

Product Name: IMTRADE BOLTA DUO® HERBICIDE
APVMA Approval No: 84061/118917



Label Name:	IMTRADE BOLTA DUO® HERBICIDE
Signal Headings:	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Constituent Statements:	670 g/L PROSULFOCARB 250 g/L TRIFLURALIN
Mode of Action:	GROUP D J HERBICIDE
Statement of Claims:	For the pre-emergent control of Annual Ryegrass, Silver Grass & Wireweed and the Suppression of Barley Grass in Barley and Wheat as specified in the Directions for Use table.
Net Contents:	1L-1000L
Restraints:	DO NOT apply more than 3L of Imtrade Bolta Duo® Herbicide per season. DO NOT apply to waterlogged soils DO NOT apply if heavy rains or storms that are likely to cause runoff are forecast within 2 days of application.
Directions for Use:	This section contains file attachment.
Other Limitations:	
Withholding Periods:	WITHOLDING PERIOD - HARVEST NOT REQUIRED WHEN USED AS DIRECTED.

	<p>WITHOLDING PERIOD - GRAZING DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 10 WEEKS AFTER APPLICATION.</p>
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Trade Advice:	
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General Instructions:	This section contains file attachment.
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Resistance Warning:	<p>Imtrade Bolta Duo® Herbicide is a member of the thiocarbamate and dinitroaniline groups of herbicides. Imtrade Bolta Duo® Herbicide has the inhibiting of fatty acid and lipid synthesis, and the inhibition of tubulin formation modes of action (MoA). For weed resistance management Imtrade Bolta Duo® Herbicide is a Group D and a Group J Herbicide. Some naturally occurring weed biotypes resistant to Imtrade Bolta Duo® Herbicide and other Group D and/or Group J Herbicides may exist through normal genetic variability in any weed population. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by Imtrade Bolta Duo® Herbicide or other Group D and/or Group J Herbicides.</p> <p>Since the occurrence of resistant weeds is difficult to detect prior to use, Imtrade Australia Pty Ltd accepts no liability for any losses that may result from the failure of Imtrade Bolta Duo® Herbicide to control resistant weeds.</p> <p>Advice as to strategies and alternative treatments that can be used should be obtained from your local farm chemical supplier, consultant, local Department of Agriculture or Primary Industries, or local Imtrade Australia Pty Ltd representative.</p>
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Precautions:	<p>RE-ENTRY PERIOD DO NOT allow entry into treated areas until the spray has dried unless wearing cotton overalls (or equivalent clothing) and chemical resistant gloves. Clothing must be laundered after each day's use.</p>
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Protections:	<p>PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS DO NOT plant sensitive grasses such as Oats, Sorghum, Millets, phalaris spp., Ryegrass or Wheat for 12 months following the use of this product except where wheat follows wheat or other winter crops. DO NOT apply under weather conditions or from spraying equipment that may cause spray to drift onto nearby or susceptible plants/crops, cropping lands or pastures. DO NOT exceed rates specified, to avoid crop damage. DO NOT allow spray to drift onto adjacent fallow land. DO NOT apply on or near shrubs, trees, lawns or crops other than Wheat or Barley. DO NOT drain or flush equipment on or near desirable trees or other plants, where their roots may extend, or in situations whereby movement of soil or by seepage absorption of the herbicide may occur. DO NOT plant oilseed poppies when a detectable residue of Imtrade Bolta Duo® Herbicide is present in the soil. Levels as low as 0.02ppm trifluralin may interact with other unfavourable factors (moisture, stress, disease etc.) to reduce poppy growth and vigour.</p> <p>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT HIGHLY TOXIC TO AQUATIC ORGANISMS. DO NOT contaminate streams, rivers or waterways with the chemical or used containers.</p>
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	DO NOT apply under meteorological conditions or from spraying equipment which could be expected to cause spray drift onto adjacent areas, particularly wetlands, waterbodies or watercourses.
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Storage and Disposal:	<p>The method of disposal of the container depends on the container type. Read the Storage and Disposal instructions on the label that is attached to the container.</p> <p>Keep out of reach of children. Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight.</p> <p>All Pack Sizes unless otherwise stated Triple rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemical 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 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. DO NOT re-use empty container for any other purpose.</p> <p>Envirodrum 110L Mini Bulk Returnable Container only DO NOT tamper with the Micro Matic valve or the security seal. DO NOT contaminate the Envirodrum with water or any foreign matter. After each use of the product, please ensure that the Micro Matic coupler, delivery system and hoses are disconnected, triple rinsed with clean water and drained accordingly. When the contents of the Envirodrum have been used, please return the empty Envirodrum to the point of purchase.</p> <p>Refillable Containers (1000L only) Empty contents fully into application equipment. Close all valves and return to point of sale for refill or storage.</p>
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Safety Directions:	May irritate the eyes. Repeated exposure may cause allergic disorders. Avoid contact with eyes. When opening the container and preparing the product for use wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow-length chemical resistant gloves Wash hands after use. After each day's use, wash gloves and contaminated clothing.
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First Aid Instructions:	If poisoning occurs, consult a doctor or Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 786).
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First Aid Warnings:	
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DIRECTIONS FOR USE IN ALL STATES:

Situation & Crop	Weeds	Rate	Critical Comments
Barley, Wheat	<p>Annual Ryegrass (<i>Lolium rigidum</i>) including Group D Resistant, Silver Grass (<i>Vulpia</i> spp.), Wireweed (<i>Polygonum aviculare</i>)</p> <p>Suppression of: Barley Grass (<i>Hordeum</i> spp.),</p>	2.25 – 3L/ha	<p>Apply pre-emergent and incorporate mechanically by sowing operation (IBS) using knife/blade point sowing equipment. Application should be made to a moist seedbed and sufficient rain to thoroughly wet the top 3 to 4 cm of soil should occur within 10 days after spraying. Avoid soil throw into adjacent seeding rows or sites where furrow walls may collapse.</p> <p>Application can occur 0-24 hours prior to incorporation by sowing. For best results apply as close as possible to sowing (within 12 hours). Application 12-24 hours before sowing may be more adversely affected by above average soil moisture, warm winter temperatures and high weed seed densities. These factors individually or combined may reduce final weed control.</p> <p>COMPLETE INCORPORATION OF IMTRADE BOLTA DUO® HERBICIDE IS ESSENTIAL FOR OPTIMAL WEED CONTROL.</p> <p>See GENERAL INSTRUCTION – INCORPORATION BY SOWING for details on IBS incorporation</p> <p>Use the higher rate for heavier stubble coverage, high weed numbers and/or where adverse conditions are expected. Stubble coverage above 40-50% ground cover and combinations of the above can reduce weed control below acceptable levels.</p> <p>Use the lower rate where optimal conditions are expected and weed seedbank numbers are low.</p>

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

Imtrade Bolta Duo® Herbicide is short residual, soil applied, pre-emergent herbicide that is absorbed by the roots and mesocotyl of germinating seedlings with inhibition of growth in the meristematic region. Foliar uptake is possible but of lower effect. Upstream translocation in the plant occurs but movement in the phloem is very unlikely. Best activity can be expected from applications before or shortly after the germination of target weeds.

Imtrade Bolta Duo® Herbicide should be applied to a moist smooth seedbed free of soil clods and emerged weeds. Imtrade Bolta Duo® Herbicide efficacy may be reduced by improper incorporation, high levels of crop or trash residues, stones or foreign matter and in areas of extremely high weed seed density such as header rows. For optimal efficacy and crop safety avoid shallow seeding and ensure accurate seed placement that avoids placement of seed in the herbicide band. Avoid water repellent soils, soils subject to water logging or where furrow walls are likely to collapse. Duration and effectiveness of weed control will depend on use rate, soil type and rainfall or irrigation after application. Adequate rainfall should occur within 10 days of application, as this herbicide requires sufficient available soil moisture to ensure soil movement and uptake by emerging weed seeds.

Crop Tolerance

The selectivity of Imtrade Bolta Duo® Herbicide in cereals is a combination of positional and physiological selectivity. Positional selectivity must be maintained by sowing at adequate depth below the herbicide band. The physiological selectivity of Imtrade Bolta Duo® Herbicide is given by the ability of cereals to metabolise the herbicide to inactive compounds more rapidly than susceptible weed species. Environmental factors such as rainfall events following application and soil type will influence product movement into the seed zone. Crop injury may occur when used in sandy soils with high leaching potential or in all soil types when heavy rainfall is received between sowing and emergence. Crop injury may also result from tank mixes with other herbicides or in the event of crop stresses including frost. Risk of crop damage may be exacerbated where varieties with short coleoptile length are planted in conjunction with the use of some fungicide seed treatments.

INCORPORATION BY SOWING

Incorporation by Sowing (IBS) with knife or blade points. Working speed should ensure adequate incorporation of product but avoid soil throw into the adjacent seeding row. Use of presswheels will minimise potential for herbicide to be dragged back into seeding rows. Weed control may be reduced in seeding rows as chemical displacement from this zone occurs, concentrating the herbicide in crop inter-rows.

