

**WARNING**  
**Keep out of the reach of children**



**ADAMA**

**Pentagon®**

GROUP	<b>4</b>	HERBICIDE
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**For the control of broadleaf weeds in pasture, grass, white clover seed crops, peas and cereals.**

**READ THE ATTACHED BOOKLET COMPLETELY BEFORE MIXING OR APPLYING**

**Active Ingredient:**

Contains 375 g/litre MCPB and 25 g/L MCPA both as the sodium salts in the form of a soluble concentrate

UN No:	3082
Class-primary	9
Packing group	III
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains MCPA and MCPB)
Marine pollutant:	YES

Batch number:	NET CONTENTS: 1 L, 5 L, 20 L, 200 L
Date of Manufacture:	
<b>Barcode to be inserted</b>	

**REFER TO BOOKLET FOR FULL LABEL INSTRUCTIONS.****WARNING**

Harmful if swallowed. Causes serious eye irritation. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects. Harmful to soil organisms. Harmful to terrestrial vertebrates.

**HANDLING PRECAUTIONS**

Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke while using this product. Avoid breathing fumes, spray mist or vapours. Use personal protective equipment as required. Wash exposed skin thoroughly after handling. Avoid unintended release into the environment. Collect spillages..

**PCBU RESPONSIBILITIES**

A PCBU with management or control of work using this substance must ensure that every worker who uses, handles, manufactures, or stores this hazardous substance (including hazardous waste) is, before the worker is allowed to carry out or supervise work involving those substances, provided with adequate information, training and instruction. This includes the use of personal protective equipment to be used to minimise risks to the health and safety of workers when carrying out work using this substance.

**QUALIFICATIONS REQUIRED FOR APPLICATION OF ECOTOXIC SUBSTANCES**

Anyone who mixes, loads, or applies this product, either by air or ground based methods, is required to be suitably qualified, or must receive guidance and, if required, assistance from a suitably qualified person. *Refer to Schedule 10 of the Hazardous Substances (Hazardous Property Controls) Notice 2017 for a list of suitable qualifications.*

**RECORD KEEPING**

Where 3 L or more of the substance is applied within 24 hours, in a place where the substance is likely to enter air or water and leave the application area, a PCBU with management or control of the substance must ensure that a written record is kept of each application of the substance. *Refer to Part 4 Clause 48 of the Hazardous Substances (Hazardous Property Controls) Notice 2017 for details of information that must be recorded.*

**EQUIPMENT**

A PCBU with management or control of work using this substance must ensure that equipment used to handle this substance retains the substance, without leakage, at all of the temperatures and pressures at which the equipment is to be used; and dispenses or applies the substance, without leakage, at a rate and in a manner that the equipment is designed for. The PCBU must ensure that the equipment is accompanied by documentation that is readily available and readily understandable about the use and maintenance of the equipment.

**STORAGE**

Store in original, tightly closed container in a dry, cool area away from foodstuffs, fertilisers and seeds. Store in accordance with NZS 8409 Management of Agrichemicals. Secondary containment and emergency response plans are required where 100 L or more of this product are stored. Refer to the product SDS for further information.

**SHELF LIFE**

When stored appropriately this product should show no significant degradation for two years from the date of manufacture. Contact your supplier for information about the use of product that is older than this.

**PERSONAL PROTECTION**

When mixing or applying wear appropriate eye protection, waterproof gloves, boots and overalls. Wash hands and exposed skin before meals and after work.

**SPILLAGE**

Wear appropriate protective clothing and prevent material from entering waterways. Contain spills and absorb with inert absorbent material (such as vermiculite, earth, sand or synthetic absorbent substance) and place in waste container. Dispose of waste safely in a suitable landfill.

**DISPOSAL**

**Container Disposal** – Ensure container is empty. Crush and bury in a suitable landfill or other approved facility. Avoid contamination of any water supply with product or empty container.

**Product Disposal** - Dispose of this product only by using according to the label or through the Agrecovery® Chemical Recovery service or other approved facility.

**Do not burn product or container.**

## SAFETY DATA SHEET

A safety data sheet for this product is available at [www.adama.com](http://www.adama.com).

### FIRST AID

**If medical advice is needed, have product container or label at hand.**

**For advice, or if you feel unwell or are exposed or concerned, contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor.**

**IF SWALLOWED:** Do NOT induce vomiting. Rinse mouth. Call a POISON CENTRE or doctor.

**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. If eye irritation persists get medical advice/attention.

### CONDITIONS OF SALE

ADAMA New Zealand Limited will not accept any responsibility whatsoever and howsoever arising and whether for consequential loss or otherwise in connection with the supply of these goods other than the responsibility for the merchantable quality of the goods and such responsibilities mandatorily imposed by the Statutes applicable to the sale and supply of these goods. To the extent allowed by such Statutes the liability of ADAMA New Zealand Limited is limited to the replacement of the goods or (at the option of ADAMA New Zealand Limited) 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 ADAMA New Zealand Limited within thirty days of delivery.



