# POISON

KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING

# GREMLIN® MITICIDE and INSECTICIDE

ACTIVE CONSTITUENT: 18 g/L ABAMECTIN SOLVENT: 350g/L N-METHYL-2-PYRROLIDONE

GROUP 6A INSECTICIDE

For the control of certain mites on cotton, soybeans, citrus, apples, capsicums, hops, pears, tomatoes, ornamentals and strawberries and Native Budworm on cotton.

IMPORTANT: READ THE ATTACHED LEAFLET BEFORE USING THIS PRODUCT

CONTENTS: 1L, 5L, 20L

APVMA Approval No: 52713/1006



® Registered Trademark of Sipcam Pacific Australia Pty Ltd

#### **GREMLIN MITICIDE AND INSECTICIDE**

#### STORAGE AND DISPOSAL

Store below 30°C (Room temperature). 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.

#### 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 or 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 a half face respirator with dust cartridge or canister. If product in eyes wash 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, respirator or face piece and contaminated clothing.

#### **FIRST AID**

If poisoning occurs, contact a doctor, or Poisons Information Centre (Phone Australia: 13 11 26). If swallowed DO NOT induce vomiting. Give a glass of water. If skin contact occurs, remove clothing and wash skin thoroughly. If in eyes, wash out immediately with water.

#### **SAFETY DATA SHEET**

For further information, refer to the Safety Data Sheet (SDS) which is available from the supplier or from our web site, <a href="www.sipcam.com.au">www.sipcam.com.au</a>

#### **NOTICE TO BUYER**

This product must be used in accordance with the directions for use. Where this product is not a good of a kind ordinarily acquired for personal, domestic or household use or consumption under the Australian Consumer Law, Sipcam's liability for any direct, indirect or consequential loss which you incur, including, without limitation, loss or damage to crop, loss of equipment, property damage, personal injury or death is limited, at Sipcam's option, to the replacement of the product or the supply of an equivalent product. By opening this package, you agree to be bound by these terms. If you do not agree to these terms, please return the entire unopened package intact to Sipcam or the place in which you purchased this product for a full refund.

# Date of Manufacture: Batch No:



This product IS classified as a Dangerous Good under the Australian code for the transport of dangerous goods by road and rail.

PESTICIDES, LIQUID, TOXIC, N.O.S. (CONTAINS ABAMECTIN)
UN No. 2902 HAZCHEM 2X

For specialist advice in an emergency only, call 1800 033 111, all hours Australia wide



# G.H.S. STATEMENT

**HAZARDS** H227: Combustible liquid. H332: Harmful if inhaled. H335: May cause respiratory irritation. H360: May damage fertility or the unborn child.

**PREVENTION** P210: Keep away from heat, sparks, open flames and hot surfaces. - No smoking. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well ventilated area.

**RESPONSE** P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P370+P378: In case of fire, use water fog.

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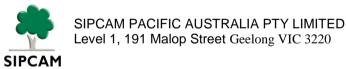
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# THIS LEAFLET IS PART OF THE LABEL

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# **DIRECTIONS FOR USE: RESTRAINTS:**

DO NOT spray if rain seems likely before the spray has dried on the leaves. Failure to observe this restraint may result in reduced efficacy.

SITUATION	PEST	RATE	WHP	CRITICAL COMMENTS
Apples, Pears	Two Spotted Mite (Tetranychus urticae)  European Red Mite (Panonychus ulmi)	750 mL/ha plus 5L/ha summer oil (see general instructions for mixing rates)	14	For best results, apply the product using dilute application (spraying to the pint 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 Gremlin to the target crop whether applying by dilute or concentrate spraying methods.  DO NOT apply this product before or after applications of Delan or Captan. In apples apply this product from 2 to 6 weeks after petal fall if monitoring shows high numbers of overwintering 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 as soon as after mite numbers have reached a threshold for your area.  Maximum mite control is usually reached at 7 days. Moderate to high mite populations will be controlled but if there are no predatory mites present retreatment with another miticide (from another chemical group) may be necessary.  Integrated pest control: The effects of abamectin on parasitic wasps and other beneficial insects in Australian orchards are not known. Studies have shown that after application of abamectin predatory mite populations may not increase for a number of weeks, due to the lack of suitable pest mite prey. Predatory mite numbers will increase with any 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 (Tetranychus urticae)	300mL/ha	3	Thorough coverage and penetration into the plant canopy is essential. Preferably apply before the build-up of mite numbers. Re-apply as pest numbers indicate. Alternate with other chemical groups. Allow at least 28 days between applications with Gremlin and DO NOT use more than 2 Gremlin sprays per crop. Refer to notes on resistance and General Instructions section of this label.
Citrus	Broad Mite (Polyhagotarsonemus latus) Brown Citrus Rust Mite (Tegolophus australis) Citrus Rust Mite (Phyllocoptera oleivora)	Dilute spray: 15mL/100mL or 25mL/100mL plus 250mL/100L summer oil Concentrate Spray: Refer to the application section - citrus	7	Apply as a dilute spray in 3000 to 6000 L water/ha as pest pressure indicates.  Apply by dilute or concentrate spraying equipment.  Apply the same total amount of Gremlin to the target crop whether applying by dilute or concentrate spraying methods.  Use the higher rate when pest pressure is high.  DO NOT apply more than once per season.

