

POISON

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



Monsoon®

Herbicide

ACTIVE CONSTITUENTS:

300 g/L BROMOXYNIL present as the octanoyl ester

150 g/L FLUROXYPYR present as the methylheptyl ester

SOLVENT: 410 g/L PHENYL METHYL KETONE

GROUP

6

4

HERBICIDE

CROPS/SITUATIONS: Fallow and Winter Cereals

CONTROLS: A wide range of broadleaf weeds as per the Directions for Use

Formulation type
Emulsifiable
Concentrate

EC



ADAMA

adama.com

CONTENTS: 1 L - 1000 L

RESTRAINTS

DO NOT apply by mister machines.

DO NOT apply by aircraft.

DO NOT apply to crops or weeds, which may be stressed (not actively growing) due to prolonged periods of extreme cold, moisture stress (water-logged or drought affected) poor nutrition, presence of disease; or previous herbicide treatment as reduced levels of control may result.

DO NOT spray if rain is likely to occur within three hours.

SPRAY DRIFT RESTRAINTS

Specific definitions for terms used in this section of the label can be found at apvma.gov.au/spraydrift.

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

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 table/s 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 apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application.

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

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

- Spray droplets are not smaller than a COARSE spray droplet size category.
- Minimum distances between the application site and downwind sensitive areas are observed (see 'Mandatory buffer zones' section of the following table titled 'Buffer zones for boom sprayers').

Buffer zones for boom sprayers

Application rate	Boom height above the target canopy	Mandatory downwind buffer zones	
		Natural aquatic areas	Vegetation areas
800 mL/ha MONSOON + 350 mL/ha MCPA LVE 570	0.5 m or lower	20 metres	Refer to MCPA label
	1.0 m or lower	50 metres	Refer to MCPA label
670 mL/ha MONSOON + 5 g/ha metsulfuron-methyl	0.5 m or lower	20 metres	80 metres
	1.0 m or lower	55 metres	275 metres

DIRECTIONS FOR USE
Table 1: Wheat, Barley and Triticale – Not for use in WA or SA

CROP GROWTH STAGE	WEEDS CONTROLLED	WEED GROWTH STAGE	RATE / ha	CRITICAL COMMENTS
Apply from 3 leaf to flag (Zadoks 13 to 39)	Bedstraw (<i>Galium tricornutum</i>), Cleavers (<i>Galium aparine</i>)	1 to 3 whorl	900 mL ⁽¹⁾ to 1 L OR 800 mL ⁽¹⁾ + MCPA LVE 570 at 350 mL	CRITICAL COMMENTS ⁽¹⁾ Add either Uptake* Spraying Oil or a surfactant (or approved alternative formulation as per GENERAL INSTRUCTIONS : Oils and surfactants). Mixtures : Mixing partners with MONSOON® may reduce crop selectivity. Apply at crop growth stages/application timings according to the mixing partner's recommendation.
	Black Bindweed (Climbing Buckwheat)	Up to 8 leaf	670 OR 700 mL ⁽¹⁾	
	Marshmallow	Up to 4 leaf		
	African turnip weed (<i>Sisymbrium thellungii</i>)	Up to 4 leaf		
	Fumitory	Up to 4 leaf	800 mL ⁽¹⁾	
	Deadnettle	2 to 6 leaf	500 mL ⁽¹⁾ OR 800 mL ⁽¹⁾	Apply 500 mL MONSOON in a tank-mix with other standard herbicides e.g. Enforcer 242 or Zulu XT at recommended label rates.
	Spiny Emex (Doublegee, Three Cornered Jack)	2 to 4 leaf		
	Bittercress (<i>Coronopus didymus</i>), Mustards, Shepherd's Purse, Turnip Weed, Wild Radish, Wild Turnip	Up to 8 leaf and up to 20 cm diameter	800 mL ⁽¹⁾ + MCPA LVE 570 at 350 mL	Sowthistle : Addition of tank mix partners like LVE MCPA is recommended at lower rate of MONSOON (500 and 670 mL/ha) or when weeds are >4 leaf.
	Common Sowthistle (<i>Sonchus oleraceus</i>)	Up to 2 leaf	500 OR 670 mL ⁽¹⁾	
		4 to 8 leaf	800 mL ⁽¹⁾ + MCPA LVE 570 at 350 mL	
	Erodium	4 to 6 leaf		
	Fat hen	4 to 6 leaf	500 mL ⁽¹⁾	Add in tank mix with other standard herbicides like Enforcer® 242 and Zulu XT at recommended label rates.
	Prickly lettuce, Saffron thistle, Volunteer field pea	Up to 8-10 leaf		
	Wireweed	up to 4 leaf	800 mL ⁽¹⁾ OR 800 mL ⁽¹⁾ + MCPA LVE 570 at 350 mL	

