

# CAUTION

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

# Crest<sup>®</sup>

## Herbicide

ACTIVE CONSTITUENTS:

**2.5 g/L FLORASULAM**

**100 g/L FLUROXYPYR** present as the METHYLHEPTYL ESTER

SOLVENT: 321.1 g/L LIQUID HYDROCARBONS

GROUP

**B I I**

HERBICIDE

Situation: Turf

Controls/Suppresses: Broadleaf weeds as specified  
in the Directions for Use

Formulation type

Suspo-  
Emulsion

**SE**



# ADAMA

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CONTENTS: 5 L – 1000 L

### DIRECTIONS FOR USE

#### RESTRAINTS

DO NOT apply to turf or weeds which may be stressed due to prolonged periods of extreme cold, sustained high temperature within 48 hours of application, moisture stress (water-logging or drought), nutritional stress, root disease or previous herbicide treatments, as turf damage or reduced levels of control may result.

DO NOT apply if rain is likely to occur within three hours or if heavy rainfall that is likely to produce runoff is forecast within 48 hours.

DO NOT apply tank mixes with 2,4-D Amine 720 or Bronco<sup>®</sup> MA-X by aircraft.

#### SPRAY DRIFT RESTRAINTS

DO NOT apply with spray droplets smaller than a COARSE spray droplet size category according to 'APVMA Compliance Instructions for Mandatory COARSE or Larger Droplet Size Categories' located under this title in the GENERAL INSTRUCTIONS section of this label.

DO NOT apply when wind speed is less than 3 or more than 20 kilometres per hour, as measured at the application site.

DO NOT apply during surface temperature inversion conditions at the application site.

Users of this product MUST make an accurate written record of the details of each spray application within 24 hours following application, and must KEEP this record for at least 2 years. The spray application details that must be recorded are:

1) Date with start and finish times of application; 2) location address and paddock(s) sprayed; 3) full name of this product; 4) amount of product used per hectare and number of hectares applied to; 5) crop or situation and weed or pest; 6) wind speed and direction during application; 7) air temperature and relative humidity during application; 8) nozzle brand, type, spray angle, nozzle capacity and spray system pressure measured during application; 9) name and address of person applying this (additional record details may be required by the state or territory where this product is used).

## MANDATORY NO-SPRAY ZONES

**Table 1. No-Spray Zones for Protection of the Aquatic Environment**

**DO NOT** apply if there are aquatic and wetland areas including aquacultural ponds, surface streams and rivers downwind from the application area and within the **mandatory no-spray zones** shown in the table below. Mandatory no-spray zones identified on tank mix partner product label must be observed if they are larger than those identified in the table below.

MIXTURE	WIND SPEED RANGE AT TIME OF APPLICATION	DOWNWIND MANDATORY NO-SPRAY ZONE	
		FIXED-WING	HELICOPTER
<b>FOR AERIAL APPLICATION</b>			
CREST® Herbicide alone	From 3 to 8 kilometres per hour	40 metres	
CREST® + Cutlass®	From 14 to 20 kilometres per hour	60 metres	
<b>FOR GROUND APPLICATION</b>			
CREST® Herbicide alone CREST® + Cutlass® CREST® + 2,4-D Amine 720	From 3 to 20 kilometres per hour	10 metres	
CREST® + Bronco® MA-X		15 metres	

**Table 2. No-Spray Zones for Protection of the Terrestrial Environment**

**DO NOT** apply if there are sensitive crops, gardens, landscaping vegetation, protected native vegetation or protected animal habitat downwind from the application area and within the **mandatory no-spray zones** shown in the table below. Mandatory no-spray zones identified on tank mix partner product label must be observed if they are larger than those identified in the table below.

