



Product Name: Surefire Enigma 240 SC Insecticide
APVMA Approval No: 89540 / 131425

Label Name:	Surefire Enigma 240 SC Insecticide
Signal Headings:	READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Constituent Statements:	ACTIVE CONSTITUENT: 240 g/L METHOXYFENOZIDE
Mode of Action:	GROUP 18 INSECTICIDE
Statement of Claims:	For the control of Lightbrown Apple Moth on Apples & Pears (Pome Fruit), Blueberries, Citrus, Grapevines and Kiwifruit; and for the control of various other Lepidopteran pests of Almonds, Apples & Pears (Pome Fruit), Avocado, Coffee, Custard Apple, Eggplant, Longan, Lychee, Peppers (Capsicum and Chilli), Okra, Macadamia and Tomatoes as specified in the Directions for Use
Net Contents:	1 L - 1000 L
Restrains:	
Directions for Use:	This section contains file attachment.
Other Limitations:	
Withholding Periods:	HARVEST Tomato, Peppers (Capsicum and Chilli), Eggplant And Okra: NOT REQUIRED WHEN USED AS DIRECTED. Citrus Fruits: DO NOT HARVEST FOR 1 DAY AFTER APPLICATION. Longan: DO NOT HARVEST FOR 3 DAYS AFTER APPLICATION. Almond: DO NOT APPLY WITHIN 7 DAYS OF HARVEST.

Blueberry: DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION.
 Avocado, Coffee, Custard Apple, Kiwifruit, Lychee and Pome Fruit:
 DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION.
 Grapes (for domestic consumption): DO NOT HARVEST FOR 21 DAYS AFTER APPLICATION.
 Grapes (for export or wine production): Consult your winery, industry spray diary or peak industry body for the recommended withholding period (export harvest interval) required to meet export residue requirements.
 Macadamia: DO NOT HARVEST FOR 4 WEEKS AFTER APPLICATION.

GRAZING
 All Crops, Orchards, Plantations and Vineyards:
 DO NOT GRAZE TREATED CROPS.
 DO NOT ALLOW LIVESTOCK TO GRAZE WITHIN TREATED ORCHARDS, PLANTATIONS OR VINEYARDS.

Trade Advice:

TRADE ADVICE:
 NOTE – CROPS INTENDED FOR EXPORT
 Surefire Enigma 240 SC Insecticide may leave detectable chemical residues in harvested produce. Overseas markets may not have appropriate residue tolerances in place or may have established tolerances which are lower than Australian maximum residue limits. Some crops for export to these destinations may require a longer harvest withholding period. If you plan to use this product on crops destined for export, please check with your exporter before using Surefire Enigma 240 SC Insecticide.

General Instructions:

SUREFIRE ENIGMA 240 SC INSECTICIDE is very suitable for use in orchards and vineyards using integrated pest management (IPM) programs.

MIXING
 Prior to pouring, shake container vigorously, then add the required quantity of SUREFIRE ENIGMA 240 SC INSECTICIDE to water in the spray vat while stirring or with agitators in motion.

WETTING AGENTS
 Not all surfactants or crop oils are of equal quality and if intending to use other wetting agents it is recommended that you consult PCT Holdings Pty Ltd prior to use. PCT Holdings Pty Ltd only supports the use of Agral* Spray adjuvant and Chemwet* 1000 with this formulation.

Dilute Spraying:
 Use a sprayer designed to apply high volumes of water up to the point of runoff and matched to the crop being sprayed. Set up and operate the sprayer to achieve even coverage throughout the crop canopy. Apply sufficient water to cover the crop to the point of runoff. Avoid excessive runoff. The required water volume may be determined by applying different test volumes, using different settings on the sprayer, from industry guidelines or expert advice. Add the amount of product specified in the Directions for Use table for each 100 L of water. Spray to the point of runoff. The required dilute spray volume will change and the sprayer set up and operation may also need to be changed as the crop grows.