Cotton (Qld, NSW and WA ONLY) DO NOT apply to cotton under visible stress.	Carmine mite (Tetranychus cinnabarinus) Two Spotted Mite (Tetranychus urticae)  Native budworm (Helicoverpa punctigera)	300 mL/ha 300 or 600 mL/ha	20	DO NOT make more than two applications to cotton per season, regardless of pest being controlled.  To ensure adequate control:  1. Apply when the threshold numbers of mites have been reached for your region.  2. Apply when mite populations are low. If the mite population is too high at time of application satisfactory control may not be achieved. Under high pest pressure a second application may be required 7-10 days after the initial application.  Thorough coverage is essential.  DO NOT make more than two applications to cotton per season, regardless of pest being controlled.  Use only when Lepton kit results indicate that no greater than 10% Helicoverpa armigera are present. Use the higher rate alone or the lower rate with a suitable mixing partner.  Applications should target brown eggs and newly emerged larvae (neonates). Mixed size larval populations should be avoided.
Hops	Two Spotted Mite (Tetranychus urticae)	1L/ha	28	Apply as a dilute spray in 1000 to 2000L water /ha (depending on crop size) as pest pressure indicates. DO NOT apply more than once per season.
Soybeans	Two Spotted Mite (Tetranychus urticae)	300 mL/ha	28	Apply to actively growing crops. Thorough coverage is essential. Monitor crops regularly and apply as soon as there are 10 mites per leaf. Best results will be obtained when applied to low mite populations. Application to high populations may not give satisfactory control. Under these conditions second mite application 7-10 days later may be needed. DO NOT apply more than 2 sprays per season.
Strawberries	Two Spotted Mite (Tetranychus urticae)	100mL/ha If spray volume is less than 600L/ha use a minimum of 600mL of this product /ha. DO NOT exceed 1200mL of this product /ha per application	3	Spray to wet all foliage to near the point of run off. Ensure thorough coverage and penetration into plants. Best results are obtained if application is made at the first sign of mite appearance. When applied at this time one application may give good control. If mite numbers exceed 3-5 mites per leaflet, apply two applications 7 to 10 days apart. Re-apply if required but apply a maximum of 2 sprays of this product per season. If a further treatment is required, apply a product from a different chemical group. Integrated Pest Control: see instructions in Apples and Pears section above. Refer to notes on resistance under General Instructions section of this label.
Tomatoes - trellised or staked	Two Spotted Mite (Tetranychus urticae)  Tomato Russet Mite (Aculops lycopersici)	High volume spraying: 300mL or 450mL this product per hectare using concentrations of 60 to 90mL/ 100L	3	Spray to wet all foliage to near the point of run off. Ensure thorough coverage and penetration into plants. Best results are obtained if application is made before build up of mite numbers. Use the higher rate if mite numbers exceed 5 to 6 mites per compound leaf. Re-apply if required but apply a maximum of 2 sprays of this product per season. Allow at least 28 days between applications of this product. Refer to notes on resistance in the general instructions section of this label.  Apply as per Two Spotted Mite. The lower rate will control Russet Mites not apparent at spraying. Use the higher rate if Russet mite is evident at time of spraying or is the
	Tobacco leafminer (Potato moth) ( <i>Phthorimaea</i> operculella)	High volume spraying: 600mL/ha using concentrations of 120mL/100L		main pest.  Wet foliage to the pint of run-off. Thorough coverage and penetration into bushes is essential.  Apply at the first sign of pest activity. Re-apply as pest numbers indicate or every 7 to 10 days with a maximum of 5 applications to the crop. If mites are also a problem DO NOT use more than 2 Gremlin sprays per crop. Refer to notes on resistance in the general instructions section of this label.  Note: Other IPM strategies to reduce leafminer populations should be employed.

