

CAUTION

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



Affinity Force

HERBICIDE

ACTIVE CONSTITUENT: 240 g/L CARFENTRAZONE-ETHYL
SOLVENT: 261.3 g/L LIQUID HYDROCARBON

GROUP **G** HERBICIDE

For the control of certain annual broadleaf weeds in winter cereals and pyrethrum as specified in the DIRECTIONS FOR USE table.

IMPORTANT: READ THE ATTACHED LEAFLET BEFORE USE



FMC Australasia Pty Ltd
Unit 26/8 Metroplex Avenue,
Murrumbidgee NSW 4172
Phone: 1800 901 939

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 (500 or 750g/L) eg. Thistle Killem® 750 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 Transit® (clopyralid), Kamba® 500, Cadence®, diuron, metribuzin, 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.

DIRECTIONS FOR USE

Restrictions:

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 crop 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 (750g/L)	WEED STAGE	CRITICAL COMMENTS
Winter cereals (wheat, barley, oats, triticale)	Ball mustard <i>Neslia paniculata</i>	All States	85mL + 330mL 100mL + 330mL	2 leaf to 6 leaf 2 leaf to 8 leaf	<p>General 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 the minimum rate of a 750 g/L formulation required for control. The corresponding rate for a 500 g/L formulation is 500 mL/ha. 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> <p>+ Bifora Addition of metribuzin (75 g ai/ha in wheat, 75 – 210 g ai/ha in barley) or diuron (180 – 252 g ai/ha in labelled cereals) to the standard tank mix of Affinity Force plus MCPA amine may improve control of Bifora, particularly where higher populations exist.</p> <p>* Cleavers Addition of dicamba, 70 – 140 g ai/ha to the standard tank mix of Affinity Force plus MCPA amine may improve control of cleavers, stunt any survivors and reduce seedset. If crop growth stage is suitable, use of the highest label rate of Affinity Force with a higher rate of MCPA amine and of dicamba may optimise cleaver control and seedset reduction.</p> <p># Indian Hedge Mustard & Wild Radish If phenoxy resistant populations of Indian hedge mustard or Wild radish are suspected, addition of metribuzin (75 g ai/ha in wheat, 75 – 210 g ai/ha in barley) or diuron (180 – 252 g ai/ha in labelled cereals) to the standard tank mix of Affinity Force plus MCPA amine may improve control.</p>
	Bedstraw/Cleavers* <i>Galium tricornutum</i> <i>G. aparine</i>		85mL + 330mL 100mL + 330mL	1 to 5 whorls 1 to 10 whorls	
	Bifora* <i>Bifora testiculata</i>		100mL + 330mL	2 leaf to 6 leaf	
	Canola <i>Brassica napus</i> <i>B. campestris</i>		85mL + 330mL 100mL + 330mL	2 leaf to 6 leaf 2 leaf to 8 leaf	
	Roundup Ready Canola volunteers		85mL + 330mL	2 leaf to 4 leaf	
	Capeweed <i>Arctotheca calendula</i>		85mL + 330mL	2 leaf to 4 leaf	
	Climbing buckwheat <i>Fallopia convolvulus</i>		85mL + 330mL	2 leaf to 6 leaf	
	Crassula <i>Crassula sieberana</i>		85mL + 330mL	2 leaf to 8 leaf	
	Fumitory (Dense flower) <i>Fumaria densiflora</i>		85mL + 330mL	2 leaf to 8 leaf	
	Indian hedge mustard* <i>Sisymbrium orientale</i>		85mL + 330mL	2 leaf to 8 leaf	
	Ivy-leaf speedwell <i>Veronica hederifolia</i>		85mL + 330mL 100mL + 330mL	2 leaf to 4 leaf 2 leaf to 6 leaf	
	Long storksbill <i>Erodium botrys</i>		85mL + 330mL 100mL + 330mL	2 leaf to 4 leaf 2 leaf to 6 leaf	
	Marshmallow <i>Malva parviflora</i>		65mL + 330mL 85mL + 330mL 100mL + 330mL	2 leaf to 4 leaf 2 leaf to 6 leaf 2 leaf to 8 leaf	
	Musk weed <i>Myagrum perfoliatum</i>		85mL + 330mL 100mL + 330mL	2 leaf to 4 leaf 2 leaf to 6 leaf	
	Paterson's curse <i>Echium plantagineum</i>		65mL + 330mL 85mL + 330mL 100mL + 330mL	2 leaf to 4 leaf 2 leaf to 6 leaf 2 leaf to 8 leaf	
	Prickly lettuce <i>Lactuca scariola</i>		85mL + 330mL	2 leaf to 8 leaf	
	Rough poppy <i>Papaver hybridum</i>		85mL + 330mL	2 leaf to 6 leaf 2 leaf to 8 leaf	
	Sheepweed / Corn gromwell / White iron weed <i>Buglossoides arvensis</i>		85mL + 330mL	2 leaf to 8 leaf	
	Shepherd's purse <i>Capsella bursa-pastoris</i>		85mL + 330mL	2 leaf to 6 leaf	
	Sowthistle <i>Sonchus oleraceus</i>		85mL + 330mL	2 leaf to 4 leaf	
	Spiny emex <i>Emex australis</i>		85mL + 330mL	2 leaf to 6 leaf, prior to branching	
	Stinging (dwarf) nettle <i>Urtica urens</i>		65mL + 330mL 85mL + 330mL 100mL + 330mL	2 leaf to 4 leaf 2 leaf to 6 leaf 2 leaf to 10 leaf	
	Toad rush <i>Juncus bufonius</i>		85mL + 330mL 100mL + 330mL	2 leaf to 4 leaf 2 leaf to 6 leaf	
	Turnip weed <i>Rapistrum rugosum</i>		85mL + 330mL	2 leaf to 8 leaf	
	Volunteer pulses – Faba beans <i>Vicia faba</i> – Field peas <i>Pisum sativum</i> – Lentils <i>Lens culinaris</i>		85mL + 330mL + Transit® 100mL OR + Kamba® 500 at 200mL	2 leaf to 5 nodes 2 leaf to 5 nodes	
	– Lupins <i>Lupinus angustifolius</i>		65mL + 330mL 85mL + 330mL	2 leaf to 4 leaf 2 leaf to 8 leaf	
– Vetch <i>Vicia spp</i>	85mL + 330mL + Transit® 100mL	2 leaf to 4 branch			
Wild radish* <i>Raphanus raphanistrum</i>	WA only SA, Vic, NSW, Qld only	65mL + 330mL 85mL + 330mL 100mL + 330mL	Majority at 2 leaf Majority at 4 leaf Majority at 6 leaf 2 leaf to 4 leaf		
Wild turnip <i>Brassica tournefortii</i>	All States	85mL + 330mL	2 leaf to 6 leaf		
Wireweed <i>Polygonum aviculare</i>		85mL + 330mL	2 leaf to 4 leaf		
Pyrethrum New crops – from 4 true leaf onwards Established crops – post harvest	Blackberry nightshade <i>Solanum nigrum</i> Cleavers <i>Galium aparine</i> Volunteer potatoes <i>Solanum tuberosum</i>	Tas. only	100mL	2 leaf to 4 leaf 2 to 6 whorls 10 – 15 cm high	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.

