

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

Affinity Force[®]

HERBICIDE

ACTIVE CONSTITUENT: 240 g/L CARFENTRAZONE-ETHYL



For the control of certain annual broadleaf weeds in winter cereals and pyrethrum as per the Directions For Use Table

IMPORTANT: READ THE ATTACHED LEAFLET BEFORE USE

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FMC[®] FMC Australasia Pty Ltd

Unit 6A, 9 Archimedes Place
Murarrie Qld 4172

STORAGE AND DISPOSAL

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

Spillage - In case of spillage, confine spilled product with material such as sand or clay. Dispose of waste as indicated below or according to the Australian Standard 2507 - Storage and Handling of Pesticides. DO NOT allow spilled product to enter sewers, drains, creeks or any other waterways. Keep out animals and unprotected persons. Vacuum, shovel or pump waste into an approved drum. To decontaminate spill area, tools and equipment, wash with a suitable solution (ie organic solvent, detergent, bleach or caustic) and add the solution to the drums of wastes already collected. Label for contents. Dispose of drummed wastes, including decontamination solution, in accordance with the requirements of Local or State Waste Management Authorities.

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 the eyes. Avoid contact with eyes and skin. When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length chemical resistant gloves and goggles or safety glasses. If product on skin, immediately wash area with soap and water. 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.

MATERIAL SAFETY DATA SHEET

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Conditions of sale

Crop Care Australasia Pty Ltd will not accept any responsibility whatsoever and howsoever arising and whether for consequential loss or otherwise in connection with the supply or use of these goods other than responsibility for the merchantable quality of the goods and such responsibilities mandatorily imposed by Statutes applicable to the sale or supply of these goods. To the extent allowed by such Statutes the liability of Crop Care Australasia Pty Ltd is limited to the replacement of the goods or (at the option of Crop Care Australasia Pty Ltd) the refund of the price paid and is conditional upon a claim being made in writing and where possible sufficient part of the goods to enable proper examination being returned to Crop Care Australasia Pty Ltd within thirty days of delivery.

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In case of emergency: Phone 1800 033 498

Ask for shift supervisor. Toll free 24 hours.



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DIRECTIONS FOR USE

Restrains :

DO NOT tank mix Affinity Force with any wetter, crop oil concentrates or blended oil/surfactant adjuvants (See compatibility section).

DO NOT tank mix MCPA LVE with Affinity Force.

DO NOT tank mix Affinity Force treatments with selective grass herbicides.

DO NOT apply the tank mix of Affinity Force + MCPA amine before the three leaf stage of cereals.

DO NOT apply to cereals under sown with legumes.

DO NOT apply Affinity Force to winter cereals by aircraft.