MIXTURE	WIND SPEED RANGE AT TIME OF APPLICATION	DOWNWIND MANDATORY NO-SPRAY ZONE	
		FIXED-WING	HELICOPTER
<b>FOR AERIAL APPLICATION</b>			
CREST® Herbicide alone	From 3 to 8 kilometres per hour	450 metres	250 metres
CREST® + Cutlass®	From 14 to 20 kilometres per hour	750 metres	500 metres
<b>FOR GROUND APPLICATION</b>			
CREST® Herbicide alone CREST® + Cutlass®	From 3 to 20 kilometres per hour	40 metres	
CREST® + Bronco® MA-X		80 metres	
CREST® + 2,4-D Amine 720		100 metres	

## WEEDS CONTROLLED OR SUPPRESSED IN ESTABLISHED TURF

WEED	WEED STAGE	STATE	RATE /ha	CRITICAL COMMENTS
White clover ( <i>Medicago repens</i> ), Bindii ( <i>Soliva sessilis</i> )	Any age	All States	1 L to 2 L#	#Add Uptake: Spraying Oil or equivalent formulation at 500 mL/100 L (0.5% v/v)  Apply to weeds after emergence from autumn to early spring. Use the higher rates during cooler months of the year or if weed pressure is high.  Complete control may take 4 to 6 weeks depending on weed growth stage at application and also soil and air temperature. Weed death will generally take longer when an application is made during winter (May to August).  A repeat application may be needed in 4 to 6 weeks if lower rates are used in high weed pressure situations or during extended germination periods due to environmental conditions.
Bathurst Burr ( <i>Xanthium spinosum</i> ), Noogoora Burr ( <i>Xanthium strumarium</i> )	2 to 8 leaf stage, up to 20 cm tall		1.5 L#	
Marshmallow or Smallflower Mallow ( <i>Malva parviflora</i> )	Up to 8 leaf or 20 cm		2 L#	
Pigweed ( <i>Portulaca oleracea</i> )	Up to 10 cm diameter		1 L#	
	10 to 30 cm diameter		1.5 L#	
Sowthistle ( <i>Sonchus oleraceus</i> )	2 to 5 leaf up to 10 cm diameter	2 L#		

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

### WITHHOLDING PERIODS

#### GRAZING WITHHOLDING PERIOD

DO NOT FEED LAWN CLIPPINGS FROM TREATED TURF TO LIVESTOCK

## GENERAL INSTRUCTIONS

### MIXING

CREST® Herbicide is a suspo-emulsion formulation which may show some separation on storage. Roll, shake or invert the container several times to ensure that CREST® has completed resuspended before measuring to mix.

### APVMA Compliance Instructions for Mandatory COARSE or Larger Droplet Size Categories

These instructions inform those using this chemical product how to lawfully comply with the requirement of a COARSE or larger spray droplet size category for spray application.

Spray droplet size categories are defined in the ASAE S572 Standard (newer name may also be shown as ASABE) or the BCPC guideline. Nozzle manufacturers may refer to one or both of these documents, to identify droplet size categories; however, for a nozzle to comply with this requirement, the manufacturer must refer to at least one.

**Complying with the label 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. The APVMA has approved only the following specific methods for choosing the correct nozzle. Use one of the methods specified in these instructions to select a correct nozzle to deliver a COARSE or larger droplet size category.**

#### Instructions for Ground Application

**USE ONLY** nozzles that the nozzles' manufacturer has rated to deliver a COARSE, a VERY COARSE or an EXTREMELY COARSE droplet size category, as referenced in ASAE S572 or BCPC. Choose a nozzle that is specified to provide the droplet size category required in the label Spray Drift Restraints.

**DO NOT** use a higher spray system pressure than the maximum the manufacturer specifies for the selected nozzle to deliver the droplet size category required in the label Spray Drift Restraint.

#### Instructions for Fixed-Wing Aerial Application

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

Nozzle choices must be made using Option 1, 2 or 3 below. Option 1 nozzles are limited to a maximum aircraft speed of 110 knots and are for COARSE droplets only. Option 2 nozzles are limited to a maximum aircraft speed of 120 knots and are also for COARSE droplets only. Option 3 nozzles have their use conditions (maximum airspeed, nozzle spray angle, product used, orifice size and spray system pressure) specified in the APVMA Approved Aerial Agricultural Association of Australia (AAAA) Nozzle Calculator (described in Option 3). Depending on those use conditions, the calculator can identify a correct nozzle for either a COARSE or a VERY COARSE spray droplet category. (To use Option 3, aerial applicators must contact the AAAA for access to their approved nozzle calculator.)

