

TITAN

TOP WETTABLE SULPHUR

FUNGICIDE AND MITICIDE

ACTIVE CONSTITUENT: 800g/kg SULPHUR (S) present as WETTABLE SULPHUR

GROUP **M2** FUNGICIDE

For the control of certain fungal diseases and mites in grapevines and other crops
as per the Directions For Use table.

APVMA Approval No.: 48056/138725

Pack Size: 15kg-850kg



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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 within 3 weeks of an oil spray except when mixing Canola Oil as a woolly bud spray on Grapevines.

DO NOT apply product in combination with spraying oils except to deciduous fruit in dormant period.

DO NOT use on Grapevines when both temperature exceeds 30°C and relative humidity exceeds 75% and other crops when temperature exceeds 24°C.

TREE AND VINE CROPS				
RATE				CRITICAL COMMENTS
In the following table, all rates are given for dilute spraying. For concentrate spraying, refer to the Application section of the GENERAL INSTRUCTIONS.				
CROP	DISEASE / PEST	STATE	RATE / 100L	
Citrus	Brown Citrus Rust Mite (<i>Tegolophus australis</i>), Citrus Bud Mite (<i>Eriophyes sheldoni</i>), Citrus Rust Mite (<i>Phyllocoptruta oleivora</i>), Lichens, Moss	QLD, NSW, VIC, SA, WA only	400 to 500g	Spray July to August with thorough coverage. DO NOT use on citrus in hot weather. Use the higher rates for heavy infestations. Leave at least 3 weeks between sprays of oil and product.
	Citrus Bud Mite (<i>Eriophyes sheldoni</i>)	TAS only	200-300g	
	Melanose	NSW, WA only		
	White Louse Scale (<i>Unaspis citri</i>)			
Grapes	Rust Mite (<i>Calepitrimerus vitis</i>)	ALL STATES	600g*	Apply as a dilute spray in mixture with Canola Oil (eg. Supastik at 2L/100L) between budswell and mid-late woolly bud stage or apply alone between woolly bud and soon after budburst. These treatments will be less effective and may be phytotoxic if applied as concentrate sprays and should be applied in a dilute spray volume that results in visible wetting of the buds, canes and cordons when the temperature is at least 15°C during application and for several hours afterwards. The wood on crowns, cordons and canes should be thoroughly wet with this application. DO NOT apply in mixture with Canola Oil after woolly bud stage as crop phytotoxicity will occur. *High rates of wettable sulphur are detrimental to some natural enemies of pests especially parasitoids of Mealy Bug and Light Brown Apple Moth.
	Bud Mite and Grapeleaf Blister Mite (<i>Colomerus vitis</i>)		200g	Apply as a dilute spray between 100% budburst on the basal nodes and 1 week later. This treatment will be less effective if applied as a concentrate spray and should only be applied in a dilute spray volume that results in visible wetting of the buds, canes and cordons when the temperature is at least 15°C during application and for several hours afterwards. During summer, build up of blister mites may be checked by sulphur sprays for Powdery Mildew, but the early budburst spray is very important for Bud Mite control.
	Powdery Mildew (<i>Uncinula necator</i>)		200-600g*	Only use higher rates at the beginning of the season when temperatures are lower (15-20°C at application). Temperatures should be at least 15°C during application and for several hours afterwards to achieve effective control. Thorough coverage is required to provide effective control. DO NOT apply when both temperature exceeds 30°C and relative humidity exceeds 75% as crop phytotoxicity may occur. Commence application at 2 weeks after budburst with further sprays applied at 4 and 6-7 weeks after budburst. In cool climates where early growth of vines is slow, the first spray may be applied later than 2 weeks after budburst and the spray interval may be extended provided 3 sprays are applied between budburst and flowering. Further applications will be required at 2-3 week intervals (depending on the growth rate of vines) up to berry softening, where disease pressure is moderate to high and/or susceptible varieties are being treated. Use in a program with other fungicides registered for Powdery Mildew control with different modes of action, will provide better Powdery Mildew control than continuous sprays of Top Wettable Sulphur alone. Note: Top Wettable Sulphur may be combined with a registered copper fungicide for control of both Powdery and Downy Mildew. *High rates of Top Wettable Sulphur are detrimental to some natural enemies of pests especially parasitoids of Mealybug and Light Brown Apple Moth.
Kiwifruit	Two-spotted Mite (<i>Tetranychus urticae</i>)	NSW, WA only	150 to 200g	Spray only when pest is present. Repeat application only when necessary. DO NOT apply during hot weather.
Mangosteens	Powdery Mildew, Mites	ALL STATES	400g	Apply as a foliar spray. Spray when pests or disease are present. Repeat application only when necessary. DO NOT apply during hot weather.

CROP	DISEASE / PEST	STATE	RATE / 100L	CRITICAL COMMENTS
Pome fruit	Black Spot (Scab) (<i>Venturia</i> spp.)	VIC, TAS, SA only	200g	Apply at pink bud, petal fall and then at intervals of 2 to 3 weeks. DO NOT use on sulphur-sensitive Apple and Pear varieties in hot weather.
		QLD only	350g	Also suppresses mite development.
	Powdery Mildew (<i>Podosphaera leucotricha</i>)	ALL STATES	400g	Apply at least 2 sprays before blossom.
		NSW, VIC, TAS, SA, WA only	200 to 300g	Apply fortnightly after blossom. Use the lower rate if weather is hot and spraying non-sensitive varieties. DO NOT use on sulphur sensitive Apple and Pear varieties in hot weather.
		QLD only	350g	Also suppresses mite development.
Rambutans	Powdery Mildew, Mites	ALL STATES	400g	Apply as a foliar spray. Spray when pests or disease are present. Repeat application only when necessary. DO NOT apply during hot weather.
Stonefruit (except apricots)	Rust (<i>Tranzchelia discolor</i>)	NSW, VIC, TAS, SA, WA only	200 to 300g	Apply about 4 weeks after petal fall or at petal fall (in QLD only) and at intervals of 3 to 4 weeks until mid to late January. Use the higher rate when disease incidence is high.
		QLD only	350g	
	Brown Rot (fruit) (<i>Monilinia fructicola</i>)	NSW, VIC, TAS, SA only	200 to 300g	Apply 4 weeks after petal fall then as cover sprays.
		QLD only	350g	Apply at petal fall only.
Non Tree and Vine Crops				
CROP	DISEASE / PEST	STATE	RATE / 100L	CRITICAL COMMENTS
Ornamentals	Powdery Mildew, Two-spotted Mite (<i>Tetranychus urticae</i>)	VIC, TAS, SA, WA only	200g	Apply when pest or disease first seen and repeat every 10 to 21 days.
		QLD only	350g	
	Powdery Mildew	NSW only	200g	
Strawberries	Powdery Mildew	NSW, WA only	200 to 300g	Apply when the disease is first noted, then at 10 to 14 day intervals during humid weather.
Tomatoes for processing	Powdery Mildew, Bean Rust, Tomato Russet Mite, Bean Spider Mite, Two-spotted Mite	VIC, TAS, SA, WA only	2kg/ha	Apply when pest or disease first seen and repeat as necessary. Crop phytotoxicity may occur when applications occur during hot conditions.
	Powdery Mildew, Bean Rust, Tomato Russet Mite, Bean Spider Mite	NSW only		DO NOT apply during the heat of the day.
Vegetables (NOT cucumbers and rockmelons)	Powdery Mildew, Rust, Tomato Russet Mite, Bean Spider Mite	VIC, TAS, SA, WA only	200 to 300g	Apply when pest or disease is first seen and repeat every 14 to 21 days. Use the higher rate in crops with a large leaf cover or when conditions favour disease and/or mite development.
	Two-spotted Mite	Vic, Tas, SA, WA only	200 to 300g	DO NOT apply during the heat of the day.
	Powdery Mildew, Rust, Tomato Russet Mite	QLD only	350g	

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

WITHHOLDING PERIOD: NOT REQUIRED WHEN USED AS DIRECTED.

GENERAL INSTRUCTIONS

MIXING

Slowly pour the TITAN Top Wettable Sulphur into the spray tank three-quarters filled with water, with the agitation system actively moving. Alternatively, premix in a bucket, by adding to the TITAN Top Wettable Sulphur a quantity of water of at least half the volume of the TITAN Top Wettable Sulphur, and stir immediately.

Add this mixture to the bulk of the water in the spray vat with agitation running. If tank mixing with another product, always add TITAN Top Wettable Sulphur to the spray tank first. Tank mixtures containing TITAN Top Wettable Sulphur should not be left overnight before use. Apply spray mix immediately to avoid settling.

APPLICATION

Tree and Vine crops

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 the 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 can then be calculated in the following way:

EXAMPLE ONLY

1. Dilute spray volume as determined above: For example 1500L/ha.
2. Your chosen concentrate spray volume: For example 500L/ha.
3. The concentration factor in this example is: $3x$ (ie $1500L \div 500L = 3$).
4. If the dilute label rate is 200g/100L, then the concentrate rate becomes 3×200 , that is 600g/100L of concentrate spraying.

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.

Non-tree and vine crops

High volume (dilute spraying): Mix specified rates of product per 100L of water and apply in sufficient water to thoroughly wet the crop to the point of run-off. The water volume should increase as the crop size and bulk increase.

Low volume (concentrate spraying): Apply in sufficient water to ensure thorough, even coverage of all plant parts. The rate of product applied per hectare should be based on that which would be applied per hectare if high volume (dilute) application was used.

WETTING AGENT

If leaves and fruit are hairy or waxy, or where the water is hard, add a non-ionic wetting agent at the approved label rate.

COMPATIBILITY

TITAN Top Wettable Sulphur is compatible with most insecticides, fungicides and foliar fertilisers including Polyram* DF, thiram, ziram, Scala*, Mycloss*, carbaryl, azinphos, urea, Foliar Nitrophoska*, Wuxal+ Foliar Nutrient and Wuxal Calcium Foliar Nutrient. TITAN Top Wettable Sulphur is not compatible with oils or formulations containing mineral oil.

FUNGICIDE RESISTANCE WARNING

TITAN Top Wettable Sulphur is a member of the multi-site activity group of fungicides. For fungicide resistance management TITAN Top Wettable Sulphur is a Group M2 fungicide. Some naturally occurring individual fungi resistant to TITAN Top Wettable Sulphur and other Group M2 fungicides may exist through normal genetic variability in any fungal population. The resistant individuals can eventually dominate the fungal population if these fungicides are used repeatedly. These resistant fungi will not be controlled by TITAN Top Wettable Sulphur and other Group M2 fungicides, thus resulting in a reduction in efficacy and possible yield loss. Since the occurrence of resistant fungi is difficult to detect prior to use, TITAN AG Pty Ltd accepts no liability for any losses that may result from the failure of TITAN Top Wettable Sulphur to control resistant fungi.

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PRECAUTIONS

Re-Entry Period: TITAN Top Wettable Sulphur is of low toxicity and irritancy, and therefore no specific requirements for re-entry into treated areas are indicated.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT contaminate streams, rivers or waterways with this product or the used containers.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

DO NOT apply under weather conditions or from spraying equipment which could be expected to cause spray to drift onto nearby susceptible plants, adjacent crops, crop lands or pastures. DO NOT spray Cucumbers, Rockmelons or Apricots as these plants exhibit low tolerance to sulphur. Where there is a range of rates, apply the lower rate during the hot dry months to avoid scorching.

STORAGE AND DISPOSAL

Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight. The special formulation of TITAN Top Wettable Sulphur requires that the bag is kept sealed to prevent deterioration. Single rinse before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. 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 regulation. DO NOT burn empty containers or product.

SAFETY DIRECTIONS: None.

FIRST AID

If poisoning occurs contact a doctor or Poisons Information Centre. Phone Australia 131126; New Zealand 0800 764 766.

SAFETY DATA SHEET

Additional information is listed in the safety data sheet (SDS). A safety data sheet for TITAN Top Wettable Sulphur Fungicide and Miticide 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: Flammable solid. Causes skin irritation. Precautionary Statements: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond container and receiving equipment. Use explosion-proof [electrical/ventilating/lighting] equipment. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. IF ON SKIN: Wash with plenty of water. Specific treatment (see on this label). If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use CO₂, powder or water spray to extinguish.

* Other trademarks

