

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

TITAN

# Thidiazuron + Diuron

## Cotton Defoliant

ACTIVE CONSTITUENTS: 120g/L THIDIAZURON  
60g/L DIURON

For the defoliation of cotton prior to harvest.

**IMPORTANT: READ THOROUGHLY BEFORE OPENING OR  
USING THIS PRODUCT.**

APVMA Approval No.: 65161/56319

Contents: 5L, 20L



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IN A TRANSPORT EMERGENCY

**DIAL 000**

POLICE OR FIRE BRIGADE

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

**DIRECTIONS FOR USE (For use in Qld, NSW, WA only):**

- Restrains:** DO NOT apply TITAN Thidiazuron + Diuron Cotton Defoliant following application of sodium chlorate, magnesium chlorate or diquat.
- DO NOT apply if greater than 50 mm rain fall is expected within 3 days of application.
- DO NOT apply when there are aquatic and wetland areas including aquacultural ponds or surface streams downwind from the application area; or non-target terrestrial vegetation downwind from the application area; and within the mandatory no-spray zone shown below.

<b>Diuron use with FINE spray droplet size classification (ASAE S572 definition)</b>		
<b>FOR AERIAL APPLICATION – TERRESTRIAL VEGETATION PROTECTION</b>		
WIND SPEED RANGE AT TIME OF APPLICATION	DOWNWIND RISK AREA	
	FIXED WING AIRCRAFT	HELICOPTER
3 to 8 kilometres per hour	250 metres	180 metres
9 to 14 kilometres per hour	350 metres	300 metres
15 to 20 kilometres per hour	450 metres	300 metres
<b>FOR GROUND APPLICATION</b>		
WIND SPEED RANGE AT TIME OF APPLICATION	DOWNWIND RISK AREA	
3 to 20 kilometres per hour	15 metres	
<b>FOR AERIAL APPLICATION – AQUATIC PROTECTION</b>		
WIND SPEED RANGE AT TIME OF APPLICATION	DOWNWIND RISK AREA	
	FIXED WING AIRCRAFT	HELICOPTER
3 to 8 kilometres per hour	120 metres	100 metres
9 to 14 kilometres per hour	160 metres	120 metres
15 to 20 kilometres per hour	160 metres	120 metres
<b>FOR GROUND APPLICATION</b>		
WIND SPEED RANGE AT TIME OF APPLICATION	DOWNWIND RISK AREA	
3 to 20 kilometres per hour	10 metres	
<b>Diuron use with MEDIUM spray droplet size classification (ASAE S572 definition)</b>		
<b>FOR AERIAL APPLICATION – TERRESTRIAL VEGETATION PROTECTION</b>		
WIND SPEED RANGE AT TIME OF APPLICATION	DOWNWIND RISK AREA	
	FIXED WING AIRCRAFT	HELICOPTER
3 to 8 kilometres per hour	60 metres	60 metres
9 to 14 kilometres per hour	80 metres	60 metres
15 to 20 kilometres per hour	80 metres	60 metres
<b>FOR GROUND APPLICATION</b>		
WIND SPEED RANGE AT TIME OF APPLICATION	DOWNWIND RISK AREA	
3 to 20 kilometres per hour	5 metres	
<b>FOR AERIAL APPLICATION – AQUATIC PROTECTION</b>		
WIND SPEED RANGE AT TIME OF APPLICATION	DOWNWIND RISK AREA	
	FIXED WING AIRCRAFT	HELICOPTER
3 to 8 kilometres per hour	20 metres	20 metres
9 to 14 kilometres per hour	40 metres	40 metres
15 to 20 kilometres per hour	40 metres	40 metres
<b>FOR GROUND APPLICATION</b>		
WIND SPEED RANGE AT TIME OF APPLICATION	DOWNWIND RISK AREA	
3 to 20 kilometres per hour	5 metres	
<b>Diuron use with COARSE spray droplet size classification (ASAE S572 definition)</b>		
<b>FOR AERIAL APPLICATION – TERRESTRIAL VEGETATION PROTECTION</b>		
WIND SPEED RANGE AT TIME OF APPLICATION	DOWNWIND RISK AREA	
	FIXED WING AIRCRAFT	HELICOPTER
3 to 8 kilometres per hour	20 metres	20 metres
9 to 14 kilometres per hour	40 metres	40 metres
15 to 20 kilometres per hour	40 metres	40 metres
<b>FOR GROUND APPLICATION</b>		
WIND SPEED RANGE AT TIME OF APPLICATION	DOWNWIND RISK AREA	
3 to 20 kilometres per hour	5 metres	
<b>FOR AERIAL APPLICATION – AQUATIC PROTECTION</b>		
WIND SPEED RANGE AT TIME OF APPLICATION	DOWNWIND RISK AREA	
	FIXED WING AIRCRAFT	HELICOPTER
3 to 8 kilometres per hour	20 metres	20 metres
9 to 14 kilometres per hour	20 metres	20 metres
15 to 20 kilometres per hour	20 metres	40 metres
<b>FOR GROUND APPLICATION</b>		
WIND SPEED RANGE AT TIME OF APPLICATION	DOWNWIND RISK AREA	
3 to 20 kilometres per hour	5 metres	

