

POISON

KEEP OUT OF REACH OF CHILDREN

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

*Quantum*TM Seed Treatment

ACTIVE CONSTITUENT: 167 g/L FLUQUINCONAZOLE

GROUP **C** FUNGICIDE

For the suppression of take-all and Septoria tritici blotch, the early season control of leaf rust and stripe rust and control of common bunt, loose smut and flag smut in wheat. For the suppression of blackleg in canola.

IMPORTANT: READ THE ATTACHED LEAFLET BEFORE USE

Contents: 10 Litres

Crompton Specialties Pty Ltd
3 Opala Street Regency Park SA 5010
Tel: (08) 8268 5700 Fax: (08) 8268 7555

Crompton

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DIRECTIONS FOR USE

Restraints

DO NOT apply to damaged, shot or pinched seed.
DO NOT apply treated seed from aircraft.

CROP	DISEASE	APPLICATION RATE	CRITICAL COMMENTS
Wheat	Take-all (suppression) (<i>Gaeumannomyces graminis</i>) Common bunt (<i>Tilletia</i> spp.) Seed- and soil-borne Flag smut (<i>Urocystis agropyri</i>) Loose smut (<i>Ustilago tritici</i>) Stripe rust * (<i>Puccinia striiformis</i> f. sp. <i>tritici</i>) Leaf rust ** (<i>Puccinia recondita</i> f. sp. <i>tritici</i>) Septoria tritici blotch (suppression) (<i>Mycosphaerella graminicola</i>)	Undiluted 4.5 L/ tonne of seed	Ensure even coverage of seed. Apply with an applicator designed for liquid seed treatments.
		Diluted 4.5 L plus up to 1.5 L of water/ tonne of seed	Calibrate application equipment for the flow rate of the grain. Quantum may be diluted with water prior to application to improve coverage. If applying dilute, or in mixtures the maximum recommended application volume is 6 L per tonne of seed.
Canola	Blackleg (suppression) (<i>Leptosphaeria maculans</i>)	20 L/tonne of seed	Ensure even coverage of seed. Apply undiluted with an applicator designed for liquid seed treatments. Calibrate application equipment for the flow rate of the grain.

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

WITHHOLDING PERIODS

Wheat

Harvest: NOT REQUIRED WHEN USED AS DIRECTED
Grazing: DO NOT GRAZE PLANTS GROWN FROM TREATED SEED, OR CUT FOR STOCK FOOD, WITHIN 12 WEEKS OF SOWING.

Canola

Harvest: NOT REQUIRED WHEN USED AS DIRECTED
Grazing: DO NOT GRAZE PLANTS GROWN FROM TREATED SEED, OR CUT FOR STOCK FOOD WITHIN 8 WEEKS OF SOWING.

PROTECTION STATEMENT

DO NOT FEED TREATED SEED TO LIVESTOCK, INCLUDING POULTRY.

GENERAL INSTRUCTIONS

Quantum is a novel quinazoline-based triazole fungicide for the protection of wheat against the root disease, take-all and protection of canola against blackleg.

When Quantum is applied as a seed treatment to wheat, the development of take-all is suppressed. Suppression of take-all with Quantum is characterised by reduced root lesions and a reduced number of whiteheads.

Quantum also provides season long control of common bunt, seed- and soil-borne flag smut and loose smut in wheat. In addition Quantum provides early season control of leaf rust, stripe rust and suppression of Septoria tritici blotch in wheat. Suppression of Septoria tritici blotch with Quantum results in a reduction in the visible symptoms of this disease.

When Quantum is applied as a seed treatment to canola, the development of blackleg disease is suppressed. Suppression of blackleg with Quantum is characterised by reduced leaf infection, reduced plant lodging and increased plant survival.

Quantum is applied to wheat and canola seed prior to sowing. The low water solubility of the active ingredient, fluquinconazole, allows extended uptake for long lasting protection of the plant, thus reducing the yield decline commonly associated with the above-mentioned root, grain and foliar diseases.

Quantum contains a red pigment so that treated grain can be easily identified.

FUNGICIDE RESISTANCE WARNING **GROUP C FUNGICIDE**

Quantum Seed Treatment is a member of the triazole group of fungicides. For fungicide resistance management Quantum is a Group C fungicide. Some naturally occurring individual fungi resistant to Quantum and other Group C 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 Quantum and other Group C 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, Crompton Specialties Pty Ltd accepts no liability for any losses that may result from the failure of Quantum to control resistant fungi.

