

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

# **Aptitude**

**HERBICIDE**



**ACTIVE CONSTITUENTS: 375 g/kg METRIBUZIN  
90 g/kg CARFENTRAZONE-ETHYL**

GROUP	C   G	HERBICIDE
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**For the control of certain annual broadleaf weeds in  
winter cereals as per the Directions For Use Table**

**IMPORTANT: READ THE ATTACHED LEAFLET BEFORE USE**

**NET CONTENTS: 5 kg, 10 kg, 15 kg, 20 kg, 25 kg, 50 kg**



**FMC Crop Protection Pty Ltd**  
5 Palmer Place  
Murarrie Qld 4172  
Phone: 1800 066 355  
[www.fmccrop.com.au](http://www.fmccrop.com.au)  
Technical Enquiries: 1800 901 939

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## **STORAGE AND DISPOSAL**

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

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 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.

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.

## **SAFETY DIRECTIONS**

Will irritate the skin, May irritate the eyes. Avoid contact with the eyes and skin. When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and chemical resistant gloves. If product on skin, immediately wash area with soap and water. Wash hands after use. After each day's use, wash gloves 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 Crop Protection Pty Ltd website.

## **Conditions of sale**

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

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® Cadence, OMO and SPREE are Registered Trademarks.

APVMA Approval No. 69052/59724

BN:

DOM:

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## DIRECTIONS FOR USE

### **Restraints:**

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

DO NOT tank mix Aptitude Herbicide treatments with selective grass herbicides.

DO NOT apply Aptitude Herbicide before the three leaf stage of cereals.

DO NOT apply to cereals under sown with legumes.

DO NOT apply Aptitude Herbicide to winter cereals by aircraft.

### **Spray Drift Restraints**

#### **Droplet size**

**DO NOT** apply with spray droplets smaller than COARSE spray droplet size category according to nozzle manufacturer specifications that refer to the ASAE S572 Standard or the BCPC Guideline.

#### **Wind Speed**

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

#### **Mandatory No-Spray Zones**

##### Aquatic environment

**DO NOT** apply if there are aquatic or wetland areas including agricultural ponds within **5 meters** downwind from the application area.

##### Terrestrial environment

**DO NOT** apply if there are non-target vegetation or animal habitat within **20 meters** downwind from the application area.

Users of this product **MUST** make an accurate written record of the details of each spray application within 24 hours following application and **KEEP** this record for a minimum of 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/situation and weed/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 product. (Additional record details may be required by the state or territory where this product is used.)

CROP	TARGET WEED	STATE	RATE g/ha APTITUDE HERBICIDE	WEED STAGE	CRITICAL COMMENTS
<b>Winter cereals (wheat, barley, oats, triticale)</b>	Bedstraw <i>Galium tricornutum</i>	All States	200	1 to 5 whorls	<b>General</b> Apply as a post-emergence treatment for the control of small, actively growing weeds.  Aptitude Herbicide may be applied on its own for the control of the weeds listed. Aptitude Herbicide may also be tank mixed with MCPA (amine formulations only) at a label rate applicable to the growth stage of the cereal (typically 330 mL/ha of a 750 g/L MCPA formulation) for robust control of all listed weeds where environmental and growth conditions are less than ideal for optimum weed growth or some weeds may be larger than the specified growth stage.  Refer to General Instructions and Compatibility directions for further application details.
	Bifora <i>Bifora testiculata</i>			2 leaf to 4 leaf	
	Capeweed <i>Arctotheca calendula</i>			2 leaf to 4 leaf	
	Fumitory (Dense flower) <i>Fumaria densiflora</i>			2 leaf to 4 leaf	
	Indian hedge mustard <i>Sisymbrium orientale</i>			2 leaf to 6 leaf	
	Marshmallow <i>Malva parviflora</i>			2 leaf to 6 leaf	
	Prickly lettuce <i>Lactuca serriola</i>			2 leaf to 4 leaf	
	Shepherd's purse <i>Capsella bursa-pastoris</i>			2 leaf to 6 leaf	
	Subterranean clover <i>Trifolium subterraneum</i>			2 leaf to 4 leaf	
	Toad rush <i>Juncus bufonius</i>			2 leaf to 4 leaf	
	Turnip weed <i>Rapistrum rugosum</i>			2 leaf to 4 leaf	
	Wild radish <i>Raphanus raphanistrum</i>			2 leaf to 4 leaf	
	Wild turnip <i>Brassica tournefortii</i>			2 leaf to 6 leaf	

**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

Aptitude Herbicide is an early post-emergence herbicide for the control of certain broadleaf weeds in winter cereals. Aptitude Herbicide is a fast acting contact herbicide and controls weeds through a process of membrane disruption and inhibition of photosynthesis at photosystem II.