Concentrate Spraying:
 Use a sprayer designed and set up for concentrate spraying (that is a sprayer which applies water volumes less than those required to reach the point of runoff) and matched to the crop being sprayed. Set up and operate the sprayer to achieve even coverage throughout the crop canopy using your chosen water volume. Determine an appropriate dilute spray volume (see Dilute Spraying) for the crop canopy. This is needed to calculate the concentrate mixing rate.
 The mixing rate for concentrate spraying can then be calculated in the following way:
 Example Only

1. Dilute spray volume as determined above: For example 1500 L/ha
2. Your chosen concentrate spray volume: For example 500 L/ha
3. The concentration factor in this example is: $3 \times$ (i.e. $1500 \text{ L} \div 500 \text{ L} = 3$)

4. If the dilute label rate is 25 mL/100 L, then the concentrate rate becomes 3 x 25, that is 75 mL/100 L of concentrate spray

The chosen spray volume, amount of product per 100 L of water, and the sprayer set up and operation may need to be changed as the crop grows.

DO NOT use a concentrate rate higher than that specified in the CRITICAL COMMENTS. For further information on concentrate spraying, users are advised to consult relevant industry guidelines, undertake appropriate competency training and follow industry Best Practices.

COMPATIBILITY

SUREFIRE ENIGMA 240 SC INSECTICIDE is incompatible with mineral spray oils.

DO NOT mix concentrates together but add each to the spray tank separately. As formulations of other manufacturers' products are beyond the control of PCT Holdings Pty Ltd, all mixtures should be tested prior to mixing commercial quantities. As changes in climatic conditions can alter the sensitivity of plants to mixtures of sprays, PCT Holdings Pty Ltd cannot be responsible for the behaviour of such mixtures.

Resistance Warning:

INSECTICIDE RESISTANCE WARNING GROUP 18 INSECTICIDE

For insecticide resistance management, Surefire Enigma 240 SC Insecticide is a Group 18 Insecticide. Some naturally occurring insect biotypes resistant to Surefire Enigma 240 SC Insecticide and other Group 18 insecticides may exist through normal genetic variability in any insect population. Repeated use of one particular insecticide or insecticides from the same chemical group can lead to the early development of insect resistance to that insecticide or chemical group. The effectiveness of Surefire Enigma 240 SC Insecticide on resistant individuals could be significantly reduced. Resistant individuals can eventually dominate the insect population if Surefire Enigma 240 SC Insecticide and other Group 18 insecticides are used repeatedly. Since occurrence of resistant individuals is difficult to detect prior to use, PCT Holdings Pty Ltd accepts no liability for any losses that may result from the failure of Surefire Enigma 240 SC Insecticide to control resistant insects. Surefire Enigma 240 SC Insecticide may be subject to specific resistance management strategies. For further information contact your local supplier, PCT Holdings representative or local agricultural department agronomist.

Precautions:

DO NOT apply using spray equipment carried on the back of the user.

RE-ENTRY

DO NOT allow entry into treated areas until the spray has dried. If prior entry is necessary, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and chemical resistant gloves. Clothing must be laundered after each day's use.

Protections:

PROTECTION OF LIVESTOCK

Low hazard to bees. May be applied on plants at any time. Keep livestock out of operational areas during treatment. Avoid spray drift onto adjoining properties or stock areas.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Toxic to aquatic life with long lasting effects. DO NOT spray across open bodies of water. DO NOT apply under meteorological conditions or from spraying equipment which could be expected to cause spray to drift onto adjacent areas, particularly wetlands, waterbodies or watercourses. DO NOT contaminate wetlands or watercourses with this product or used containers.

Storage and Disposal:

KEEP OUT OF REACH OF CHILDREN.

DO NOT store near food, feedstuffs, fertilisers or seed.

Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight.

Triple-rinse containers before disposal. Add rinsings to 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.

Refillable containers:

Empty contents fully into application equipment. Close all valves and return to designated collection point for refill or storage.

SPILL AND LEAK MANAGEMENT

Do not touch or walk through spilled material. Wear a face shield or goggles, overalls buttoned to neck and wrist, chemical resistant gloves and footwear. Stop leak when safe to do so. Dam area and prevent entry into waterways, and drains.

Small spills/leaks: Absorb with material such as sand, soil or sawdust. Collect spilled product and place in sealable container for disposal. Spill residues may be cleaned using water and detergent. Contain and absorb wash water for disposal. Absorb and collect washings and place in the same sealable container for disposal. Dam the area of large spills and report them to PCT Holdings Pty Ltd on 1800 630 877.