Table 2: Fallow

WEEDS CONTROLLED	WEED GROWTH STAGE	RATE / ha	CRITICAL COMMENTS
African turnip weed (<i>Sisymbrium thellungii</i>)	Up to 4 leaf	670 OR 700 mL ⁽¹⁾	Complete coverage is essential, plants which are shaded by stubble or other weeds will not be controlled. Weeds that are drought stressed and sprayed under hot conditions may not be adequately controlled. The addition of glyphosate will provide broader spectrum weed control where needed. Refer to the Compatibility section for appropriate glyphosate products. The rate of Wipe-Out® used should be robust for the conditions and sufficient to control the hardest-to-kill weed in the situation. For general fallow weed control application volumes above 50 L/ha are recommended.
Bedstraw (<i>Galium tricornutum</i>), Cleavers (<i>Galium aparine</i>)	Up to 5 whorl	1.3 L ⁽¹⁾	
Bellvine	Pre-flowering	670 mL + 1 L Wipe-Out® Pro	
Bittercress (<i>Coronopus didymus</i>), Mustards, Shepherd's Purse, Turnip Weed, Wild Radish, Wild Turnip	Up to 8 leaf and up to 20 cm diameter	800 mL ⁽¹⁾ + MCPA LVE 570 at 350 mL	
Black Bindweed (Climbing Buckwheat)	Cotyledon to mature, vining plants	1 L ⁽¹⁾ OR 670 mL to 1 L + Wipe-Out®	
Bladder Ketmia	4 to 8 leaf, up to 10 cm tall	670 mL + 1.0 L Wipe-Out® Pro	⁽¹⁾ Add Uptake* Spraying Oil (or approved alternate formulation as per GENERAL INSTRUCTIONS ; Oils and surfactants). When mixing with Wipe-Out® Pro to control both grass and broadleaf weeds, refer to the Wipe-Out® Pro label for use rates and adjuvants recommended for the grasses (see GENERAL INSTRUCTIONS ; compatibility section).
Common Sowthistle (<i>Sonchus oleraceus</i>)	2 to 5 leaf up to 10 cm diameter	1.3 L ⁽¹⁾ or 670 mL + 500 mL Wipe-Out® Pro	
Prickly Lettuce			⁽²⁾ Delay treatment until the maximum number of shoots have emerged, but before the onset of fruiting (late summer).
Cowvine (Peach Vine) (<i>Ipomoea lonchophylla</i>)	2 to 10 leaf up to 10 cm diameter	670 mL to 1 L + 1.0 L Wipe-Out® Pro ⁽¹⁾	
Caltrop (yellow vine), including <i>Tribulus terrestris</i> , <i>T. maximus</i> and <i>T. microccus</i>	Up to 15 cm diameter	670 mL + 0.8 L Wipe-Out® Pro	DO NOT treat plants showing symptoms from previous treatment. Use the high rate when longer term weed control (6-10 months) is required and delay planting crops during this period.
Deadnettle	2 to 6 leaf	500 mL ⁽¹⁾ OR 800 mL ⁽¹⁾	
Erodium	4 to 6 leaf	800 mL ⁽¹⁾ + MCPA LVE 570 at 350 mL	The low rate will require follow-up treatments.
Fumitory	Up to 4 leaf	800 mL ⁽¹⁾	
Pigweed (<i>Portulaca oleracea</i>)	Up to 10 cm diameter	1 L ⁽¹⁾	
	Up to 60 cm diameter	1 L + 0.8 L Wipe-Out® Pro	
<i>Polymeria pusilla</i>	2 to 10 leaf, up to 20 cm diameter	1.3 L ⁽¹⁾ OR 670 mL + 1.0 L Wipe-Out® Pro	For Roundup Ready* cotton varieties a minimum spray volume of 80 L/ha should be used. MONSOON® alone or with Wipe-Out® will not provide satisfactory control of ratoon or "stub" cotton.
Smallflower Mallow or Marshmallow (<i>Malva parviflora</i>)	Up to 8 leaf, up to 20 cm diameter	1.3 L ⁽¹⁾	
Spiny Emex (Doublegee, Three Cornered Jack)	2 to 4 leaf	500 mL ⁽¹⁾ OR 800 mL ⁽¹⁾	
Volunteer Roundup Ready* Cotton (<i>Gossypium hirsutum</i>)	Cotyledon to 6 leaves	1 L alone or PLUS Wipe-Out®	
Wireweed	2 to 3 leaf, up to 10 cm tall	670 mL ⁽²⁾ + 5 g metsulfuron OR 670 mL ⁽²⁾ + 500 mL Wipe-Out® Pro	