Tomatoes – field grown	Two Spotted Mite (Tetranychus urticae)	300 or 450mL/ha	3	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. Best results are obtained if application is made before build up of mite numbers. Use the higher rate if mite numbers exceed 5 mites per compound leaf. Re-apply if required but apply a maximum of 2 spray of this product per season. Allow at least 28 days between applications of this product. Refer to notes on resistance in the general instructions section of this label.
	Tobacco leafminer (Potato moth) (Phthorimaea operculella)	600mL/ha		Apply in sufficient volume to obtain even coverage and penetration of plants. Use droppers to direct spray onto plants away form the interrow. Apply at the first sign of pest activity. Re-apply as pest numbers indicate or every 7 to 10 days with a maximum of 5 applications to the crop. If mites are also a problem DO NOT use more than 2 Gremlin sprays per crop. Refer to notes on resistance in the general instructions section of this label.  Note: Other IPM strategies to reduce leafminer populations should be employed.
	Tomato Russet Mite (Aculops lycopersici)	300 or 450mL/ha		Apply as per Two Spotted Mite. The lower rate will control Russet Mites not apparent at spraying. Use the higher rate if Russet mite is evident at time of spraying or is the main pest.
Ornamentals including Roses, Chrysanthemums, Carnations and indoor foliage plants	Two Spotted Mite ( <i>Tetranychus</i> urticae)	50mL/100L to a maximum of 1.5L	Nil	Spray to wet foliage to near the point of run-off using at least 2,000L water/ha (100L/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 a second application 7 to 10 days later. DO NOT use overhead irrigation within 24 hours after application. DO NOT use on Ferns or Shasta. For ornamentals not listed on this label, small test applications to assess unexpected phytotoxicity should be made before spraying the whole crop. DO NOT use more than 2 times per season. Refer to notes on resistance in the general instructions section of this label.

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

WITHHOLDING PERIODS:

COTTON: DO NOT HARVEST FOR 20 DAYS AFTER APPLICATION.

DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 20 DAYS AFTER APPLICATION.

CITRUS: DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION

HOPS: DO NOT HARVEST, GRAZE OR CUT FOR STOCK FOOD FOR 4 WEEKS AFTER

**APPLICATION** 

**SOYBEANS:** 

APPLES AND PEARS: DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION. DO NOT

FEED TREATED PRODUCE TO LIVESTOCK FOR

14 DAYS AFTER APPLICATION.

CAPSICUMS, STRAWBERRIES: DO NOT HARVEST FOR 3 DAYS AFTER APPLICATION. DO NOT FEED TREATED

PRODUCE TO LIVESTOCK FOR 3 DAYS AFTER APPLICATION.

TOMATOES: DO NOT HARVEST FOR 3 DAYS AFTER APPLICATION. DO NOT FEED TREATED

PRODUCE TO LIVESTOCK FOR 3 DAYS AFTER APPLICATION.

ORNAMENTALS: NOT REQUIRED WHEN USED AS DIRECTED DO NOT GRAZE OR CUT FOR STOCK FOOD

DO NOT HARVEST FOR 28 DAYS AFTER APPLICATION.

DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 28 DAYS AFTER APPLICATION.

#### **GENERAL INSTRUCTIONS**

This product is not systemic but moves quickly into leaves following application. It is important that thorough coverage is achieved so that the maximum amount of product can be deposited on the leaf surface for uptake and subsequent ingestion by sucking mites. Product that is not absorbed by leaves is quickly degraded.

#### Resistance

It is known that early development of mite resistance may occur if one particular miticide and miticides from the one particular chemical group are continually used. For this reason it is recommended that this product be applied no more than twice in one season and preferably only once per season. A second application is only recommended where mite pressure is very high. It is also recommended to alternate this product with miticides from a different chemical group. Consult your local supplier or technical adviser for further information on chemicals groups.

