface temperature inversion when there is continuous overcast weather, with low and heavy cloud and/or wind speed remains above 11km/h for the whole period between sunset and sunrise.

- A lack of suitable weather conditions for spraying over extended periods is not an excuse for spraying in unsuitable conditions.

DO NOT apply if crop or weeds are stressed due to dry or excessively moist conditions.

DO NOT apply with spray droplets smaller than VERY COARSE spray droplets according to the ASAE S572.1 definition for standard nozzles.

DO NOT use if rain is likely within 6 hours.

### Monitoring and record keeping

Users of this product MUST make an accurate written record of the details of each spray application within 24 hours following application and KEEP this record for a minimum of 2 years. The spray application details that must be recorded are: 1- date of use with start and finish times of application; 2- the specific location which must include address and paddock/s sprayed; 3- product trade name (full name) of the product being used; 4- rate of application which must include the amount of product used per hectare and number of hectares applied to; 5- situation, crop or commodity to which the chemical was applied; 6- wind speed and direction during application; 7- air temperature and relative humidity during application; 8- nozzle brand, model, size, type, and spray system pressure measured during application; 9- height of spay boom from ground ; 10- name and contact details of person applying this product (Additional record keeping and/or details may be required by the state or territory where this product is used).

**Watch for changes in weather conditions. Stop spraying immediately if a surface temperature inversion occurs or if spraying conditions become unsuitable for any other reason.**

#### Advisory for boom sprayer use in cereals, fallow and pasture

##### 1 October to 15 April

Use in cereals, fallow and pastures during the period **3 October to 15 April**, it is advised to:-

Use nozzles that **produce extremely coarse (xc) to ultra coarse (uc) droplets**.

Use higher water rates per ha, to give better efficacy.

Use slower application speeds to allow operators to lower boom heights. Increasing droplet size and water rates while reducing application speed will assist in mitigating off target inversion drift during summer spraying. Extremely coarse droplets will produce <3% driftable droplets.

### BOOM SPRAYERS (GROUND APPLICATION)

DO NOT apply by a boom sprayer unless the following requirements are met:

- spray droplets not smaller than a VERY COARSE (VC) spray droplet size category (minimum XC between 3 October and 15 April – advisory).
- boom heights 0.5 metres or lower above the target canopy (the higher of either the crop canopy or the targeted weeds)
- minimum distances between the application site and downwind sensitive aquatic and wetland areas including aquacultural ponds, surface streams and rivers (see Aquatic 'Downwind mandatory no-spray zone' section of the following table titled 'Buffer zones for boom sprayers') are observed.
- minimum distances between the application site and downwind sensitive crops, gardens, landscaping vegetation, protected native vegetation or protected animal habitat (see Terrestrial 'Downwind mandatory no-spray zone' section of the following table titled 'Buffer zones for boom sprayers') are observed. The buffer zones provide guidance but may not always be completely protective of all agricultural crops.

Group 3 (450g 2,4-D/L as the IPA salt):		
Application rate (/ha)	Downwind mandatory no spray zone	
	Aquatic	Terrestrial
Dryland cropping: winter cereals and fallows		
Up to 1.7L (750g ae/ha)	10 metres	10 metres
Up to 1.9L (880g ae/ha)	15 metres	15 metres
Up to 2.3L (1080g ae/ha)	20 metres	20 metres
Tropical & subtropical uses: sugarcane		
Up to 2.4L (1080g ae/ha)	20 metres	20 metres
Up to 4.9L (2220g ae/ha)	35 metres	30 metres
Tropical & subtropical uses: peanuts		
Up to 5L (2250g ae/ha)	35 metres	30 metres
Pasture		
Up to 4.4L (2000g ae/ha)	30 metres	30 metres
Up to 6.1L (2750g ae/ha)	40 metres	35 metres

### DIRECTIONS FOR USE FOR AERIAL APPLICATION

To enable aerial application of 2,4-D products the following instructions are provided:

#### 1. Nozzle selection to achieve mandatory VERY COARSE or Larger Droplet Size Categories for aerial application.

#### Important information

These instructions inform users of 2,4-D products how to lawfully comply with the requirement of a VERY COARSE or larger spray droplet size category for aerial spray application.

**Complying with the requirement to use a specific droplet size category means using the correct nozzle that will deliver that droplet size category under the spray operation conditions being used. Only the following specific methods can be used for choosing the correct nozzle. Use one of the methods specified in these instructions to select a correct nozzle to deliver a VERY COARSE or larger droplet size category for aerial application.**

#### Instructions for Fixed-Wing Aerial Application – for VERY COARSE droplet size or larger categories

Instructions in this section apply to fixed-wing aerial application of products for which a label or a permit Spray Drift Restraint requires VERY COARSE spray droplet category.

Nozzle choices must be made using Option 1 or 2 below.