WEEDS CONTROLLED	WEED GROWTH STAGE	RATE / ha	CRITICAL COMMENTS
Fat hen	4 to 6 leaf	500 mL ⁽¹⁾	Add in tank mix with other standard herbicides like Enforcer® 242 and Zulu XT at recommended label rates.
Prickly lettuce, Saffron thistle, Volunteer field pea	Up to 8-10 leaf		

Table 3: Optical Spot Spray Technologies

Note: Calibrate the sprayer to spray the equivalent of 100 L/ha

For weed cover between 0% and 30% only. If percentage weed cover exceeds 30% use approved boom spray rates.

SITUATION	WEEDS CONTROLLED	RATE	ADJUVANT	CRITICAL COMMENTS
Fallow	Fleabane, Sowthistle, Caltrop (Yellow vine)	2-4 L/ha	- Add Uptake* Spraying Oil (or equivalent product) at 500 mL/100 L when using the low rate/to improve control of large weeds.	Apply to rosette to flowering plants. Use higher rate on late flowering/mature plants or plants under moisture stress.
	Apple of Peru, Annual ground cherry/ Wild gooseberry (<i>Physalis</i> spp.), Perennial ground cherry, Smallflower mallow or marshmallow, Volunteer sunflowers			Target plants from seedling up to 15 cm tall.
	Bedstraw, Cleavers			Up to 5 whorl.
	Climbing buckwheat, Pigweed, Thornapples			Target plants from seedling up to 10 cm diameter.
	Saltbush			Up to 25 cm diameter.
	Sesbania pea, Wireweed			Target plants from 2 leaf up to 10 cm tall
	Spiny emex, Doublegee or three cornered Jack			Target plants from 2 - 8 leaf stage.

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

WITHHOLDING PERIODS:

CROPS, PASTURES:

CROP HARVEST:

DO NOT GRAZE TREATED CROPS OR CUT FOR STOCK FOOD FOR 8 WEEKS AFTER APPLICATION.

NOT REQUIRED WHEN USED AS DIRECTED.

