READ SAFETY DIRECTIONS BEFORE OPENING OR USING

TITAN

DUELLING
SPRAY ADJUVANT

ACTIVE CONSTITUENT: 704g/L ETHYL and METHYL ESTERS of CANOLA OIL with 196g/L NON-IONIC SURFACTANTS



A Biodegradable Penetrator Adjuvant, to enhance the effectiveness of certain Herbicides, Pyrethroid Insecticides, Defoliants and Desiccants.

TITAN Duelling Spray Adjuvant improves your spray results by: Increasing penetration through waxy cuticles; Increasing wetting and spreading of spray droplets; Reducing spray droplet evaporation rates.

TITAN Duelling Spray Adjuvant can be applied by boomspray, aerial application, CDA, ULV and low volume and high volume situations.

APVMA Approval No.: 83320/135608

Pack Size: 2.5L-1000L

TITAN AG
CROP PROTECTION

TITAN AG Pty Ltd | ABN 57 122 081 574
15/16 Princes Street, Newport NSW 2106
Tel (02) 9999 6655 | titanag.com.au

ADJ Formulation Type **Adjuvant**

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

SITUATION	APPLICATION RATE/100L	CRITICAL COMMENTS
Post-emergent herbicides	300mL-1.0L	TITAN Duelling Spray Adjuvant may be used in place of non-ionic surfactants or crop oils. Subject to spray volumes, usage rates may vary between 200mL-2.0L of TITAN Duelling Spray Adjuvant per hectare.
Products containing 30g/L Mesosulfuron	1.0L	TITAN Duelling Spray Adjuvant is recommended for all applications where products containing 30g/L Mesosulfuron are used.
TITAN Imazapic 240 Herbicide and other products which contain 240g/L Imazapic	1.0L	Recommended for post-emergent use in Peanuts only.
Decision*	1.0L	DO NOT use TITAN Duelling Spray Adjuvant when using Decision in mixtures with Tigrex or Giant. Apply with foliar zinc oxide.
TITAN Atrazine 900 WG Herbicide and other 900g/kg Atrazine products	500mL-1.0L	For post-emergent use in TT Canola.
Products containing 100g/L Iodosulfuron	1.0L	TITAN Duelling Spray Adjuvant is recommended for all applications where products containing 100g/L Iodosulfuron are used.
Products containing 525g/kg Imazethapyr and 175g/kg Imazapyr	1.0L	TITAN Duelling Spray Adjuvant is recommended for all applications where products containing 525g/kg Imazethapyr and 175g/kg Imazapyr are used.
TITAN Imazapic + Imazapyr + MCPA Selective EC Herbicide and other products combining 22g/L Imazapic + 7.3g/L Imazapyr + 288.5g/L MCPA	500mL	TITAN Duelling Spray Adjuvant is recommended for all applications where 22g/L Imazapic + 7.3g/L Imazapyr + 288.5g/L MCPA products are used.
Products containing 5g/L Butafenacil + 225g/L Glyphosate	500mL	TITAN Duelling Spray Adjuvant is recommended for all applications where 5g/L Butafenacil + 225g/L Glyphosate products are used.
224g/L Acifluorfen products	1.0L	Recommended for use in Mung Beans only.
Products containing 700g/kg Saflufenacil	1L	TITAN Duelling Spray Adjuvant is recommended for all applications where 700g/kg Saflufenacil products are used.
Products combining 525g/kg Imazapic + 175g/kg Imazapyr	500mL	TITAN Duelling Spray Adjuvant is recommended for all applications where products combining 525g/kg Imazapic + 175g/kg Imazapyr are used.
TITAN Imazamox 700 WG Herbicide and other products containing 700g/kg Imazamox	500mL or 1.0L	There are some applications where TITAN Duelling Spray Adjuvant should not be used with 700g/kg Imazamox. Refer 700g/kg Imazamox product labels.
