

MAGNAMUS

PCS No 07271

FUNGICIDE

A suspension concentrate formulation containing 250 g/L (23.39 % w/w) mandipropamid.

For the control of foliar blight (*Phytophthora infestans*) and protection against tuber blight in potatoes; the control of downy mildew on protected and outdoor lettuce, lamb's lettuce, endives (including frisée, escarole and radicchio), rocket, red mustard and herb; the moderate control of downy mildew in baby leaf crops, spinach, land cress, cress, purslane, spinach beet leaves (chard), Brussels sprouts, cauliflower, broccoli/calabrese, radish and vining peas.

FOR PROFESSIONAL USE ONLY

Risk and Safety Information

A suspension concentrate formulation containing 250 g/L (23.39 % w/w) mandipropamid.

Toxic to aquatic life with long lasting effects.

Keep out of reach of children.

Do not eat, drink or smoke when using this product.

Avoid release to the environment.

Collect spillage.

Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty triple rinsed clean containers which can be disposed of as non-hazardous waste.

To avoid risks to human health and the environment comply with the instructions for use.

Contains 1,2-benzisothiazol-3-one. May produce an allergic reaction.

To avoid risks to human health and the environment, comply with the instructions for use.



PCS No. 07271

Manufacturing date and Batch No.: see packaging

For 24 hour emergency information contact:

CARECHEM24 +44 (0)1235 239670

Approval Holder:

UPL Holdings Coöperatief U.A.
Claudius Prinsenlaan 144 A
Blok A, 4818CP Breda
The Netherlands

Marketing Company:

UPL Europe Ltd.
The Engine Rooms (1st Floor)
Birchwood Park, Warrington
Cheshire, WA3 6YN
UK
Tel: 00 44 1925 8199 99

Net Contents:

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DIRECTIONS FOR USE

IMPORTANT: This information is approved as part of the Product Label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.

FULL LIST OF HERBS

Scientific Name	Common Name
<i>Agastache rugosa</i>	Korean Mint
<i>Agastache spp</i>	
<i>Allium schoenoprasum</i>	Chives
<i>Anethum graveolens</i>	Dill leaves
<i>Angelica archangelica</i>	Angelica
<i>Anthriscus cerefolium</i>	Chervil
<i>Artemisia dracunculus</i>	Tarragon
<i>Calendula officinalis</i>	Marigold
<i>Coriandrum sativum</i>	Coriander leaves
<i>Foeniculum vulgare</i>	Fennel leaves
<i>Helichrysum angust/italicum</i>	Curry Plant
<i>Hyssopus officinalis</i>	Hyssop
<i>Laurus nobilis</i>	Bay
<i>Levisticum officinalis</i>	Lovage leaves
<i>Melissa officinalis</i>	Lemon Balm
<i>Mentha gentilis</i>	Gingermint
<i>Mentha suaveolens</i>	Applemint
<i>Mentha suaveolens variegata</i>	Pineapplemint
<i>Mentha spicata</i>	Spearmint
<i>Mentha x piperita</i>	Peppermint

Scientific Name	Common Name
<i>Mentha x piperita citrata</i>	Lemon Peppermint
<i>Ocimum basilicum</i>	Basil
<i>Origanum heracleoticum</i>	
<i>Origanum majorana</i>	Marjoram
<i>Origanum vulgare</i>	Oregano
<i>Petroselinum crispum</i>	Parsley
<i>Poterium sanguisorba</i>	Burnet (salad)
<i>Rosmarinus officinalis</i>	Rosemary
<i>Rumex acetosa</i>	Sorrel
<i>Ruta graveolens</i>	Rue
<i>Salvia officinalis</i>	Sage
<i>Satureja spp.</i>	Savory
<i>Tanacetum parthenium</i>	Feverfew
<i>Thymus camphoratus</i>	
<i>Thymus citriodora</i>	Lemon Thyme
<i>Thymus serpyllum</i>	Mother Of Thyme
<i>Thymus vulgaris</i>	Thyme
<i>Trigonella foenum-graecum</i>	Fenugreek
<i>Tropaeolum majar</i>	Nasturtium
<i>Urtica dioica</i>	Nettle
<i>Viola odorata</i>	Violet





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PROPERTIES OF MAGNAMUS

MAGNAMUS is a foliar fungicide for the preventative control of late blight (*Phytophthora infestans*) in potatoes and downy mildew in lettuce, herbs and other salad crops, named brassica, radish, vining peas and is highly active against spore germination. Uptake into the leaf tissue assures good translaminar activity and inhibits mycelial growth during the incubation period.