GENERAL INSTRUCTIONS

MINIMUM RECROPPING PERIODS		
PLANT-BACK PERIODS FOR CROPS FOLLOWING THE APPLICATION OF MONSOON® FOR RATES UP TO 1.86 L/ha		
RATE:	Up to 1 L/ha; OR Up to 3 L/ha (optical spot spraying)	Up to 1.33 L/ha; OR Up to 4 L/ha (optical spot spraying)
CROP	DAYS	
Barley, Wheat, chickpea	7	7
Cotton	14	28
Soybean	7	14
Sunflower, Maize, Sorghum	7	7
NOTE: Before using MONSOON® in tank mixes with other herbicides, check the plant-back information on all product labels. The time between spraying and planting will be determined by the most residual product, i.e., the product with the longest plant-back period.		

MIXING

Mix only sufficient chemical for each day's use and avoid storing.

Mixing in Water: Half fill the spray tank with water and add the required quantity of MONSOON® and complete filling. Agitate continuously to ensure thorough mixing before and during application.

Tank mixtures: Wettable powder or dry flowable formulations (e.g., water dispersible granules) should be added to the spray tank first, followed by suspension concentrates (flowables), water soluble salts and then emulsifiable concentrate formulations (MONSOON®). Add spraying oils and surfactants (wettters) last.

OILS AND SURFACTANTS

Oils

Where specified use only Uptake* Spraying Oil or equivalent at the rate of 500 mL/100 L of spray mix. When using less than 100 L/ha spray volume, ensure a minimum of 250 mL/ha of Uptake* is used, unless 1 L/100 L or 1 L/ha is specified.

Surfactants (wettters)

Use a 100% concentrate non-ionic surfactant such as BS1000* at 100 mL/100 L of spray mix where required.

COMPATIBILITY

MONSOON® is compatible with a range of Adama herbicides and other crop protection products. Always follow the correct mixing order. Refer to the MONSOON® physical compatibility guide and correct mixing order guide at adama.com before use.

WIPE-OUT® Pro

When mixing MONSOON® with Wipe-Out® Pro to control both grass and broadleaf weeds, refer to the Wipe-Out® Pro label for use rates and adjuvants recommended for the grasses. DO NOT use Wipe-Out® Pro at less than 1.0 L/ha in tank mixes with MONSOON®, when Barnyard grass, Button grass, Crowsfoot grass, Native millet or Liverseed grass are present.

APPLICATION METHODS AND WATER RATES

BROADCAST APPLICATION IN CROPPING AND FALLOW SITUATIONS

Ground application (Boom)

Apply MONSOON® with an accurately calibrated boom sprayer in at least 50 L/ha water. Flat nozzles are recommended using pressures in the range 200 to 300 kPa. Set the boom at a height to ensure a double overlap of the nozzle patterns.

CLEANING SPRAY EQUIPMENT

Rinse water should be discharged onto a designated disposal area or, if this is unavailable, onto wasteland away from desirable plants and water courses.

Cleaning equipment after using water-based sprays:

Rinsing: After using MONSOON® Herbicide, empty the tank completely and drain the whole system. Thoroughly wash inside the spray unit using a pressure hose. Drain and clean any filters in the tank, pump, lines, hoses and nozzles. After cleaning the tank as above, quarter fill the clean water and circulate throughout the pump, lines and nozzles. Drain and repeat the rinsing procedure twice.

Decontamination (before spraying cotton and other sensitive crops; see

PROTECTION OF CROPS): Wash the tank and rinse the system as above. Then quarter fill the tank and add an alkali detergent (e.g. liquid Surf*, Omo*, Drive*) at 50 mL/10 L of water or the powder equivalent at 50 g/10 L and circulate throughout the system for at least fifteen minutes. If using a concentrated laundry detergent use 250 g (or mL)/100 L water. Do not use chlorine-based cleaners. Drain the whole system. Remove filters and nozzles and clean them separately. Finally flush the system with clean water and allow to drain.

RESISTANT WEEDS WARNING

MONSOON® Herbicide is a member of the pyridine and nitriles groups of herbicides.

The product has the disrupters of plant cell growth and the photosystem II inhibitor modes of action. For weed resistance management, the product is a Group 4 and Group 6 Herbicide. Some naturally occurring weed biotypes resistant to the product and other Group 4 and Group 6 herbicides may exist through normal genetic variability in any weed population. The resistant individual 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 4 and Group 6 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 this product to control resistant weeds. Strategies to minimise the risk of herbicide resistance are available. Contact your farm chemical supplier, consultant, local Department of Agriculture, or Adama representative.

