

# Mirquat

A soluble concentrate containing 730 g/l (65% w/w) chlormequat chloride.

**A growth regulator for use on winter and spring wheat, winter and spring oats, winter barley, triticale, winter rye and ornamental plant production.**

## PRODUCT BENEFITS

- A useful tool for the prevention of lodging in a range of crops.
- Can help produce stronger, thicker stems.
- Frequently used as part of a programme preceding ethephon based plant growth regulators especially in winter barley.
- Can be used on a range of ornamental plants.

**LERAP category:** Unclassified

**Pack size:** 15 litres  
Also available in bulk bins (650–1000 litres)

**Storage:** PROTECT FROM FROST



## IMPORTANT INFORMATION

FOR USE ONLY AS AN AGRICULTURAL/HORTICULTURAL PLANT GROWTH REGULATOR

Crop	Maximum individual dose	Maximum total dose	Maximum number of treatments	Latest time of application
Winter wheat (including aerial application)	2.3 l/ha	2.3 l/ha	–	Before 2nd node detectable
Spring wheat (including aerial application)	1.1 l/ha	–	One per crop	
Winter barley	2.3 l/ha	2.3 l/ha	–	Before 1st node detectable
Triticale		–	One per crop	
Winter and spring oats (including aerial application)				Before 3rd node detectable
Winter rye		1		Before 2nd node detectable
Ornamental plant production	See 'other specific restriction'			

*Other specific restriction:*

- When using in ornamental plant production the maximum concentration must not exceed 480 ml product per 10 litres of water.

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.

MAPP 11406

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.

## DIRECTIONS FOR USE

**IMPORTANT: This information is approved as part of the Product Label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.**

### RESTRICTIONS

MIRQUAT should not be applied until crops are actively growing.

DO NOT spray if rain is imminent or the crop is wet. At least six hours and preferably 24 hours is required before rainfall for maximum uptake of MIRQUAT.

DO NOT apply MIRQUAT to very late sown spring wheat or spring oats.

DO NOT apply to under fertilized crops or crops growing under stress. Under stress conditions mixtures of MIRQUAT and liquid nitrogenous fertilizers may cause crop scorch. This is normally outgrown without affecting yield.

DO NOT apply under windy conditions as drift may occur on to other crops and plants.

DO NOT use straw from MIRQUAT treated cereals as a horticultural growth medium or as a mulch.

### PROBLEM CONTROLLED

The use of MIRQUAT in winter wheat, barley, oats and rye can help produce shorter, thicker and stronger stems which can help reduce the risk of early lodging.

MIRQUAT is a useful growth regulator in a number of ornamental crops. When used at the correct stage, it can reduce internode length, thus producing compact and robust plants. It can also advance flower production and increase flower numbers. In bedding plants, legginess can be reduced and the period of saleability extended.

## CROP SPECIFIC INFORMATION

MIRQUAT should only be used on crops that are growing satisfactorily, without stress and under fertile conditions. Applications at early growth stages are often less effective, especially if unfavourable weather conditions slow down growth.

### Water volume

Apply MIRQUAT in at least 200 to 400 litres of water per hectare.

Crop	Dose	Max. no. of treatments	Timing
Winter wheat	2.3 l/ha	–	For optimum effect spray before second node detectable stage.
Spring wheat	1.1 l/ha	One per crop	Apply when the crop is actively growing from the fully tillered stage but before the first node detectable stage. For best results, apply from leaf sheath erect stage but before the second node detectable stage.
Winter barley	2.3 l/ha	–	Apply to actively growing crop from fully tillered stage but before first node detectable stage.  Use on barley has given inconsistent results.
Triticale	2.3 l/ha	One per crop	Apply to actively growing crop from fully tillered stage but before first node detectable stage.
Winter and spring oats	2.3 l/ha + an authorised non-ionic wetting agent	One per crop	Spray when the crop is in active growth and when most tillers are at the second node detectable stage but before the third node detectable stage.
Winter rye	2.3 l/ha	One per crop	Apply when the crop is actively growing from the leaf sheath erect stage to the first node detectable stage. Results will vary but lodging can often be prevented.

### Undersown crops

MIRQUAT may be safely used on wheat and oats undersown with grasses and clovers.

### Ornamental crops

Response to treatment with MIRQUAT is variable and can differ widely depending on variety, stage of growth and physiological conditions of the plant. It is advisable to treat a few plants separately before treating a whole batch.

Application can be via the foliage or soil. Follow the recommendations given for individual species as results vary according to the species.

