

POISON

KEEP OUT OF REACH OF CHILDREN

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

VENDEX[®]

MITICIDE

ACTIVE CONSTITUENT: 550 g/L FENBUTATIN OXIDE



GROUP **12B** INSECTICIDE

**For the control of certain mites in fruit,
hops and ornamentals as indicated in the
Directions for Use table**

IMPORTANT: READ THE ATTACHED LEAFLET/BOOKLET BEFORE USE.

CONTENTS: 5L

**UPL Australia Pty Ltd
Level 3, 70 Hindmarsh Square,
Adelaide, SA, 5000
Tel: (08) 8112 0900
Fax: (08) 8112 0999**



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STORAGE AND DISPOSAL

Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight.

Triple rinse containers before disposal. Add rinsings to the spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots in compliance with relevant Local, State or Territory government regulations.

Do not burn empty containers or product.

This container can be recycled if it is clean, dry, free of visible residues and has the drumMUSTER logo visible. Triple-rinse container for disposal. Dispose of rinsate or any undiluted chemical according to state legislative requirements. Wash outside of the container and the cap. Store cleaned container in a sheltered place with cap removed. It will then be acceptable for recycling at any drumMUSTER collection or similar container management program site. The cap should not be replaced, but may be taken separately.

SAFETY DIRECTIONS

May irritate the eyes and skin. Avoid contact with eyes and skin. Do not inhale spray mist. When preparing spray wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow-length PVC gloves and face shield. When using the prepared spray wear elbow-length PVC gloves. If product or spray on skin, immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, face shield and contaminated clothing.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26, New Zealand 0800 764 766. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

SAFETY DATA SHEET

Additional information is listed in the Safety Data Sheet that can be obtained from the supplier.

CONDITIONS OF SALE

UPL Australia Pty Ltd accepts responsibility for the consistent quality of the product; however since the use and application of the product is beyond control, the company accepts no responsibility whatsoever for any loss, damage or other result following the use of the product whether used in accordance with directions or not; other than those mandatorily imposed by statutes, the liability is limited to the replacement of the goods and is conditional upon a claim made in writing and, where necessary, a sufficient part of the goods being returned for proper examination by the company within thirty days of sale.

Additional statements required by Globally Harmonised System for classification and labelling of chemicals (GHS) and Safe Work Australia:

Toxic if inhaled. Very toxic to aquatic life with long lasting effects. Read label before use. Avoid breathing dust, fume, gas, mist, vapours or spray. Use only outdoors or in a well-ventilated area. Avoid release to the environment.

UN No: 2810	TOXIC LIQUID, ORGANIC, N.O.S. (FENBUTIN OXIDE)
In an Emergency Dial 000 Police or Fire Brigade	24 Hour Emergency Response Service Australia 1800 033 111 International +61 3 9663 2130
PG: III	HAZCHEM CODE: 2X



BATCH NO

DOM

APVMA Approval No: 68860/136356

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09/22/B

DIRECTIONS FOR USE

RESTRAINTS

DO NOT apply by aircraft.

DO NOT use in orchards where products likely to cause mite flaring have been used or are planned to be used.