DISEASE CONTROLLED

Lettuce, herbs and other salad crops

For the control of downy mildew on protected and outdoor lettuce, lamb's lettuce, endives (including frisee, escarole and radicchio), rocket, purslane and herbs.

MAGNAMUS may be applied to the following crops– red mustard, baby leaf crops, spinach, land cress, cress and spinach beet leaves (*chard*):
MODERATE CONTROL

Potatoes

For the control of Foliar blight (*Phytophthora infestans*) and protection against tuber blight.

Brussels sprouts, cauliflower, broccoli/calabrese and radish

Downy mildew (*Peronospora brassicae*, *Peronospora parasitica*): REDUCTION

Vining peas

Downy mildew (*Peronospora viciae*): MODERATE CONTROL

POTATOES

MAGNAMUS can be used on all varieties of potatoes including seed potatoes.

BACKGROUND TO POTATO BLIGHT CONTROL

Late blight (*Phytophthora infestans*) is potentially a devastating disease of potatoes. In commercial production, a season long disease prevention policy is essential. First of all ensure that other control methods are being satisfactorily applied:

1. Prevent re-growth on potato dumps.
2. Destroy all groundkeepers.
3. Plant disease free seed.
4. Use generous soil ridges to protect tubers.

Integrate this approach with a fungicide programme:

Early Crops

In first and second early potato crops, particularly those grown in the same locality as main crop potatoes, an adequate and full blight protection programme should be applied right up to harvesting or haulm desiccation.

This will protect the early crop while helping to reduce disease risk to later crops.

Maincrops

Disease prevention programmes require regular and season long fungicide use to limit foliar blight development. However, as an effective fungicide programme will preserve leaf area there may be more risk of infecting tubers at harvest, particularly during "heavy" blight years. Completion of the control programme should therefore include a complete haulm desiccant. Lifting of the crop should not take place for at least 10 days after **COMPLETE KILL** of the haulm. Crops intended for storage should not be lifted while there is any green tissue **AT ALL** on the leaves or stem bases.





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Blight Risk Assessment

The risk of disease is affected by **weather conditions** (during the crop life) and **crop location**:

Weather Conditions - Spread of disease occurs under warm, humid conditions. Preferably use a reliable decision support system to determine what frequency of fungicide treatment is appropriate and fungicide type required.

Note: Blight forecasting has often been based on the occurrence of "Smith periods". A "Smith period" is a 48 hour period in which the minimum temperature is 10°C or more and the relative humidity exceeds 90% for at least 11 hours during the first 24 hours and for at least 11 hours again during the final 24 hours. However, any period of warm, humid weather increases blight risk.

TIMING

MAGNAMUS is a protectant fungicide and therefore the spray programme must start BEFORE blight enters the crop. Commence spraying at the first blight warning or when local weather conditions are favourable for the disease.

Intervals between applications of MAGNAMUS should be reduced as blight risk increases, so that protection of the crop can be maintained.

Applications of MAGNAMUS should be made at 7-10 day intervals depending on disease pressure. As disease pressure and the risk of late blight infection increase, the interval should be shortened.

Rates of Use

Apply MAGNAMUS at 0.6 litres product per hectare. Up to four applications may be made per crop.

Applications of MAGNAMUS can be made up to 3 days before harvest.