## **Insecticide Resistance Warming**

GROUP	6A	INSECTICIDE
GROOF	UA	INSECTICIDE

For insecticide resistance management Gremlin Miticide and Insecticide is a Group 6A miticide and insecticide. Some naturally-occurring insect biotypes resistant to Gremlin Miticide and Insecticide and other Group 6A miticides and insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the mite and insect population if Gremlin Miticide and Insecticide or other Group 6A miticides and insecticides are used repeatedly. The effectiveness of Gremlin Miticide and Insecticide on resistant individuals could be significantly reduced. Since the occurrence of resistant individuals is difficult to detect prior to use, Sipcam Pacific Australia Pty Ltd accepts no liability for any losses that may result from the failure of Gremlin Miticide and Insecticide to control resistant mites. It is recommended that this product be applied no more the following amount of times per season/crop and that it is not used consecutively except where a two spray schedule is specifically recommended: Cotton:no more than twice in one season and preferably only once per season. A second application is only recommended where mite pressure is very high.

Soybeans: no more than 2 sprays per season. A second application is only

recommended where mite pressure is very high.

Apples, Capsicums, Pears, Citrus, Hops: one spray per season

Tomatoes: two sprays per season, 5 sprays if mites are NOT present

Strawberries: two sprays per season

Gremlin should not be applied in 2 consecutive seasons or crops without an unrelated chemical being used in between. Alternate this product with approved miticides from other chemical groups. For further information contact your local supplier, Sipcam Pacific Australia Pty Ltd representative or local department of agriculture agronomist

#### **Crop Monitoring**

It is essential to carry out regular crop monitoring of mite levels (every 2-3 days for cotton and every 3-5 days for other crops) to ensure the product is applied at the correct timing.

## **Mixing Instructions for Apples and Pears**

To obtain 750mL this product + 5L Summer oil/ha apply spray at the following mixing rates:

	This product	(Quantity per 100L required)	Summer Oil
1000L/ha (minimum)	75mL		500mL
1500L/ha	50mL		335mL
2000L/ha	37.5mL		250mL
2500L/ha	30mL		200mL

#### Mixina

Partially fill the spray tank with water, add the required amount of this product then add the remainder of the product. If oil is recommended add this after the Gremlin is well mixed. A wetting agent is NOT required.

#### **Crop Safety**

A mixture of this product with summer oil has very occasionally caused slight fruit 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 has been associated with low water volumes. DO NOT apply Gremlin to apples and pears before or after applications of Delan<sup>1</sup> or Captan<sup>1</sup>. The label instructions on the summer oil label must be strictly followed. Conditions which may contribute to crop damage are:

- 1) unusually hot conditions present or expected within 24 hours of application
- 2) poor or slow drying conditions
- 3) Application with equipment that may leave large droplets on fruit after application.

#### Compatibility

This product is compatible with most commonly used insecticides and fungicides. However, all mixtures should be tested prior to mixing commercial quantities.

#### **Application Instructions for Cotton**

This product may be applied by ground spraying equipment or by fixed wing aircraft. Apply in a minimum of 20L water per hectare. Ensure good coverage. Ground application: Apply with inter-row droppers fitted with nozzles spraying towards the cottons rows. The inter-row nozzles should be level with or just below the canopy and spraying at right angles to the ground. Aerial application (fixed wing): Apply in the cooler parts of the day or night when there is a reliable cross wind to assist with good penetration into the crop canopy. Preferably use aircraft fitted with Micronair atomisers.

#### **Application Instructions for Citrus**

To be effective Gremlin requires thorough spray coverage. Ensure that equipment is properly calibrated to give an even distribution at the correct volume.

The same quantity of Gremlin per hectare should be used when spraying either with dilute or concentrate method.

#### **APPLICATION**

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 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 amount of product specified in the Directions for Use table for each 100L of water. Spray to the point of run-off.
- 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 run-off) 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 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**

- i) Dilute spray volume as determined above: For example 1500L/ha
- ii) Your chosen concentrate spray volume: For example 500L/ha
- iii) The concentration factor in this example is:  $3 \times (ie\ 1500L \div 500L = 3)$
- iv) If the dilute label rate is 10mL/100L, then the concentrate rate becomes 3 x 10, that is 30mL/100L of concentrate spray.

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

#### **PRECAUTIONS**

#### Re-entry period

Allow the spray to dry on the foliage before re-entry to treated areas. **DO NOT** allow entry into treated areas in glasshouses for 24 hours after treatment. When prior entry is necessary, wear cotton overalls buttoned to the neck and wrist and elbow length PVC gloves.

### PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

**Drift Warning:** DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures.

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

DO NOT contaminate streams, rivers or waterways with the chemical or used containers. Dangerous to fish and other water borne organisms. Dangerous to bees. DO NOT spray any plants in flower while bees are foraging. Studies indicate that when abamectin comes into contact with soil it readily and tightly binds to the soil and becomes inactive over time.

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