

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

eChem
Thi-Ultra
 COTTON DEFOLIANT

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

For the defoliation of cotton prior to harvest

APVMA Approval No. 59134/

IMPORTANT: READ THIS BOOKLET BEFORE USE

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GENERAL INSTRUCTIONS

eChem Thi-Ultra is a liquid suspension formulation and should be shaken well before use. After treatment with eChem Thi-Ultra, 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 eChem Thi-Ultra. 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 eChem Thi-Ultra; re-treatment 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 eChem Thi-Ultra 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 eChem Thi-Ultra remain in the sprayer system, it may be released during subsequent applications of other products, causing damage to crops.

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

RESTRAINT

DO NOT apply eChem Thi-Ultra 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 to fields where the slope exceeds 3%.

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 in the General Instructions.

CROP/SITUATION	DEFOLIATION CONDITIONS	RATE/HA	CRITICAL COMMENTS
Cotton/ Defoliation - first or second spray	IDEAL 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 recommended label rate of Hasten Spray Adjuvant, Ad-Here Spray Adjuvant or D-C-TRON 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"> Use the higher rate for denser canopies or to provide a faster response. A second spray of either Thi-Ultra or an alternative harvest aid may be required 7 to 10 days later.
	GOOD 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 recommended label rate of Hasten Spray Adjuvant, Ad-Here Spray Adjuvant or D-C-TRON Cotton Spray Oil	Apply as above, but use these rates under good conditions.
	AVERAGE Conditions are: <ol style="list-style-type: none"> warm but night temperatures are dropping to 12°C (not below) and the crop is physiologically ready to defoliate or; temperature is still hot/warm but the crop is not physiologically ready to senesce. 	250 to 300 mL plus the recommended label rate of Hasten Spray Adjuvant, Ad-Here Spray Adjuvant or D-C-TRON Cotton Spray Oil	Apply as above, but use these rates under average conditions.
	COLD Night temperatures fall below 12°C and/or mean day/night temperatures fall below 18°C.	300 to 400 mL plus the recommended label rate of Hasten Spray Adjuvant, Ad-Here Spray Adjuvant or D-C-TRON 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 PERIOD

Cotton Processing - NOT REQUIRED WHEN USED AS DIRECTED.

Grazing/Cotton Trash - DO NOT GRAZE TREATED AREAS OR FEED COTTON TRASH TO LIVESTOCK.

Export of Treated Produce

Growers should note that suitable MRLs or import tolerances may not be established in all markets for produce treated with eChem Thi-Ultra. If you are growing produce for export, please check with eChem (Australia) Pty Ltd for the latest information on MRL's and import tolerances BEFORE using eChem Thi-Ultra.

Mixing

Add the required amount of eChem Thi-Ultra straight into the partly filled spray tank or mixing vat with agitator running, followed by D-C-TRON Cotton Spray Oil, and then 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 eChem Thi-Ultra to the ¾ filled spray tank or mixing vat and agitate thoroughly. With agitator running, add the EC product, followed by D-C-TRON Cotton Spray Oil. Keep mixture agitated while spraying.

Application

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

Diuron use with **FINE, MEDIUM** and **COARSE** spray droplet size classification (ASAE S572 definition).

For Aerial Application – TERRESTRIAL VEGETATION PROTECTION

FIXED WING AIRCRAFT

Wind speed range at time of application	Downwind Risk Area		
	FINE	MEDIUM	COARSE
3 to 8 kilometres per hour	250 metres	60 metres	20 metres
9 to 14 kilometres per hour	350 metres	80 metres	40 metres
15 to 20 kilometres per hour	450 metres	80 metres	40 metres

HELICOPTER

Wind speed range at time of application	Downwind Risk Area		
	FINE	MEDIUM	COARSE
3 to 8 kilometres per hour	180 metres	60 metres	20 metres
9 to 14 kilometres per hour	300 metres	60 metres	40 metres
15 to 20 kilometres per hour	300 metres	60 metres	40 metres

For Aerial Application – AQUATIC PROTECTION

FIXED WING AIRCRAFT

Wind speed range at time of application	Downwind Risk Area		
	FINE	MEDIUM	COARSE
3 to 8 kilometres per hour	120 metres	20 metres	20 metres
9 to 14 kilometres per hour	160 metres	40 metres	40 metres
15 to 20 kilometres per hour	160 metres	40 metres	40 metres

HELICOPTER

Wind speed range at time of application	Downwind Risk Area		
	FINE	MEDIUM	COARSE
3 to 8 kilometres per hour	100 metres	20 metres	20 metres
9 to 14 kilometres per hour	120 metres	40 metres	40 metres
15 to 20 kilometres per hour	120 metres	40 metres	40 metres

FOR GROUND APPLICATION

Diuron use with **FINE, MEDIUM** and **COARSE** spray droplet size classification (ASAE S572 definition).

For Ground Application – TERRESTRIAL VEGETATION PROTECTION

Wind speed range at time of application	Downwind Risk Area		
	FINE	MEDIUM	COARSE
3 to 20 kilometres per hour	15 metres	5 metres	5 metres

For Ground Application – AQUATIC PROTECTION

Wind speed range at time of application	Downwind Risk Area		
	FINE	MEDIUM	COARSE
3 to 20 kilometres per hour	10 metres	5 metres	5 metres

Equipment

AERIAL APPLICATION

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.

FOR GROUND APPLICATION

Standard boom sprayers are recommended and must be fitted with mechanical or by-pass agitation. Use sufficient water to obtain complete coverage of all leaves, i.e. 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, taking particular care 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 eChem Thi-Ultra per sprayed hectare.

Compatibility

eChem Thi-Ultra is compatible in tank mixtures with ethephon, dimethoate and parathion. CAUTION: When tank mixed with Roundup® CT (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 eChem Thi-Ultra by air when citrus in flush is within 8 km downwind from the point of application.
- DO NOT apply eChem Thi-Ultra by air when within 800 m of lettuce.

In addition:

- DO NOT plant lettuce or carrots in cotton fields where eChem Thi-Ultra 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 eChem Thi-Ultra has been applied within the previous two months.
- DO NOT plant small grains, sorghum or corn in cotton fields where eChem Thi-Ultra 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.

Triple or preferably pressure 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 bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

SAFETY DIRECTIONS

Will irritate 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 1311 26.

MATERIAL SAFETY DATA SHEET

Additional information is listed in the Material Safety Data Sheet, which can be obtained from the supplier.

Conditions of sale

eChem (Australia) Pty. Ltd. accepts responsibility for the consistent quality of the product however since the use and application of the product is beyond control, the company accepts no responsibility whatsoever for any loss, damage or other result following the use of the product whether used in accordance with directions or not; other than those mandatorily imposed by statutes, the liability is limited to the replacement of the goods and is conditional upon a claim made in writing and, where necessary, a sufficient part of the goods being returned for proper examination by the company within thirty days of sale.