RESISTANCE MANAGEMENT

MAGNAMUS contains a CAA fungicide (FRAC code no. 40). It does not contain a formulated partner mixture, for resistant management purposes. To minimise the risk of resistance development in the pathogen population the following guidelines for CAA fungicides (based on an average number of 12 fungicide applications/season for potato blight control) should be followed:-

- 1) Where possible, use formulated/tank mixtures or an alternating strategy using fungicides from different mode of action groups.
- 2) Where CAA fungicides are applied as a mixture (co-formulated or as a tank mix) a maximum of 50% of the total number of applications may be made per crop or season. In potatoes up to six applications may be made.
- 3) Where CAA fungicides are applied alone (without a co-formulant or tank mix partner) a maximum of 33% of the total number of applications may be made per crop or season. In potatoes a maximum of four applications may be made.
- 4) No more than 3 applications of any CAA fungicide should be made consecutively
- 5) Further information on suitable tank mix products and resistance management strategies is available from FRAG and BPC websites.
- 6) For information on suitable tank mix partner products contact UPL.

LETTUCE, LAMB'S LETTUCE, ENDIVES (INCLUDING FRISEE, ESCAROLE AND RADICCHIO), ROCKET, RED MUSTARD, BABY LEAF CROPS, SPINACH, LAND CRESS, CRESS, PURSLANE, SPINACH BEET LEAVES (CHARD) AND HERBS

TIMING

Before applying MAGNAMUS, ensure the crop is free from any stress caused by environmental or agronomic effects.

Always inspect crops to assess disease development immediately before spraying. Best results will be achieved from applications made in the earliest stage of disease development or as a protectant treatment following a disease risk assessment or the use of appropriate decision support systems.

Protected crops - Only one application of MAGNAMUS should be made per crop.

Outdoor crops - Two applications of MAGNAMUS can be made per crop. Allow a minimum interval of 7 days between applications.

Applications of MAGNAMUS can be made up to 7 days before harvest.

Rates of Use

Apply MAGNAMUS at 0.6 litres product per hectare.





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RESISTANCE MANAGEMENT

To minimise the risk of resistance developing MAGNAMUS may be applied in tank mixture or alternating using a fungicide with a different mode of action at a rate that is effective against downy mildew. Further information on suitable tank mix products and resistance management strategies is available on the FRAG website.

Use in alternation with fungicides with another mode of action.

OUTDOOR RADISH

TIMING

A second treatment may be required per crop if disease pressure remains high. A minimum interval of 7 days must be observed between applications to radish.

Do not exceed 2 applications per crop or 6 applications per year for multi-crop areas.

Rates of Use

Apply MAGNAMUS at 0.6 litres product per hectare.

Applications of MAGNAMUS can be made up to 7 days before harvest.

RESISTANCE MANAGEMENT

To minimise the risk of resistance developing MAGNAMUS may be applied in tank mixture or alternating using a fungicide with a different mode of action at a rate that is effective against downy mildew. Further information on suitable tank mix products and resistance management strategies is available on the FRAG website.

Use in alternation with fungicides with another mode of action.

BRUSSELS SPROUTS, CAULIFLOWER AND BROCCOLI/CALABRESE

TIMING

A second treatment may be required if disease pressure remains high. A minimum interval of 10 days must be observed between applications to brassicae.

Rates of Use

Apply MAGNAMUS at 0.6 litres product per hectare.

Applications of MAGNAMUS can be made up to 14 days before harvest.

PROCESSING

Where a crop is destined for processing, consult your processor before treating with MAGNAMUS.

RESISTANCE MANAGEMENT

To minimise the risk of resistance developing CAA fungicides may be applied in formulated/tank mixture or alternating strategy using fungicides from different mode of action groups which are effective against downy mildew.

Use in alternation with fungicides with another mode of action is recommended.

CAA fungicides should make up no more than 50% of the total number of fungicide applications per crop or season.

For information on suitable tank mix partner products contact UPL.





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VINING PEAS

TIMING

A second treatment may be required if disease pressure remains high. A minimum interval of 14 days must be observed between applications to vining peas.

Rates of Use

Apply MAGNAMUS at 0.6 litres product per hectare.
Applications of MAGNAMUS can be made up to 14 days before harvest.

PROCESSING

Where a crop is destined for processing, consult your processor before treating with MAGNAMUS.

