

## POISON

KEEP OUT OF REACH OF CHILDREN

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

# eChem

# ABAMECTIN

INSECTICIDE/MITICIDE

ACTIVE CONSTITUENT: 18 g/L ABAMECTIN

SOLVENTS: 265 g/L N-METHYL PYRROLIDONE

58 g/L LIQUID HYDROCARBON

**GROUP 6 INSECTICIDE**

For the control of pest mites and native budworm on cotton.

For the control of pest mites on pears, apples, capsicums, tomatoes, strawberries and ornamentals.

As specified in the directions for use table.

**IMPORTANT: READ THIS LEAFLET BEFORE USE.**

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### APPLICATION ON COTTON:

#### Air:

Apply by air spray when there is a reliable cross wind to assist with good penetration into the crop canopy. Application should be carried out in the cooler parts of the day or night. Preferably use aircraft fitted with Micronair atomisers.

#### Ground:

Use inter-row droppers fitted with nozzles spraying towards the cotton rows. Inter-row nozzles should be level with or just below the canopy and spraying at right angles to the ground.

#### MIXING:

Measure the required amount of eChem ABAMECTIN and add to the partly filled spray tank, and then add the remainder of the water. If oil is recommended, add this after eChem ABAMECTIN is well mixed. Wetting agent is not required.

#### Mixing instructions for Apple and Pear applications:

To achieve 75 mL eChem ABAMECTIN plus 5 L Summer Oil per ha, apply spray at the following mixing rates:

Water application volume	Amount of eChem ABAMECTIN per 100 L	Amount of Summer Oil per 100 L
1000 L/ha (Minimum)	75 mL	500 mL
1500 L/ha	50 mL	335 mL
2000 L/ha	37.5 mL	250 mL
2500 L/ha	30 mL	200 mL

#### PRECAUTIONS: Re-Entry Period.

Under field conditions the spray should be allowed to dry on the foliage before re-entry into the treated areas. Do not allow entry into treated areas in the glasshouses for 24 hours after treatment. When entry prior to this time is necessary, wear cotton overalls buttoned to the neck and wrist and elbow length PVC gloves.

#### PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT:

Do not apply when weather conditions favour drift from the target area. Dangerous to fish and other aquatic organisms. Do not contaminate streams, rivers or waterways with the chemical or used containers. Dangerous to bees. Do not spray any plants in flower whilst bees are foraging. Studies indicate that when abamectin comes in contact with soil it readily and tightly binds to the soil and becomes inactive over time. Empty containers and any residual concentrate or diluted spray mix should be disposed of safely in an approved landfill.

#### STORAGE AND DISPOSAL:

Store in the closed original container in a well-ventilated area, as cool as possible. Do not store for prolonged periods in direct sunlight.

Triple or preferably pressure 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 bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

#### GENERAL INSTRUCTIONS

eChem ABAMECTIN Insecticide/Miticide is for the control of pest mites on pears, apples, tomatoes, citrus, hops, strawberries and ornamentals, and for the control of pest mites and native budworm on cotton. Refer to accompanying leaflet for complete directions for use and product constraints. After application, eChem Abamectin quickly moves into the leaves where it remains for several weeks and where it is taken up by sucking insects.

Abamectin is not systemic, making good coverage essential. Abamectin that is not absorbed into the plant is quickly degraded.

#### INSECTICIDE RESISTANCE WARNING

**GROUP 6 INSECTICIDE**

For insecticide resistance management eChem Abamectin Insecticide-Miticide is a Group 6 insecticide. Some naturally occurring insect biotypes resistant to eChem Abamectin Insecticide-Miticide and other Group 6 insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if eChem Abamectin Insecticide-Miticide or other Group 6 Insecticides are used repeatedly. The effectiveness of eChem Abamectin Insecticide-Miticide on resistant individuals could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use eChem (Australia) Pty Ltd accepts no liability for any losses that may result from the failure of eChem Abamectin Insecticide-Miticide to control resistant insects. eChem Abamectin Insecticide-Miticide may be subject to specific resistance management strategies. For further information contact your local supplier, eChem (Australia) Pty Ltd representative or local agricultural department agronomist.