A knife or blade point is defined as being <12mm in width, having no wings, inverted T or blade and is generally on a minimum 200mm row spacing.

Stubble coverage above 40-50% ground cover can reduce Weed control below acceptable levels..

IMTRADE BOLTA DUO® HERBICIDE MUST BE INCORPORATED INTO THE SOIL WITHIN 24 HOURS OF APPLICATION

CONDITIONS FOR BEST RESULTS

This product must be thoroughly incorporated as recommended. Soil should be well worked and free of weeds at the time of application. Product effectiveness may be reduced by inadequate incorporation, high organic matter, excess clods, crop or trash residues, stones or other foreign matter and in areas of unnaturally high weed seed population such as header tracks or livestock rest areas. Components of Imtrade Bolta Duo® are volatile and disappear from exposed surfaces. Loss is hastened by high temperature, winds or warm moist soil.

MIXING

Imtrade Bolta Duo® Herbicide is an emulsifiable concentrate that mixes readily with water. Fill the spray tank to one quarter full. Add Imtrade Bolta Duo® Herbicide and continue adding water to make up to the final spray volume. Agitate while mixing and spraying. When tank mixing wettable powder or water dispersible granule formulations should be added to the tank first followed by suspension concentrates (flowables), water soluble salts then Imtrade Bolta Duo® Herbicide or other emulsifiable concentrate formulations. Maintain thorough agitation during mixing and application. Agitate tank mixes vigorously if allowed to stand. **Note: Tank mix spray solutions should NOT be left standing in the vat overnight.**

Application

Apply by ground rig only in a minimum of 50L water/ha. Water rate selection should be based on soil type and stubble load. Stubble loads above 40 to 50% ground coverage can reduce weed control below acceptable levels. Water volumes greater than 70L/ha are recommended in order to reduce the impact of stubble in direct drill or minimum tillage systems. Use a nozzle delivering spray quality in the medium to very coarse spray range. Where possible spray and incorporate into the soil in one operation. Delay may cause inferior weed control. Use properly calibrated standard low pressure (170-340 kilopascal) boom type sprayer.

DO NOT apply by air.

Sprayer Clean Up

After using Imtrade Bolta Duo® Herbicide, empty the tank completely and drain the whole system. Thoroughly wash inside the tank using a pressure hose, drain the tank and clean any filters in the tank, pump, line and nozzles. **To rinse:** After cleaning the tank as above, quarter fill the tank with clean water and circulate through the pump, lines, hoses and nozzles. Drain and repeat the rinsing procedure twice.

COMPATIBILITY

IMTRADE BOLTA DUO® HERBICIDE may be mixed in the spray tank with:

Herbicides: Imtrade Eradicator 540 Herbicide, Imtrade Mandate 750 WG Selective Herbicide, Imtrade Spraykill Herbicide, Imtrade Paraquat 250 Herbicide.

Insecticides: Imtrade Chlorpyrifos 500 Insecticide.

Always refer to plant back restrictions on the label of the tank mix partner.

As formulations of other manufacturers' products are beyond the control of Imtrade Australia Pty Ltd and water quality varies with location, all mixtures should be tested prior to mixing commercial quantities.

RESISTANCE MANAGEMENT

Large numbers of healthy surviving weeds can be an indication that resistance is developing. Efforts should be made to prevent seed set of the surviving weeds. **DO NOT** make more than 1 application of a Group **D** or Group **J** Herbicide with the inhibition of fat acid and lipid synthesis, and inhibition of tubulin formation MoA to a crop in the same season.

If the user suspects that the target weed population is resistant to herbicides with this MoA, Imtrade Bolta Duo® Herbicide or other Group **D** or Group **J** Herbicides should not be used. Strategies to minimise the risk of herbicide resistance are available. The above recommendations should be incorporated into an Integrated Weed Management (IWM) Program that uses a diverse range of options to manage grass weeds and avoids over reliance on any 1 method of control. Consult your local farm chemical supplier, consultant, local Department of Agriculture or Primary Industries, or local Imtrade Australia Pty Ltd representative for details.

Tank Mixes

Application of Imtrade Bolta Duo® Herbicide at less than 2.25L/ha when tank mixing for Annual Ryegrass control **WILL NOT** be effective in the control of Group **D** or **J** resistant populations nor to delay the onset of herbicide resistance development. Tank mixing of herbicides is only effective in managing resistance where a lethal dose rate of each herbicide is applied.