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

TITAN
Abamectin 18
Insecticide/Miticide

ACTIVE CONSTITUENT: 18g/L ABAMECTIN
SOLVENT: 481g/L LIQUID HYDROCARBON
CO-SOLVENT: 100g/L N-METHYL-2-PYRROLIDONE

GROUP 6A INSECTICIDE

For the control of certain mites on cotton, citrus, apples, capsicums, hops, pears, tomatoes, ornamentals and strawberries and Native Budworm on cotton as specified in the Directions For Use table.

APVMA Approval No.: 65889/53431
Pack Size: 5L-1000L

TITAN AG Pty Ltd
15/16 Princes Street, Newport, NSW 2106
Telephone 02 9999 6655  Fax 02 9999 0483
www.titanag.com.au

IN A TRANSPORT EMERGENCY
DIAL 000
POLICE OR FIRE BRIGADE

UN NO. 2902
PESTICIDES, LIQUID,
TOXIC, N.O.S.
(CONTAINS ABAMECTIN)
HAZCHEM 2X
PACKAGING GROUP III
**DIRECTIONS FOR USE:**

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

### Apple, Pears
- **Situation:** Apples, Pears
- **Pest:** Two Spotted Mite (Tetranychus urticae), European Red Mite (Panonychus ulmi)
- **Rate:** 750mL/ha plus 5L/ha summer oil (see general instructions for mixing rates)
- **WHP (days):** 14
- **Critical Comments:** For best results, apply the product using dilute application (spraying to point of run-off). If applying with concentrate applications efficacy may be compromised. DO NOT apply at more than two times concentrate (i.e., half the dilute water volume). Apply the same amount of TITAN Abamectin Insecticide/Miticide to the target crop whether by spraying by dilute or concentrate spraying methods. DO NOT apply this product either before or after applications of Delan or Captain. In apples apply this product from 2 to 6 weeks after petal fall if monitoring shows high numbers of over wintering European Red Mites 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 possible 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 pests 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 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
- **Pest:** Two Spotted Mite (Tetranychus urticae)
- **Rate:** 300mL/ha
- **WHP (days):** 3
- **Critical Comments:** Thorough coverage and penetration into the plant canopy is essential. Preferably apply before the build up of plant numbers. Re-apply as pest numbers indicate. Alternate with other chemical groups. Allow at least 28 days between applications with TITAN Abamectin Insecticide/Miticide and do not use more than 2 TITAN Abamectin Insecticide/Miticide sprays per crop. Refer to notes on resistance and General Instructions section of this label.

**Integrated Pest Control:** From a different chemical group may be necessary. Studies have shown that after application of Abamectin predatory mite populations may not increase for a number of weeks, due to 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.

### Citrus
- **Pest:** Broad Mite (Polyphagotars-omenus latus), Brown Citrus Rust Mite (Tegolophus australis), Citrus Rust Mite (Phyllocoperta oleivora)
- **Rate:** Dilute spray: 15mL/100mL or 25mL/100mL plus 250mL/100mL summer oil
- **WHP (days):** 7
- **Critical Comments:** Apply as a dilute spray in 3000 to 6000L water/ha as pest pressure indicates. Apply by dilute or concentrate spraying equipment. Apply the same amount of TITAN Abamectin Insecticide/Miticide to the target crop whether by spraying by dilute or concentrate spraying methods. Use the higher rate when the pest pressure is high. DO NOT apply more than once per season.

### Cotton
- **Pest:** Carmine Mite (Tetranychus cinnabarinus), Two Spotted Mite (Tetranychus urticae)
- **Rate:** 300mL/ha
- **WHP (days):** 20
- **Critical Comments:** DO NOT make more than 2 applications to cotton per season, regardless of pest being controlled. To ensure adequate control:
  1. Apply when the threshold number of mites has been reached for your region.
  2. Apply when mite populations are low. If the mite population is too high at the 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 2 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 larval populations should be avoided.

### Hops
- **Pest:** Two Spotted Mite (Tetranychus urticae)
- **Rate:** 1L/ha
- **WHP (days):** 28
- **Critical Comments:** 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.

**Integrated Pest Control:** See instructions in Citrus section above. Refer to notes on resistance under General Instructions section of this label.