#### Crop Safety:

eChem ABAMECTIN plus Summer Oil may very occasionally cause slight russetting on some pear varieties, particularly Anjou and other sensitive varieties when used alone or when other products are applied sequentially. A very small amount of temporary apple fruit blemishing may be associated with low water volume applications. DO NOT apply eChem Abamectin before or after applications of Delan\* or Captan\*. The Directions for Use and Precautions on summer oil labels should be followed carefully. Certain conditions may play a part in the occurrence of this damage. DO NOT make applications (1) when unusually hot conditions are present or expected within 24 hours after application, (2) under poor or slow drying conditions, or (3) with equipment that may leave large droplets on fruit after application. (DELAN is the registered trademark of American Cyanamid Company).

#### For Citrus Applications:

To be effective eChem ABAMECTIN requires thorough spray coverage. Ensure that equipment is properly calibrated to give an even distribution at the correct volume. The same quantity of eChem ABAMECTIN per hectare should be applied when spraying using the dilute or concentrate application method.

#### Dilute spraying:

Use a sprayer designed to apply high volumes of water up to the point of run-off 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 run-off. Avoid excessive run-off. 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 required amount of eChem ABAMECTIN specified in the Directions for use. Spray to the point of run-off. The dilute spray

#### SAFETY DIRECTIONS

Poisonous if absorbed by skin contact or swallowed. Will damage eyes. Will irritate the skin. Avoid contact with eyes and skin. Do not inhale spray mist. When opening the container, preparing spray and using prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC gloves and goggles. For space applications, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC gloves, goggles and half facepiece respirator with dust cartridge or canister. If product in eyes, wash it out immediately with 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, goggles, contaminated clothing and respirator (and if rubber, wash with detergent and warm water).

#### FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone 13 11 26). If swallowed, do NOT induce vomiting. Give a glass of water. If skin contact occurs, remove contaminated clothing and wash skin thoroughly. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

#### MATERIAL SAFETY DATA SHEET

Additional information is listed in the Material Safety Data Sheet.

Experience with miticides has shown that continuous use of one particular miticide or miticides from one particular chemical group can lead to the early development of mite resistance to that miticide or chemical group. Therefore ABAMECTIN should not be applied more than the following number of times per season/crop and should not be used consecutively except where a two spray schedule is specifically recommended:

Apples, Pears, Citrus, Hops:	One spray per season
Tomatoes:	Two sprays per crop per season if mites are present. Five sprays per crop per season if mites are not present.
Cotton, Capsicums Strawberries, Ornamentals:	Two sprays per season.

Alternate ABAMECTIN with approved miticides from other chemical groups. Consult your chemical supplier or technical consultant for advice on chemical groups.

#### CROP MONITORING:

Effective control depends upon regular monitoring of crops. Check crops regularly (every 3-5 days) during the season.

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 run-off) and matched to the crop being sprayed. Good coverage is essential as eChem ABAMECTIN is not systemic. 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, above) 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

- Dilute spray volume as determined above: for example 1500 L/ha.
- Your chosen concentrate spray volume: for example 500 L/ha.
- The concentrate factor in this example is 3X (ie 1500 L ÷ 500L = 3).
- If the dilute label rate is 125 mL/100L, then the concentrate rate becomes 3 x 125 = 375 mL/100L of concentrate spray.

The chosen spray volume, amount of product per 100 L of water, and the sprayer set and operation may need to be changed as the crop grows. For further information on concentrate spraying, users are advised to consult relevant industry guidelines, undertake appropriate competency training and follow industry best practice.

#### COMPATIBILITY:

eChem ABAMECTIN is compatible with most commonly used insecticides and fungicides. DO NOT apply with ULV formulations.

#### CONDITIONS OF SALE

eChem (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.

