



Insecticide for use on different crops.

An emulsifiable concentrate containing 50 g/L lambda-cyhalothrin (5.5 % w/w)

MAPP No.: 13529

GROUP

3A

INSECTICIDE

IMPORTANT INFORMATION: FOR USE ONLY AS AN AGRICULTURAL/HORTICULTURAL INSECTICIDE

Crops/Situations:	Maximum individual dose: (ml product/ha)	Maximum total dose: (ml product/ha/crop)	Latest time of application:
Barley, wheat, durum wheat, oats, rye	100	400	Before late milk stage
Triticale	100	400	Before second node detectable stage
Winter oilseed rape	150	450	Before end of flowering
Spring oilseed rape	150	450	6 weeks before harvest
Field beans, combining pea	150	300	25 days before harvest
Edible podded pea, vining pea	150	300	-
Sugar beet	150	300	8 weeks before harvest
Potato	150	600	-
Pear	180	540 ml/ha/annum	7 days before harvest
Lettuce	150	300	7 days before harvest

Other Specific Restrictions:

A maximum number of 4 applications per crop must not be exceeded.
Non-returnable containers must not be re-used for any purpose.

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.



Distributed by: **Belchim Crop Protection Ltd**

1b Fenice Court, Phoenix Park, Eaton Socon, St Neots, Cambridgeshire PE19 8EW | www.belchim.co.uk | info-uk@belchim.com

Content: **1L e**



Markate® 50 - An emulsifiable concentrate containing 50 g/L lambda-cyhalothrin (5.5 % w/w)

DANGER



H301 Toxic if swallowed.

H304 May be fatal if swallowed and enters airways.

H314 Causes severe skin burns and eye damage.

H332 Harmful if inhaled.

H336 May cause drowsiness or dizziness.

H410 Very toxic to aquatic life with long lasting effects.

P260 Do not breathe spray.

P280 Wear face protection, protective gloves.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a POISON CENTER/doctor if you feel unwell

P391 Collect spillage.

P501 Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

SP 1 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).

Authorisation holder:

K&E BVBA

Brustem Industriepark
Lichtenberglaan 2019
B-3800 Sint-Truiden
Belgium

Marketing company:

Agrovista UK Limited

Rutherford House
Nottingham Science and Technology Park
University Boulevard
Nottingham
NG7 2PZ

Tel: 0115 9390202 | Fax: 0115 9398031

enquiries@agrovista.co.uk | www.agrovista.co.uk

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SAFETY PRECAUTIONS

OPERATOR PROTECTION

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:

- WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES AND FACE PROTECTION (FACESHIELD) when handling the concentrate.

However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.

- WASH CONCENTRATE from skin or eyes immediately.
- WASH HANDS AND EXPOSED SKIN before meals and after work.
- WASH ALL PROTECTIVE CLOTHING thoroughly after use, especially the insides of gloves.
- TAKE OFF IMMEDIATELY all contaminated clothing.

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).
- DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 5 m of the top of the bank of a static or flowing water body, unless a Local Environmental Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1 m of the top of a ditch which is dry at the time of application. DO NOT ALLOW DIRECT SPRAY from hand held sprayers to fall within 1m of the top of the bank of a static or flowing water body. Aim spray away from water.
- DO NOT ALLOW DIRECT SPRAY from broadcast air-assisted applications to fall within 25 m of the top of the bank of a static or flowing water body, unless a Local Environmental Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 5m of the top of a ditch which is dry at the time of application.
- This product qualifies for inclusion within the Local Environment Risk Assessment for Pesticides (LERAP) scheme. Before each spraying operation from a horizontal boom sprayer or broadcast air-assisted sprayer either a LERAP must be carried out in accordance with CRD's published guidance or the statutory buffer zone must be maintained. The results of the LERAP must be recorded and kept available for three years.
- TO PROTECT NON TARGET INSECTS/ARTHROPODS, respect an untreated buffer zone of 5 m to non-crop land (see Directions for use).
- Only apply to crops in flower once bees have finished foraging for the day.