Products containing 240g/L Clethodim; 360g/L Clethodim in EC formulations	500mL to 1.0L	Refer to product label.
Shogun*	500mL	Refer to Shogun label.
TITAN Flumioxazin 500 WG Herbicide	500mL to 1.0L	Use the lower rate on actively growing weeds.
Products that contain 300g/L Florpyrauxifen Benzyl	2-4L	Use higher rates of TITAN Duelling Spray Adjuvant where weeds are large or dense at spray time.
Products containing 700g/kg Imazethapyr	500mL	For post-emergent use. Refer to pesticide label.
Products containing 750g/kg or 875g/kg Terbuthylazine	500mL	For post-emergent applications.
Targa Bolt® and other products containing 200g/L Quizalofop	1.0L	TITAN Duelling Spray Adjuvant is recommended for all applications where Targa Bolt or other products containing 200g/L Quizalofop are used.
TITAN Clodinafop 240 EC Herbicide and other products combining 240g/L Clodinafop + 60g/L Cloquintocet	500mL	DO NOT use TITAN Duelling Spray Adjuvant when using TITAN Clodinafop 240 EC Herbicide and or similar products containing 240g/L Clodinafop + 60g/L Cloquintocet in mixtures with Tigrex or Jaguar. Where water volumes less than 50L/ha are used, do not use less than 250mL/ha of TITAN Duelling Spray Adjuvant.
TITAN Carfentrazone 400EC Herbicide and other 400g/L Carfentrazone-ethyl products	0.5-1.0L	TITAN Duelling Spray Adjuvant is recommended for use with 400g/L Carfentrazone products to control certain weeds. See Carfentrazone product labels for use rate and details.
Products containing 360g/L Paraquat	0.5-1.0L	TITAN Duelling Spray Adjuvant is recommended for all applications where 360g/L Paraquat products are used.
Products containing 200g/kg Butafenacil + 520g/kg Triasulfuron	500mL	TITAN Duelling Spray Adjuvant is recommended for all applications where products containing 200g/kg Butafenacil + 520g/kg Triasulfuron are used.
Products that contain 25g/L Aminopyralid present as Tri-Isopropanolamine Salt; 100g/L Picloram as the Tri-Isopropanolamine Salt; 200g/L Triclopyr as the Triethylamine Salt	500mL	
Velocity*	1L	TITAN Duelling Spray Adjuvant is recommended for all applications where Velocity is used.
Pyrethroid Insecticides	2.0-5.0L	TITAN Duelling Spray Adjuvant may be used with certain emulsifiable concentrate formulations.
Defoliants	600mL-2.0L per hectare	TITAN Duelling Spray Adjuvant may be used in place of crop oils. The higher recommended rate may be necessary when plants are subject to severe stress.
Desiccants	500mL-2.0L	
Use of TITAN Duelling Spray Adjuvant with Herbicides, Insecticides, Fungicides, Defoliants and Desiccants: TITAN Duelling Spray Adjuvant may be used wherever an oil-based adjuvant is recommended on the label of agricultural chemicals, unless esterified seed-oil adjuvants are specifically excluded. The recommended usage rate of TITAN Duelling Spray Adjuvant for all such applications should be approximately 0.5-1.0L/ha and should not be less than 0.2L/ha (see table below).		

TITAN AG CROP PROTECTION

Spray Application	Spray Volume per hectare	Rate TITAN Duelling Spray Adjuvant L/100L of spray volume
Low Volume	10-20L/ha	2.0-5.0L
Broadacre Boom Spray	50-100L/ha	500mL-2.0L
High Volume	200-500L/ha	200-500mL
When spraying at volumes other than those shown above, apply TITAN Duelling Spray Adjuvant at approximately 500mL-1.0L/ha.		