#### DIRECTIONS FOR USE:

#### RESTRAINTS:

**DO NOT use if rainfall is expected before spray has dried as reduced efficacy may result.**

**DO NOT overhead irrigate within 24 hours after application.**

SITUATION	PEST	RATE	WITHHOLDING PERIOD	CRITICAL COMMENTS
Cotton	Two spotted mite ( <i>Tetranychus urticae</i> ) Carmine mite ( <i>Tetranychus cinnabarinus</i> )	300 mL/ha	20 days (harvest)  20 days (livestock / grazing)	Do NOT make more than two applications to cotton per season, regardless of the pest being controlled. Apply by ground spraying equipment or fixed wing aircraft in a minimum volume of 20 litres per hectare. Good coverage is essential. Monitor crops regularly and apply as soon as the threshold mite number for your area has been reached. Best results will be obtained when applied to low mite populations. Application to high populations may not give satisfactory control. Under these conditions a second miticide application 7 - 10 days later may be needed. Refer to notes on resistance under General Instructions section of this label.
	Native budworm ( <i>Helicoverpa punctigera</i> )	300 mL/ha OR 600 mL/ha		Do NOT make more than two applications to cotton per season, regardless of the pest being controlled. Use only when Lipton test kit results indicate no greater than 10% <i>Helicoverpa amigera</i> are present. Use the higher rate alone, or the lower rate with a suitable mixing partner. Applications should be targeted at brown eggs and newly emerged larvae (neonates). Mixed sized larval populations should be avoided.
Pears Apples	Two spotted mite ( <i>Tetranychus urticae</i> ) European red mite ( <i>Panonychus ulmi</i> )	750 mL/ha plus 5 L/ha summer oil see general instructions for mixing rates.	14 days (harvest)  14 days (livestock / grazing)	Apply as dilute or concentrated sprays but in no less than 1000 L/ha. Good coverage is essential. Use a high quality summer spraying oil and follow label instructions. DO NOT apply eChem Abamectin before or after applications of Delan* or Captan*. For best results apply soon after mite numbers have reached the threshold for your area, and apply the product using dilute applications (spraying to the point of run-off). If applying with concentrate applications, efficacy may be compromised. DO NOT apply at more than two times concentrate (ie. Half the dilute water volume). Apply the same total amount of eChem Abamectin to the total crop whether applying eChem Abamectin by dilute or concentrate spraying methods. In apples, apply eChem Abamectin from 2 to 6 weeks after petal fall if monitoring shows high numbers of over-wintering European red mite eggs are present, or if mites are a problem early in the season. In pears, timing is not as critical and the application should be made soon after mite number have reached the threshold for your area. Generally eChem Abamectin takes about 7 days to reach maximum mite control. eChem Abamectin will control moderate to high mite populations but, in the absence of predatory mites (see integrated Pest management below), retreatment with another miticide may be necessary. If re-treatment is required, use an approved miticide from a different chemical group. Refer to notes on resistance and crop safety under General instructions section of this label. <b>Integrated pest control:</b> The effects of eChem Abamectin on parasitic wasps and other beneficial insects in Australian orchards are not fully known. Studies have shown that after application of eChem Abamectin, predatory mite populations may not increase for a number of weeks due to a lack of suitable pest mite prey. Predatory mite numbers will increase with any increase in pest mite numbers, allowing the continuation of biological mite control. DO NOT use in IPM programmes unless the pest mite threshold has been reached and predators are unlikely to achieve effective control.
	Capsicums	Two spotted mite ( <i>Tetranychus urticae</i> )	300 mL/ha	3 days (harvest)  3 days (livestock / grazing)
Citrus	Brown citrus rust mite ( <i>Tegetolophus australis</i> ), Citrus rust mite ( <i>Phyllocoptera oleivora</i> ), Broad mite ( <i>Polyhagotarsonemus latus</i> )	15 - 25 mL/100 L plus 250 mL/100L summer oil.	7 days (harvest)	Apply as pest pressure indicates, as a dilute spray in 3000 to 6000 Litres of water per hectare. Apply the same amount of product to the target crop whether applying this product by dilute or concentrate spraying methods. Use the higher rate under conditions of high pest pressure. Make no more than one application per season.
Hops	Two spotted mite ( <i>Tetranychus urticae</i> )	1 L/ha	4 weeks (harvest)  4 weeks (livestock / grazing)	Apply as pest pressure indicates, as a dilute spray in 1000 to 2000 Litres of water per hectare, depending on crop size. Make no more than one application per season.