#### Mandatory Instructions for Fixed-Wing Aerial Applications

<b>Option 1:</b> For up to a maximum aircraft speed of 120 knots and a VERY COARSE droplet size category, USE ONLY narrow angle flat fan nozzles with spray angle less than or equal to 25, orifice size 20 or greater and oriented straight back to the flight direction. USE ONLY a spray system pressure greater than or equal to 4 bar.
<b>Option 2:</b> USE ONLY nozzles rated by the APVMA Approved AAAA Nozzle Calculator or the USDA-ARS Aerial Spray Nozzle Models as VERY COARSE to comply with a product label's requirement for a VERY COARSE spray droplet size category. When using the AAAA Nozzle Calculator or the USDA-ARS Aerial Spray Nozzle Models, aerial applicators must also follow the additional instructions below in (a), (b) and (c). (a) Aerial applicators must only use the droplet size category given in the nozzle calculator at the DV(0.1) position to identify a nozzle to comply with the required spray droplet category. The categories shown at the DV(0.5) and the DV(0.9) positions in the calculator must not be used for making a nozzle selection. (b) Aerial applicators must not apply at airspeeds greater than that speed used to select the nozzle. A nozzle identified as VERY COARSE can also be used at slower airspeeds provided that the nozzle angle and system pressure are kept the same. (c) When a particular pesticide product is chosen within the nozzle calculator as one of the conditions set to select a nozzle, then aerial applicators must use that specific pesticide product with that nozzle.
<b>Note – contact the Aerial Application Association of Australia (aaa.org.au) for information on how to obtain access to the APVMA Approved AAAA Nozzle Calculator; the USDA-ARS Aerial Spray Nozzle Models can be downloaded from their website (ars.usda.gov/plains-area/college-station-tx/southern-plains-agricultural-research-center/aerial-application-technology-research/docs/a-models).</b>

#### Instructions for Helicopter Aerial Application – for VERY COARSE droplet size or larger categories

Instructions in this section apply to helicopter application of products where a label or a permit Spray Drift Restraint requires VERY COARSE spray droplet category. Nozzle choices must be made using Option 1 or 2 below.

#### Mandatory Instructions for helicopter Aerial Applications

<b>Option 1:</b> For helicopter applications requiring a VERY COARSE spray droplet size category, USE ONLY nozzles selected with the methods previously specified for fixed-wing aircraft in Section 1.
<b>Option 2:</b> When using Accu-Flo nozzles (Bishop Equipment Mfg Inc), USE ONLY nozzles rated according to the manufacturer's instructions to select the correct nozzle to apply a VERY COARSE or an EXTREMELY COARSE droplet size category to satisfy the label requirement for one of those specific droplet size categories.

#### Examples of nozzles and settings that can achieve VERY COARSE or Larger Droplet Size Categories using Section 1, Option 2 include;

For flying speeds up to 120 knots (Fixed wing aircraft):						
Nozzle model	Fan Angle (deg)	Deflector	Orifice Size	Orientation to airstream (deg)	Pressure (psi)	Category
CP11TT straight stream	-	-	10	0	40 or higher	Very Coarse
			15		50 or higher	
			20		60 or higher	
CP09	-	0	0.078	0	70 or higher	Extremely Coarse
			0.125		90 or higher	
			0.125			
For flying speeds up to 100 knots (Fixed wing aircraft and Helicopters):						
Nozzle model	Fan Angle (deg)	Deflector	Orifice Size	Orientation to airstream (deg)	Pressure (psi)	Category
CP09	-	0	0.078	0	30 or higher	Very Coarse
			0.125		35 or higher	
CP11TT straight stream	-		10 or larger	0	40 or higher	Extremely Coarse
For flying speeds up to 60 knots (Helicopters):						
Nozzle model	Fan Angle (deg)	Deflector	Orifice Size	Orientation to airstream (deg)	Pressure (psi)	Category
CP09	-	30	0.078	0	30 or higher	Very Coarse
			0.125		30 or higher	
CP03	0		0.062 or larger	0	30	Extremely Coarse
STANDARD Flat Fan	40	-	6 or larger	0	30 or higher	Very Coarse
STANDARD Flat Fan	40	-	10 or larger	0	30 or higher	Extremely Coarse
CP11TT FF40	40		6 or larger	0	30 or higher	Very Coarse

**AERIAL APPLICATION**

DO NOT apply by aerial application unless the following requirements are met:

- spray droplets not smaller than a VERY COARSE (VC) spray droplet size category
- release heights 5 metres or lower above the target canopy
- minimum distances between the application site and downwind sensitive aquatic and wetland areas including aquacultural ponds, surface streams and rivers (see Aquatic 'Downwind mandatory no-spray zone' section of the following table titled 'Buffer zones for aircraft') are observed.
- minimum distances between the application site and downwind sensitive crops, gardens, landscaping vegetation, protected native vegetation or protected animal habitat (see Terrestrial 'Downwind mandatory no-spray zone' section of the following table titled 'Buffer zones for aircraft') are observed. The buffer zones provide guidance but may not always be completely protective of all agricultural crops.