**Option 1:** For up to a maximum aircraft speed of 110 knots and a COARSE droplet size category, **USE ONLY** solid stream 0° nozzles with orifice diameter greater than or equal to 1.5 mm and oriented straight back to the flight direction. **USE ONLY** a spray system pressure greater than or equal to 3 bar.

**Option 2:** For up to a maximum aircraft speed of 120 knots and a COARSE droplet size category, **USE ONLY** narrow angle flat fan nozzles with spray angle less than or equal to 40° and oriented straight back to the flight direction. **USE ONLY** a spray system pressure greater than or equal to 4 bar.

**Option 3:** **USE ONLY** nozzles rated by the APVMA Approved AAAA Nozzle Calculator as COARSE or VERY COARSE to comply with a product label's requirement for a COARSE or a VERY COARSE spray droplet size category. Use the AAAA Nozzle Calculator, and follow the additional instructions below in a), b) and c).

a) To identify a nozzle to comply with the required spray droplet category, aerial applicators must use only the droplet size category given in the nozzle calculator at the DV(0.1) position. 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 the product at airspeeds greater than the speed used to select the nozzle. If an application airspeed that is slower than 100 knots (the minimum speed specified in the nozzle calculator) is planned, a nozzle identified as COARSE or VERY COARSE at 100 knots can also be used at these 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. When a pesticide product is planned for use and is not available as a choice within the nozzle calculator, aerial applicators must use the category 'Other product' in the calculator to set the condition for selecting a nozzle.

#### Instructions for Helicopter Aerial Application

Instructions in this section apply to helicopter application of products where the label Spray Drift Restraint requires a COARSE, a VERY COARSE or an EXTREMELY COARSE spray droplet category.

Nozzle choices must be made using Option 1, 2 or 3 below.

**Option 1:** For helicopter applications requiring a COARSE or a VERY COARSE spray droplet size category, **USE ONLY** nozzles selected with the methods previously specified for fixed-wing aircraft in Section 2.

**Option 2:** When using Micronair controlled droplet applicators (Micron Sprayers Ltd), **USE ONLY** nozzles selected with the Micronair Droplet Size Prediction Models designed for Micronair products (and located on the company website) to choose a nozzle to satisfy the label requirement for a COARSE droplet size category. Important: to qualify for the COARSE category, the DV(0.1) value must be greater than 156 microns. Adjust parameters as necessary (eg lower the atomizer rotation rate) in order to achieve a DV(0.1) value greater than 156 microns.

**Option 3:** 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 COARSE, a VERY COARSE or an EXTREMELY COARSE droplet size category to satisfy the label requirement for one of those specific droplet size categories.

#### APPLICATION

Apply CREST® Herbicide using coarse to very coarse spray droplets according to ASAE S572 Standard or the BCPC Guideline.

Only apply CREST® using an accurately calibrated spray rig in a water volume of 80 to 100 L/ha for application by ground boom and not less than 30 L/ha by aerial application.

#### SPRAY APPLICATIONS AND SPRAY DRIFT MANAGEMENT

**USE ONLY** when wind speed is more than 3 kilometres per hour or less than 15 km/h, as measured by an anemometer at the application site. **USE ONLY** coarse to very coarse spray according to the ASAE S572 definition for standard nozzles.

Application checklist:

- Ensure sprayer is cleared/decontaminated before commencing
- Inform your neighbours prior to spraying
- Ensure sprayer is set-up correctly for the particular application
- Check
  - Boom calibration – at nozzle
  - Nozzle choice – low drift/correct spray quality – coarse to very coarse droplet
  - Suitable boom height
  - Speed for intended application
- You must check, determine and record the weather conditions immediately prior to, and immediately after the spray application is made.
- Record
  - Temperature
  - Relative humidity
  - Delta T
  - Wind speed (min 3 km/h, max 15 km/h)
  - Is there a temperature inversion?
- Night Spraying – Extra care is required to ensure that inversion conditions are not present. Use a smoke generator to determine wind direction and presence of inversion conditions.