STORAGE AND DISPOSAL

- KEEP IN ORIGINAL CONTAINER, tightly closed in a safe place.
- WASH OUT CONTAINER THOROUGHLY, empty washings into spray tank and dispose safely.
- DO NOT RE-USE CONTAINER FOR ANY PURPOSE.

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 the product.

To reduce effects on non-target insects or other arthropods:

- For application to cereals: DO NOT SPRAY WITHIN 5 m OF THE FIELD BOUNDARY.
- For application to other arable and vegetable crops using tractor-mounted boom sprayers: Avoid spraying within 5 m of the field boundary.¹
- For application to pears using broadcast air-assisted sprayers: The best available application technique, which minimises off-target drift, should be used.

¹These buffer distances should be measured from the field boundary, which for the purpose of this labelling, is defined as from the edge of non-cropped land (i.e. land taken permanently out of agricultural production, including the 1-2 m strips adjacent to hedgerows and watercourses established under the Single Payment Scheme). Cropped land includes managed buffer zones (e.g. grass strips, wild flower margins and conservation headlands), but since these are used as havens for wildlife it is best practice to minimise spray drift onto them.

CROP SPECIFIC INFORMATION

WINTER WHEAT, DURUM WHEAT, WINTER BARLEY, WINTER OATS, RYE, TRITICALE

• BARLEY YELLOW DWARF VIRUS (APHID VECTORS)

Apply 100 ml/ha in 200 l water/ha

Timing for High Risk (Virus Prone) Areas:

- a) Cereals sown in September: Apply a single MARKATE 50 spray as a routine in the period late October if BYDV is commonly a problem on the farm or in the locality. If aphids are found in the crop earlier, spray immediately. Further treatments may be required in high risk areas especially during mild winters.

b) Cereals sown from October onwards: Follow recommendations for low risk areas.

Timing for Low Risk Areas:

A spray should only be applied in the years when the risk of infection is high, based on aphid monitoring and according to specialist advice. When aphids can be found in the crop and/or specialists identify a BYDV risk, spray immediately.

Note: Crops which follow closely a grass ley or weedy stubble, where there is a risk of direct aphid transfer to the crop should be treated as high risk.

Spring use

In the absence of an earlier application of MARKATE 50, treatment can also be worthwhile if aphids carrying BYDV are present up to GS32.

**WINTER AND SPRING WHEAT, DURUM WHEAT, WINTER AND SPRING BARLEY,
WINTER AND SPRING OATS, RYE, TRITICALE**

• APHIDS ON THE EARS e.g. GRAIN APHID, ROSE-GRAIN APHID (NOT ON TRITICALE)

Apply 100 ml/ha in 200-300 l water/ha. (Use sufficient water volume to ensure thorough crop penetration.)

The optimum timing for application is after ear emergence (GS59). The latest time of application is before GS77. Apply according to official thresholds.

Notes: When MARKATE 50 is used for control of aphids on the ear, some reduction of aphids on the flag leaf will occur.

• YELLOW CEREAL FLY (*Opomyza florum*) (WINTER WHEAT ONLY)

Apply 100 ml/ha in 200 l water at egg hatch, usually from late January onwards depending on the season. Early emerged crops are most at risk.

Sprays applied for the control of BYDV will also give some control of this pest.

WINTER AND SPRING OILSEED RAPE

• FLEA BEETLE

Apply 150 ml/ha in 200 l water at first signs of attack.
Repeat 10-14 days later if necessary.

• POLLEN BEETLES

Apply 150 ml/ha in 200-300 l water at the green/yellow bud stage according to specialist advice or if official thresholds are reached.

Use sufficient water volume to ensure thorough crop penetration.

For information on the potential development and management of pyrethroid resistance in

pollen beetle please consult the latest IRAG and HGCA guidance.

• SEED WEEVIL AND POD MIDGE

Apply 150 ml/ha in 200-300 l water during the flowering period when seed weevil numbers reach the threshold for spraying. Use sufficient water volume to ensure thorough crop penetration. Best results are normally achieved when application coincides with the onset of peak adult activity. This often occurs between the 20% pod set stage and the end of flowering on the main raceme (i.e. 75% petal fall across the entire crop). Avoid spraying in the heat of the day when bees are particularly active.