CROP	PEST	WHP	RATE	CRITICAL COMMENTS
IMPORTANT: Rates for all crops except BANANAS and STRAWBERRIES are for DILUTE APPLICATION with SPRAY VOLUMES based on PLANT ROW VOLUME: refer to General Instructions for details. DO NOT APPLY TO DECIDUOUS FRUIT, HOPS, CITRUS AND ORNAMENTALS OTHER THAN AS A DILUTE SPRAY. Refer to General Instructions for RESISTANCE MANAGEMENT.				
Apples Pears	Two-spotted mite (<i>Tetranychus urticae</i>)	2 days	20 mL/100 L (rate with biological control)	WHERE BIOLOGICAL CONTROL OF mites IS BEING PRACTICED: Apply 20 mL/100 L as required to assist control by the biological agent(s), determined by frequent field checks conducted by appropriately trained personnel. WHERE BIOLOGICAL CONTROL IS NOT BEING PRACTICED: Apply 40 mL/100 L at the first sign of mite activity, well before a dense infestation develops. Repeat as required, subject to resistance management. Where biological control of European Red Mite is not being practiced and after an OIL spray has been applied at recommended rates BEFORE BUD-BURST; APPLY Vendex TO PREDOMINANTLY MOTILE STAGES of European Red Mite IN DECEMBER. Re-apply as required but well before a dense infestation develops.
Peaches Nectarines	European red mite (<i>Panonychus ulmi</i>)	14 days	<u>OR</u> 40 mL/100 L (rate without biological control)	
Apples Pears	Bryobia mite (<i>Bryobia rubrioculus</i>)	2 days	40 mL/100 L	Apply at first sign of mite activity, well before a dense infestation develops. Repeat as required. This pest is normally controlled by the programme for two-spotted mite and European red mite.
Peaches Nectarines		14 days		
Hops	Two-spotted mite (<i>Tetranychus urticae</i>)	2 days	40 mL/100 L	Apply at the first sign of activity, well before a dense infestation develops. Repeat as required, subject to resistance management.
Avocados	Tea red spider mite (<i>Oligonychus coffeae</i>), Six spotted mite (<i>Eotetranychus sexmaculatus</i>)	14 days	38 mL/100 L	Apply at the first sign of mite activity and repeat as infestations indicate. Spot spray individual trees only. Two applications a fortnight apart is normally adequate to control these pests.
Bananas	Two-spotted mite (<i>Tetranychus urticae</i>), Banana spider mite (<i>Tetranychus lambi</i>)	1 day	370 mL/ha	Apply according to pest incidence, well before a dense infestation develops. Repeat as required, subject to resistance management.
Citrus	Citrus rust mite (<i>Phyllocoptura oleivora</i>)	7 days	45 mL/100 L	Apply according to pest incidence, well before a dense infestation develops. Repeat as required.
	Brown citrus rust mite (<i>Teqalophus australis</i>)		30 mL/100 L	
	Citrus bud mite (<i>Eriophyes sheldoni</i>)		20 mL/100 L	

Table continued on next page

DIRECTIONS FOR USE *Continued*

CROP	PEST	WHP	RATE	CRITICAL COMMENTS
Strawberries	Two-spotted mite (<i>Tetranychus urticae</i>)	1 day		Apply at the first sign of mite activity. Ensure that the spray thoroughly covers the undersides of all leaves. Repeat as required, subject to resistance management.
			300 mL/ha	Use this rate when the spray volume is greater than 2000 L/ha.
			400 mL/ ha	Use this rate when the spray volume used is between 400 and 2000 L/ha.
			700 mL/ha	Use this rate when the spray volume used is between 200 and 400 L/ha.
Ornamentals	Two-spotted mite (<i>Tetranychus urticae</i>) European red mite (<i>Panonychus ulmi</i>)	-	40 mL/100 L	Apply at the first sign of mite activity, well before a dense infestation develops. Repeat as required, subject to resistance management. Due to the diversity of ornamentals and growing conditions, plant reactions to VENDEX must be checked to ascertain safety before each large scale application is made. UPL Australia Pty Ltd will not accept liability for any adverse plant reactions caused by VENDEX.

NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.

WITHHOLDING PERIODS

BANANAS, STRAWBERRIES: DO NOT HARVEST FOR 1 DAY AFTER APPLICATION.

APPLES, PEARS: DO NOT HARVEST FOR 2 DAYS AFTER APPLICATION.

CITRUS: DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION.

AVOCADOS, PEACHES, NECTARINES: DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION.

GENERAL INSTRUCTIONS

MODE OF ACTION: This product kills adults and nymphs. It acts more rapidly in hot weather than in cool weather. Treatment of light infestations is more effective than treatment of heavy infestations.