CROP/SITUATION	DEFOLIATION CONDITIONS	RATE/HA	CRITICAL COMMENTS
Cotton Defoliation – first or second spray	<b>Ideal</b> Conditions are hot to warm (30 to 35°C daytime temperature) and the crop is ready to be defoliated with natural senescence already occurring. Nitrogen and water are almost depleted and there is little or no top growth. A good fruit load is set.	150 to 200 mL plus the label rate indicated of D-C-Tron <sup>†</sup> Cotton Spray Oil	Apply the first spray to cotton, which has been grown under good (non-stressed) conditions and is physiologically mature i.e., when the top harvestable boll is mature. Application made prior to boll maturity may result in yield and quality reductions. <ul style="list-style-type: none"> <li>• Use the higher rate for denser canopies or to provide a faster response.</li> <li>• A second spray of either TITAN Thidiazuron + Diuron Cotton Defoliant or an alternative harvest aid may be required 7 to 10 days later.</li> </ul>
	<b>Good</b> Conditions are warm (25 to 30°C daytime temperature) and the crop is ready to be defoliated. Nitrogen and water are low and there is little or no new growth and a good fruit load is set.	200 to 250 mL plus the label rate indicated of D-C-Tron <sup>†</sup> Cotton Spray Oil	Apply as above, but use these rates under good conditions.
	<b>Average</b> Conditions are; (i) warm but night temperatures are dropping to 12°C (not below) and the crop is physiologically ready to defoliate or; (ii) temperature is still hot/warm but the crop is not physiologically ready to senescence.	250 to 300 mL plus the label rate indicated of D-C-Tron <sup>†</sup> Cotton Spray Oil	Apply as above, but use these rates under average conditions.
	<b>Cold</b> Night temperatures fall below 12°C and/or mean day/night temperatures fall below 18°C.	300 to 400 mL plus the label rate indicated of D-C-Tron <sup>†</sup> Cotton Spray Oil	Apply as above, but use these rates under cold conditions.

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

**WITHHOLDING PERIODS:**

**COTTON PROCESSING: NOT REQUIRED WHEN USED AS DIRECTED.**

**GRAZING/COTTON TRASH: DO NOT GRAZE TREATED AREAS OR FEED COTTON TRASH TO LIVESTOCK.**

## GENERAL INSTRUCTIONS

TITAN Thidiazuron + Diuron Cotton Defoliant is a liquid suspension formulation and should be shaken well before use. After treatment with TITAN Thidiazuron + Diuron Cotton Defoliant, leaves fall while still green so that there is minimal dry leaf trash to contaminate fibre or interfere with harvesting.

Maximum defoliation occurs 7 to 21 days following application of TITAN Thidiazuron + Diuron Cotton Defoliant.

Defoliation will be slower under cold conditions, or when the crop is not physiologically mature.

**NOTE:** Rainfall within 24 hours after application will reduce the effectiveness of TITAN Thidiazuron + Diuron Cotton Defoliant; retreatment may be necessary. Crops with moderate to high levels of nitrogen remaining in the soil are more prone to leaf freezing than crops that have depleted soil nitrogen.

Tank mixes of TITAN Thidiazuron + Diuron Cotton Defoliant with organophosphates may form a residue in application equipment. While still fresh and moist, this residue is easily removed by flushing the entire system with a commercial tank cleaner.

DO NOT allow the spray solution to dry in the application equipment. Immediately following application, flush and rinse equipment (mix tanks, pumps, transfer lines, application tanks, sumps, booms, nozzles and all related equipment) thoroughly with detergent and water.