For spring sown varieties apply at green to yellow bud stage if seed weevils are present at threshold levels. Repeat application during flowering if the attack is prolonged.

The latest time of application to winter oilseed rape is the end of flowering and the latest time for spring oilseed rape is six weeks before harvest.

WINTER AND SPRING FIELD BEANS: PEA AND BEAN WEEVIL

For the reduction of leaf notching/feeding damage, apply 150 ml/ha in 200-300 l/ha water if there is a risk of severe damage by adult weevils to the growing points of the crop in the early stages of growth. Use sufficient water volume to ensure thorough crop penetration.

Under high pest pressure a repeat application may be required 2-3 weeks after the initial application. Where there is a history of severe weevil damage, a first application made at the first signs of adult attack (leaf notching) may be beneficial in some situations.

POTATOES: APHIDS

Apply 150 ml/ha in at least 400 l water per ha: use sufficient water volume to ensure thorough crop penetration. MARKATE 50 can also provide incidental control of other pests e.g. cutworms if the timing coincides with that for aphid control.

Seed crops: In these crops minimising the spread of viruses e.g. Potato Virus Y (PVY) is usually the prime consideration. *Myzus persicae* is the main vector of virus diseases in potatoes. To discourage aphid feeding (so as to minimise virus transmission) and to control aphids already in the crop use MARKATE 50 in mixture with either pymetrozine or pirimicarb. Observe any label restrictions on the partner product.

Where it is suspected that forms of *Myzus persicae* tolerant to pirimicarb are present a mixture with pymetrozine is likely to provide the best control.

Ware crops: Use MARKATE 50 for the control of *Macrosiphum euphorbiae* and other aphid pests. Where resistant forms of *Myzus persicae* are present or suspected MARKATE 50 should not be used.

SUGAR BEET

• FLEA BEETLE

Apply 150 ml/ha in 200 l water as soon as adult feeding damage is seen. Repeat if necessary.

• BEET LEAF MINER (MANGOLD FLY)

Apply 150 ml/ha in 200 l water at egg hatch or according to specialist advice. Repeat if necessary.

• CUTWORM

Apply 150 ml/ha in 400-1000 l water/ha, according to specialist advice at egg hatch and repeat 10-14 days later. Use sufficient water volume to ensure thorough crop penetration. The latest time of application is eight weeks before harvest.

Note on aphid control: If peach-potato aphid (*M. persicae*) or black bean aphid (*Aphis fabae*) is present in the crop at the time of an application to control flea beetle, leaf miner or cutworm use a tank mix with pirimicarb (50% basis) at 280 g/ha.

PEAS (combining pea, vining pea, edible podded pea)

• PEA & BEAN WEEVIL

For the reduction of leaf notching/feeding damage, apply 150 ml/ha in 200 l water if there is a risk of severe damage by adult weevils to the growing points of the crop in the early stages of growth. Under high pest pressure a repeat application may be required 2-3 weeks after the initial application.

Where there is a history of severe weevil damage, a first application made at the first signs of adult attack (leaf notching) may be beneficial in some situations.

• PEA MOTH

Application dose: 100 ml/ha in 300-600 l/ha water, use sufficient water volume to ensure thorough crop penetration.

Combining peas: Apply to flowering crops according to official advice or as indicated by pheromone traps. Spray later crops as soon as they are in full flower.

Apply a second treatment 10-14 days after the first.

Edible podded and vining peas: Crops which are in full flower should be treated with a single spray at the calculated date.

• PEA APHID

Apply to flowering crops at 100 ml/ha (see notes below) in 300-600 l/ha water according to specialist advice or when thresholds are reached. Repeat if necessary. Inspect the crop carefully,

especially during the early stages of flowering. Use sufficient water volume to ensure thorough crop penetration.

Notes: MARKATE 50 will provide effective control of early infestations of pea aphid which are confined to the terminal growing points of the crop and are exposed to spray droplets. For established aphid infestations on the growing points and for aphid infestations which are sheltered within the crop canopy apply MARKATE 50 in tank mixture with pirimicarb at 280 g/ha. Where aphids are the only pest present and are well established throughout a crop canopy which is dense it is preferable to apply pirimicarb (50% basis) alone at 280 g/ha.