ADAMA

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**AGRECOVERY**

### EMERGENCY RESPONSE

(All hours)

Ring from anywhere in New Zealand

**0800 734 607**

In a Transport

Emergency

Phone 111

Police or Fire

## PRODUCT INFORMATION

Pentagon is a selective herbicide for the control of many broadleaf weeds in pasture, grass, white clover seed crops, peas and cereals. Pentagon controls most species of thistles, buttercups and many common pasture weeds. This product depends on its conversion within the plant into an active form and this occurs most readily in actively growing plants.

**BEWARE: APPLY THIS PRODUCT CAREFULLY AS SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS.**

### EPA Controls:

- Do not apply into or onto water.

**TIME OF APPLICATION:** Treat weeds when they are as young as possible, but ensure they are actively growing. Weeds rapidly become less susceptible as they age. Cold or frosty conditions following treatment may halt growth and reduce effectiveness. Do not apply to weeds under stress (frost, drought) or when rain is expected within 12 hours.

**ANIMAL SAFETY:** Poisonous plants (including but not limited to black nightshade and buttercups) may become more palatable after spraying. If concerned that stock may be affected, stock should be kept away from the area until plants have died down.

**WITHHOLDING PERIOD:** Except for animal safety reasons no withholding period is required when used as directed.

**It is an offence for users of this product to cause residues exceeding the relevant MRL in the Food Notice: Maximum Residue Levels for Agricultural Compounds.**

**MIXING:** Pour the measured quantity of Pentagon into the partly filled spray tank and add the remainder of the water, agitating thoroughly during filling.

**RAINFALL:** Do not spray if rainfall is expected within 12 hours of spraying.

**APPLICATION METHODS:** Pentagon should be applied using conventional ground equipment.

**BOOM SPRAYING:** Use a minimum of 100 - 200 litres of water per hectare as a medium quality spray. For difficult to control perennial weeds use the higher rate to obtain more complete coverage.

**AERIAL SPRAYING:** Aerial spraying or the use of ULV applicators is not recommended.

**SPOT SPRAYING:** Use a dilution of 1:100 (10ml/L) and ensure complete spray coverage.

### Rates of Application:

CROP	RATE PER HECTARE	CRITICAL COMMENTS
Pasture: Newly sown pasture	3-4L in 100-300 litres of water.	Use after clover has developed two trifoliolate leaves and weeds are in the young seedling stage.
Pasture: Established pasture	3-4L in 100-300 litres of water.	Use the higher rate once weeds are past the 2-3 leaf stage or growing strongly.
Grass Seed Crops: Ryegrass, Cocksfoot, Timothy, Dogstail, etc	3-4L in 100-300 litres of water.	Spray well before seed head emergence when the majority of the weeds are the seedling stage.
White Clover Seed Crops	3-4L in 100-300 litres of water.	Apply in spring to actively growing seedling weeds. Do not apply after the clover has commenced flowering.

Peas	3-4L in 100-300 litres of water.	Use between the 5 and 7 node growth stage of the crop. Some initial twisting of the peas may result, but this is temporary. Do not mix Pentagon with other herbicides for use in peas. Heavy rain may remove the protective wax layer on the foliage. If this occurs delay treatment until a crystal violet confirms the crop is safe to treat.
Cereals	3-4L in 100-300 litres of water.	Use between crop growth stages 2 leaf and 1st node detectable. Use the higher rate if the weeds have developed more than 2-3 leaves and are in the young plant stage. Do not use in crops undersown with clover or lucerne.

**Weeds Table:** Recommendations relate to the rates recommended in the Crops table unless otherwise indicated.

WEEDS CONTROLLED	CRITICAL COMMENTS
Annual buttercups, Fathen, Scotch thistle.	Controlled at all growth stages before flowering.
Giant buttercup, Black nightshade, Redroot.	Good control in seedling stage (2-3 leaves). Useful suppression at later growth stages.
Nodding, Winged and Variegated thistle.	Good control in seedling stage (2-3 leaves) with 4/ha. Useful suppression at later growth stages.
Californian thistle.	Treat at the flower bud stage with 4L/ha.
Hedge mustard, Willow weed, Wireweed, Cornbind, Wild turnip, Nettle, Seedling docks.	Controlled at the seedling stage (2-3 leaves) only with 4L/ha. Useful suppression at later growth stages.
Rushes, mature docks, Speedwells, Chickweed, Spurrey, Cleavers, Stinking mayweed, Chamomiles, Daisy, Dandelion or Ragwort will <b>NOT</b> be controlled.	

### RESISTANCE MANAGEMENT

Pentagon contains the GROUP 4 phenoxy-carboxylic-acids, MCPA and MCPB. Do not use another product containing an herbicide in the same group in conjunction with Pentagon, and where possible alternate the types of herbicides used within any one paddock over time. Herbicides from different group codes should either be used alternately or mixed together to prevent the numbers of resistant individuals building up. Naturally occurring biotypes resistant to phenoxy-carboxylic-acids are known to exist. Since the occurrence of resistant weeds is difficult to detect prior to use ADAMA New Zealand Ltd accepts no liability for losses that may result from the failure of this product to control resistant weeds. Refer to <https://resistance.nzpps.org/> for further resistance management advice.

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