### Strawberries
- **Pest:** Two Spotted Mite (Tetranychus urticae)
- **Rate:** 100mL/ha
- **WHP (days):** 3
- **Critical Comments:** 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 7-10 days apart. Re-apply if required, but apply a maximum of two sprays of this product per season. If further treatment is required, apply a product from a different chemical group.
<table>
<thead>
<tr>
<th>SITUATION</th>
<th>PEST</th>
<th>RATE</th>
<th>WHP (days)</th>
<th>CRITICAL COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomatoes – staked or trellised</td>
<td>Two Spotted Mite (Tetranychus urticae)</td>
<td>High volume spraying: 300mL or 450mL of this product per ha using concentrations of 60 to 90mL/100L</td>
<td>0</td>
<td>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 5-6 mites per compound leaf. Re-apply if required, but apply a maximum of two sprays of this product per season. Allow at least 28 days between applications of this product. Refer to notes on resistance under General Instructions section of this label.</td>
</tr>
<tr>
<td>Tomato Russet Mite (Aculops lycopersici)</td>
<td>High volume spraying: 600mL using concentrations of 120mL/100L</td>
<td></td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>Tobacco Leafminer (Potato Moth) (Phthorimaea operculella)</td>
<td></td>
<td></td>
<td></td>
<td>Wet foliage to the point 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 7-10 days with a maximum of five applications to the crop. If mites are also a problem DO NOT use more than two TITAN Abamectin Insecticide/Miticide sprays per crop. Refer to notes on resistance under General Instructions section of this label.</td>
</tr>
<tr>
<td>Tomatoes – field grown</td>
<td>Two Spotted Mite (Tetranychus urticae)</td>
<td>300 or 450mL/ha</td>
<td>3</td>
<td>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 two sprays of this product per season. Allow at least 28 days between applications of this product. Refer to notes on resistance under General Instructions section of this label.</td>
</tr>
<tr>
<td>Tobacco Leafminer (Potato Moth) (Phthorimaea operculella)</td>
<td>600mL/ha</td>
<td></td>
<td></td>
<td>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. Apply at the first sign of pest activity. Re-apply as pest numbers indicate or every 7-10 days with a maximum of 5 applications to the crop. If mites are also a problem DO NOT use more than 2 TITAN Abamectin Insecticide/Miticide sprays per crop. Refer to notes on resistance under General Instructions section of this label.</td>
</tr>
<tr>
<td>Tomato Russet Mite (Aculops lycopersici)</td>
<td>300 or 450mL/ha</td>
<td></td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>Ornamentals including Roses, Chrysanthemums, Carnations and indoor foliage plants</td>
<td>Two Spotted Mite (Tetranychus urticae)</td>
<td>50mL/100L to a maximum of 1.5L</td>
<td>Nil</td>
<td>Spray to wet foliage to the point of run off using at least 2000L water/ha (100L/500m²). 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 7-10 days later. DO NOT use overhead irrigation within 24 hours of application. DO NOT use on Ferns or Shasta. For ornamentals not listed on this label, small test applications to test unexpected phytotoxicity should be made before spraying the whole crop. DO NOT use more than 2 times per season. Refer to notes on resistance under General Instructions section of this label.</td>
</tr>
<tr>
<td>Soybeans</td>
<td>Two Spotted Mite (Tetranychus urticae)</td>
<td>300mL/ha</td>
<td>28 days</td>
<td>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.</td>
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</tbody>
</table>

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

**WITHHOLDING PERIODS:**

- **COTTON:** DO NOT HARVEST FOR 20 DAYS AFTER APPLICATION.
- **CITRUS:** DO NOT HARVEST OR CUT FOR STOCK FOOD FOR 20 DAYS AFTER APPLICATION.
- **HOPS:** DO NOT HARVEST, CUT OR GRAZE FOR STOCK FOOD FOR 4 WEEKS AFTER APPLICATION.
- **APPLES, PEARS:** DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION.
- **CAPSICUMS, STRAWBERRIES:** DO NOT FEED TREATED PRODUCE TO LIVESTOCK FOR 14 DAYS AFTER APPLICATION.
- **SOYBEANS:** DO NOT HARVEST FOR 28 DAYS AFTER APPLICATION.
- **SOYBEANS:** DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 28 DAYS AFTER APPLICATION.
- **TOMATOES:** DO NOT HARVEST FOR 3 DAYS AFTER APPLICATION.
- **ORNAMENTALS:** DO NOT FEED TREATED PRODUCE TO LIVESTOCK FOR 3 DAYS AFTER APPLICATION.
- **ORNAMENTALS:** NOT REQUIRED WHEN USED AS DIRECTED.
- **ORNAMENTALS:** DO NOT GRAZE OR CUT FOR STOCK FOOD.
GENERAL INSTRUCTIONS
This product is not systemic, but quickly moves 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 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 chemical groups.