CROP	TARGET WEED	STATE	RATE/ha Affinity Force + MCPA amine (500g/L)	WEED STAGE	CRITICAL COMMENTS
Winter cereals (wheat, barley, oats, triticale)	Ball mustard <i>Neslia paniculata</i>	All States	85mL + 500mL	2 leaf to 6 leaf	<p>General</p> <p>Apply as a post-emergence treatment for the control of small actively growing weeds.</p> <p>Always tank mix with MCPA amine. The MCPA amine rate recommended on this label is a minimal rate required for control. Refer to the specific MCPA amine label for higher use rates.</p> <p>Under wet/ good growing conditions some weed regrowth may occur eg. Bifora. A follow up application of a suitable herbicide ie. 2,4-D amine may be required as part of a good weed management strategy.</p> <p>Refer to General Instructions and Compatibility directions for further application details.</p>
	100mL + 500mL		2 leaf to 8 leaf		
	Bedstraw/Cleavers <i>Galium tricornutum</i>		85mL + 500mL	1 to 10 whorls	
	Bifora <i>Bifora testiculata</i>		100mL + 500mL	2 leaf to 6 leaf	
	Canola <i>Brassica napus</i> <i>B. campestris</i>		85mL + 500mL 100mL + 500mL	2 leaf to 6 leaf 2 leaf to 8 leaf	
	Capeweed <i>Arctotheca calendula</i>		85mL + 500mL	2 leaf to 4 leaf	
	Climbing buckwheat <i>Fallopia convolvulus</i>		85mL + 500mL	2 leaf to 6 leaf	
	Crassula <i>Crassula sieberana</i>		85mL + 500mL	2 leaf to 8 leaf	
	Fumitory (Dense flower) <i>Fumaria densiflora</i>		85mL + 500mL	2 leaf to 8 leaf	
	Indian hedge mustard <i>Sisymbrium orientale</i>		85mL + 500mL	2 leaf to 8 leaf	
	Ivy-leaf speedwell <i>Veronica hederifolia</i>		85mL + 500mL 100mL + 500mL	2 leaf to 4 leaf 2 leaf to 6 leaf	
	Long storksbill <i>Erodium botrys</i>		85mL + 500mL 100mL + 500mL	2 leaf to 4 leaf 2 leaf to 6 leaf	
	Marshmallow <i>Malva parviflora</i>		65mL + 500mL 85mL + 500mL 100mL + 500mL	2 leaf to 4 leaf 2 leaf to 6 leaf 2 leaf to 8 leaf	
	Musk weed <i>Myagrum perfoliatum</i>		85mL + 500mL 100mL + 500mL	2 leaf to 4 leaf 2 leaf to 6 leaf	
	Prickly lettuce <i>Lactuca serriola</i>		85mL + 500mL	2 leaf to 8 leaf	
	Rough poppy <i>Papaver hybridum</i>		85mL + 500mL	2 leaf to 8 leaf	
	Sheepweed / Corn gromwell / White iron weed <i>Buglossoides arvensis</i>		85mL + 500mL 100mL + 500mL	2 leaf to 6 leaf 2 leaf to 8 leaf	
	Shepherd's purse <i>Capsella bursa-pastoris</i>		85mL + 500mL	2 leaf to 8 leaf	
	Sowthistle <i>Sonchus oleraceus</i>		85mL + 500mL	2 leaf to 6 leaf	
	Spiny emex <i>Emex australis</i>		85mL + 500mL	2 leaf to 4 leaf	
Stinging (dwarf) nettle <i>Urtica urens</i>	85mL + 500mL	2 leaf to 6 leaf, prior to branching			

CROP	TARGET WEED	STATE	RATE/ha Affinity Force + MCPA amine (500g/L)	WEED STAGE	CRITICAL COMMENTS
Winter cereals (wheat, barley, oats, triticale)	Sub. clover <i>Trifolium subterranean</i>	All States	65mL + 500mL	2 leaf to 4 leaf	
			85mL + 500mL	2 leaf to 6 leaf	
			100mL + 500mL	2 leaf to 10 leaf	
	Toad rush <i>Juncus bufonius</i>		85mL + 500mL	2 leaf to 4 leaf	
			100mL + 500mL	2 leaf to 6 leaf	
	Turnip weed <i>Rapistrum rugosum</i>		85mL + 500mL	2 leaf to 8 leaf	
	Volunteer pulses		85mL + 500mL + Lontrel* 100mL OR + Banvel* 500mL	2 leaf to 5 nodes	
	- Faba beans <i>Vicia faba</i>	2 leaf to 5 nodes			
	- Field peas <i>Pisum sativum</i>	2 leaf to 6 leaf			
	- Lentils <i>Lens culinaris</i>	65mL + 500mL 85mL + 500mL	2 leaf to 4 leaf		
- Lupins <i>Lupinus angustifolius</i>	2 leaf to 8 leaf				
- Vetch <i>Vicia spp</i>	85mL + 500mL + Lontrel* 100mL	2 leaf to 4 branch			
Wild radish <i>Raphanus raphanistrum</i>	WA only	65mL + 500mL	Majority at 2 leaf		
		85mL + 500mL	Majority at 4 leaf		
		100mL + 500mL	Majority at 6 leaf		
	SA, Vic, NSW, Qld only	100mL + 500mL	2 leaf to 4 leaf		
Wild turnip <i>Brassica tournefortii</i>	All States	85mL + 500mL	2 leaf to 6 leaf		
Wireweed <i>Polygonum aviculare</i>		85mL + 500mL	2 leaf to 4 leaf		
Pyrethrum New crops - from 4 true leaf onwards Established crops - post harvest	Blackberry nightshade <i>Solanum nigrum</i>	Tas. only	100mL	2 leaf to 4 leaf	To improve weed spectrum Affinity Force may be tank mixed or applied as a sequential application with other pyrethrum herbicides. Do not apply within 10 days of other herbicides.
	Cleavers <i>Galium aparine</i>			2 to 6 whorls	
	Volunteer potatoes <i>Solanum tuberosum</i>			10 – 15 cm high	