**BUFFER ZONES FOR AIRCRAFT FOR SUGARCANE BASED ON LOW APPLICATION RATE: (product groups 2, 3, 4, 5, 6, 7, 8a, 8b, 9a, 9b, 10, 11, 12, 13, 16, 14a, 14b): 3 metre release height or lower above the target canopy**

Application rate (/ha)	Spray droplet size category	Downwind mandatory no spray zone			
		Fixed wing		Helicopter	
		Aquatic	Terrestrial	Aquatic	Terrestrial
Tropical & subtropical uses: Sugarcane					
Up to 1080g ae/ha	Very Coarse or larger	95 metres	90 metres	90 metres	85 metres
	Extremely Coarse or larger	70 metres	70 metres	70 metres	65 metres
Up to 1250g ae/ha	Very Coarse or larger	110 metres	100 metres	95 metres	95 metres
	Extremely Coarse or larger	80 metres	75 metres	75 metres	70 metres

**BUFFER ZONES FOR AIRCRAFT: 3 metre release height or lower above the target canopy**

Group 3 (450g 2,4-D/L as the IPA salt): 3 metre release height or lower above the target canopy

Application rate (/ha)	Downwind mandatory no spray zone			
	Fixed wing		Helicopter	
	Aquatic	Terrestrial	Aquatic	Terrestrial
Dryland cropping: winter cereals and fallows				
Up to 1.7L (750g ae/ha)	75 metres	70 metres	70 metres	70 metres
Up to 1.9L (880g ae/ha)	80 metres	80 metres	75 metres	75 metres
Up to 2.3L (1080g ae/ha)	95 metres	90 metres	90 metres	85 metres
Tropical & subtropical uses: sugarcane				
Up to 4.9L (2220g ae/ha)	180 metres	170 metres	150 metres	140 metres
Tropical & subtropical uses: peanuts				
Up to 5L (2250g ae/ha)	180 metres	170 metres	150 metres	140 metres

**BUFFER ZONES FOR AIRCRAFT: 5 metre release height or lower above the target canopy**

Group 3 (450g 2,4-D/L as the IPA salt): 5 metre release height or lower above the target canopy

Application rate (/ha)	Downwind mandatory no spray zone			
	Fixed wing		Helicopter	
	Aquatic	Terrestrial	Aquatic	Terrestrial
Dryland cropping: winter cereals and fallows				
Up to 1.7L (750g ae/ha)	130 metres	130 metres	120 metres	110 metres
Up to 1.9L (880g ae/ha)	150 metres	150 metres	130 metres	120 metres
Up to 2.3L (1080g ae/ha)	180 metres	170 metres	140 metres	140 metres
Tropical & subtropical uses: sugarcane				
Up to 4.9L (2220g ae/ha)	425 metres	400 metres	250 metres	225 metres
Tropical & subtropical uses: peanuts				
Up to 5L (2250g ae/ha)	425 metres	400 metres	250 metres	225 metres

**Pasture application by air – 5 metre release height**

Application rate 2750g ae/ha, VERY COARSE droplet size, Aerial application (Group 2, 3, 5, 6, 7, 8a, 8b, 9a, 9b, 11, 12b): 5 metre release height or lower above target canopy

	Downwind no-spray zone	
	Fixed Wing	Helicopter
	Wind speed range at time of application	500 metres
From 3 to 7 kilometres per hour	500 metres	300 metres
From 7 to 14 kilometres per hour	550 metres	300 metres

	Downwind no-spray zone	
	Fixed Wing	Helicopter
	Wind speed range at time of application	475 metres
From 3 to 7 kilometres per hour	475 metres	275 metres
From 7 to 14 kilometres per hour	525 metres	300 metres

Application rate 2000g ae/ha, VERY COARSE droplet size, Aerial application (Group 2, 3, 5, 6, 7, 8a, 8b, 9a, 9b, 12b): 5 metre release height or lower above target canopy

	Downwind no-spray zone	
	Fixed Wing	Helicopter
	Wind speed range at time of application	375 metres
From 3 to 7 kilometres per hour	375 metres	190 metres
From 7 to 14 kilometres per hour	375 metres	220 metres

	Downwind no-spray zone	
	Fixed Wing	Helicopter
	Wind speed range at time of application	350 metres
From 3 to 7 kilometres per hour	350 metres	180 metres
From 7 to 14 kilometres per hour	350 metres	210 metres

