# POISON

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

# Command<sup>®</sup> 480 EC Herbicide

# ACTIVE CONSTITUENT: 480 g/L CLOMAZONE SOLVENT: 400 - 450 g/L LIQUID HYDROCARBONS



For the control of certain annual broadleaf weeds in Cucurbits, Green Beans, Navy Beans, Potatoes, Poppies, and Tobacco as per the Directions for Use Table.

# IMPORTANT: READ THE ATTACHED LEAFLET BEFORE USE

# CONTENTS: 1 ,5 & 10 Litres



FMC Crop Protection Pty Ltd 5 Palmer Place Murarrie QLD 4172 Phone 1800 901 939

Command 480 EC Herbicide 10 June 2003 Page 1 of 10 1, 5 & 10 Litre

# STORAGE AND DISPOSAL

Do NOT store near (or allow to contact) fertilisers, fungicides or pesticides. Store in the closed, original container in a well ventilated area, as cool as possible. Do not store for prolonged periods in direct sunlight. Store in a locked room or place away from children, animals, food, feed stuffs, seed and fertilisers. FLAMMABLE : Store away from naked lights, heat sources and oxidising agents.

Spillage - In case of spillage, confine and absorb spilled product with absorbent material such as sand, clay or cat litter. Dispose of waste as indicated below or according to Australian Standard 2507 - Storage and Handling of Pesticides. Do NOT allow spilled product to enter sewers, drains, creeks or any other waterways.

Triple or (preferably) pressure rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on-site. Break, crush, puncture and bury empty containers in a local authority landfill. If not available bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, vegetation and roots. Empty containers and product should not be burnt.

### SAFETY DIRECTIONS

Harmful if inhaled or swallowed. Will irritate the eyes and skin. Avoid contact with eyes and skin. Do not inhale vapour. When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow length nitrile gloves and face shield or goggles. When using the prepared spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow length nitrile gloves. If product in eyes, wash 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). If swallowed, do not induce vomiting.

# **MATERIAL SAFETY DATA SHEET (MSDS)**

Additional information is listed in the MSDS FMC/COM/1, which is available from the supplier.

#### WARRANTY

FMC makes no warranty expressed or implied, concerning the use of this product other than that indicated on the label. Except as so warranted the product is sold as is. Buyer and user assume all risk of use and/or handling and/or storage of this material when such use and/or handling and/or storage is contrary to label instructions.

Image: Book and Command are Registered Trademarks of FMC Corporation, Philadelphia, USA Other trademarks.

#### BATCH No:

APVMA Approval No: 49604/58576

Insert Dangerous Goods Information only when required on label

Command 480 EC Herbicide 10 June 2003

Page 2 of 10 1.5 & 10 Litre

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

# Command<sup>®</sup> 480 EC Herbicide

ACTIVE CONSTITUENT: 480 g/L CLOMAZONE SOLVENT: 400 - 450 g/L LIQUID HYDROCARBONS



For the control of certain annual broadleaf weeds in Cucurbits, Green Beans, Navy Beans, Potatoes, Poppies and Tobacco as per the Directions for Use Table.

# **IMPORTANT: READ THIS LEAFLET BEFORE USE**

# CONTENTS: 1, 5 & 10 Litres

FMC Crop Protection Pty Ltd 5 Palmer Place Murarrie QLD 4172 Phone 1800 901 939

Command 480 EC Herbicide 10 June 2003

Page 3 of 10 1, 5 & 10 Litre

# **COMMAND 480 EC HERBICIDE**

# Directions for use

# RESTRAINTS:

DO NOT apply by aircraft or through irrigation equipment.

DO NOT apply more than a combined total of 2L/ha on any one paddock in any 12 month period.

DO NOT apply in fog or in conditions conducive to fog.

DO NOT apply to soil intended for seedling transplants, with the exception of tobacco. DO NOT mechanically incorporate Command into soil.

DO NOT apply to soils with both organic carbon content less than 2% and clay content less than 15%, excluding poppy and tobacco crops which have a higher crop tolerance to clomazone at label rates.

# How to use tables:

1. Select rate, or rate range, for use in your crop from Table 1.

2. Check crop tolerance using crop tolerance soil type (Table 2) of the soil that your crop is to be grown in, to determine maximum crop tolerance range. Crop damage may occur if using rates higher than shown in Table 2.

Note: Use lower rate (500 mL/ha) in combination with other post plant pre emergent herbicides to broaden weed spectrum.