• PEA MIDGE

Timing: Apply at 150 ml/ha in 200-400 l water/ha within 3-5 days of the first adult midge found in the crop. Use sufficient water volume to ensure thorough crop penetration. Repeat 7-10 days later if midge activity continues.

Sprays can be delayed if the weather is not suitable for midge activity or if the crop is not at a susceptible growth stage.

Note: Consult a crop specialist for advice on application timing and information on midge activity in your area.

PEARS: PEAR SUCKER

Apply 180 ml/ha in 200-2000 l water (use sufficient water volume to ensure thorough crop penetration). Apply when first sucker eggs are being laid, usually in late February/early March. Should sucker build up in the summer in the absence of predators, apply MARKATE 50 at the same rate and repeat after 2-3 weeks if necessary.

Resistance: Pear suckers resistant to one or more groups of insecticides are widespread. Where strains resistant to products containing pyrethroid insecticide occur, MARKATE 50 is unlikely to give satisfactory control of this pest.

Where repeat treatment is necessary use different active ingredients.

OUTDOOR LETTUCE: CUTWORM

Apply 150 ml/ha in 400-1000 l water at egg hatch or according to specialist advice and repeat 10-14 days later. Use sufficient water volume to ensure thorough crop penetration.

MIXING AND SPRAYING

This product is to be used only in accordance with the recommendations and instructions provided with this pack. Use in any other circumstances is entirely at user's risk.

Wash out container thoroughly. Preferably use an integrated pressure rinsing device or

rinse three times. Add washings to the sprayer at the time of filling. Dispose of rinsed container safely according to the Code of Practice for Using Plant Protection Products: Ensure adequate volume and pressure is used and that the sprayer is correctly calibrated before use. Do not leave the spray liquid in the sprayer for long periods (i.e. during meals or overnight).

COMPATIBILITY

Before using any tank mixture, consult and comply with the recommendations of the partner products. Each product should be added separately to the bulk of the water in the spray tank and thoroughly mixed before adding the next chemical.

Always use constant agitation of the sprayer tank during mixing, transportation and application. Spray immediately.

Other than when mixing with trace elements, always add MARKATE 50 to the spray tank last.

RESISTANCE MANAGEMENT

Strains of some aphid species are resistant to many aphicides. Especially for applications to potatoes, resistance issues should be considered. Where aphids resistant to products containing lambda-cyhalothrin occur, MARKATE 50 is unlikely to give satisfactory control and repeat treatments are likely to result in lower levels of control. The following measures are proposed to avoid further resistance development:

- Be vigilant for resistance but be aware that poor control can sometimes be due to poor spray coverage. Monitor treatment efficacy a few days after application.
- Do not make repeat applications of any insecticide if it appears not to work at full rate and it has been applied correctly, use an alternative from a different chemical class.
- Do not apply insecticides below label rates as this can lead to a subsequent increase in resistance problems.
- Tank mixes should contain insecticides from different chemical classes and be applied at the full recommended rates

CONDITIONS OF SUPPLY

All goods supplied by us are of high grade and we believe them to be suitable but, as we cannot exercise control over their storage, handling, mixing or use, or the weather conditions before, during or after application which may affect the performance of the goods, all conditions and warranties, statutory or otherwise, as to the quality or fitness for any purpose of our goods are excluded. No responsibility will be accepted by us or re-sellers for any failure in performance, damage or injury whatsoever arising from their storage, handling, application or use. These

conditions cannot be varied by our staff or agents whether or not they supervise or assist in the use of such goods.

WARRANTY

The seller makes no warranty, expressed or implied, with regard to the use of the product other than that indicated on the label. The purchaser and user shall assume all risk associated with use and/or handling and/or the storage of the product, if this use and/or handling and/or storage are carried out contrary to the instructions on the label.

To access the Safety Data Sheet for this product scan the QR code or use the weblink below



WEBLINK to specific data sheet on manufacturer's website:

www.belchim.co.uk/pdf/MSDS/Markate_MSDS.pdf

Alternatively, contact your supplier.