EXPORT OF TREATED PRODUCE

Growers should note that suitable MRLs or import tolerances may not be established in all markets for produce treated with Quantum Seed Treatment. If you are growing produce for export, please check with Crompton Specialties Pty Ltd for the latest information on MRLs and import tolerances BEFORE using Quantum Seed Treatment.

APPLICATION

Quantum is applied to seed prior to sowing. Application must be conducted with a seed treatment machine suitable for flowable seed dressings, with an adjustable output. The equipment must be calibrated for the flow rate of the seed, to ensure even coverage and correct application rates. For best results, Quantum should be used to treat only undamaged seed of high viability.

Wheat

Quantum is a water based flowable product that can be applied neat or diluted with water. When applying the diluted product, prepare sufficient solution for the quantity of grain to be treated. Do not store diluted product. Do not dilute Quantum with more than 1.5 litres of water for each tonne of seed treated.

Canola

Apply Quantum neat to canola seed. Do not add water.

MIXING INSTRUCTIONS

Wheat only

If mixing other compatible products or water with Quantum, mix only sufficient product for immediate use. Add the required compatible product or water to Quantum and agitate thoroughly by shaking, rolling or stirring. Do not allow mixed product to stand for more than five hours without further agitation.

COMPATIBILITY

Wheat only

Quantum is compatible with Vincit^{®A} C, Vitaflo^{®B} C (up to 1.25 L/tonne) and Raxil^{®C} C seed treatments.

Where additional protection against grain storage pests is required, Crompton Specialties Pty Ltd recommends a mixture of Quantum with K-Obio^{®D} or another registered grain protection insecticide. Refer to the product label for application information.

CROP SAFETY

Canola

Quantum may shorten the hypocotyl length of canola. To avoid possible negative effects, Crompton Specialties Pty Ltd recommends following good canola sowing practices. Avoid sowing Quantum treated canola deeper than 20 mm, or into soils prone to crusting. Ensure Quantum treated seed is sown in the season of treatment.

PRECAUTIONS

DO NOT use treated seed for human or animal consumption. DO NOT allow treated seed to contaminate grain or other seed intended for human or animal consumption.

PROTECTION OF LIVESTOCK

DO NOT feed treated seed to animals, including poultry.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Treated seed could be harmful to game and wildlife.

DO NOT feed treated seed to wild or domestic birds. Any spillage of treated seed, however minor, must be cleaned up immediately, preferably recovered and used.

DO NOT contaminate streams, rivers or waterways with either this product, washings of this product, treated seed, or any container which has held product (see Storage and Disposal for directions).

STORAGE AND DISPOSAL

Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. Do not store near foodstuffs or animal feed. Triple or preferably pressure rinse containers before disposal. Dispose of rinsings in disposal pit, or use for diluting product to required volume. 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 bury empty container in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

Application equipment

Rinse all application equipment with clean water immediately after use and dispose of rinsings in a dedicated disposal pit, specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots.

Treated seed and containers of treated seed

Store treated seed in clearly marked bags or silos, away from other grain, animal feed or foodstuffs, in a cool, dry storage area. Do not use treated seed for human or animal consumption. If disposal of treated seed is necessary e.g. when cleaning up spillages, bury seed below 500 mm in a suitably located disposal pit, as described above. Do not use bags that have contained treated seed for any other purpose.

SAFETY DIRECTIONS

Harmful if swallowed. May irritate the eyes. Avoid contact with the eyes. When preparing the mixture and using the prepared mixture, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow-length PVC gloves and goggles. Wash hands after use. After each day's use, wash gloves, goggles and contaminated clothing.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. *Phone Australia* 131 126.

MATERIAL SAFETY DATA SHEET

Additional information is listed in the Material Safety Data Sheet.

CONDITIONS OF SALE

Crompton Specialties Pty Ltd will not accept any responsibility whatsoever and howsoever arising and whether for consequential loss or otherwise in connection with the supply or use of these goods other than responsibility for the merchantable quality of the goods and such responsibilities mandatorily imposed by Statutes applicable to the sale or supply of these goods. To the extent allowed by such Statutes the liability of Crompton Specialties Pty Ltd is limited to the replacement of the goods or (at the option of Crompton Specialties Pty Ltd) the refund of the price paid and is conditional upon a claim being made in writing and where possible sufficient part of the goods to enable proper examination being returned to Crompton Specialties Pty Ltd within thirty days of delivery.

TM Trademark applied for

Registered Trademarks:

- Cheminova
- A subsidiary of Crompton Corporation
- Bayer AG
- Aventis Environmental Science S.A.

APVMA Approval No: 57975/0903

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