Spray Application	TITAN Duelling Spray Adjuvant rate
Aerial, CDA, ULV	200mL-2L/ha

Cotton Defoliation

PRODUCT	TITAN Duelling Spray Adjuvant rate	CRITICAL COMMENTS
Thidiazuron and Thidiazuron + Diuron products for defoliation. Ethephon products for boll opening (when used with Thidiazuron products).	500mL/ha	TITAN Duelling Spray Adjuvant can be used to enhance the performance of certain Cotton defoliation products.

Fungicide and Insecticide products

PRODUCT	TITAN Duelling Spray Adjuvant rate	CRITICAL COMMENTS
Products containing Spirotetramat	500mL-1L/100L	See product label for crop specific instructions.
TITAN Prothioconazole & Tebuconazole Fungicide	1L/100L	See product label for crop specific instructions.
Insecticides containing 32.5g/L Emamectin	1L/ha	Use TITAN Duelling Spray Adjuvant where Silverleaf Whitefly is the main target.

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

* Registered trademarks of third party

GENERAL INSTRUCTIONS

TITAN Duelling Spray Adjuvant is a highly penetrating spray adjuvant suitable for use with certain post-emergent herbicides, pyrethroid insecticides, defoliants and desiccants. It improves the pesticide performance by utilising the excellent penetration effect of esterified vegetable oils in combination with the wetting and spreading characteristics of non-ionic surfactants.

Read all directions for use on the TITAN Duelling Spray Adjuvant label and on the pesticide label. The pesticide manufacturer's directions and recommendations always take precedence over directions contained on this label.

COMPATIBILITY

TITAN Duelling Spray Adjuvant is compatible with a range of products detailed in the Direction for Use table, however all instructions on the agricultural chemical's label must be strictly followed.

HERBICIDE SPRAYS

TITAN Duelling Spray Adjuvant can be added to certain post-emergent herbicides to increase their efficiency. In some situations TITAN Duelling Spray Adjuvant may reduce selectivity. Care must be exercised when applying TITAN Duelling Spray Adjuvant with post-emergent herbicides on sensitive crops under conditions where plants are subject to drought stress, high temperatures and high humidity. If in doubt it is a sensible precaution to trial by application to a small area before committing to large scale applications.

CROP SAFETY

Refer to the directions for use on the agricultural chemical label. Caution must be exercised when applying TITAN Duelling Spray Adjuvant with agricultural chemicals on sensitive crops during periods when plants are subject to drought stress, high temperatures or high humidity. If in doubt it is a sensible precaution to trial by application to a small area before committing to large scale application.

MIXING

Follow directions on pesticide label. Half fill spray tank with water and add required amount of pesticide with agitation. Top up tank with water followed by addition of required amount of TITAN Duelling Spray Adjuvant and continue agitation while spraying.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT contaminate streams, rivers or waterways with the chemical or used container.

STORAGE AND DISPOSAL

KEEP OUT OF REACH OF CHILDREN. Store in the closed, original container in a well-ventilated area, as cool as possible. DO NOT store for prolonged periods in direct sunlight. Under conditions below 0°C TITAN Duelling Spray Adjuvant may thicken and become cloudy. It returns to a normal clear liquid state above 0°C. 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, puncture or shred and deliver empty packaging for appropriate disposal 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.

Refillable Containers: Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

SAFETY DIRECTIONS

May irritate the eyes and skin. Avoid contact with skin or eyes. Avoid inhaling vapour or spray mist. Wear overalls, rubber gloves and goggles or disposable face shield. After each day's use wash contaminated clothing, gloves and face shield or goggles with soap and water.

FIRST AID

If poisoning occurs contact a doctor or Poisons Information Centre. Phone Australia 131126; New Zealand 0800 764 766. If in eyes, hold eyes open and flood with water for at least 15 minutes and see a doctor. Additional information is listed in the safety data sheet (SDS).

SAFETY DATA SHEET

A safety data sheet for TITAN Duelling Spray Adjuvant 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: None.

TITAN AG CROP PROTECTION