CROP	WEEDS CONTROLLED	RATE	CRITICAL COMMENTS
Cucumber, Pumpkins, Kabocha squash, Rockmelons, Watermelon, & Zucchini	Apple of Peru ( <i>Nicandra</i> <i>physalodes</i> ), Blackberry nightshade ( <i>Solanum nigrum</i> ), Fat hen ( <i>Chenopodium</i> <i>album</i> ),	0.5 - 1L/ha	DO NOT apply to soil intended for cucurbit seedling transplants. Watermelons are sensitive to Command. Only the minimum suggested rate should be used. Apply post plant pre-emergence before weeds emerge. Some cucurbit varieties may show differing levels of tolerance to Command. See section on SYMPTOMS. Use lower rates in combination with other post plant pre emergent herbicides to broaden weed
Green Beans (French beans)	Pig Weed (Portulaca oleracea), Potato Weed (Galinsoga parviflora),	0.5-1L/ha	spectrum. Apply post plant pre-emergence before weeds emerge. Command can be used in tank mix with other post plant pre emergent herbicides. Use lower rates in combination with other post plant pre emergent herbicides to broaden weed spectrum.
Navy Bean	Amaranth ( <i>Amaranthus powellii</i> ) (Suppression only)	0.5-1 L/ha	Apply post plant pre-emergence before weeds emerge. Command can be used in tank mix with other post plant pre-emergence herbicides. Use lower rates in combination with other post plant pre emergent herbicides to broaden weed spectrum.

Table 1.

# Directions for use (Cont)

CROP	WEEDS	RATE	CRITICAL COMMENTS
	CONTROLLED		
<b>Poppies</b> (Tas only)			Apply post emergence to actively growing weeds as early as the 2 leaf stage of the crop through to the 8 leaf stage. Command is compatible with other poppy herbicides. To broaden weed spectrum, Command can be used in tank mixes or in a multiple spray strategy with other poppy herbicides. Use higher rates on heavier soil types and lower rates on sandy, low organic matter soils. Use
			in accordance with advice from contracting Company's Advisory Officers.
, tin tur	Amaranth (Suppression only)	0.5 - 1 L/ha	Use the lower rate for small weeds cotyledon to 2 leaf in size. Use the higher rate for high weed pressure or weeds 4-6 leaf in size.
	Fat Hen		Use the lower rate for small weeds cotyledon to 2 leaf in size. Use the higher rate for high
	Hogweed (Polygonum aviculare)	0.25 - 0.5 L/ha	weed pressure or weeds 2-4 leaf in size.
	Stagger Weed (Stachys arvensis)	0.5 L/ha	Apply at the cotyledon to 4 leaf stage.
	Wild radish ( <i>Raphanus</i> <i>raphanistrum</i> ) (Suppression only)	1 L/ha	Apply at the cotyledon to 4 leaf stage. Useful suppression only may be achieved. If weed population is high or weeds are greater than 4 leaf in size, use a dedicated wild radish herbicide.
Potatoes (Tas only)	Apple of Peru, Blackberry nightshade, Fat hen,	0.5 L/ha	Apply Command in tank mixes with other post plant pre-emergence herbicides to broaden weed spectrum. Apply post plant pre-emergence before weeds emerge. Do not apply to emerged potatoes as crop injury may occur.
Tobacco (Transplanted tobacco only. Do not use on seedling beds.)	Pig Weed, Potato Weed, Amaranth (Suppression only)	1-2 L/ha	Apply pre transplant or up to 7 days post transplant before weeds emerge. If weeds have emerged before application can be made, cultivate shortly before or at the time of treatment, or if prior to planting use in a tank mix with a knockdown herbicide. Use higher rates when high weed pressure is expected or in heavier soil types. Use lower rates on sandy, low organic matter soils.

Table 2 is a crop tolerance calculator for use with all crops with the exception of Poppies and Tobacco which have a higher crop tolerance to clomazone at label rates.

Table 2.	Maximum crop tolerance recommended rates based on soil type (clay	
	and organic carbon content).	

Soil texture	Clay content	Organic Carbon Content				
	Clay Content	< 1%	1 - < 2%	2-3%	> 3%	
Sand, Loamy Sand, Silt	< 15%	Only use in poppies and tobacco		500 mL	500 mL	
Loam, Sandy Loam, Silt Loam, Sandy Clay loam	15-30%	Only use in poppies and tobacco	500 mL	500 mL	1 L	
Sandy Clay, Clay Loam, Silt Clay Loam, Silty Clay, Clay.	> 30%	500 mL	500 mL	1 L	1 L	

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

# WITHHOLDING PERIOD:

# All Crops:

HARVEST: Not required when used as directed. GRAZING: Do not graze or cut for stock food until after harvest.