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

WITHHOLDING PERIODS

Grazing: DO NOT ALLOW STOCK TO GRAZE TREATED AREAS FOR 14 DAYS AFTER APPLICATION.

Crop Harvest: NOT REQUIRED WHEN USED AS DIRECTED.

GENERAL INSTRUCTIONS

Affinity Force Herbicide is an early post-emergence herbicide for the control of certain broadleaf weeds in winter cereals and pyrethrum. Affinity Force is a fast acting contact herbicide and controls weeds through a process of membrane disruption. The foliar uptake of Affinity Force is rapid and plant desiccation can occur within 1 to 4 days of application. Application of Affinity Force should target small actively growing weeds. Subsequent germinations will not be controlled. Affinity Force should always be tank mixed with MCPA amine in winter cereals.

SYMPTOMS

Affinity Force is rapidly absorbed through the foliage of plants. Within a few hours following application, the foliage of susceptible weeds show signs of desiccation, and in subsequent days

necrosis and death of the plant. Due to environmental conditions and certain spray tank additives, some herbicidal symptoms may appear on the crop in the form of leaf spotting. However, the crop recovers quickly, usually within two to three weeks of treatment.

Extremes in environmental conditions eg. temperature and moisture, soil conditions and/or cultural practices may affect the activity of Affinity Force. Under warm moist conditions, herbicide symptoms may be accelerated. While under very dry conditions, the expression of herbicidal symptoms is delayed, and weeds hardened off by drought are less susceptible to Affinity Force.

COMPATIBILITY

Winter cereals: Affinity Force should always be tank mixed with formulations of MCPA **amine** (500g/L) eg. Thistle Killem[®] to broaden the weed control spectrum compared to either product applied alone. Do not tank mix Affinity Force with MCPA **LVE** formulations or ester formulations of other herbicides or with wetters and oil adjuvants, as excessive crop injury may occur.

Affinity Force plus MCPA amine is compatible with Lontrel[®], Banvel[®] 200, Cadence[®], EDTA chelate formulations of trace elements eg Supa Copper, Supa Mang and Supa Zinc from Agrichem Manufacturing.

Pyrethrum: Affinity Force should be applied on its own, tank mixed with or used in a sequence with other herbicides used in pyrethrum as advised by Botanical Resources Australia.

Annual Grass (wild oat, ryegrass etc.) Control

Affinity Force should not be mixed with selective grass herbicides as grass weed control is significantly reduced and excessive crop injury may occur. Increased crop injury is caused by the crop oil concentrates and oil/surfactant blends used with these grass herbicides. Instead, allow a 10 to 14 day interval between separate broadleaf and grass herbicide applications.

Use of Surfactant/ Wetting Agents/ Oil Adjuvants

Do not add wetters, spray oils or oil/surfactant adjuvants to the tank mix of Affinity Force plus MCPA. The addition of wetters, oils and oil/surfactant blends will greatly increase crop injury without any significant improvement in weed control.