INSECTICIDE RESISTANCE WARNING
For insect resistance management TITAN Abamectin Insecticide/Miticide is a group 6A miticide and insecticide. Some naturally occurring insect biotypes resistant to this product and other group 6A insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if the product or other Group 6A insecticides are used repeatedly. The effectiveness of the product on resistant individuals could be significantly reduced.

Since occurrence of resistant individuals is difficult to detect prior to use, TITAN AG Pty Ltd accepts no liability for any losses that may result from the failure of this product to control resistant insects. It is recommended that this product be applied no more than 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.
- **Apples, Capsciums, Pears, Citrus, Hops**: One spray per season.
- **Tomatoes**: Two sprays per season, five sprays if mites are NOT present.
- **Strawberries**: Two sprays per season.

This product must not be applied in two 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, TITAN AG representative or local agricultural department agronomist.

Crop Monitoring
It is essential to carry our 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 of this product + 5L Summer Oil/ha apply spray at the following mixing rates:

<table>
<thead>
<tr>
<th>This product Quantity per 100L required</th>
<th>Summer Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000L/ha (minimum)</td>
<td>75mL</td>
</tr>
<tr>
<td>1500L/ha</td>
<td>50mL</td>
</tr>
<tr>
<td>2000L/ha</td>
<td>37.5mL</td>
</tr>
<tr>
<td>2500L/ha</td>
<td>30mL</td>
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</table>

MIXING
Partly fill the spray tank with water, add the required amount of this product, and then add the remainder of the product. If oil is recommended then add this after the TITAN Abamectin Insecticide/Miticide 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 this product to apples and pears before or after applications on Delan® or Captan®. The label instructions on the summer oil 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.

APPLICATION INSTRUCTIONS FOR COTTON
This product may be applied by ground spraying or by fixed wing aircraft. Apply in a minimum of 20L of water per hectare. Ensure good coverage.

**Ground**: Apply with inter-row droppers fitted with nozzles spraying towards the cotton rows. The inter-row nozzles should be level with or just below the canopy and spraying at right angles to the ground.

**Air (fixed wing)**: Apply in 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 this product requires thorough spray coverage. Ensure that equipment is properly calibrated to give an even distribution at the correct volume. The same quantity of product per hectare should be used when spraying either with dilute or concentrate 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 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**
1. Dilute spray volume as determined above: For example 1500L/ha
2. Your chosen spray volume: For example 500L/ha
3. The concentration factor in this example is: 3X (i.e. 1500L divided by 500L = 3)
4. 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 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 into treated areas. DO NOT allow entry in 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 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.
STORAGE AND DISPOSAL
Store in the closed original container in a cool, dry, well-ventilated area. DO NOT store for prolonged periods in direct sunlight.

For Non-Refillable Containers: 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 a 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 500mm 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.

For Refillable Containers: Storage must be secure so that contents cannot be tampered with. All locks and/or seals must be in order. If locks or seals are broken prior to initial use then the integrity of this product cannot be assured. If this occurs TITAN AG Pty Ltd should be advised immediately. Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

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 the 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 arms and face thoroughly with soap and water. After each day’s use, wash gloves, goggles, respirator (if rubber wash with detergent and warm water) 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 contaminated clothing and wash skin thoroughly. If in eyes, wash out immediately with water.

MATERIAL SAFETY DATA SHEET
Additional information is listed in the material safety data sheet (MSDS). A material safety data sheet for TITAN Abamectin 18 Insecticide/Miticide is available from TITAN AG Pty Ltd on request. Call Customer Service on (02) 9999 6655 or visit www.titanag.com.au

CONDITIONS OF SALE: TITAN AG Pty Ltd shall not be liable for any loss injury damage or death whether consequential or otherwise whatsoever or howsoever arising whether through negligence or otherwise in connection with the sale supply use or application of this product. The supply of this product is on the express condition that the purchaser does not rely on TITAN AG’s skill or judgment in purchasing or using the same and every person dealing with this product does so at his own risk absolutely. No representative of TITAN AG Pty Ltd has any authority to add to or alter these conditions.

* Other trademarks

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**TITAN AG**
**Crop Protection**