RESISTANCE MANAGEMENT

To minimise the risk of resistance developing MAGNAMUS may be applied in tank mixture or alternating using a fungicide with a different mode of action at a rate that is effective against downy mildew. Where possible, use tank mixtures or an alternating strategy using fungicides from different mode of action groups

Further information on suitable tank mix products and resistance management strategies is available on the FRAG website.

MIXING AND SPRAYING

Apply through a conventional hydraulic sprayer calibrated to give an even application at the correct volume.

Application to outdoor crops of potatoes, lettuce and associated crops should be made via a tractor mounted, trailed or self-propelled sprayer or alternatively through a knapsack sprayer.

The application to indoor lettuce and associated crops should be made via a hydraulic nozzle applicator e.g. motorised sprayer with hand or boom lance or via a knapsack sprayer.

Spray Volume

Potatoes: Apply MAGNAMUS in at least 200 litres of water per hectare.

Lettuce and similar: Apply MAGNAMUS in 200-600 litres of water per hectare.

Broccoli/Calabrese: Apply MAGNAMUS in 200-600 litres of water per hectare.

Radish: Apply MAGNAMUS in at 200-600 litres of water per hectare.

Vining peas: Apply MAGNAMUS in at 200-800 litres of water per hectare.

Spray Nozzles

A medium quality spray* is preferred for application of MAGNAMUS (* as defined by The British Crop Protection Council). A spray pressure of 2 - 3 bar is recommended.

Mixing

Make sure the sprayer is clean and set to give an even application at the correct volume.

Fill the spray tank with half the required volume of clean water and start agitation. Add the required amount of MAGNAMUS and continue agitation whilst adding the rest of the water.

Agitate the mixture thoroughly before use and continue agitation during spraying and any stoppages

Thoroughly wash all spray equipment with water immediately after use

Do not leave the spray liquid in the sprayer for long periods (such as during meal breaks or overnight).

COMPANY ADVISORY INFORMATION

As part of our Product Stewardship policy, UPL recommends the following precautions should also be observed:

Wear appropriate clothing – cotton overall and rubber gloves, when handling the concentrate.

Since the occurrence of resistance cannot be forecast, neither UPL Europe Ltd nor its distributors can accept responsibility for any loss or damage to crops caused by the failure of MAGNAMUS to control resistant strains.

This product is to be used only in accordance with the recommendations and instructions given on the label provided with this pack.



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IMPORTANT INFORMATION FOR PROFESSIONAL USE ONLY FOR USE ONLY AS AN AGRICULTURAL FUNGICIDE

Crops	Maximum individual dose (L product/ha)	Maximum number of treatments	Latest time of application
Potato	0.6	Four per crop	3 days before harvest
Protected lettuce, lamb's lettuce, endives (including frisee, escarole and radicchio), rocket, red mustard, baby leaf crops*, spinach, land cress, cress, purslane, spinach beet leaves (chard) and herbs#	0.6	One per crop	7 days before harvest
Outdoor lettuce, lamb's lettuce, endives (including frisee, escarole and radicchio), rocket, red mustard, baby leaf crops*, spinach, land cress, cress, purslane, spinach beet leaves (chard) and herbs#	0.6	Two per crop	7 days before harvest
Outdoor radish	0.6	Two per crop	7 days before harvest
Brussels sprouts, cauliflower, Broccoli/calabrese	0.6	Two per crop	14 days before harvest
Vining peas	0.6	Two per crop	14 days before harvest

* crops harvested no later than the 8 true leaf stage

please refer to the full list of herbs included at the back of the label

For outdoor crops and protected crops that are grown under a temporary cover, the maximum total dose must not exceed 1.2 L product/ha/year on any single area of land.

**READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE.
FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS**

SAFETY PRECAUTIONS

Operator Protection

WASH HANDS AND EXPOSED SKIN before eating, drinking and after work.
IF YOU FEEL UNWELL, seek medical advice (show label where possible).

Environmental Protection

Do not contaminate water with the product or its container. Do not clean application equipment near surface water. Avoid contamination via drains from farmyards and roads.

Storage and Disposal

KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.
DO NOT RE-USE CONTAINER for any purpose.
RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely.