



## FREQUENTLY ASKED QUESTIONS

### GENERAL QUESTIONS

#### 1. What are NUVAN<sup>®</sup> PROSTRIPS<sup>®</sup>?

NUVAN PROSTRIPS are constructed of a resin plastic impregnated with DDVP. They require no mixing or preparing are easy to use and may be applied for long-lasting control of many crawling and flying pests. Two versions are currently sold to the Professional Pest Management market: NUVAN PROSTRIPS (16g) and the larger NUVAN PROSTRIPS+ (65g).

#### 2. How do NUVAN PROSTRIPS work?

NUVAN PROSTRIPS work through vapor action. Vapors emerge from the strip slowly over time and control pests exposed to the vapors.

#### 3. What is DDVP?

DDVP is the active ingredient in NUVAN PROSTRIPS. The common name for this active ingredient is dichlorvos and its chemical name is 2,2-dichlorovinyl dimethyl phosphate.

#### 4. Was DDVP banned?

No, DDVP has never been banned as a registered product. In fact, it is currently used in agriculture to protect stored products and commodities such as stored grains and foodstuffs. Pest strips containing DDVP have remained on the market since first introduced in the 1960s. However, pest strips were not labeled for professional use before the introduction of NUVAN PROSTRIPS.

#### 5. How long do NUVAN PROSTRIPS last?

When used in accordance with label directions, NUVAN PROSTRIPS provide protection from labeled pests for up to four months.

#### 6. What is the mode of action of NUVAN PROSTRIPS?

The active ingredient in NUVAN PROSTRIPS, DDVP, is an organophosphate insecticide, which works by inhibiting acetylcholinesterase. During normal nerve impulse transmission in insects, an impulse is passed from one neuron to another via a substance called acetylcholine. After the impulse is transmitted, acetylcholine must be broken down to prevent additional impulses from being initiated. The enzyme that allows this breakdown to occur is called acetylcholinesterase. DDVP inhibits acetylcholinesterase, allowing acetylcholine to continue to induce impulses, which paralyzes the insect's nervous system and eventually cause it to die.

#### 7. Are NUVAN PROSTRIPS safe?

Yes. When used in accordance with label directions, NUVAN PROSTRIPS do not pose a risk to humans or domestic animals.

#### 8. How do I use NUVAN PROSTRIPS?

NUVAN PROSTRIPS are easy to use and require minimal set-up or maintenance. Each strip comes in a sealed foil packet. Simply remove the strip from the foil packet and place it in the provided plastic cartridge. Hang or place the cartridge where pests are a concern. (NUVAN PROSTRIPS may also be used without the cartridge.) NUVAN PROSTRIPS may also be used in confined spaces or airtight containers for application to specific items. The strip starts to work when removed from the foil packet and is designed to protect a specified volume of area for up to four months against labeled pests. After the strip expires, simply wrap it in paper or plastic and throw it away. Place a new strip in the cartridge for continued pest control. Always read and follow label directions.

#### 9. Where can I use NUVAN PROSTRIPS?

NUVAN PROSTRIPS and NUVAN PROSTRIPS+ may be used in many areas, including attics, storage units, sheds, crawl spaces, pump houses, utility boxes, garbage cans, trash dumpsters and receptacles, compactors, vacation homes, cabins, boats and other areas.

NUVAN PROSTRIPS also can be used in some locations that are not appropriate for NUVAN PROSTRIPS+, such as closets, cupboards, pantries and recreational vehicles.

Always read and follow label directions.



## GENERAL QUESTIONS (con't)

### 10. What is the novel application method?

NUVAN PROSTRIPS are applied by simply placing the strips in the area intended to be treated. The strip then controls pests in the treated area for up to four months.

### 11. Are NUVAN PROSTRIPS effective immediately?

Depending upon various environmental conditions (temperature, barometric pressure, etc.) NUVAN PROSTRIPS effectively treat the intended area when a sufficient amount of DDVP vapors evaporate from the strip to control the target pest. It can take several hours, up to a day or more, for the effective DDVP concentration to be reached in a treated area for the target pest.

### 12. Is there an odor from the vapor action?

No, vapors from the NUVAN PROSTRIPS are virtually undetectable by humans, domestic animals and pests.

### 13. How long does DDVP last?

DDVP is a non-residual insecticide. After application, DDVP acts quickly on labeled pests and then it is rapidly degraded. The impregnated resin strip continually releases small amounts of DDVP, for up to four months, which makes NUVAN PROSTRIPS perform like a residual product.