Safety Directions:

When opening the container, preparing the spray and using the prepared spray, wear cotton overalls buttoned to neck and wrist (or equivalent clothing) and elbow-length chemical resistant gloves. After each day's use, wash gloves and contaminated clothing.

First Aid Instructions:

If poisoning occurs contact a doctor or Poisons Information Centre. Phone Australia 13 11 26, New Zealand 0800 764 766.

First Aid Warnings:

DIRECTIONS FOR USE

USE ON TREE AND VINE CROPS

In the following table, all rates given are for dilute spraying. For concentrate spraying, refer to the MIXING/ APPLICATION section. Apply by dilute or concentrate spraying equipment. Apply the same total amount of product to the target crop whether applying this product by dilute or concentrate spraying methods. For concentrate spraying, DO NOT use at rates greater than 5 times the dilute spraying rate. Refer to the WHP section for information on grazing.

CROP	PEST	RATE / 100 L	WHP	CRITICAL COMMENTS
Almonds	Carob moth (1 st generation)	80 mL + wetter	(H) 7 days	Practice good orchard hygiene with the removal of mummified fruit in winter. <u>Early post-flower application:</u> At the beginning of the season (Aug-Sept), carefully monitor pheromone traps for peak adult pest incidence of 1st generation. Once regular field scouting indicates egg laying and newly hatched larvae apply a maximum of 3 sprays of SUREFIRE ENIGMA 240 SC INSECTICIDE at a minimum of 10-day intervals between sprays. Apply to complete coverage. Refer to WETTING AGENTS in the GENERAL INSTRUCTIONS section for more information
	Carob moth (2 nd generation)			<u>Hull-split application:</u> SUREFIRE ENIGMA 240 SC INSECTICIDE should be applied at the start of hull split (2 – 5% of the almond hull sutures open). Carefully monitor pheromone traps for peak activity of 2nd generation moths. Continue field scouting for egg-laying activity and apply SUREFIRE ENIGMA 240 SC INSECTICIDE to coincide with the initiation of egg hatch. Apply to ensure complete coverage of all foliage and fruit (hull/shell) surfaces. Concentrate spraying is not appropriate for this pest. Do not apply less than 2000 L/ha water.

CROP	PEST	RATE / 100 L	WHP	CRITICAL COMMENTS	
Apples and Pears (and other Pome Fruit)	Lightbrown apple moth	25 mL	(H) 14 days	For control of the spring generation of lightbrown apple moth, commence spraying at petal fall and apply in a series of 3 applications at 14 day intervals. Alternatively, in areas where a later summer generation occurs, spray when moth activity is indicated by pheromone traps or lure pots. Apply a minimum of 2 sprays with a 21 day interval. Ensure thorough coverage of developing fruit clusters. When insect pressure is high in blocks with large, vase-shaped trees and with short-stemmed, bunchy varieties, SUREFIRE ENIGMA 240 SC INSECTICIDE must be applied by dilute spraying to ensure run-off into fruit clusters.	
	Loopers			Control of these pests is best achieved using a schedule of 3 sprays of SUREFIRE ENIGMA 240 SC INSECTICIDE in spring (see above).	
Avocado	Avocado leafroller	25 mL + a wetting agent at 10 mL/ 100 L	(H) 1 day	Crop monitoring is recommended from pre-bloom. Apply at first sign of pest incidence and target eggs and newly hatched larvae. Additional sprays may be required if re-infestation occurs.	
Blueberry	Lightbrown apple moth			(H) 7 days	Thorough coverage of the plant is essential. Target eggs and newly hatched larvae. Apply when locally determined thresholds are exceeded.
Citrus				(H) 1 day	Use with high volume spraying equipment only. Thorough coverage is essential. Spray to runoff. Apply when eggs and very small larvae are first seen in flower clusters or developing fruitlets. A second spray may be required 2 - 3 weeks later if larvae hatch over an extended period.
Coffee	Avocado leafroller	25 mL	(H) 14 days	Crop monitoring for pest incidence is recommended from pre-bloom. Apply at first sign of pest incidence, targeting eggs and very small larvae before they are protected in retreats. Additional sprays may be required if re-infestation occurs.	
Custard apple	Yellow peach moth			Apply when locally determined pest thresholds are exceeded as indicated by field checks. Additional sprays may be required if re-infestation occurs. Spray to thoroughly cover fruit.	

