

**ECOTOXIC**

**KEEP OUT OF REACH OF CHILDREN**

**Quantum**<sup>®</sup>  
Selective Herbicide

# HERBICIDE

Contains: 500g/Litre of diflufenican in the form of a suspension concentrate

**For the control of broadleaf weeds in winter  
and spring sown cereals except oats**



**PLEASE READ THE ENTIRE LABEL BEFORE MIXING OR USE. SHAKE OR STIR WELL BEFORE USE**

**HAZARD CLASSIFICATIONS: 6.9B, 9.1A, 9.2C**

**APPROVED HANDLER:** This product must be under the control of an approved handler during use.

**RECORD KEEPING:** Records of use must be kept under certain circumstances. See MSDS for details.

**WARNING:** May cause organ damage from repeated oral exposure at high doses.

**FIRST AID:** If swallowed DO NOT induce vomiting. For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. DO NOT scrub the skin. If splashed in eyes, wash out repeatedly with water for at least 15 minutes. If inhaled move the victim to fresh air immediately. Begin artificial respiration if breathing has stopped.

**PERSONAL PROTECTION:** When mixing or applying wear eye protection, chemical resistant gloves, boots and cotton overalls buttoned to the neck and wrist. Wash protective clothing daily after work. Wash hands and exposed skin before meals and after work.

**ECOTOXICITY:** Very toxic to aquatic organisms. Avoid contamination of any water supply with product or empty container. Harmful to the soil environment.

**STORAGE:** Store in original container, tightly closed, away from foodstuffs.

**DISPOSAL:** Triple rinse empty container placing rinse water in the spray tank. If recycling, discard cap and deliver clean container to an Agrecovery depot or crush and bury in an approved landfill. Dispose of product only by using according to this label, or at an approved disposal facility.

**MATERIAL SAFETY DATA SHEET:** Additional information is listed in the MSDS available from Zelam Ltd or [www.zelam.com](http://www.zelam.com).

**Approved pursuant to the HSN0 Act 1996,** No: HSR1001647. See [www.epa.govt.nz](http://www.epa.govt.nz) for approval conditions.

**Registered pursuant to the ACVM Act 1997,** No: P007306 See [www.foodsafety.govt.nz](http://www.foodsafety.govt.nz) for registration conditions.

**DIRECTIONS:**

**WEEDS CONTROLLED:** Cotyledon - 4 leaf stage: Black nightshade, catchfly, chickweed, field pansy, henbit, hempnettle, mouse-eared chickweed, nettle, nipplewort, oxtongue, parsley piert, redroot, scarlet pimpernel, scrambling speedwell, shepherds purse, spurrey, twincross, wild turnip.

Cotyledon - 2 leaf stage: Seedling broadleaved dock, combind, dandelion, fathen, scentless chamomile, small flowered buttercup, sowthistle, vetch, willow weed, wireweed, yellow gromwell. Cotyledon - 1 leaf stage: Cleavers, fumitory. Older stages of weeds than specified above may only be severely checked or suppressed. Perennial weeds, especially those growing from root chips, will not be controlled.

CROP TYPE	RATE	CRITICAL COMMENTS
<b>CEREALS</b> Winter and spring sown wheat, barley, ryecorn and triticale	200ml/ha plus 1 litre/ha of Twister™ (isoproturon 50SC)	Apply between early post-emergence and jointing, but while weed species present are within the growth stages specified above.

**It is an offence for users of this product to cause residues exceeding the relevant MRL in Food Notice: Maximum Residue Levels for Agricultural Compounds.**

**GENERAL:** Quantum must be applied to actively growing weeds but before they reach the maximum growth stages indicated above. Weeds at a more advanced stage may only suffer a temporary check. Susceptible weeds germinating after application will be controlled by residual activity. Quantum is most effective when soil conditions favour rapid growth; moist soil and high light intensity result in a rapid discolouration of target weeds. Weeds may take several days to die but they will no longer compete with the crop for moisture, light and nutrients. Dry soil conditions will reduce activity and drought affected weeds are less susceptible. Quantum should be applied to a fine, well prepared, moist, compact seedbed. Clods greater than 5 cm in diameter and surface trash may impair performance. Quantum should not be used on soils with an organic matter content over 10%.

Quantum may be used on all varieties of wheat and barley at any growth stage up to jointing although it may cause slight crop yellowing, particularly on barley, under cool, wet conditions or on light soils. This condition is temporary and will not affect subsequent crop growth or yield. Quantum should not be applied to cereals undersown with grass or clover; or to oats or other cereals not listed; under drought conditions; or if severe frosts are expected.

**MODE OF ACTION:** Quantum is both shoot and root absorbed giving good contact and residual activity against young seedling and germinating weeds. It acts by blocking the photosynthetic processes of the plant causing extensive bleaching and discolouration of new growth. It is particularly active on field pansy and some cruciferous species, but controls a broad spectrum of weeds.

**SOIL RESIDUES:** After harvest thoroughly cultivate soil before sowing subsequent crops. In the event of a winter crop failure through drought or disease, replant in the spring only with wheat or barley after thorough cultivation.

**COMPATIBILITY:** Compatible in tank mixtures with chlorsulfuron. DO NOT mix with any emulsifiable concentrate formulations.

**APPLICATION:** Apply through any standard crop sprayer capable of giving uniform coverage at a spray volume of between 150-300 litres of water/ha. Use spray pressures of at least 200 kPa and select spray nozzles capable of producing fine spray droplets. CDA or aerial application is not recommended. Avoid overlapping or over dosing as this may cause crop injury.

**SPRAYER CLEAN-UP:** To avoid injury to subsequently sprayed sensitive crops, thoroughly clean spray equipment with several rinses of clean water after use.

**RAINFALL:** Rainfall within 6 hours following treatment may reduce effectiveness.

**BEWARE:** Apply this product carefully. Spray drift may cause serious damage to desirable plants. Ensure compliance with relevant air management plans. A strategy to minimise spray drift should be employed at all times when applying spray near aquatic environments.

**RESISTANCE MANAGEMENT:** **[GROUP F1 HERBICIDE]** Quantum contains a pyridinecarboxamide herbicide with the inhibition of carotenoid biosynthesis mode of action. Naturally occurring weed biotypes resistant to this herbicide could develop. These resistant weeds may dominate a population when Quantum or other group F1 herbicides are used exclusively. To minimise this risk use strictly in accordance with label instructions and any resistance management strategies that may exist. For further information see [www.resistance.nzpps.org](http://www.resistance.nzpps.org)

**NOTICE TO BUYER:** The manufacturer and vendors of Quantum warrant the formulation to contain the specified active ingredient within accepted tolerance but make no warranty of any kind on the uses of material and accept no responsibility, whether the material is used in accordance with the label directions or not.

**REGISTERED TO:** Zelam Limited, Hudson Road, New Plymouth, NZ  
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BATCH NO:
D.O.M:

QUANTUM 160324