### 14. What pests are NUVAN PROSTRIPS effective against?

NUVAN PROSTRIPS and NUVAN PROSTRIPS+ are effective against all labeled pests, including ants, bed bugs, beetles, cockroaches, earwigs, flies, mosquitoes, moths, silverfish, spiders and wasps. See label for a complete list of controlled pests.

### 15. Is DDVP effective against flies and other flying pests?

Yes. The DDVP contained in NUVAN PROSTRIPS is highly effective against many flying pests, including flies.

### 16. Are NUVAN PROSTRIPS a good product to use for flea control?

NUVAN PROSTRIPS are not labeled for flea control.

## BED BUG CONTROL WITH NUVAN PROSTRIPS

### 17. Is DDVP effective against bed bugs?

DDVP is highly effective against all bed bug strains, even strains that may be resistant to other pesticide products. NUVAN PROSTRIPS are registered for control of bed bugs.

### 18. Can NUVAN PROSTRIPS be used to eliminate bed bugs from belongings and household items?

Yes. Nuvan may be used to eliminate bed bugs from various infested items.

### 19. How should NUVAN PROSTRIPS be used to eliminate bed bugs from infested items?

Infested items must be placed within a confined space, such as an airtight container with NUVAN PROSTRIPS. Vapors from the NUVAN PROSTRIPS fill the confined space, killing bed bugs exposed to the vapors within the treated space.

### 20. How long does it take for bed bugs to be killed using NUVAN PROSTRIPS?

A minimum of 48 to 72 hours are required to control bed bug nymphs and adults. A minimum of one week is required to control bed bug eggs.



## BED BUG CONTROL WITH NUVAN PROSTRIPS (con't)

### 21. What factors can affect treatment results with NUVAN PROSTRIPS?

The most significant factor that will impact bed bug control by NUVAN PROSTRIPS is the ability of the treatment vapors to reach the bed bugs. Within a confined and sealed treatment space, diffusion moves the vapors to hidden areas. Depending on the configuration of the treatment space, this diffusion can take anywhere from a few hours up to a day or more.

### 22. Can I seal items in a plastic bag with NUVAN PROSTRIPS to kill bed bugs?

NUVAN PROSTRIPS may be used in plastic bags. NUVAN PROSTRIPS+ cannot be used in plastic bags. There are some logistical issues that may affect exposure and efficacy when using NUVAN PROSTRIPS in a plastic bag, including the quantity and density of the items in the bag, and the temperature and quantity of free air space within the bag. If a plastic bag is used, it should be at least 2 mL thick and must be sealed with tape or other suitable material to render it virtually airtight.

### 23. What is meant by free air space within the bag?

Nuvan works by vapor action. The vapors must be able to successfully travel to the areas where bed bugs and eggs are hidden in order for it to work. For this to occur, there must be air space around items in which the vapors can move. For best results, do not force excess air out of the bag or use a vacuum seal.

### 24. What would be better than using a plastic bag?

A plastic storage bin or other sturdy container with a strong seal would be superior to using a plastic bag because the rigid sides of the storage bin will not cave in and reduce available free air space.

### 25. What might cause a NUVAN PROSTRIPS bed bug treatment to fail?

Even though NUVAN PROSTRIPS vapors are 100 percent effective against bed bugs, there may be instances where it appears that bed bugs have survived a treatment. Should this occur, it indicates that bed bugs were hidden in areas the treatment vapors could not reach or penetrate. However, such results can be avoided through proper preparation and treatment methodology.

### 26. What other general-use tips are there for using NUVAN PROSTRIPS to treat bed bugs?

The following general use tips should be considered to optimize your results when using NUVAN PROSTRIPS to eliminate bed bugs:

- a. Remember, for NUVAN PROSTRIPS to work, the treatment vapors must be able to reach the bed bugs or eggs where they are hiding.
- b. Vapors from NUVAN PROSTRIPS are not true fumigant gases and will not pass through certain materials as a fumigant would.
- c. Vapors from NUVAN PROSTRIPS can enter cracks, crevices and open void areas where bed bugs may be hiding.
- d. Gentle air circulation within the treated space will enhance the ability of the treatment vapors to be delivered to areas where bed bugs may be hiding.
- e. Normal room temperatures (about 65 to 75°F) in the treatment space will produce better results than cooler temperatures.
- f. Although some bed bugs may be killed in just minutes, optimal results can only be attained when the required exposure time has been applied (48 to 72 hours for nymphs and adults, one week for eggs).
- g. Avoid over-stuffing a plastic bag or treatment container when using NUVAN PROSTRIPS to kill bed bugs.
- h. Do not fill a plastic bag or treatment container over two-thirds full when using NUVAN PROSTRIPS to kill bed bugs.
- i. Be sure to capture air within the sealed plastic bag or treatment container when using NUVAN PROSTRIPS to kill bed bugs.
- j. Shoes, purses, belts and other such items that may not be placed in a clothes dryer are good choices for NUVAN PROSTRIPS bed bug treatment. Clothing and garments may be rendered bed bug-free quicker by using a typical dryer.



**27. What should I do after the NUVAN PROSTRIPS treatment is completed?**

When the treatment period is completed it is wise to inspect the treated items and space to ensure that all bed bugs have been killed. Treated items should be aired out or ventilated in an open space to remove lingering DDVP vapors, if any.

**28. What are suitable ways to ventilate or air out NUVAN PROSTRIPS treated items?**

NUVAN PROSTRIPS-treated items and containers may be opened outdoors to ventilate vapors. If the ventilation process must be conducted indoors, use fans placed in open windows or doors to provide fresh air ventilation of treated items.

**29. Anything else that should be done after items are treated for bed bugs using NUVAN PROSTRIPS?**

The treatment vapors of NUVAN PROSTRIPS provide no residual insecticidal activity and dissipate relatively quickly. However, some people may elect to wipe treated items with a damp cloth after the treatment has been completed.

**30. How are NUVAN PROSTRIPS packaged?**

NUVAN PROSTRIPS are available in two sizes. The large NUVAN PROSTRIPS+ are 65g strips designed for application in 900 to 1,200 cubic feet areas. The small NUVAN PROSTRIPS are 16g strips designed for application in 100 to 200 cubic feet areas. NUVAN PROSTRIPS are sealed in foil packets and convenient plastic cages are provided for ease of application. These products are packaged as follows:

PRODUCT	NUVAN PROSTRIPS Size	NUVAN PROSTRIPS per Pack	Packs per Carton	Total NUVAN PROSTRIPS per Carton
NUVAN PROSTRIPS+	65g	3	6	18
NUVAN PROSTRIPS	16g	12	6	72

**31. What do I do with the strips I don't need to use after I've already opened a foil pack?**

To optimize the effectiveness of NUVAN PROSTRIPS, it's best to use the strips immediately after the foil packet has been opened. However, the foil packet may be re-sealed to prolong the useful life of unused NUVAN PROSTRIPS. The unused NUVAN PROSTRIPS must be carefully sealed within the foil pouch to assure that little or no air or moisture is present within the foil packet. If the foil packet is not thoroughly resealed, the useful life of the NUVAN PROSTRIPS may be diminished.

**32. What causes the useful life of the strips to decrease if they are left in an opened foil packet?**

Once the foil packet is opened, the DDVP present in the resin plastic strip may begin to interact with moisture present within the air. Moisture causes DDVP to degrade over time.

**33. How do I properly reseal the packet to protect the unused NUVAN PROSTRIPS?**

To properly protect their useful life, NUVAN PROSTRIPS are sealed in foil packets during manufacturing. If all of the NUVAN PROSTRIPS contained in the foil packet aren't used, contain and seal the remaining unused strips within the foil packet. Squeeze out as much air as possible from the foil packet, fold over the opened end at least twice and seal with tape to sufficiently protect your unused NUVAN PROSTRIPS. The shelf life of NUVAN PROSTRIPS may be diminished by as much as one month or more if they are not used when the foil pack is initially opened. We do not recommend storing NUVAN PROSTRIPS in zip-lock plastic bags. NUVAN PROSTRIPS are better protected in the foil-lined packet. Placing the sealed foil packet within a closed zip-lock bag may be useful when storing unused NUVAN PROSTRIPS.

**34. How do I dispose of used NUVAN PROSTRIPS?**

Used NUVAN PROSTRIPS with no remaining useful life may be disposed of by wrapping in paper, plastic or other suitable material and placing in the trash.

For more information about NUVAN PROSTRIPS contact your local authorized AMVAC® distributor, call 1-888 GO AMVAC (1-888-462-6822) or visit [amvac-chemical.com](http://amvac-chemical.com).