## COMPATIBILITY

CREST® Herbicide is compatible with the following:

**Broadleaf Herbicides:** Cutlass® 500, Bronco® MA-X, Bronco® 200, Bronco® 400, Zulu® XT.

**Adjuvants:** Always use Uptake® Spraying Oil, Hotwire® Spraying Oil or Enhance® Spray Adjuvant (500 mL/100 L water).

## CLEANING SPRAY EQUIPMENT

After using CREST® Herbicide, empty the tank completely and drain the whole system. Thoroughly wash inside the tank using a pressure hose, drain the tank and clean any tank, pump, line and nozzle filters.

**Partial Cleaning (Rinse only)** – before using rig to spray barley, triticale and wheat):

After cleaning the tank as above, quarter fill the tank with clean water and circulate through the pump, line, hoses and nozzles. Drain and repeat procedure twice.

**Complete Cleaning (Decontamination)** – before using rig to spray crops that are susceptible to CREST® Herbicide):

- After cleaning the tank as above, quarter fill the tank with clean water and add a liquid alkali detergent at 500 mL/100 L water and circulate throughout the system for at least fifteen minutes. Note: Chlorine –based cleaners are NOT recommended.
- Drain the whole system. Then remove filters and nozzles and clean separately.
- Finally, rinse inside the tank thoroughly using a pressure hose and flush system with clean water and allow to drain.

**Rinse water should be discharged onto a designated disposal area or, if this is unavailable, onto unused land away from desirable plants and their roots and watercourses.**

## CROP SAFETY

**Established Turf:** Transient discolouration may occur in turf situations when the high rate (2 L/ha) of CREST® has been used up to 21 days following treatment. This product is not recommended to be used in Creeping bentgrass golf or bowling green situations.

## RESISTANT WEEDS WARNING

CREST® contains members of the pyridine and triazolopyrimidine sulfonanilide group of herbicides. The product has the disrupters of cell growth and acetolactate synthase (ALS) inhibitor modes-of-action. For herbicide resistance management, CREST® is a Group I + Group B herbicide. Some naturally occurring weed biotypes resistant to the product and other Group I and/or Group B 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 this product or other Group I or Group B herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Adama accepts no liability for any losses that may result from the failure of the product to control resistant weeds. Strategies to minimise the risk of herbicide resistance are available. Contact your farm chemical supplier, consultant or local Department of Agriculture.

## RE-ENTRY

DO NOT allow entry into treated areas until the spray has dried.

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

DO NOT apply if there are aquatic or wetland areas including aquacultural ponds downwind from the application area and within the mandatory no-spray zones shown in the MANDATORY NO-SPRAY ZONES restraints.

DO NOT apply under weather conditions or from spraying equipment that may cause spray drift onto nearby susceptible plants/crops, cropping lands or pastures. Avoid spray drift onto susceptible crops such as cotton, tobacco, tomatoes, vines, fruit trees, vegetables, legume crops and pastures, oilseed crops and susceptible trees (e.g. Kurrajongs, Belahs, Eucalyptus).

## PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Very toxic to aquatic life. DO NOT contaminate wetlands or watercourses with this product or used containers.

## STORAGE AND DISPOSAL

**5 L, 10 L, 15 L, 20 L:** Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. 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 for appropriate disposal 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.

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

## SAFETY DIRECTIONS

Will irritate the eyes and skin. Avoid contact with eyes and skin. When opening the container and preparing the spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow-length chemical resistant gloves and a face-shield or goggles. If product in eyes, wash it out immediately with water. 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.

## SDS

Additional information is listed in the safety data sheet (SDS). A safety data sheet for CREST® is available from adama.com or call Customer Service on 1800 423 262.

**CONDITIONS OF SALE:** The use of CREST® Herbicide being beyond the control of the manufacturer, no warranty expressed or implied is given by Adama Australia regarding its suitability, fitness or efficiency for any purposes for which it is used by the buyer, whether in accordance with the Directions for Use or not. Adama Australia accepts no responsibility for any consequence whatsoever resulting from the use of this product.

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