

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

TITAN

PEACEKEEPER 600SC

INSECTICIDE

ACTIVE CONSTITUENT: 600g/L CHLORANTRANILIPROLE

GROUP **28** INSECTICIDE



For the control of *Lepidopteran* species of insect pests in Cotton and Pulse crops
as per the Directions for Use.

APVMA Approval No.: 92067/134346

Pack Size: 1L-200 L



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IN A TRANSPORT EMERGENCY

DIAL 000

POLICE OR FIRE BRIGADE

TRANSPORT AND HANDLING
NOT A DANGEROUS GOOD
ACCORDING TO THE AUSTRALIAN
DANGEROUS GOODS (ADG) CODE
FOR TRANSPORT BY ROAD AND RAIL

DIRECTIONS FOR USE

Restraints: DO NOT apply if heavy dew is present on crops, or if rainfall is expected within 2 hours of application.

DO NOT make more than 3 applications per Cotton crop per season and no more than 2 consecutive sprays per field per season.

DO NOT make more than 2 applications per Pulse crops per season. Applications must be a minimum of 7 days apart.

SPRAY DRIFT RESTRAINTS

Specific definitions for terms used in this section of the label can be found at www.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 tables 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: • spray droplets not smaller than a Medium spray droplet size category • minimum distances between the application site and downwind aquatic areas (see 'Mandatory buffer zones' in table 1) are observed.

Buffer Zones for Boom Sprayers

Table 1: Mandatory Buffer Zone for protection of the aquatic environment

Application Rate	Mandatory Downwind Buffer Zone
Up to 90mL/ha	20 metres

DO NOT apply by aircraft unless the following requirements are met:

- spray droplets not smaller than a Medium spray droplet size category;
- for release heights 25% of wingspan or 25% of rotor diameter or lower above the target canopy, minimum distances between the application site and downwind aquatic areas (see 'Mandatory buffer zones' in table 2) are observed.

Buffer Zones for Aircraft

Table 2: Mandatory Buffer Zone for protection of the aquatic environment

Application Rate	Wind speed conditions	Mandatory Downwind Buffer Zone
Up to 90mL/ha	3-8km/h	100 metres
	8-14km/h	200 metres
	15-20km/h	400 metres

For use in all STATES where appropriate for the crop and/or insect pest.

CROP	PEST	RATE	WHP	CRITICAL COMMENTS
Cotton	Cotton Bollworm (<i>Helicoverpa armigera</i>), Native Budworm (<i>Helicoverpa punctigera</i>), Cluster Caterpillar (<i>Spodoptera litura</i>)	55 or 90mL + non-ionic surfactant @ 125 gai/100L	28 days	Target brown eggs and hatchling (neonates or 1st instar) to small larvae (2nd instar) when they reach the economic spray threshold and before they become entrenched in squares, flowers and bolls. Use the low rate on threshold larvae pressure (2 larvae per metre row) and low egg pressure. Use the high rate with high egg and/or larvae pressure (where potential for >2 larvae per metre row produced) and so as to achieve longer residual control of <i>Helicoverpa</i> spp.
	Northern Rough Bollworm (<i>Earias vittella</i>), Rough Bollworm (<i>Earias huegeliana</i>)	90mL + non-ionic surfactant @ 125gai/100L		Target eggs and hatchling (neonates or 1st instar) to small larvae (2nd instar) when they reach the economic spray threshold and before they become entrenched in terminals or bolls.
Chickpea	Cotton Bollworm (<i>Helicoverpa armigera</i>), Native Budworm (<i>Helicoverpa punctigera</i>)	40mL + non-ionic surfactant @ 125gai/100L	14 days	A maximum of two applications are to be applied to any one crop per season. Further treatments should be made with alternative mode of action insecticides. Regularly scout crops to monitor for larvae. Target sprays against larvae. Apply as larvae reach threshold numbers. Larvae in entrenched feeding sites will not be controlled. Use enough water to ensure thorough coverage of the crop. Target a minimum of 100L/ha by ground rig and a minimum of 30L/ha by aircraft. Use in accordance with CropLife Insecticide Resistance Management Strategy guidelines. Target brown eggs and hatchlings (neonates or first instar) to small larvae (second instar) when they reach the economic spray threshold and before they become entrenched in flowers or pods.
Mung Bean, Soybean	Bean Podborer (<i>Maruca vitrata</i>), Cotton Bollworm (<i>Helicoverpa armigera</i>), Native Budworm (<i>Helicoverpa punctigera</i>), Soybean Looper (<i>Thysanoplusia orichalcea</i>), Bean Looper (<i>Mocis alterna</i>), Irrigated Tabby (<i>Anticarsia irrorata</i>)			
Winter Pulse crops (except Chickpea) including: Faba/Broad Bean, Field Pea, Lentil, Lupin, Vetch	Cotton Bollworm (<i>Helicoverpa armigera</i>), Native Budworm (<i>Helicoverpa punctigera</i>)			

CROP	PEST	RATE	WHP	CRITICAL COMMENTS
Summer Pulse crops (except Mung Bean and Soybean) including: Azuki/Adzuki Bean, Cow Pea, Navy Bean, Pigeon Pea	Bean Podborer (<i>Maruca vitrata</i>), Cotton Bollworm (<i>Helicoverpa armigera</i>), Native Budworm (<i>Helicoverpa punctigera</i>), Soybean Looper (<i>Thysanoplusia orichalcea</i>), Bean Looper (<i>Mocis alterna</i>), Irrorated Tabby (<i>Anticarsia irrorata</i>)	40mL + non-ionic surfactant @ 125gai/100L	14 days	A maximum of two applications are to be applied to any one crop per season. Further treatments should be made with alternative mode of action insecticides. Regularly scout crops to monitor for larvae. Target sprays against larvae. Apply as larvae reach threshold numbers. Larvae in entrenched feeding sites will not be controlled. Use enough water to ensure thorough coverage of the crop. Target a minimum of 100L/ha by ground rig and a minimum of 30L/ha by aircraft. Use in accordance with CropLife Insecticide Resistance Management Strategy guidelines. Target brown eggs and hatchlings (neonates or first instar) to small larvae (second instar) when they reach the economic spray threshold and before they become entrenched in flowers or pods.

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

WITHHOLDING PERIODS

HARVEST

COTTON: DO NOT HARVEST FOR 28 DAYS AFTER APPLICATION.

PULSE CROPS: DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION.

GRAZING

COTTON: DO NOT ALLOW LIVESTOCK TO GRAZE CROPS, COTTON STUBBLE OR GIN TRASH TREATED WITH TITAN Peacekeeper 600SC.

PULSE CROPS: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 14 DAYS AFTER APPLICATION.

EXPORT STATEMENT: Import tolerances for produce treated with TITAN Peacekeeper 600SC Insecticide may be pending in some countries. Consult with your exporter or TITAN AG before applying TITAN Peacekeeper 600SC Insecticide to export crops.

GENERAL INSTRUCTIONS

TITAN Peacekeeper 600SC Insecticide is an anthranilic diamide insecticide in the form of a suspension concentrate. TITAN Peacekeeper 600SC Insecticide is particularly active on *Lepidopteran* insect pests, primarily as a larvicide. TITAN Peacekeeper 600SC Insecticide should be applied after careful field monitoring of pest populations of eggs and larvae to determine the need for application, the correct timing of the initial application and of any subsequent applications. Subsequent applications are dependent on economic thresholds, as well as the growth rate of new unprotected plant material. For *Helicoverpa* species, spray applications should be timed to coincide with egg hatching and before larvae are entrenched in protected feeding sites. TITAN Peacekeeper 600SC Insecticide has been specifically designed for use in Integrated Pest Management (IPM) schemes. TITAN Peacekeeper 600SC Insecticide does not give traditional larval "knockdown" control. TITAN Peacekeeper 600SC Insecticide enters larvae primarily by ingestion of treated foliage, or through penetration of the insect cuticle. After ingesting TITAN Peacekeeper 600SC Insecticide, the larvae cease feeding and die four to five days later. TITAN Peacekeeper 600SC Insecticide provides square, flower and boll protection in cotton, and flower and pod protection in pulse crops.

INSECTICIDE RESISTANCE WARNING

For insecticide resistance management TITAN Peacekeeper 600SC Insecticide is a Group 28 insecticide. Some naturally occurring insect biotypes resistant to TITAN Peacekeeper 600SC Insecticide and other Group 28 insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if TITAN Peacekeeper 600SC Insecticide and other Group 28 insecticides are used repeatedly. The effectiveness of TITAN Peacekeeper 600SC Insecticide on resistant individuals could be significantly reduced. Since the occurrence of resistant individuals is difficult to detect prior to use, TITAN AG accepts no liability for any losses that may result from the failure of TITAN Peacekeeper 600SC Insecticide to control resistant insects.

Strategies to minimise the risk of insecticide resistance are available. To help prevent the development of resistance to TITAN Peacekeeper 600SC Insecticide observe the following instructions:

- Use TITAN Peacekeeper 600SC Insecticide in accordance with the current Insecticide Resistance Management (IRM) strategy for your region.
- Apply TITAN Peacekeeper 600SC Insecticide or other Group 28 insecticides using a "window" approach to avoid exposure of consecutive insect pest generations to the same mode of action. Multiple successive applications of TITAN Peacekeeper 600SC Insecticide or other Group 28 insecticides are acceptable if they are used to treat a single insect generation.

- Following a "window" of TITAN Peacekeeper 600SC Insecticide or other Group 28 insecticides, rotate to a "window" of applications of effective insecticides with a different mode of action.
- The total exposure period of all "Group 28-active windows" applied throughout the crop cycle (from seedling to harvest) should not exceed 50% of the crop cycle.
- Incorporate IPM techniques into the overall pest management program.
- Monitor insect populations for loss of field efficacy.
- Cultivate all cotton and pulse crop fields as soon as possible after picking/harvest to destroy over-wintering pupae of *Helicoverpa armigera*. For further information contact your farm chemical supplier, consultant, local Department of Agriculture or Primary Industries, or TITAN AG Representative. For additional information on insect resistance, modes of action and monitoring visit the Insecticide Resistance Action Committee (IRAC) on the web at <http://www.irac-online.org>

MIXING

Fill spray tank to ¼ to ½ full of water. Measure the amount of TITAN Peacekeeper 600SC Insecticide required for the area to be sprayed. Add TITAN Peacekeeper 600SC Insecticide directly to the spray tank with the agitation engaged. Mix thoroughly to disperse the insecticide. Once dispersed, the material must be kept in suspension at all times by continuous agitation. Use mechanical or hydraulic means.

DO NOT use air agitation, premix or slurry. If spray solution is left standing, ensure thorough re-agitation of the spray mix until fully resuspended. DO NOT allow spray mix to sit overnight, as re-suspension may be difficult.

SURFACTANTS

Use a non-ionic surfactant/wetting agent at 125g active/100L (eg. BS1000* @ 125mL/100L).

DO NOT add a non-ionic surfactant/wetting agent if:

- Mixing with another product which already contains a surfactant and/or the product label advises not to add a surfactant.
- Mixing with a liquid fertiliser.

COMPATIBILITY

TITAN Peacekeeper 600SC Insecticide is compatible with many commonly used fungicides, liquid fertilisers, herbicides, insecticides, and biological control products. However, since the formulations of products are always changing, it is advisable to test the physical compatibility of desired tank mixes and check for adverse effects like settling out or flocculation. To determine the physical compatibility, add the recommended proportions of the tank mix products to water, mix thoroughly and allow to stand for 20 minutes. If the combination remains mixed, or can be re-mixed readily, it is considered physically compatible. Avoid complex tank mixtures of several

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products or very concentrated spray mixtures. The crop safety of all potential tank-mixes, including additives and other pesticides, on all crops under all environmental conditions has not been fully tested. Before applying any tank-mixture not specifically recommended on this label or other supplemental labelling, the safety to the target crop must be confirmed. To test for crop safety, apply the combination to a small area of the target crop in accordance with the label instructions to ensure that a phytotoxic response will not occur. TITAN Peacekeeper 600SC Insecticide is compatible with Ovasyn* (amitraz) and Pix* (mepiquat chloride). TITAN Peacekeeper 600SC Insecticide is not compatible with Ultra Low Volume (ULV) formulations. The mixing sequence recommended is: water soluble bags, dry flowable or water dispersible granules, wettable powders, water-based suspension concentrates (TITAN Peacekeeper 600SC Insecticide), water-soluble concentrates, suspo-emulsions, oil based suspension concentrates, emulsifiable concentrates, adjuvants and surfactants, soluble fertilisers and drift retardants.

APPLICATION

Application equipment should be calibrated to apply at least 60 droplets per cm² of target foliage. Droplet VMD should be of MEDIUM spray quality.

Ground Application

Apply as a blanket spray or as a banded spray. Ensure thorough spray coverage on the foliage, using appropriate fan nozzles. Apply in a minimum spray volume of 100L/ha and keep the boom low to avoid spray drift. A minimum spray pressure of 275 kPa (40 psi) should be used with fan nozzles applying insecticides. Higher pressure reduces droplet size, DOES NOT improve canopy penetration and may increase drift potential.

WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.

For band spraying, increase the number of fan nozzles per crop row as the plant size increases.

Aerial Application

TITAN Peacekeeper 600SC Insecticide must only be applied with aircraft fitted with accurately calibrated equipment. Apply a minimum total spray volume of 30L/ha with nozzles (eg. Micronaire rotary atomisers, CP nozzles or conventional hydraulic nozzles) capable of producing medium spray quality droplets. A spray drift minimisation strategy, should be employed at all times when applying this product.

DO NOT apply TITAN Peacekeeper 600SC Insecticide using Ultra Low Volume (ULV) methods.

Minimising Spray Drift

The most effective drift management strategy is to apply the largest droplets which are consistent with pest control objectives. Coarser droplet size spectra have larger volume mean diameters (VMDs) and lower drift potential. The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator must consider all these factors when making application decisions. Refer to the Spray Drift Restraints.

Spray Equipment Cleanout

Prior to application, start with clean, well-maintained application equipment. Immediately following application, thoroughly clean all spray equipment to reduce the risk of forming hardened deposits which might become difficult to remove. Drain spray equipment. Thoroughly rinse sprayer and flush hoses, boom, and nozzles with clean water. Clean all other associated application equipment. Take all necessary safety precautions when cleaning equipment.

DO NOT clean near wells, water sources or desirable vegetation. Dispose of waste rinse water in accordance with local regulations.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto near-by nontarget plants/crops, cropping lands or pastures.

IMPORTANT: Not all crops within a crop group, and not all varieties, cultivars or hybrids of crops, have been individually tested for crop safety. To test for crop safety, apply the product in accordance with the label instructions to a small area of the target crop to ensure that a phytotoxic response will not occur, especially where the application is a new use of the product by the applicator.

PRECAUTION

DO NOT use human flaggers/markers unless they are protected by engineering controls such as vehicles with enclosed cabs.

PROTECTION OF HONEY BEES AND OTHER INSECT POLLINATORS

Based on Good Agricultural Practices (GAP), TITAN Peacekeeper 600SC Insecticide should not be applied when bees are actively foraging.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Dangerous to aquatic invertebrates. Drift and run off from treated areas may be hazardous to aquatic organisms in neighbouring areas. DO NOT contaminate streams, rivers or waterways with the chemical or used containers.

STORAGE AND DISPOSAL

KEEP OUT OF REACH OF CHILDREN. Store in the closed, original container in a dry, well-ventilated area, as cool as possible 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 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.

SAFETY DIRECTIONS

May irritate eyes, avoid contact with eyes. When using together with other products, consult their label safety directions. Wash hands after use.

FIRST AID

First aid is not generally required. If in doubt, contact a Poisons Information Centre. Phone Australia 131126; New Zealand 0800 764 766 or a doctor.

SAFETY DATA SHEET

Additional information is listed in the safety data sheet (SDS). A safety data sheet for TITAN Peacekeeper 600SC Insecticide is available from TITAN AG Pty Ltd on request. Call Customer Service on (02) 9999 6655 or visit 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.

Additional statements required by Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia:
Very toxic to aquatic life with long lasting effects. Precautionary Statements:
Avoid release to the environment. Collect spillage. Dispose of contents/containers in accordance with local/regional/national regulations.