RE-ENTRY

DO NOT enter treated areas until the spray has dried, unless wearing cotton overalls buttoned to the neck and wrist (or equivalent clothing) and chemical resistant gloves. Clothing must be laundered after each day's use.

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PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

Susceptible crops include but are not limited to clovers, cotton, fruit, hops, lupins, ornamentals, peas, pine tree, potatoes, navy beans, safflower, shade trees, soybeans, sunflower, tobacco, tomatoes, vegetables and vines. MONSOON® can be damaging to susceptible crops during both growing and dormant periods. Grasses are normally unaffected by MONSOON® and establish quickly after treatment. Transitory damage can occur on some species particularly those that spread by stolons such as couch grass (*Cynodon dactylon*), Kikuyu grass and carpet grass (*Axonopus* spp.) DO NOT allow spray to drift onto susceptible crops, shade trees and *Pinus* spp. DO NOT use under weather conditions or from spraying equipment, which could cause spray to drift onto nearby susceptible plants.

Note: Maximum daily temperatures at or above 20°C at application, or on days following treatment may result in seedling mortality and established plants may be damaged.

PROTECTION OF LIVESTOCK

DO NOT graze stock or cut treated crops or plants for food except as specified under withholding periods. Poisonous plants may become more palatable after spraying therefore stock should be kept out of the area until the plants have died down. DO NOT allow stock to re-enter paddocks containing treated poisonous plants, until the plants have died down.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

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

INTEGRATED PEST MANAGEMENT

Tank mix with MCPA LVE 570: Not compatible with integrated pest management (IPM) programs utilising predatory arthropods. Minimise spray drift to reduce harmful effects on predatory arthropods in non-crop areas.

PROTECTION OF HONEYBEES AND OTHER INSECT POLLINATORS

Harmful to bees. DO NOT apply to flowering plants or crops. DO NOT allow spray drift to flowering weeds or flowering crops in the vicinity of the treatment area. Before spraying, notify beekeepers to move hives to a safe location with an untreated source of nectar and pollen, if there is potential for managed hives to be affected by the spray or spray drift.

STORAGE AND DISPOSAL

Storage for all containers:

Store in closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight.

Disposal

Recycled containers:

This container can be recycled if it is clean, dry, free of visible residues and has the *drumMUSTER* logo visible. Triple or pressure rinse container before disposal. Dispose of rinsate by adding 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 a *drumMUSTER* collection or similar container management site. The cap should not be replaced but may be taken separately.

Non-recycled containers:

Triple rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. 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.

Refillable containers:

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

SMALL SPILL MANAGEMENT

Wear protective equipment (See **SAFETY DIRECTIONS**). Apply absorbent material such as earth, sand, clay granules or cat litter to the spill. Sweep up material for disposal when absorption is completed and contain in a refuse vessel for disposal (see **STORAGE AND DISPOSAL** section). If necessary, wash the spill area with an alkali detergent and water and absorb the wash liquid for disposal.

SAFETY DIRECTIONS

Harmful if inhaled or swallowed. Will irritate skin and eyes. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. Do not inhale vapour.

When opening the container and preparing the spray, wear cotton overalls, buttoned to the neck and wrist (or equivalent clothing), a washable hat, elbow-length chemical resistant gloves and goggles.

When using the prepared spray wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), a washable hat and elbow-length chemical resistant gloves.

Wash hands after use. After each day's use, wash gloves, 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. If in eyes, wash out immediately with water.

SAFETY DATA SHEET

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

CONDITIONS OF SALE: The use of MONSOON® 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 purpose for which it is used by the buyer, whether in accordance with the directions or not and Adama Australia accepts no responsibility for any consequence whatsoever resulting from the use of this product.

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