MIXING**SHAKE CONTAINER WELL BEFORE USE.**

The product mixes readily with water. Partially fill the spray vat and with the agitation system operating, slowly add the required amount of VENDEX after adding any other spray materials. Top up the spray vat with water. The agitation system should be operated continuously until all the spray is applied. Sprays containing VENDEX should be applied within 3 hours of preparation.

WETTING AGENTS: When VENDEX is being applied at dilute volumes the addition of a wetting agent is unnecessary, but one can be added if required for other products in the spray. The addition of a wetting agent, such as Shirwet+ 600 or Nufarm Surfactant 600 at 15 mL/100 L or Monsoon+ at 30 mL/100 L is recommended when VENDEX is applied at lower volumes to bananas and strawberries.

APPLICATION

GENERAL: THOROUGH COVERAGE IS ESSENTIAL FOR MAXIMUM EFFECTIVENESS. Because VENDEX is highly repellent to mites, it drives many from sprayed to unsprayed zones within plants. Here some survive their limited contact with VENDEX and multiply to provide a source of reinfestation.

CALCULATION OF SPRAY VOLUMES BASED ON PLANT ROW VOLUME

PLANT ROW VOLUME:

The PLANT ROW VOLUME is calculated as follows:

PLANT ROW VOLUME = 10 times (HEIGHT of PLANT in METRES) times (WIDTH of PLANT in METRES) divided by (BETWEEN ROW SPACE in METRES)

DILUTE SPRAY VOLUMES:

The DILUTE SPRAY VOLUME in LITRES per HECTARE is calculated as follows:

DILUTE SPRAY VOLUME = (PLANT ROW VOLUME) times (SPRAY VOLUME FACTOR) Refer to the relevant crop instructions below for the appropriate SPRAY VOLUME FACTOR.

DECIDUOUS FRUIT: Apply only as a dilute spray. Apply with an air-blast sprayer calibrated to deliver the required spray volume based on PLANT ROW VOLUME and the following SPRAY VOLUME FACTORS:

100 for trees of low foliage density

125 for trees of moderate foliage density

150 for trees of high foliage density

The equipment should be adjusted so that the spray is evenly distributed throughout the trees. The performance of VENDEX increases with the fineness of the spray. Preferably apply using a sprayer fitted with cone nozzles. If flat fan nozzles are used a minimum of 60 should be operated.

CITRUS: Apply only as a dilute spray. The spray equipment should be calibrated to deliver the required spray volume based on PLANT ROW VOLUME and the following SPRAY VOLUME FACTORS:

200 for trees of low foliage density

250 for trees of moderate foliage density

300 for trees of high foliage density

Citrus canopies are difficult to penetrate and application using an oscillating boom sprayer is preferred to application using an air-blast spray. If an air-blast sprayer is used, ensure that it is opening the canopy to permit entry of the spray to the interior of the tree. Spray equipment should be adjusted so that the spray is evenly distributed throughout the trees.

STRAWBERRIES: May be applied as a high to medium volume spray, depending on the rate of VENDEX that is applied. Irrespective of the spray volume and rate used, ensure that the spray thoroughly covers the undersides of all leaves. This can be achieved by adjustment of the proximity and direction of the spray nozzle(s) relative to the plants, combined with selection of a spray pressure that will move and expose the undersides of the leaves. Air-blast assistance is recommended for spray volumes between 400 and 1000 litres per hectare and is essential for spray volumes below 400 litres per hectare.

BANANAS: May be applied in 400 litres of water per hectare or more. Apply as a fine spray, preferably using a sprayer fitted with cone nozzles. DO NOT apply at volumes that produce excessive runoff.

ORNAMENTALS: Apply as a dilute spray. Use sufficient volume and direct the spray to ensure that the undersides of the leaves are thoroughly covered.

HOPS: Apply only as a dilute spray. Apply with an air-blast sprayer calibrated to deliver the required spray volume based on PLANT ROW VOLUME and a SPRAY VOLUME factor of 130 for vines in full leaf. The equipment should be adjusted so that the spray is evenly distributed throughout the vines. The performance of VENDEX increases with the fineness of the spray. Preferably apply with a sprayer fitted with cone nozzles.