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.

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

Affinity Force Herbicide is a member of the Aryl triazolone 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 using a minimum spray volume of 100L/ha can improve weed control. This is particularly important on bifora and other hard to control weeds. Use a minimum of 100 L/ha if weed infestation is heavy or the crop cover is dense and this volume is highly recommended when using the preferred Air Induction (AI) nozzles.

Affinity Force plus MCPA amine – this tank mix must be applied with nozzles that produce a Coarse spray quality (to ASAE S572 standard) due to the MCPA component. Air induction nozzles are the most suitable nozzle type to produce a Coarse spray quality. The preferred nozzles are Agrotop AirMix or TeeJet AIXR. Do not use air induction (AI) or non AI nozzles that produce a spray quality of Very Coarse and above to apply Affinity Force plus MCPA amine. Do not use TeeJet TT nozzles as experience has shown inferior control of bifora in particular can result. Single orifice or twin orifice flat fan nozzles can be used provided they meet the above specifications. Use of 110-03 or bigger single orifice nozzles or equivalent bigger twin orifice nozzles with Affinity Force may reduce control of bifora but not other weeds.

Pyrethrum – conventional flat fan nozzles that produce a Fine to Medium spray quality can be used.

Do not use floodjet, boomless jets or misters or controlled droplet application equipment.

Do not apply Affinity Force 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.

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 deliver empty packaging for appropriate disposal at an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 500mm 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.

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

Additional information is listed in the Material Safety Data Sheet which is available from your supplier or the FMC website: www.fmccrop.com.au

Conditions of sale

FMC 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 FMC Australasia Pty Ltd is limited to the replacement of the goods or (at the option of FMC 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 FMC Australasia Pty Ltd within thirty days of delivery.

APVMA Approval No.: 62003/49469

In a Transport Emergency Dial 000 Police or Fire Brigade	SPECIALIST ADVICE IN EMERGENCY ONLY 1800 033 111 ALL HOURS – AUSTRALIA WIDE
--	---

Ask for shift supervisor. Toll free 24 hours.

© FMC and Affinity Force are Registered Trademarks of FMC Corporation.

© Kamba, Transit, Thistle Killen, Cadence, OMO and SPREE are Registered Trademarks.



FMC Australasia Pty Ltd.
A.B.N. 45 095 326 821
Unit 26, 8 Metroplex Avenue
Murarrie Qld 4172
Phone: 1800 066 355
www.fmccrop.com.au
Technical Enquiries: 1800 901 939