Crop	Dose	Timing
Hibiscus trionium	40 ml/10 litres soil drench at 50 ml/pot	To be applied as a soil drench when shoots are 5–6 cm long. This will give height reduction and more compact plants.
Poinsettia	<i>Soil drench:</i> 40 ml/10 litres at 50 ml/pot, 10 days after potting	MIRQUAT can be applied as a drench or foliar spray to shorten internode length and produce balanced growth.
	<i>Foliar spray:</i> 19 ml/10 litres up to three sprays at 10–14 day intervals	Treatment is beneficial in all year round production and when plants are potted early and begin active growth before the onset of short days. Treatment should not be needed where the plants are potted up after the middle of September.
	<i>Unpinched:</i> 10–14 days after potting <i>Pinched:</i> Seven days after pinching	
Asiatic hybrid lilies	Soil drench 316 ml/10 litres at 50 ml/15 cm pot	Treatment of hybrid Mid-century types should be made when the shoots appear above ground and are 6–7 cm high, to check excess vegetative growth.
Hybrid geraniums	Drench or spray 24 ml/10 litres at 50 ml/pot	Apply as two sprays seven and nine weeks from sowing to induce early flowering and induce a dwarf habit. Drench when plants are well established.
Pelargonium zonale	Foliar spray 12–24 ml/10 litres	For F1 zonal hybrids. Treatments will result in earlier flowering and improved growth habit. Apply when the plants have four fully expanded leaves, with a second spray 10–14 days later.
Bedding plants	Spray or drench 19–40 ml/10 litres	For use on Phlox, Antirrhinum celosia, Salvia. Apply as foliar spray or compost drench. Use higher rate for drench treatment. Only well established plants should be treated.
Camellia	Soil drench 40 ml/10 litres at 50 ml/pot	Apply as a drench, monthly, to increase flower bud formation. Best combined with high nitrogen liquid feed.

## **MIXING AND SPRAYING**

Before spraying ensure that the sprayer is clean and in good working order. Check all hoses, filters and nozzles. Calibrate according to the sprayer manufacturer's recommendations.

Add the appropriate amount of MIRQUAT to clean water in a half-filled sprayer tank. Start agitation and when mixed thoroughly add the remainder of the water. Continue agitation during spraying.

WASH EQUIPMENT THOROUGHLY with water and wetting agent immediately after use and spray out. Spray out again before storing or using for another product. Traces of MIRQUAT can cause harm to susceptible crops sprayed later.

## **Aerial application**

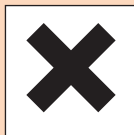
MIRQUAT may be applied from the air to wheat and oats at the recommended rate. Apply in 20–100 litres of water per hectare, using aircraft or helicopters with fan nozzles. Results may not be as effective as from ground applications. Aerial application should not be made in tank mix with other products.

## **COMPATIBILITY**

For a list of compatibilities contact your agronomist or Nufarm.

## MIRQUAT

A soluble concentrate containing 730 g/litre chlormequat chloride.



### HARMFUL

#### **HARMFUL IF SWALLOWED.**

**HARMFUL TO AQUATIC ORGANISMS, MAY CAUSE LONG TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.**

WEAR SUITABLE PROTECTIVE CLOTHING AND EYE/FACE PROTECTION.

KEEP OUT OF THE REACH OF CHILDREN.

KEEP CONTAINERS TIGHTLY CLOSED.

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDSTUFFS.

WHEN USING DO NOT DRINK, EAT OR SMOKE.

IF SWALLOWED, SEEK MEDICAL ADVICE IMMEDIATELY AND SHOW THE CONTAINER OR LABEL.

AVOID RELEASE TO THE ENVIRONMENT; REFER TO SPECIAL INSTRUCTIONS/SAFETY DATA SHEET.

**To avoid risks to man and the environment, comply with the instructions for use.**

## SAFETY PRECAUTIONS

### Operator protection

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment.

WEAR SUITABLE PROTECTIVE GLOVES when handling the concentrate.

However, engineering controls may replace personal protective equipment if a COSHH assessment shows that they provide an equal or higher standard of protection.

WASH CONCENTRATE from skin and eyes immediately.

DO NOT BREATHE SPRAY.

WASH HANDS AND EXPOSED SKIN before meals and after work.

IF YOU FEEL UNWELL, seek medical advice (show the label where possible).

### Environmental protection

DO NOT CONTAMINATE SURFACE WATERS OR DITCHES with chemical or used container.

### Storage and disposal

KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.

WASH OUT CONTAINER THOROUGHLY, empty washings into spray tank and dispose of safely.

DO NOT RE-USE CONTAINER for any purpose.

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDSTUFFS.

*Product sold in bulk (650 to 1000 litre) containers must only be transferred from the top of the container using the correct dry-break coupling system. Return containers for re-use via your distributor.*