BIOLOGICAL CONTROL: Recommendations for where biological control is being practised should only be followed if one or more of the following are established in the particular orchard; *Typhlodromus occidentalis*, *Typhlodromus pyri*, *Phytoseiulus persimilis*. If none of these predators is established, follow the recommendations for where biological control is not being practised.

INSECTICIDE RESISTANCE WARNING

GROUP **12B** INSECTICIDE

For insecticide resistance management VENDEX Miticide is a group 12B insecticide. Some naturally occurring insect biotypes resistant to VENDEX and other Group 12B insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if VENDEX or other Group 12B insecticides are used repeatedly. The effectiveness of VENDEX on resistant individuals could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use, UPL Australia Pty Ltd accepts no liability for any losses that may result from the failure of VENDEX to control resistant insects.

VENDEX may be subject to specific resistance management strategies. For further information contact your local supplier, UPL Australia Pty Ltd representative or local agriculture department agronomist.

Do NOT use VENDEX in areas where specific VENDEX resistance has been identified. For further information on resistance management refer to the attached leaflet. UPL Australia Pty Ltd cannot accept responsibility for loss or damage to crops arising from resistance.

Two types of resistance have been identified:

1. A "general organotin-resistance" which confers moderate resistance to VENDEX.

2. A "specific VENDEX resistance" which confers high resistance to VENDEX.

While the effectiveness of VENDEX against strains that possess only "general organotin-resistance" is substantially less than against fully susceptible strains, a moderate level of control can be achieved by applying well before a dense infestation develops.

VENDEX is ineffective against the strains of two-spotted mite that possess "specific VENDEX resistance" and these strains cannot be controlled by VENDEX. These strains are known to exist in the Goulburn Valley, in Victoria, but they may have developed or may well develop in other areas. There is no evidence that strains of European red mite resistant to VENDEX have developed in Australia, however development of such strains is likely.

To maximise the useful life of VENDEX, users are requested to:

(a) Establish biological control using predatory mites. This will enable the use of lower rates of VENDEX.

(b) Regularly monitor mite infestations before and after treatment to ensure appropriate timing of applications and assess susceptibility.

(c) Where possible, alternate VENDEX with a miticide from another chemical group.

(d) Regularly inspect, maintain and calibrate application equipment to ensure it is operating efficiently. Thorough spray coverage will minimise the number of treatments needed to control mites.

(e) If an end of season clean-up treatment is required, use a miticide from another chemical group.

COMPATIBILITY

ALKALINE MATERIALS: VENDEX is incompatible with alkaline materials.

SPRAYING OILS: Adding spraying oils to VENDEX can reduce speed of action. Where rapid speed of action is required do NOT mix spraying oils with VENDEX.

FOLIAR FERTILISERS: Do NOT mix with foliar fertilisers.

2-WAY MIXTURES: VENDEX is compatible with any one of the following: Copper oxychloride, Gusathion, Hold-on treatments for pears – NAA and 2,4-D, Kocide, Lorsban, Nudrin 225, Lannate L, SaproI®, thiram, ziram, zineb and Apollo.

3-WAY MIXTURES: Compatible and incompatible mixtures of VENDEX with fungicides and insecticides are listed in the following table:

INSECTICIDE	Gusathion	Nudrin or Lannate L	Lorsban
FUNGICIDE:			
Copper oxychloride	YES	YES	NO
Kocide	YES	YES	YES
SaproI	YES	YES	YES
Thiram	YES	YES	YES
Ziram	YES	YES	YES

YES = compatible with VENDEX

NO = incompatible with VENDEX

PROTECTION OF LIVESTOCK

DO NOT graze or feed animals on cover crops in sprayed orchards.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Dangerous to fish. DO NOT contaminate streams, rivers or waterways with the chemical or used containers.

STORAGE AND DISPOSAL

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Triple rinse containers before disposal. Add rinsings to the spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots in compliance with relevant Local, State or Territory government regulations.

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