Prior to applying Affinity Force clean the spray tank to remove any wetters or adjuvants remaining from previous spray operations otherwise crop injury may result.

RESISTANT WEEDS WARNING

GROUP	G	HERBICIDE
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Affinity Force Herbicide is a member of the Aryl triazolinone group of herbicides. Its mode of action is through a process of membrane disruption, which is initiated by the inhibition of the enzyme protoporphyrinogen oxidase. This inhibition interferes with the chlorophyll biosynthetic pathway. For weed resistance management Affinity Force is a Group G herbicide.

Some naturally occurring weed biotypes resistant to Affinity Force and other herbicides that inhibit the enzyme protoporphyrinogen oxidase may exist through normal genetic variability in any weed population and increase if these herbicides are used repeatedly. These resistant weeds will not be controlled by Affinity Force or other herbicides that inhibit the enzyme protoporphyrinogen oxidase.

Since the occurrence of resistant weeds is difficult to detect prior to use, FMC Australasia Pty Ltd accepts no liability for any losses that may result from the failure of Affinity Force to control resistant weeds.

RE-ENTRY PERIOD

Do not allow entry into 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.

TIMING

Application should be made to small, actively growing weeds generally less than 6 to 8 leaf in stage - refer to growth stages for specific weeds. As Affinity Force is a contact herbicide, best control is achieved when weeds are exposed and are not shielded by other weeds and/or the crop. Ideally crops should be at the 3 leaf to early/mid tillering stage (Zadok's code 13 to 25), prior to crop canopy closure.

MIXING

Add half the required volume of water to spray tank and start agitation and then add the measured amount of Affinity Force. In cereals add the required volume of MCPA amine next then add buffering agent if required then the balance of water to tank. Maintain good agitation at all times until spraying is completed.

The spray solution can be buffered to within the range of pH 5 to pH 8. Do not use with tank additives that alter the pH of the spray solution below pH 5 or above pH 8 or that contain surfactants.

APPLICATION

Apply Affinity Force (plus MCPA amine in cereals) as a broadcast application. Use conventional boom sprayers with either mechanical or by-pass agitation. Spray equipment should be properly calibrated to ensure correct application. Use a spray volume of 50 to 150 litres per hectare. Experience has shown that increasing spray volumes from 50L/ha to 100L/ha improves weed control. This is particularly important on bifora and other hard to control weeds. Use the higher volume if weed infestation is heavy or the crop cover is dense.

Use single orifice flat fan nozzles such as Spraying Systems TeeJet® 11001, 110015, 11002 or equivalent sizes from other manufacturers or Spraying Systems TwinJet® twin flat spray tips TJ60-11002, TJ60-11003 or TJ60-11004 or equivalent sizes from other manufacturers. Do not use 110-03 or bigger single orifice nozzles or TJ11006 or bigger twin orifice nozzles with Affinity Force. Do not use floodjet, low drift or air inducted nozzles, boomless jets or misters or controlled droplet application equipment. Do not apply Affinity Force to winter cereals by aircraft. Always ensure that agitation is continued until spraying is completed even if the sprayer is stopped for brief periods of time.

MCPA amine: it is important to follow the MCPA label directions for use in relation to weed and crop size and application timing. The MCPA amine use rate recommended for tank mix with Affinity Force in cereals on this label is a minimum rate required for control. Higher MCPA amine rates may be used in accordance with the specific MCPA amine label to improve results in difficult situations.

The best application conditions are when soil is moist, weather fine and rain unlikely within 6 hours.

Extremes in environmental conditions eg. temperature and moisture, soil conditions and/or cultural practices may affect the activity of Affinity Force. Under warm moist conditions, herbicide symptoms may be accelerated. While under very dry conditions, the expression of herbicidal symptoms is delayed, and weeds hardened off by drought are less susceptible to Affinity Force.

