

POISON

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

Mandate® Xtra

Herbicide

ACTIVE CONSTITUENTS:

320 g/L CLODINAFOP-PROPARGYL

80 g/L CLOQUINTOCET-MEXYL

SOLVENT: 433 g/L LIQUID HYDROCARBON

GROUP **A** HERBICIDE

Crop: Wheat

Controls: Wild Oats, Paradoxa Grass (Annual Phalaris), Canary Grass and Annual Ryegrass as specified in the Directions for Use table.

Formulation type

Emulsifiable
Concentrate

EC



ADAMA

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CONTENTS: 1 L - 1000 L

DIRECTIONS FOR USE

RESTRAINTS

DO NOT apply if rainfall is expected within 2 hours.

DO NOT apply to weeds or crops which are under stress. For example, due to very dry, very wet, frosty or diseased conditions, nutrient deficiency or high insect pressure.

DO NOT apply to weeds or crops immediately after a prolonged period of frosts.

DO NOT apply under poor growing conditions.

CROP	WEEDS CONTROLLED	STATE	RATE (per ha)	WEED GROWTH STAGE	CRITICAL COMMENTS
Wheat 2 leaf to late jointing (Zadoks 12 – 37)	Wild Oats	Qld, Nthn. NSW only	50 mL + 500 mL Hasten* or Uptake* oil per 100 L of water.	2 to 5 leaf	DO NOT TANK MIX WITH BROADLEAF HERBICIDES AT THESE RATES. Apply at 65 mL/ha when weeds are not actively growing. Where low water volumes are used, DO NOT use less than the minimum oil volumes specified (See Minimum Oil Volumes). Cold water: Under cold water conditions (10°C or less), use Hasten* instead of Uptake*.
			65 mL + 500 mL Hasten* or Uptake* oil per 100 L of water.	2 leaf to mid tillering	
			65 mL + 500 mL Hasten* or Uptake* oil per 100 L of water.	2 to 5 leaf	
			95 mL + 500 mL Hasten* or Uptake* oil per 100 L of water.	2 leaf to mid tillering	
					MAY BE TANK MIXED WITH COMPATIBLE HERBICIDES. Apply in mixtures for broadleaf weed control only when weeds are actively growing. When mixing MANDATE® XTRA with certain broadleaf weed herbicides, some reduction in grass weed control may occur. Unless otherwise specified always use Uptake* or Hasten* when tank mixing broadleaf herbicides. Apply at 95 mL/ha when weeds are not actively growing. Where low water volumes are used, DO NOT use less than the minimum oil volumes specified (See Minimum Oil Volumes). Cold water: Under cold water conditions (10°C or less), use Hasten* instead of Uptake*.

CROP	WEEDS CONTROLLED	STATE	RATE (per ha)	WEED GROWTH STAGE	CRITICAL COMMENTS
Wheat 2 leaf to late jointing (Zadoks 12 – 37)	Wild Oats	Sthn. NSW, Vic, SA, WA only	50 mL + 500 mL Hasten* or Uptake* oil per 100 L of water OR 100 mL of 100% non-ionic surfactant per 100 L of water.	2 to 5 leaf	MAY BE TANK MIXED WITH COMPATIBLE HERBICIDES. Apply in mixtures for broadleaf weed control only when weeds are actively growing. When mixing MANDATE® XTRA with certain broadleaf weed herbicides, some reduction in grass weed control may occur. Refer to compatibility chart for specific rates for tank mixes. Unless otherwise specified always use Uptake* or Hasten* when tank mixing broadleaf herbicides. Apply at 65 mL/ha when weeds are not actively growing. Where low water volumes are used, DO NOT use less than the minimum oil volumes specified (See Minimum Oil Volumes). Cold water: Under cold water conditions (10°C or less), use Hasten* instead of Uptake*.
			65 mL + 500 mL Hasten* or Uptake* oil per 100 L of water OR 100 mL of 100% non-ionic surfactant per 100 L of water.	2 leaf to mid tillering	
Wheat 2 leaf to late jointing (Zadoks 12 – 37)	Paradoxa Grass (<i>Phalaris paradoxa</i>), Canary Grass (<i>Phalaris minor</i>)	Qld, NSW, Vic, Tas, SA only	65 mL + 500 mL Hasten* or Uptake* oil per 100 L of water.	2 to 3 leaf	DO NOT TANK MIX WITH BROADLEAF HERBICIDES AT RATES BELOW 120 mL/ha. Apply in mixtures for broadleaf weed control only when weeds are actively growing. When mixing MANDATE® XTRA with certain broadleaf weed herbicides some reduction in grass weed control may occur. Apply at 120 mL/ha when weeds are not actively growing. Where low water volumes are used, DO NOT use less than the minimum oil volumes specified (See Minimum Oil Volumes). Cold water: Under cold water conditions (10°C or less), use Hasten* instead of Uptake*.
			95 mL + 500 mL Hasten* or Uptake* oil per 100 L of water.	2 to 5 leaf	
			120 mL + 500 mL Hasten* or Uptake* oil per 100 L of water.	2 leaf to early tillering	
	Annual Ryegrass	NSW, Vic, Tas, SA, WA only	120 mL + 500 mL Hasten* or Uptake* oil per 100 L of water.	2 to 4 leaf	MAY BE TANK MIXED WITH COMPATIBLE HERBICIDES. Apply in mixtures for broadleaf weed control only when weeds are actively growing. When mixing MANDATE® XTRA with certain broadleaf weed herbicides, some reduction in grass weed control may occur. Apply at 160 mL/ha when weeds are not actively growing. Where low water volumes are used, DO NOT use less than the minimum oil volumes specified (See Minimum Oil Volumes). Cold water: Under cold water conditions (10°C or less), use Hasten* instead of Uptake*.
160 mL + 500 mL Hasten* or Uptake* oil per 100 L of water.			2 leaf to early tillering		