	Tomatoes-Trellised OR Staked tomatoes	Two spotted mite ( <i>Tetranychus urticae</i> )  Tomato russet mite ( <i>Aculops lycopersici</i> )	High volume spraying: 300-450 mL/ha eChem ABAMECTIN using concentrations of 60-90 mL/100 L	3 days (harvest)  3 days (livestock / grazing)
Tomatoes-Field grown (not trellised)	Two spotted mite ( <i>Tetranychus urticae</i> )	300-450 mL/ha	3 days (harvest)	Apply in sufficient volume to obtain even coverage and penetration of plants. Use droppers to direct spray onto plants and away from the inter-row. Preferably apply before the build-up of mite numbers. If mite numbers exceed 5 mites per compound leaf, use the higher rate. Re-apply as pest numbers indicate. Allow at least 28 days between applications with ABAMECTIN and do not use more than 2 ABAMECTIN sprays per crop. Refer to notes on resistance under General Instructions section of this label.
	Tomato russet mite ( <i>Aculops lycopersici</i> )		3 days (livestock / grazing)	Apply as for Two Spotted Mite. The lower rate will control tomato russet mite not apparent at spraying. Use the higher rate when tomato russet mite is present at spraying or is the main pest.
	Tobacco Leafminer (Potato moth) ( <i>Phthorimaea operculella</i> )	600 mL/ha		Apply in sufficient volume to obtain even coverage and penetration of plants. Use droppers to direct spray onto plants and away from the inter-row. Preferably apply before the build-up of mite numbers. If mite numbers exceed 5-6 mites per compound leaf, use the higher rate. Re-apply as pest numbers indicate. Allow at least 28 days between applications with ABAMECTIN and do not use more than 2 ABAMECTIN sprays per crop. Refer to notes on resistance under General Instructions section of this label. NOTE: Other IPM strategies to reduce leaf miner populations should be employed.
Strawberries	Two spotted mite ( <i>Tetranychus urticae</i> )	100 mL/100 L. If spray volume is less than 600 L/ha, use a minimum of 600 mL/ha eChem ABAMECTIN. Do not exceed 1200 mL/ha eChem ABAMECTIN per application	3 days (harvest)  3 days (livestock / grazing)	Spray to wet foliage to near the point of run-off. Thorough coverage and penetration into plants is essential. Preferably apply on first appearance of mites. When applied early, one application may be sufficient to give effective control. However, if mite numbers exceed 3-5 mites per leaflet, apply two applications spaced 7-10 days apart. Re-apply as pest numbers indicate to a maximum of 2 sprays with ABAMECTIN per season. If re-treatment is required after 2 consecutive sprays with ABAMECTIN, use an approved miticide from a different chemical group. Refer to notes on resistance under General Instructions section of this label. Integrated pest control: See comments in the Apple and Pear section.
Ornamentals, including Roses, Chrysanthemums, Carnations and indoor foliage plants	Two spotted mite ( <i>Tetranychus urticae</i> )	50 mL/100 L to a maximum of 1.5 L/ha ABAMECTIN per application	DO NOT cut or graze for stock food	Spray to wet foliage to near the point of run-off using at least 2000 L/ha (100L per 500 square metres). Thorough coverage and penetration into plants is essential. Preferably apply on first appearance of mites. When applied when pest numbers are low to moderate, one application will be sufficient to give effective control. However, if mites are numerous, apply two applications spaced 7-10 days apart. DO NOT use overhead irrigation within 24 hours after application. Re-apply as pest numbers indicate to a maximum of 2 sprays with ABAMECTIN per season. DO NOT use on Ferns and Shasta Daisies. For ornamentals not listed on the label, small test applications to assess for unexpected phytotoxicity should be made before spraying the whole crop. Do not use more than two times per season. Refer to notes on resistance under General Instructions section of this label.

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

#### WITHHOLDING PERIODS:

##### -Apples, Pears:

**DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION. DO NOT FEED TREATED PRODUCE TO LIVESTOCK FOR 14 DAYS AFTER APPLICATION.**

##### -Citrus:

**DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION.**

##### -Cotton:

**DO NOT HARVEST FOR 20 DAYS AFTER APPLICATION. DO NOT GRAZE OR CUT FOR STOCK FEED FOR 20 DAYS AFTER APPLICATION.**

##### -Capsicums, Strawberries, Tomatoes:

**DO NOT HARVEST FOR 3 DAYS AFTER APPLICATION. DO NOT FEED TREATED PRODUCE TO LIVESTOCK FOR 3 DAYS AFTER APPLICATION.**

##### -Ornamentals:

**DO NOT CUT OR GRAZE FOR STOCK FOOD.**

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