SPRAYER CLEAN OUT

Thoroughly clean all spray equipment using the following procedure when you have finished spraying highly active materials such as carfentrazone-ethyl.

In addition to the following procedure, ensure proper equipment clean-out for any other products mixed with Affinity Force as specified on the other product labels.

IMPORTANT:

More complete cleaning can be achieved if the spray equipment is cleaned immediately following each use.

Mix only as much herbicide spray solution as needed at a time.

DO NOT store the sprayer for any extended period of time, especially over night, with Affinity Force spray solution remaining in the tank, spray lines, spray boom plumbing, spray nozzles or strainers.

Preparation of the Cleaning Solution:

Prepare a spray equipment cleaning solution by mixing an alkaline detergent eg "OMO" or "SPREE" at a rate of 100g for every 100L of clean water used.

Upon completion of applying Affinity Force and before spraying sensitive crops including **canola, pulses such as faba beans, lentils, other legumes and cotton:**

1. Fill the spray tank with sufficient cleaning solution to allow the operation of the spray system for a minimum of 15 minutes to thoroughly flush hoses, spray boom and spray nozzles **then fill the spray tank to capacity to ensure contact of the solution with all internal surfaces. Let the cleaning solution soak in tank, pump and spray lines overnight.**

2. Before further use of the sprayer, operate the spray system for 15 minutes, then completely drain the sprayer system. Rinse the tank with clean water and flush through the hoses, spray boom, and spray nozzles.
3. If possible spray a pesticide requiring an oil adjuvant eg Achieve & Supercharge onto cereals as a further means of removing possible residues of Affinity Force before spraying sensitive crops.
4. Immediately prior to commencement of spraying a sensitive crop, purge the boom lines by operating the spray system onto a fence line or waste area for sufficient time to remove any solution that has been residing in the spray lines. **This is also recommended for subsequent tank loads or if the sprayer has been left standing for a period of time containing spray solution.**
5. If storing equipment for more than 48 hours, preferred practice is to clean spray equipment as outlined above allowing to soak over night, drain and flush with fresh water and leave fresh water in the spray tank, hoses, and spray booms until next use. This water must be drained from the spray boom and lines and flushed out with clean water before beginning any application to a sensitive crop.

Properly dispose of all cleaning solution and rinsate safely in accordance with Federal, State, and local regulations and guidelines.

Do not apply sprayer cleaning solutions or rinsate to sensitive crops.

Should small quantities of Affinity Force remain in inadequately cleaned mixing, loading and/or spray equipment, they may be released during subsequent applications potentially causing effects to sensitive crops and other vegetation.

The above method is only effective if the cleaning solution comes into contact with every surface or contact point that may contain even minute carfentrazone-ethyl residues.

CROP ROTATION RECOMMENDATIONS

Affinity Force Herbicide does not provide residual activity, therefore no crop rotational restrictions apply.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

Do not apply under weather conditions, or from spray equipment, which may cause spray drift onto nearby susceptible plants, adjacent crops, or pastures, or onto wetlands, waterbodies or watercourses.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Highly toxic to algae and aquatic plants. DO NOT contaminate streams, rivers or waterways with Affinity Force or used container.

STORAGE AND DISPOSAL

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

Spillage - In case of spillage, confine spilled product with material such as sand or clay. Dispose of waste as indicated below or according to the Australian Standard 2507 - Storage and Handling of Pesticides. DO NOT allow spilled product to enter sewers, drains, creeks or any other waterways. Keep out animals and unprotected persons. Vacuum, shovel or pump waste into an approved drum. To decontaminate spill area, tools and equipment, wash with a suitable solution (ie organic solvent, detergent, bleach or caustic) and add the solution to the drums of wastes already collected. Label for contents. Dispose of drummed wastes, including decontamination solution, in accordance with the requirements of Local or State Waste Management Authorities.

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TRADEMARKS

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