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

WITHHOLDING PERIOD:

HARVESTED GRAIN: WITHHOLDING PERIOD NOT REQUIRED WHEN USED AS DIRECTED.

ANIMAL GRAZING/FEEDING: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 4 WEEKS AFTER APPLICATION.

GENERAL INSTRUCTIONS

MANDATE® XTRA Herbicide should be applied only when weeds are actively growing.

MIXING

Fill the spray tank to half full. Then add MANDATE® XTRA while adding water to make up the final spray volume. Pour MANDATE® XTRA into the stream of incoming water. Good agitation at the time MANDATE® XTRA is added to the tank will ensure good mixing. Add the required amount of high emulsifier (>15%) loaded petroleum spray oil concentrates e.g. Uptake*, Enhance* OR esterified and emulsified vegetable oils e.g. Hasten* or Kwickin* just before the tank is full of water and with the agitators in motion.

MIXING ORDER

Some products may react with other products if they are not mixed in the correct order. The general mixing order of products should be:

1. Water conditioners or buffers
2. Water dispersible granules (WG)
3. Wettable powders (WP)
4. Flowable or suspension concentrates (SC)
5. Emulsifiable concentrates (EC) (MANDATE® XTRA)
6. Water based or soluble concentrates
7. Oils and wetters – e.g. Hasten*, Uptake*, Wetspray® 1000

It is important to ensure that each individual component of the tank mix is fully dissolved and in solution before the next product is added to the tank mix, otherwise mixing problems may occur.

MINIMUM OIL VOLUMES

The minimum amount of oil to be applied with MANDATE® XTRA will depend on the type of oil used. When applying MANDATE® XTRA using low water volumes, DO NOT use less than the minimum oil volumes specified below:

- For oils normally applied at 1% v/v (e.g. Crop Shield*), DO NOT apply less than 500 mL oil/ha.
- For oils normally applied at 0.5% v/v (e.g. Uptake*, Hasten*, Hotwire®, Enhance*, Kwickin*), DO NOT apply less than 250 mL oil/ha.

CLEANING SPRAY EQUIPMENT

After using MANDATE® XTRA, empty the tank completely and drain the whole system.

Thoroughly wash inside the tank using a pressure hose, drain the tank and clean any filters in the tank, pump, line and nozzles.

To rinse: After cleaning the tank as above, quarter fill the tank with clean water and circulate through the pump, lines, hoses and nozzles. Drain and repeat the rinsing procedure twice.

To decontaminate: Before spraying cereals (except wheat), maize, sorghum or other sensitive crops, wash the tank and rinse the system as above.

Drain and repeat the rinsing procedure. Then quarter fill the tank and add a liquid alkali detergent (e.g. Surf*, Omo*, Drive*) at 0.5 L/100 L of water and circulate throughout the system for at least fifteen minutes. Drain the whole system. Remove filters and nozzles and clean them separately. Finally flush the system with clean water and allow to drain. Dispose of all water used for cleaning in a disposal pit specifically marked and set up for this purpose clear of waterways, vegetation and roots.

APPLICATION

Ground Application: Boom spray with flat fan nozzles. Ensure good spray coverage is obtained. Apply using 50 to 110 L water per hectare. A medium to coarse spray quality applied at a minimum of 80 L/ha is recommended.

Aircraft Application: For best results use 20 to 30 L water per hectare and spray at 2 m to 3 m above the crop. A medium to coarse spray quality applied is recommended.

For rotary atomizers (micronairs) this can be achieved using blade angles of 55° to 65°. Where booms and nozzles are attached, flat fan nozzles with a spray angle of 65° to 90° should be used. Avoid applying MANDATE® XTRA if wind speeds are greater than 5 m/s. If spraying in calm conditions use larger droplets and reduce flying height. Do not spray when there is a risk of inversion.

COMPATIBILITY

When MANDATE® XTRA is applied with compatible herbicides always use a recommended oil. Use only a 100% non-ionic surfactant when mixing with diflufenican based products.

Adjuvants: Adama recommends the use of high emulsifier (>15%) loaded petroleum spray oil concentrates e.g. Uptake*, Enhance* OR esterified and emulsified vegetable oils such as Hasten*, Plantocrop* or Kwicken*. Please consult Adama for more information on other adjuvants and compatible products.

Grass Herbicides: MANDATE® XTRA is compatible with diclofop methyl, e.g. Rhino®.

Broadleaf Herbicides: Some broadleaf weed herbicides are incompatible with MANDATE® XTRA because they reduce the effectiveness of MANDATE® XTRA or because in mixture they may cause crop yellowing. For the latest information on compatibility of MANDATE® XTRA with broadleaf herbicides refer to your local reseller, Adama Territory Manager or the Adama website, adama.com

Incompatible: The following herbicides are known to be incompatible with MANDATE® XTRA: Diuron, Logran*, Broadside* and all 2,4-D formulations. Herbicides which are incompatible with MANDATE® XTRA must be applied separately. In this situation, apply MANDATE® XTRA first and then allow at least 10 days between its application and application of the broadleaf weed herbicide.

Insecticides: MANDATE® XTRA is compatible with Suprathion® 400 EC.

HERBICIDE RESISTANCE WARNING

MANDATE® XTRA Herbicide is a member of the aryloxyphenoxypropionate ("fop") group of herbicides. MANDATE® XTRA has the inhibition of fat (lipid) synthesis, (or inhibitors of acetyl CoA carboxylase) mode of action. For weed resistance management, MANDATE® XTRA is a Group A herbicide. Some naturally occurring weed biotypes resistant to MANDATE® XTRA and other Group A 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 MANDATE® XTRA or other Group A herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Adama Australia accepts no liability for any losses that may result from the failure of MANDATE® XTRA Herbicide to control resistant weeds.

Weed biotypes resistant to diclofop-methyl and other "grass specific" herbicides can also often be resistant to MANDATE® XTRA. Before using MANDATE® XTRA on a population resistant to or suspected to be resistant to "grass specific" herbicides, have a resistance test conducted to ensure that it is susceptible to MANDATE® XTRA. Large numbers of healthy surviving weeds can be an indication that resistance is developing. Efforts should be made to prevent seed set of the surviving weeds. DO NOT make more than one application of a Group A herbicide with the inhibition of fat (lipid) synthesis (or inhibitors of acetyl CoA carboxylase) mode of action to a crop in the same season. If the user suspects that the target weed population is resistant to herbicides with this mode of action, MANDATE® XTRA or other Group A herbicides should not be used.

Strategies to minimise the risk of herbicide resistance are available.

The above recommendations should be incorporated into an Integrated Weed Management (IWM) Program. Consult your farm chemical supplier, consultant, local Department of Agriculture or Primary Industries, or local Adama representative for details.

PRECAUTIONS

Re-entry Period: DO NOT enter treated areas without protective clothing until the spray has dried.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

DO NOT apply on or near shrubs, trees, lawns or crops other than wheat. DO NOT drain or flush equipment on or near desirable trees or other plants, where their roots may extend, or in situations where by movement of soil or by seepage absorption of the herbicide may occur. DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants, crops, cropping lands or pastures.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT apply to irrigation drains or channels. DO NOT contaminate streams, rivers or watercourses with the chemical or used containers.

STORAGE AND DISPOSAL

Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. 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 it 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 program site. The cap should not be replaced, but may be taken separately. 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.

Returnable container with Micro Matic valve (60 L, 110 L): Store the original sealed container in a cool well-ventilated area. DO NOT store for prolonged periods in direct sunlight. DO NOT tamper with the Micro Matic valve or the security seal. DO NOT contaminate the container with water or any foreign matter. After each use of the product, please ensure that the Micro Matic coupler delivery system and hoses are disconnected, triple rinsed with clean water and drained accordingly. When the contents of the container have been used, please return the container to the point of purchase. The container with Micro Matic valve remains the property of Adama Australia.

1000 L: Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. Storage must be secure so that contents cannot be tampered with. All locks and/or seals must be in order. If locks or seals are broken prior to initial use, then the integrity of this product cannot be assured. If this occurs Adama Australia should be advised immediately. This returnable container is reusable and remains the property of Adama Australia. DO NOT rinse empty container. Empty contents fully into application equipment. Close all valves and return to the point of supply for refill or storage. No other liquid, solid or pesticide product should be put into it. When empty return to Adama Australia for cleaning, relabelling and refilling.

SAFETY DIRECTIONS

Harmful if inhaled or swallowed. Will irritate the eyes. Avoid inhaling vapour or spray mist. Avoid contact with eyes and skin. When opening the container and preparing spray wear cotton overalls buttoned at the neck and wrist (or equivalent clothing) and a washable hat, elbow length PVC gloves and face shield or goggles. If product in eyes, wash it out immediately with 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, 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 MANDATE® XTRA is available from adama.com or call Customer Service on 1800 423 262.

CONDITIONS OF SALE

The use of MANDATE® XTRA 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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