Should any residue of TITAN Thidiazuron + Diuron Cotton Defoliant remain in the sprayer system, it may be released during subsequent applications of other products causing damage to crops.

## EXPORT OF TREATED PRODUCE

Growers should note that suitable MRLs or important tolerances may not be established in all markets for produce treated with TITAN Thidiazuron + Diuron Cotton Defoliant. If you are growing produce for export, please check with TITAN AG Pty Ltd for the latest information on MRLs and import tolerances BEFORE using TITAN Thidiazuron + Diuron Cotton Defoliant.

## MIXING

Add the required amount of TITAN Thidiazuron + Diuron Cotton Defoliant straight into the partly filled spray tank or mixing vat with agitator running, followed by D-C-Tron Cotton Spray Oil, then add the rest of the water. Keep mixture agitated while spraying. Use only freshly prepared sprays.

### DO NOT store spray mixture overnight.

When tank mixing with emulsifiable concentrates (EC), add the TITAN Thidiazuron + Diuron Cotton Defoliant to the 3/4 filled spray tank or mixing vat and agitate thoroughly. With agitator running, then add the EC product, followed by the D-C-Tron Cotton Spray Oil.

Keep mixture agitated while spraying.

## APPLICATION

Apply as a uniform spray ensuring thorough coverage of the whole plant.

## EQUIPMENT

**Aircraft:** Apply by aircraft in 20 to 40 L/ha spray mixture and ensure thorough coverage. A steady cross wind is recommended for best penetration. DO NOT exaggerate swath width.

**Ground Sprayers:** Standard boom sprays are recommended and must be fitted with mechanical or by-pass agitation. Use sufficient water to obtain complete coverage of all leaves, ie at least 90 to 100 litres of water per hectare. Good coverage should be obtained with three or more nozzles per row depending upon crop height and canopy density. A nozzle configuration including droppers will give maximum coverage in dryland crops with particular care being taken to ensure thorough but even coverage. Overdosing on some plant parts eg., caused by nozzle overlap along the sides of plants may result in localised leaf freezing. If band spraying dryland crops, care should be taken when calculating the actual applied rate of TITAN Thidiazuron + Diuron Cotton Defoliant per sprayed hectare.

## COMPATIBILITY

TITAN Thidiazuron + Diuron Cotton Defoliant is compatible in tank mixtures with ethephon, dimethoate and parathion.

**CAUTION:** When tank mixed with Glyphosate, a higher proportion of cotton leaf may be retained (freezing).

DO NOT use this mixture on stressed cotton, particularly drought-affected cotton.

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

DO NOT allow spray drift to contact trees or crops other than cotton, as this product may injure or defoliate other crops, particularly citrus, grapevines and lettuce.

To help reduce drift damage potential:

- DO NOT apply TITAN Thidiazuron + Diuron Cotton Defoliant by air when citrus in flush is within 8 km downwind from the point of application.
- DO NOT apply TITAN Thidiazuron + Diuron Cotton Defoliant by air when within 800 m of lettuce.

In addition:

- DO NOT plant lettuce or carrots in cotton fields where TITAN Thidiazuron + Diuron Cotton Defoliant has been applied within the previous 9 months.
- DO NOT plant legumes, lucerne, other root crops or leafy vegetables (besides those noted above) in cotton fields where TITAN Thidiazuron + Diuron Cotton Defoliant has been applied within the previous two months.
- DO NOT plant small grains, sorghum or corn in cotton fields where TITAN Thidiazuron + Diuron Cotton Defoliant has been applied within the previous two weeks.

## PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

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

## STORAGE AND DISPOSAL

KEEP OUT OF REACH OF CHILDREN. Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight. DO NOT store the product at low temperatures (less than 5°C). 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 a 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.

## SAFETY DIRECTIONS

Will irritate the eyes and skin. Avoid contact with eyes and skin. When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist, a washable hat and elbow-length PVC gloves. Wash hands after use. After each day's use, wash gloves and contaminated clothing.

## FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26.

## MATERIAL SAFETY DATA SHEET

Additional information is listed in the material safety data sheet (MSDS). A material safety data sheet for TITAN Thidiazuron + Diuron Cotton Defoliant 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.

\* Other trademarks

BATCH NO:

DATE OF MANUFACTURE:

