



'BULLION®'

MAPP 14058

A water-dispersible granule containing 500 g/kg flupyrsulfuron methyl, a sulfonyleurea, for control of black-grass and certain broad-leaved weeds in winter wheat and winter barley, winter oats, winter rye and triticale.

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

SAFETY PRECAUTIONS

OPERATOR PROTECTION

WASH CONCENTRATE from skin or eyes immediately

DO NOT BREATHE SPRAY

WASH HANDS AND EXPOSED SKIN before meals and after work

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

EMPTY CONTAINER COMPLETELY and dispose of safely

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National Poisons Information Service 111 (England and Wales) or 0845 424 24 24
(Scotland)



This label is compliant with the CPA Voluntary Initiative Guidance

Contents: X grams

Batch No: xxx

BULLION

Herbicide

Contains 500g/kg flupyr-sulfuron-methyl

WARNING



Very toxic to aquatic life with long lasting effects.

Collect spillage.

Dispose of contents / container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste

Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).

To avoid risks to human health and the environment, comply with the instructions for use

IMPORTANT INFORMATION

FOR USE ONLY AS A PROFESSIONAL HERBICIDE

Crop	Max. Individual Dose Dose	Max. number of treatments	Latest time of application
Winter wheat	20 g/ha	1 per crop	Before GS31
Winter barley	20 g/ha	1 per crop	Pre-emergence
Winter oats, Winter rye, Triticale	10g/ha	1 per crop	December 31st

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

-----*(Start of label leaflet)*-----

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

- Do not apply 'Bullion' to any crop suffering from stress as a result of drought, water-logging, low temperatures, pest or disease attack, nutrient or lime deficiency, soil compaction or other factors reducing crop growth.
- Do not use 'Bullion' on crops undersown with grasses, clover or other legumes or any other broad-leaved crop.
- Do not apply within seven days of rolling emerged winter wheat
- Refer to 'Compatibility' for details on use of 'Bullion' with other 'ALS inhibiting' herbicides
- Because some non-target crops are highly sensitive to 'Bullion', avoid damage by drift onto plants outside the target area, or onto ponds, waterways or ditches. Thorough cleansing of equipment is also very important - see separate section.

WEED CONTROL

'Bullion' is a highly active herbicide with foliar and root activity against black-grass and a wide range of broad-leaved weeds. It is readily translocated within the weed plant, inhibiting growth within hours of application. The time taken for symptoms to appear and death to occur may vary between species. In some weed species, depending on weather conditions, symptoms may not be apparent for up to four weeks. Plants not completely killed are often severely stunted and are much less competitive with the crop. 'Bullion' has a moderate residual life in soil under normal conditions. The residual activity is reduced by high soil temperatures due to increased degradation of the active ingredient. Weed control may also be reduced when soil conditions are very dry. Nevertheless, with adequate soil moisture, susceptible weeds germinating soon after treatment will be controlled.

Weed resistance

This product contains flupyr-sulfuron methyl, which is an ALS inhibitor, also classified by the Herbicide Resistance Action Committee as 'Group B'. Use only as part of a resistance management strategy that includes cultural methods of control and does not use ALS inhibitors as the sole chemical method of grass-weed control.

Strains of some annual grasses (e.g. black-grass, wild-oats, and Italian rye-grass) have developed resistance to herbicides which may lead to poor control. Resistance management strategies should integrate both chemical and cultural approaches. Cultural measures play an essential role in limiting weed populations and preventing or reducing the risk of resistance development e.g. ploughing, delayed drilling, rotations, stale seed-beds. However, herbicides are also important in preventing crop competition and reducing seed shed.

When herbicides with the same mode of action are used repeatedly over several years in the same field, selection of resistant biotypes can take place. These can propagate and may become dominating. A weed species is considered resistant to a herbicide if it survives a correctly applied treatment at the recommended dose. Development of resistance within a weed species can be avoided or delayed by sequencing or tank-mixing with suitable products having a different mode of action. A strategy for preventing

and managing resistance should be adopted. The Weed Resistance Action Group have produced guidelines and copies are available from the HGCA, CPA, your distributor, crop adviser or product manufacturer. A herbicide resistance audit should be conducted with the aim of reducing the risk of herbicide resistance imposed by both your cultural system and herbicide strategy.

CROPS

'Bullion' can be used on all varieties of winter wheat and winter barley, winter oats, winter rye and triticale between the growth stages given below. Under certain climatic, soil and crop conditions some slight chlorosis and stunting of the crop may occur.

PRE-EMERGENCE IN WINTER WHEAT AND WINTER BARLEY

For control of black-grass, apply 'Bullion' at 20 g/ha before black-grass emergence in tank-mix with approved formulations of either pendimethalin (M13405) at 3.3 l/ha, flufenacet + pendimethalin (M13914) at 4 l/ha. This treatment may also provide control of a number of weeds such as Chickweed, Mayweeds and Red dead-nettle. Tank-mix partners must only be used in accordance with their label warnings and restrictions. The seed should be covered by at least 32mm of soil and for best results apply to a firm, moist seedbed that is free of clods. Adverse crop effects such as stunting or loss of vigour may occur following use of 'Bullion' in tank-mixture in winter barley. Affected crops will normally recover but yield reductions are possible.

POST-EMERGENCE APPLICATION IN WINTER WHEAT, WINTER OATS, WINTER RYE AND TRITICALE

Winter wheat: Apply 'Bullion' at 20g/ha from the 1 leaf stage (GS 11) to before first node detectable stage (GS 31). For black-grass control and for resistance management 'Bullion' should be tank-mixed or sequenced with a partner e.g. pendimethalin and/or flufenacet based products. Optimal control of black-grass is achieved following application from the 1-leaf stage in winter wheat. Control is reduced beyond this stage.

Winter oats, winter rye and triticale: Apply 'Bullion' at 10 g/ha from the 2 leaf stage (GS 12) to December 31st

The susceptibility ratings of broad-leaved weeds in the following table refers to post-emergence application with good spray cover and good growing conditions.

Weed species	Rate	Susceptibility
Charlock	10 g/ha.	Susceptible up to 6 true leaves
Chickweed, Common	10 g/ha 15 g/ha	Susceptible up to 2 true leaves Susceptible up to 6 true leaves
Cleavers	20 g/ha	Moderately resistant up to 6 true leaves
Crane's-bill	20 g/ha	Susceptible up to 6 true leaves
Dead-nettle, Red	15 g/ha	Susceptible up to 6 true leaves
Forget-me-not, Field	15 g/ha	Susceptible up to 6 true leaves
Groundsel	10 g/ha	Susceptible up to 6 true leaves
Mayweed	10 g/ha	Susceptible up to 6 true leaves
Pansy, Field	20 g/ha	Moderately resistant up to 2 true leaves
Poppy, Corn*	20 g/ha	Susceptible up to 6 true leaves
Shepherd's-purse	10 g/ha	Susceptible up to 6 true leaves
Speedwell, Ivy-leaved	20 g/ha	Moderately resistant up to 2 true leaves
Volunteer Oilseed Rape	10 g/ha	Susceptible up to 6 true leaves

* Weeds germinating after treatment may not be adequately controlled.

FOLLOWING CROPS

Only cereals, oilseed rape, field beans, red and white clover or grass may be sown in the year of harvest to succeed a cereal crop treated with 'Bullion'. Where 'Bullion' is applied in tank-mix or sequence with other products, the following-crop advice on the labels of those products must be followed as appropriate.

CROP FAILURE

In the event of crop failure for any reason, sow only winter wheat or spring wheat, within three months of application of 'Bullion'. Prior to re-sowing, soil should be ploughed and cultivated to a depth of at least 15 cm. After three months, follow the recommendations in "Following crops" section.

VOLUME AND APPLICATION

Apply in 100-400 litres of water per hectare, using suitable equipment to give good cover of the weeds. When crops are thick the higher volume should be used. When applying 'Bullion', care should be taken not to overlap spray swaths.

SOIL

'Bullion' can be used on all soil types. On highly alkaline soils (pH > 7.7) the residual activity and subsequent weed control achieved by 'Bullion' is reduced. 'Bullion' is more persistent in soils of low pH.

MIXING

Before using 'Bullion', make sure that the spraying equipment is clean. 'Bullion' mixes easily with water, but the following mixing procedure should be followed: Half fill the spray tank with water, start the agitation and add the required quantity of 'Bullion' directly to the tank without prior creaming. Continue agitation while topping up the tank and while spraying.

COMPATIBILITY

Tank-mix partners must only be used in accordance with their label warnings and restrictions. When using 'Bullion' in a tank-mix, always add 'Bullion' to the spray tank first. 'Bullion' is compatible with the following:

- STOMP 400SC
- DEFY
- CRYSTAL

Consult your supplier before applying in tank-mix with any other product.

The following 'joint application' with other sulfonylurea and 'ALS inhibiting' herbicides may be applied to a crop. Requirements and restrictions on other product labels must be adhered to. 'Joint application' is the use of BULLION in tank mixture or sequence with one of the products listed below.

Atlantis WG*	Concert SX	Hiker	Inka SX
Ally Max SX	Chimera SX	Horus*	Ratio SX
Avro SX	Finish SX	Hunter	Refine Max SX
Barton WG	Galaxy	Jubilee SX	Spitfire
BiPlay SX	GEX 353	Lorate	Starane Gold
Boxer	GF-184	Octavian*	Starane Vantage

Broadway Star**	Harmony M SX	Othello*	Starane XL
Broadway Sunrise**	Hatra*	Pacifica*	Traton SX
		Presite SX	

* To avoid increased selection of herbicide resistant plants, a sequence of 'Bullion' with one of these products is only permitted where 'Bullion' has been applied in tankmix with a suitable residual partner e.g. pendimethalin and/or flufenacet based products and before blackgrass emergence. 'Bullion' may only be applied in sequence with these products for the control of common chickweed or mayweed provided a robust non-ALS inhibitor programme has been applied in the autumn.

** Maximum of 10 g/ha 'Bullion'. Do not use in tank mixture or sequence with 'Bullion', where 'Bullion' is applied at more than 10 g/ha

Additional recommendations may be approved since label printing. Please consult your supplier for latest details on compatibilities.

WARNING

EXTREME CARE SHOULD BE TAKEN TO AVOID DAMAGE BY DRIFT ONTO PLANTS OUTSIDE THE TARGET AREA OR ONTO PONDS, WATERWAYS OR DITCHES OR LAND INTENDED FOR CROPPING. SPRAYING EQUIPMENT SHOULD NOT BE DRAINED OR FLUSHED ONTO LAND PLANTED WITH OR INTENDED FOR PLANTING WITH TREES OR CROPS OTHER THAN CEREALS.

SPRAY TANK CLEAN-OUT

POOR CLEANOUT PRACTICES AND INSUFFICIENT WATER VOLUMES USED FOR THE RINSE PROCEDURE MAY RESULT IN INADEQUATE REMOVAL OF PRODUCT DEPOSITS. SUBSEQUENT USE OF APPLICATION EQUIPMENT IN THESE CIRCUMSTANCES MAY RESULT IN DAMAGE TO NON-CEREAL CROPS.

TO AVOID SUBSEQUENT DAMAGE TO CROPS OTHER THAN CEREALS, IMMEDIATELY AFTER SPRAYING 'BULLION' THOROUGHLY CLEAN ALL SPRAY EQUIPMENT, INCLUDING INSIDE AND OUTSIDE OF LID, USING THE FOLLOWING PROCEDURE:

Always start with a clean tank and spray system. Clean spray equipment thoroughly immediately after use.

1. Thoroughly and completely rinse all interior tank surfaces (including lid) with water (use at least 10% of the tank capacity), taking care to remove any visible deposits. Flush pump, filters and boom after removing in-line strainers, nozzle tips and screens (clean these parts separately). Drain the remainder of the rinsate from the tank.
2. Repeat the rinse, flush and drain.

GENERAL NOTES:

Consult label tank cleanup procedures for all tank mix partners and be sure to use the most rigorous procedure recommended.

ADDITIONAL NOTES

'Bullion' is non-corrosive to equipment, non-flammable and non-volatile.

NOTICE TO BUYER

All goods supplied by us are of a high grade and we believe them to be suitable for any purpose for which we expressly supply them, but as we cannot exercise control over their mixing or use, all conditions and warranties, statutory or otherwise, as to the quality or fitness for any purpose of our goods are excluded and no responsibility will be accepted by us for any damage or injury whatsoever arising from their storage, handling, application or use.

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Section 6 of the Health and Safety at Work Act

Additional Product Safety Information

(This section does not form part of the product label under the Control of Pesticide Regulations 1986)

The product label provides information on a specific pesticidal use of the product; do not use otherwise, unless you have assessed any potential hazard involved, the safety measures required and that the particular use has "off-label" approval or is otherwise permitted under the Control of Pesticides Regulations.

The information on this label is based on the best available information including data from test results

Safety Data Sheet

[insert QR code and wording]

To access the Safety Data Sheet for this product scan the code