CROP	PEST	RATE / 100 L	WHP	CRITICAL COMMENTS
Grapevines	Lightbrown apple moth	25 mL	(H) 21 days	Thorough leaf tip and bunch coverage is essential. Spring generation: Apply from pre-flowering onwards targeting eggs and small (5 - 6 mm long) larvae (up to 3rd instar). Apply a second spray 14 - 21 days later. Summer generation: Apply at first sign of activity targeting eggs and larvae up to 5 - 6 mm long (up to 3rd instar). The summer generation can only be detected by monitoring.
Kiwi fruit	Lightbrown apple moth		(H) 14 days	Monitor pest activity from bud burst onwards. Target sprays at eggs and first instar larvae.
Longan	Macadamia nut borer	40 mL	(H) 3 days	Spray thoroughly when pest numbers reach economic threshold levels according to field checks. Target sprays against eggs and early instar larvae.
Lychee			(H) 14 days	
Macadamia	Macadamia flower caterpillar	25 mL	(H) 4 weeks	Monitor for eggs and very small larvae on flowers and apply at a threshold of 50 - 80% of racemes infested.
	Macadamia nut borer	40 mL		Spray to thoroughly cover nuts when pest numbers reach economic threshold levels according to field checks. Target sprays against eggs and early instar larvae.

(H) harvest

USE ON NON-TREE AND VINE CROPS

NOTE: SUREFIRE ENIGMA 240 SC INSECTICIDE is a moult-accelerating insecticide that requires ingestion for control. Feeding ceases almost immediately after ingestion. Larvae in protected feeding sites (e.g. flowers) will not be controlled. Mortality of larvae will not be evident until 4-6 days after application. Refer to the WHP section for information on grazing.

CROP	PEST	RATE	CRITICAL COMMENTS
Tomatoes, Peppers (Capsicum and Chilli), Eggplant and Okra	Native budworm Tomato grub Cluster caterpillar	125 or 170 mL/ 100 L or 1.25 or 1.7 L/ha.	Use the higher rate under heavy egg pressure. Apply SUREFIRE ENIGMA 240 SC INSECTICIDE to brown eggs or at egg hatch when pest numbers reach treatment threshold levels as determined by field checks. Maintain field checks and reapply after 7 days if necessary. Ensure thorough coverage of plants.

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

RESTRAINTS

DO NOT apply if rain or overhead irrigation is expected within 6 hours. Retain the first flush of irrigation tailwater/storm water in the tailwater dam after application.

DO NOT use more than 3 sprays per season in any single crop.

DO NOT use in covered or protected situations such as glasshouses, greenhouses, shade houses or plastic tunnels.

DO NOT apply by aircraft.

DO NOT apply more than 3 times to any Almond crop.

DO NOT apply more than once at the hull split stage.

SPRAY DRIFT RESTRAINTS

Specific definitions for terms used in this section of the label can be found at apvma.gov.au/spraydrift

DO NOT allow bystanders to come into contact with the spray cloud.

DO NOT apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. The buffer zones in the relevant buffer zone table/s below provide guidance but may not be sufficient in all situations. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.

DO NOT apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application.

DO NOT apply if there are hazardous surface temperature inversion conditions present at the application site during the time of application. Surface temperature inversion conditions exist most evenings one to two hours before sunset and persist until one to two hours after sunrise.

DO NOT apply by a boom sprayer unless the following requirements are met:

- Minimum distances between the application site and downwind sensitive areas (see 'Mandatory buffer zones' section of the following table titled 'Buffer zones for boom and vertical sprayers') are observed.

DO NOT apply by a vertical sprayer unless the following requirements are met:

- Spray is not directed above the target canopy.
- The outside of the sprayer is turned off when turning at the end of rows and when spraying the outer row on each side of the application site.
- Minimum distances between the application site and downwind sensitive areas (see 'Mandatory buffer zones' section of the following table titled 'Buffer zones for boom and vertical sprayers') are observed.

Buffer Zones for Boom and Vertical Sprayers

Crops	Mandatory Downwind Buffer Zones
	Livestock Areas
Grapes, Blueberries, Coffee	5 metres
Tomatoes, Peppers, Eggplants, Okra	15 metres