# **GENERAL INSTRUCTIONS**

Command<sup>®</sup> 480 EC Herbicide is primarily a soil applied herbicide for the control of certain annual weeds. Plant uptake of Command occurs through both the roots and the foliage. The movement of the active constituent clomazone within the plant occurs upward and outwards to the leaf. Clomazone is not downward systemic, or translocated from leaf to leaf.

When using Command as a post plant pre-emergence herbicide all emerged weeds should be controlled by application of a non-selective, non-persistent herbicide or by tillage. The soil surface should be left free of large clods of soil that might protect weed seedlings during emergence. Best weed control is achieved when overhead irrigation is used to grow the crop. Command should not be mechanically incorporated into the soil as unacceptable crop injury and variable weed control may occur. When using Command as a post emergence herbicide ensure weeds are young and actively growing.

# SYMPTOMS

Clomazone, the active constituent Command, inhibits the biosynthesis of photosynthetic pigments of both chlorophyll and carotenoids. Accordingly the foliage of susceptible plants show signs of chlorosis (whitening or bleaching), followed by necrosis (browning). In some situations, one or more of the following conditions such as; higher use rates, sandy soils, soils of low organic matter, or soils of low pH, may cause an increase in the activity of Command and crop damage may occur. Do not apply Command on to soils with both organic carbon content less than 2% and clay content less than 15%, excluding poppy and tobacco crops, which have a higher crop tolerance to clomazone at label rates. Some crop varieties may show differing levels of tolerance to Command. It is recommended to test on a small area to ensure tolerance is acceptable before adoption on a wider scale. For more specific information consult with your local dealer.

#### COMPATIBILITY

Command may be tank mixed with other post plant pre-emergent herbicides to broaden the weed control spectrum compared to products applied alone. Lower rates of Command may be used when tank mixing.

**POPPIES** - Command is compatible with Asulox\*, Brodal\* and Frontier\*. Command is not compatible with Tramat\* and efficacy can be reduced in tank mixes using Starane\*. Other herbicide combinations should be used with caution and in accordance to advice from contracting Company's Advisory Officers.

**OTHER CROPS** - when tank mixing with other herbicides (eg: Frontier\*) refer to both product labels to ensure use patterns are compatible ie. post plant pre-emergence and observe all application precautions, rotational guidelines and replanting instructions of each product label.

# **RESISTANT WEEDS WARNING**



Command is a member of the Isoxazolidinone group of herbicides. Command has the inhibitors of carotenoid biosynthesis mode of action. For weed resistance management Command is a Group Q Herbicide.

Some naturally occurring weed biotypes resistant to Command and other GroupQ herbicides may exist through normal genetic variability in any weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by Command or other Group Q Herbicides.

Since the occurrence of resistant weeds is difficult to detect prior to use, FMC International A.G. accepts no liability for any losses that may result from the failure of Command or other Group Q Herbicides.

#### MIXING

Add half the required volume of water in spray tank and start agitation. If tank mixing with wettable powders or Water Dispersible Granules add these first, Liquid Suspensions (ie. Flowables) are added next, and Command is added last. Maintain good agitation at all times until spraying is completed.

# APPLICATION

Inappropriate application techniques can result in highly visible symptoms of spray drift. Command can be applied as a broadcast or banded application. Use conventional sprayers with either mechanical or by-pass agitation. Apply using flat fan nozzles producing medium to coarse droplets, Spray equipment should be properly calibrated to ensure correct application. To minimise off target movement use the lowest pressure and boom height which provides uniform coverage, using 150 to 400 litres per hectare. Do not apply to very wet soils or to soils with a rough surface.

#### Band spray rate

The rate of Command for band spraying per hectare of crop is calculated from the broad area rates as follows

Band width (cm) X Broadcast Rate (L) Row spacing (cm)

= Band Rate (L) per hectare of crop for band spraying

Command 480 EC Herbicide 10 June 2003

Page 7 of 10 1, 5 & 10 Litre

# CROP ROTATION RECOMMENDATIONS

Command treated area may be replanted to any of the specified crops after the interval indicated in the following table.

For Command								
Minimum Recropping INTERVAL (months after application)								
Rate	0	3	6	9	12	15		
0.5 L/ha or less	Poppies Potatoes Cucurbits Beans Tobacco Rice		Barley Oats Wheat Lucerne Rye grass Onions Canola Sub- clover	All other crops				
1.0 L/ha	Potato Cucurbits Beans Tobacco Rice	Poppies		Barley, Oats Wheat Lucerne Rye grass Onions Canola Sub-clover	All other crops			
2.0 L/ha	Cucurbits Beans Tobacco	Potato Poppies Rice			Barley Oats Wheat, Lucerne, Rye grass, Onions, Canola, Sub- clover	All other crops		

#### Minimum Recropping Intervals For Command

Tolerance of other crops (grown through to maturity) should be determined on a small scale before sowing into larger areas.