**Pasture application – 3 metre release height**

Application rate 2750g ae/ha, VERY COARSE droplet size, Aerial application (Group 2, 3, 5, 6, 7, 8a, 8b, 9a, 9b, 11, 12b): 3 metre release height above target canopy

	Downwind no-spray zone	
	Fixed Wing	Helicopter
	Wind speed range at time of application	250 metres
From 3 to 7 kilometres per hour	250 metres	150 metres
From 7 to 14 kilometres per hour	250 metres	180 metres

	Downwind no-spray zone	
	Fixed Wing	Helicopter
	Wind speed range at time of application	250 metres
From 3 to 7 kilometres per hour	250 metres	140 metres
From 7 to 14 kilometres per hour	250 metres	170 metres

Application rate 2000g ae/ha, VERY COARSE droplet size, Aerial application (Group 2, 3, 5, 6, 7, 8a, 8b, 9a, 9b, 12b): 3 metre release height above target canopy

	Downwind no-spray zone	
	Fixed Wing	Helicopter
	Wind speed range at time of application	160 metres
From 3 to 7 kilometres per hour	160 metres	90 metres
From 7 to 14 kilometres per hour	160 metres	140 metres

	Downwind no-spray zone	
	Fixed Wing	Helicopter
	Wind speed range at time of application	140 metres
From 3 to 7 kilometres per hour	140 metres	85 metres
From 7 to 14 kilometres per hour	150 metres	130 metres

**BUFFER ZONES FORESTRY USES FOR APPLICATION BY HELICOPTER AND ACCU-FLO NOZZLE, 0.020 ORIFICE OR LARGER (product groups 2, 3, 4, 5, 6, 7, 8a, 8b, 9a, 9b, 10, 11, 12, 13, 16, 14a, 14b)**

DO NOT apply by fixed wing aircraft

DO NOT apply by helicopter unless the following requirements are met:

- Accu-Flo™ nozzles with orifice size 0.020 or larger are used.
- flying speed 102 km/hr (55 knots) or slower
- release heights 15 metres or lower above the target canopy
- minimum distances between the application site and downwind sensitive aquatic and wetland areas including aquacultural ponds, surface streams and rivers (see Aquatic 'Downwind mandatory no-spray zone' section of the following table titled 'Buffer zones for aircraft') are observed.
- minimum distances between the application site and downwind sensitive crops, gardens, landscaping vegetation, protected native vegetation or protected animal habitat (see Terrestrial 'Downwind mandatory no-spray zone' section of the following table titled 'Buffer zones for aircraft') are observed. The buffer zones provide guidance but may not always be completely protective of all agricultural crops.

Application rate (/ha)	Wind speed range at time of application	Downwind mandatory no spray zone	
		Helicopter	
		Aquatic	Terrestrial
Release heights 15 metres or lower above the target canopy			
Up to 1000g ae/ha	From 7 to 15 kilometres per hour	75 metres	75 metres
	From 3 to 7 kilometres per hour	35 metres	35 metres
Release heights 10 metres or lower above the target canopy			
Up to 1000g ae/ha	From 7 to 15 kilometres per hour	45 metres	45 metres
	From 3 to 7 kilometres per hour	15 metres	15 metres

**VERTICAL SPRAYERS**

DO NOT apply by a vertical sprayer unless the following requirements are met:

- Spray is not directed above the target canopy.
- The outside of the sprayer is turned off when turning at the end of rows and when spraying the outer row on each side of the application site.
- For dilute water rates up to the maximum listed for each type of canopy specified, minimum distances between the application site and downwind sensitive areas (see 'Mandatory buffer zones' section of the following table titled 'Buffer zones for vertical sprayers') are observed.

**Buffer zones for vertical sprayers**

Type of target canopy and dilute water rate	Mandatory buffer zones (distances given in metres)				
	Bystander areas	Natural aquatic areas	Pollinator areas	Vegetation areas	Livestock areas
2 metres tall and shorter, maximum dilute water rate of 1000L/ha	Not required	Not required	Not required	Not required	Not required
Taller than 2 metres (not fully-foliated), maximum dilute water rate of 4000L/ha		15 metres		15 metres	
Taller than 2 metres (fully-foliated), maximum dilute water rate of 4000L/ha		10 metres		5 metres	

**Group 15b (100g 2,4-D/L as sodium salt)**

Type of target canopy and dilute water rate	Mandatory buffer zones (distances given in metres)				
	Bystander areas	Natural aquatic areas	Pollinator areas	Vegetation areas	Livestock areas
2 metres tall and shorter, maximum dilute water rate of 1000L/ha	Not required	Not required	Not required	Not required	Not required
Taller than 2 metres (not fully-foliated), maximum dilute water rate of 4000L/ha		15 metres		15 metres	
Taller than 2 metres (fully-foliated), maximum dilute water rate of 4000L/ha		10 metres		5 metres	



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