

Pegasus[®]500SC

Miticide with a new mode of action for control of mites in flowers and vegetables

REGISTRATION NO. PCPB(T) 0194
Suspension concentrate
GUARANTEE; Diafenthiuron 500 g/lit.

KEEP LOCKED OUT OF REACH OF CHILDREN

COMMERCIAL AND AGRICULTURAL CLASS
READ THE LABEL AND ATTACHED LEAFLET BEFORE USE

Shelf Life: At least 2 years from date of manufacture in original unopened containers.

NOTICE TO USER: This pest control product is to be used only in accordance with the directions on this label. It is an offence under the Pest Control Products Act to use or store a pest control product under unsafe conditions.

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MEMBER OF
AGROCHEMICALS
ASSOCIATION OF KENYA
MEMBERSHIP NO. 226



syngenta

Colour band: YELLOW



Mode of Action

The active ingredient of PEGASUS[®] is chemically a thiourea. The thiourea is not active by itself but has first to be converted to its carbodimide derivative. This conversion can take place abiotically in the environment, or due to metabolism in the pest. The mode of action results in paralysis of the pest after intake of or contact with the product. The pest remains immobile on the crop until death after around 3-4 days (hidden knock-down effect). After the first intake no further damage occurs on the crop. It has translaminar activity and has excellent contact and/or stomach action with some ovicidal action.

Recommendations or Use

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

Crop	Pest	Rate/100 lt.	Comments
Ornamentals	Two spotted mite	60-100	2-3 sprays at 7-10 day intervals. Apply at the beginning of the population build up (5-10 mites/leaf), 2nd spray 7 days after the 1st treatment.
Vegetables Beans, Brassicas (cabbage, cauliflower, broccoli), cucurbits, eggplant, sweet pepper, chilli, tomato).	Two spotted mite	60-100	2-3 sprays at 7-10 day intervals. Apply at the beginning of the population build up (5-10 mites/leaf), 2nd spray 7 days after the 1st treatment.

Spectrum of Activity

PEGASUS[®] as an acaricide is highly active against susceptible and OP resistant mite species. It also controls whiteflies, thrips, jassids, aphids and diamond backmoth.

Crop Tolerance: When used as recommended PEGASUS[®] is well tolerated by the target crops. In case of doubt check crop tolerance first. Applications in leafy vegetables and ornamentals, however, should not be made during hot periods. Spray additives, emulsifiers, or crop oils should not be used simultaneously with PEGASUS[®].

Compatibility

PEGASUS[®] is compatible with most standard insecticides and fungicides with neutral reaction. In case of doubt a physical compatibility test should be carried out.

Integrated Pest Management and Selectivity to Beneficials

Diafenthiuron is rated as a soft compound to beneficial arthropods (IOBC class 1, resp. IOBC class 2 for predatory mites and immature stages of bugs). In spite of being slightly harmful to immature stages of predatory bugs, freshly emerging immatures are left unharmed and allow a fast recovery of the population. The product can be rated as safe to the adults of all beneficial insect groups. The product is suitable for IPM programmes in covered crops where it is compatible with the biological control of whiteflies (*Encarsia*) and mites (various species of Phytoseiidae).

Resistance Management with PEGASUS:

Tactics to avoid resistance

- Apply only when necessary e.g. according to economic threshold levels
- Always apply at the correct dose
- Alternate with other control agents. Because of its new mode of action, PEGASUS[®] is an ideal product to be used in a rotation scheme. In order to limit selection pressure on a specific control agent do not rely on a single class of pesticide. This tactic is most effective when products are rotated by pest generations rather than by individual applications. PEGASUS[®] should be applied at a maximum of 4 consecutive applications and should only be re-used after alternation with other products from a different chemical class. Alternation should not be done by switching products from one spray to another within the same pest generation, but by switching after a new generation has begun. This means subsequent application of the same chemical to the same generation if the application intervals are narrow. Switching on a generation basis will avoid multiple selection by several chemicals towards one generation. Where it is not possible to distinguish between individual pest generations, 2-4 applications of PEGASUS[®]s are recommended. Then switch to products from another chemical class before resuming applications with PEGASUS[®] e.g. for whitefly control alternate PEGASUS[®]s with ACTARA[®] and for mite control alternate with DYNAMEC[®].
- Mix with other control agents. Resistance can also be delayed by mixing control agents with different modes of action. PEGASUS[®] can be used in such tank mixtures.
- Crop Programmes – establish crop programmes with PEGASUS[®] and products of other chemical classes.

Application Technique

All equipment has to be properly calibrated before use. Check forward speed, flow rate and ensure thorough, even coverage of the crop, in particular also of the lower parts. Avoid spray drift to non-target sites.

Ground Application

PEGASUS[®] can be applied with tractor boom sprayers, knapsack sprayers or knapsack mistblowers.

Recommended spray volumes with tractor boom sprayers are 150-500 lt./ha. Use 110⁰ flat fan nozzles at 2-5 bar pressure. The mesh size of the nozzle should be adapted to the nozzle orifice, i.e., the smaller the nozzle, the finer the filter. With knapsack sprayers 150-500 lt./ha are recommended. Use hollow cone nozzles with a pressure of 2-5 bars. Keep your walking speed steady.

With knapsack mistblowers the recommended spray volume is 50-150 lt./ha. Always run the engine at full speed for the best droplet formation.

In a 20 litre knapsack sprayer use 32 ml (using 500 litres/ha water volume) and 26 ml using 600 lt./ha water volume.

Protected crops

PEGASUS[®] can be applied with spray guns, horizontal and vertical boom sprayers, or knapsack sprayers. In view of the usually dense crop stands, particular care has to be taken to achieve thorough coverage of the lower plant parts. Spray volumes between 500 and 1500 lt./ha are recommended.