Cover crops, however may be planted anytime but stand reductions may occur in some areas. Do not graze, or harvest for food or feed, cover crops.

**Replanting:** If initial seedlings fail to produce a stand, the crop maybe replanted in fields treated with Command alone. Do not retreat field with a second application of Command. Do not replant treated fields with any crop at intervals, which are inconsistent with the rotational crop guidelines on this label. When tank mixing observe all application precautions, rotational guidelines and replanting instructions of each product label.

## PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

DO NOT apply under meteorological conditions or from spray equipment, which could be expected to cause spray drift onto nearby susceptible plants, adjacent crops, crop lands or pastures.

## OFF TARGET WHITENING

Command can cause whitening of sensitive plants (ie. some species of trees, shrubs, flowers, agronomic crops and fruit and vegetables) by either spray drift or volatilisation. The application and recommendation for the use of this product should be undertaken only by persons adhering to the following requirements:

# Precautions to be taken to minimise potential off-target effects:

- DO NOT spray within 100 metres of residential or industrial properties or homes on neighboring properties,

- Where it is proposed to spray within 100 metres of a neighbouring property which is used for primary production, the owner of the property must be given written notice of the intention to spray and information which includes the name of the product being sprayed and its effects on susceptible plant species,

- Ensure that when the product is being diluted prior to application that it is done away from desirable plants,

- DO NOT empty or clean sprayers near homes and sensitive plants,

- DO NOT apply by aircraft, or through irrigation equipment, and

- Remove contaminated clothing before entering areas where sensitive plants exist e.g. homes, nurseries, greenhouses and other crops.

#### Application equipment/calibration:

- Use coarse nozzles with pressure not exceeding 35PSI/250 kPa (2.5 bar) with boom height no greater than 60 cm above the target, and

- Apply only with calibrated equipment.

#### Minimisation of product volatilisation:

- Apply to dry soils in 150-400L water per hectare,

- DO NOT apply to wet soils and or wet plants,

- DO NOT spray poppy crops beyond the 8 leaf stage,

- DO NOT apply in wind gusts over 12km/hr or when weather conditions favor the formation of inversion layers,

- Weather resulting in warm, high moisture soils increase the volatility potential of Command. Sunlight may also heat the soil surface, evaporating soil moisture and causing an inversion effect. This inversion effect causes the product to move to the soil surface where it is more subject to volatilisation, and

- DO NOT apply in fog or in conditions conducive to fog.

#### PROTECTION OF WILDLIFE, FISH, CRUSTACEA, AND ENVIRONMENT

DO NOT contaminate dams, streams, rivers or waterways with Command or used container.

# STORAGE AND DISPOSAL

Do NOT store near (or allow to contact) fertilisers, fungicides or pesticides. Store in the closed, original container in a well ventilated area, as cool as possible. Do not store for prolonged periods in direct sunlight. Store in a locked room or place away from children, animals, food, feed stuffs, seed and fertilisers. FLAMMABLE : Store away from naked lights, heat sources and oxidising agents.

<u>Spillage</u> - In case of spillage, confine and absorb spilled product with absorbent material such as sand, clay or cat litter. Dispose of waste as indicated below or according to Australian Standard 2507 - Storage and Handling of Pesticides. Do NOT allow spilled product to enter sewers, drains, creeks or any other waterways.

Triple or (preferably) pressure rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on-site. Break, crush, puncture and bury empty containers in a local authority landfill. If not available bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, vegetation and roots. Empty containers and product should not be burnt.

# SAFETY DIRECTIONS

Harmful if inhaled or swallowed. Will irritate the eyes and skin. Avoid contact with eyes and skin. Do not inhale vapour. When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow length nitrile gloves and face shield or goggles. When using the prepared spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow length nitrile gloves. If product in eyes, wash 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. If swallowed, do not induce vomiting. Give a glass of water.

# MATERIAL SAFETY DATA SHEET (MSDS)

Additional information is listed in the Material Safety Data Sheet, which is available from the supplier.

#### WARRANTY

FMC makes no warranty expressed or implied, concerning the use of this product other than that indicated on the label. Except as so warranted the product is sold as is. Buyer and user assume all risk of use and/or handling and/or storage of this material when such use and/or handling and/or storage is contrary to label instructions.

APVMA APPROVAL No: 49604 58576