The foliar uptake of Aptitude Herbicide is rapid and plant desiccation can occur within 1 to 4 days of application. Application of Aptitude Herbicide should target small actively growing weeds. Subsequent germinations will not be controlled.

## **SYMPTOMS**

Aptitude Herbicide 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 Aptitude Herbicide. 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 Aptitude Herbicide.

## **COMPATIBILITY**

**Winter cereals:** when Aptitude Herbicide is optionally tank mixed with MCPA it should always be tank mixed with formulations of MCPA **amine** (750 or 500g/L) in situations where some of the weeds present are larger than the maximum growth stage specified on the label or where growth conditions are less conducive to expression of herbicide activity.

**Do not** tank mix Aptitude Herbicide with MCPA **LVE** formulations or ester formulations of other herbicides or with wetters and oil adjuvants, as excessive crop injury may occur.

Aptitude Herbicide is compatible with FMC MCPA 750 Selective Herbicide, FMC Clopyralid 300 Herbicide, FMC Dicamba 500 Herbicide, Cadence®, EDTA chelate formulations of trace elements eg Supa Copper, Supa Mang and Supa Zinc from Agrichem.

## **Annual Grass (wild oat, ryegrass etc.) Control**

Aptitude Herbicide 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 Aptitude Herbicide. The addition of wetters, oils and oil/surfactant blends will greatly increase crop injury without any significant improvement in weed control.

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

## **RESISTANT WEEDS WARNING**

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Aptitude Herbicide contains members of the aryl triazolinone (carfentrazone-ethyl) and triazinone (metribuzin) groups of herbicides. Aptitude Herbicide inhibits the enzyme protoporphyrinogen oxidase and photosynthesis at photosystem II. For weed resistance management Aptitude Herbicide is a Group C and a G herbicide.

Some naturally occurring weed biotypes resistant to Aptitude Herbicide and other herbicides that inhibit the enzyme protoporphyrinogen oxidase and photosynthesis at photosystem II 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 Aptitude Herbicide or other herbicides that inhibit the enzyme protoporphyrinogen oxidase and photosynthesis at photosystem II.

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

### **TIMING**

Application should be made to small, actively growing weeds generally less than 6 leaf in stage - refer to growth stages for specific weeds. As Aptitude Herbicide 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 Aptitude Herbicide. Where MCPA is tank mixed with Aptitude Herbicide 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 Aptitude Herbicide 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. 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.

Aptitude Herbicide optionally tank mixed with MCPA amine 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 Aptitude Herbicide tank mixed with MCPA amine. Do not use TeeJet TT nozzles as experience has shown inferior control can result. Single orifice or twin orifice flat fan nozzles can be used provided they meet the above specifications.

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

Do not apply Aptitude Herbicide by aircraft.

One application only per annum.

Always ensure that agitation is continued until spraying is completed even if the sprayer is stopped for brief periods of time.

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

#### **Important Information**

These instructions inform users of 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 to identify droplet size categories, but for a nozzle to comply with this requirement, the manufacturer must refer to at least one.

In the following instructions, Section 1 is for ground application and Sections 2 and 3 are for aerial application.

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.

**SECTION 1. Instructions for Ground Application – for COARSE droplet size or larger categories.**

**Mandatory Instructions for Ground Applications**

**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 to ASAE S572 or BCPC. Choose a nozzle 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.

**Sections 2 and 3 are not applicable to this label.**

**Where tank mixed with MCPA amine:** it is important to follow the MCPA label directions for use in relation to weed and crop size and application timing. MCPA amine 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 Aptitude Herbicide. 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 Aptitude Herbicide.

**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 Aptitude Herbicide 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 Aptitude Herbicide 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 Aptitude Herbicide 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 Aptitude Herbicide 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 Aptitude Herbicide 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**

Aptitude 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**

Very toxic to aquatic life. **DO NOT** contaminate wetlands or watercourses with Aptitude Herbicide 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.

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 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.

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#### **TRADEMARKS**

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**In case of emergency: Phone 1800 033 498**

Ask for shift supervisor. Toll free 24 hours.



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