Pre-harvest intervals

Beans, Cole crops, Cabbage (head)	14 days
Brassica leafy vegetables	14 days
Cucumbers, Tomatoes	3 days
Eggplant, Melons	7 days
Onions, Pepper (sweet, chilli)	28 days

Mixing

PEGASUS® is a suspension concentrate. Shake containers well before use to re-homogenise possible sedimentation of the active ingredient. Make certain that the sprayers are clean and not contaminated. Calculate carefully the required amount of spray mixture in order to avoid any leftovers in the spray tank after treatments. For operator safety do not contaminate the outside of the sprayer. If PEGASUS® is mixed with other products, add the products to the water in the spray tank/mixing tank in the following order: First add the product packed in water soluble bags, then, after dissolution of bags, the mixing partner(s). It is advisable, however, to make a compatibility test first.

Tractorised equipment

Fill 1/10 to 1/2 of the spray tank/mixing tank with clean water, start agitation, add the calculated and measured quantity of product, and fill up the spray tank, agitating continuously. Continue agitation during application to maintain a uniform spray mixture. When filling the spray tank/mixing tank, the filling hose should always be above water level in order to prevent suck back.

Portable equipment. If no mixing tanks are used, fill half of the sprayer with clean water, add the calculated and measured quantity of product, close the knapsack lid, shake well for a short time, and then fill the sprayer up with water.

Re-entry interval

Do not enter treated areas for 24 hours unless protective clothing is worn.

Protective clothing and Operator Safety

Occupational hygiene is the key to operator safety! When working with PEGASUS® always have clean water and soap available. AVOID all contact with the concentrate, spray liquid, or rinsates with the skin. In large-scale operations, use proper mixing equipment or closed filling systems. In case of contamination, remove clothes and wash body immediately. Avoid inhalation of spray mist. DO NOT breathe spray mist. DO NOT eat, drink or smoke while handling the product, wash hands and face before doing so. WEAR protective clothing, i.e., for mixing/loading: impermeable gloves, face mask; for application: overalls, hat or cap; facemask, gumboots and impermeable gloves. IF CONTAMINATION OCCURS with concentrate or spray mixture, immediately wash skin thoroughly, flush eyes several times with abundant fresh water, and remove contaminated clothing. AFTER USE, thoroughly clean protective equipment and wash entire body and change clothing. Wash contaminated clothing before re-use.

First Aid

If any indisposition occurs stop work immediately and call a physician. SKIN CONTACT: Remove contaminated clothing and thoroughly wash the affected parts of the body with soap and water. EYE CONTACT: Rinse eyes with clean water for several minutes. If poisoning is suspected, stop work immediately and call a physician. Show label to the physician. If inhaled move to clean fresh air. If swallowed, repeatedly administer medicinal charcoal in plenty of water. Seek medical advice immediately if a large volume of concentrate was ingested.

Note: Never give anything orally to an unconscious person and never induce vomiting.

Poisoning symptoms: No case of human poisoning is on record

Antidote: No specific antidote is known. In case of poisoning apply symptomatic therapy.

WHO Class: II (moderately hazardous)

Environment and wildlife

TOXIC TO BEES. DO NOT spray when bees are actively foraging in an area. Application should be timed to provide the maximum possible interval between treatment

and the next period of bee activity. Bumble bees are little affected by spray deposits on glasshouse crops. Direct exposure to the spray during application should be avoided. Remove the hives prior to application and reintroduce the day after. At the

recommended rates PEGASUS® is practically NON-TOXIC to BIRDS, ALGAE and to the EARTHWORM *Eisenia foetida*. HIGHLY TOXIC TO FISH and to CRUSTACEANS. Direct contamination of surface water and contamination by spray drift have to be strictly avoided. Do not contaminate rivers, lakes, ponds and water used for irrigation or domestic purposes or flowing or stagnant water, by the disposal of product wastes. DO NOT contaminate soil, stagnant or running water by disposal of waste. Newly treated areas

must not be grazed and all livestock is to be kept out; no food or feed should be collected from treated areas for a period corresponding to the pre-harvest interval and all livestock is to be kept out.

Product and Container Disposal

Dispose of surplus product on a landfill site approved for pesticides, or divide remainder into small quantities and bury in a safe place away from water supplies. Dilute small quantities of surplus spray mixture with plenty of water and spray on fallow land. Dispose of containers in a landfill site approved for pesticides, or burn in a safe place. DO NOT re-use empty containers for any other purpose, especially not for food, feed or storing drinking water.

Leakage and Spillage

Remove heavily contaminated soil and bury in a safe place away from water supplies.

Spillage: soak up with sand, sawdust, soil or an oil-binding agent. Collect contaminated material thoroughly and bury in a safe place or put in a waste bin or plastic bag, mark it and dispose of on a landfill site approved for pesticides. Treat spill area with plenty of water. Do not re-use-spilt product.

Storage: Store away from sun and damp in a cool dry place. Store in original tightly closed containers in a well-ventilated area. Avoid storage above 35°C. Store under lock and key, away from foodstuffs, drinking water, animal feeds, children, animals and unauthorised persons.

Notice to User

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User's Risk

Seller's guarantee is limited to the terms set out on the label and subject thereto, the buyer assumes the risk to persons or property arising from the use or handling of this product and accepts the product on that condition. All recommendations for use of the product are based on the current state of the manufacturer's knowledge. Since the manufacturer cannot control the application, use, storage or processing of the product, the manufacturer cannot accept responsibility thereof.

Since the occurrence of resistance cannot be foreseen, the manufacturer accepts no responsibility for any loss or damage to crops resulting from failure of PEGASUS® to control a resistant strain of the target pest.

Before using the product, please read the attached product label and accompanying packaging leaflet.

Use pesticides safely.