



ATLANTIS[®]
Star

2 kg e

GROUP 2 HERBICIDE

A highly active herbicide (including two sulfonylurea herbicides) with foliar and some root activity against black-grass, loose silky bent, wild-oats, rye-grasses, meadow-grasses, sterile brome and a range of annual broad-leaved weeds in winter wheat and winter triticale.



MAPP 20011

A water dispersible granule formulation containing 45 g/kg mesosulfuron-methyl, 9 g/kg iodosulfuron-methyl-sodium and 22.5 g/kg thienencarbazone-methyl.

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

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ATLANTIS STAR

UFI: WKV0-N0AF-X00V-5G43

A water dispersible granule formulation containing 45 g/kg mesosulfuron-methyl, 9 g/kg iodosulfuron-methyl-sodium and 22.5 g/kg thien carbazon-methyl. Also contains mefenpyr-diethyl.



DANGER

Causes serious eye damage.

Very toxic to aquatic life with long lasting effects.

Wear protective gloves/protective clothing/eye protection/face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

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.

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



GB89144175a rA1

IMPORTANT INFORMATION FOR USE ONLY AS AN AGRICULTURAL HERBICIDE

CROPS	MAXIMUM INDIVIDUAL DOSE	MAXIMUM NUMBER OF TREATMENTS	LATEST TIME OF APPLICATION
Winter wheat, winter triticale	0.333 kg product/ ha	One per crop	Second node detectable (GS 32) of the crop

OTHER SPECIFIC RESTRICTIONS:

This product must only be applied between 1 February in the year of harvest and the specified latest time of application.

To avoid the build-up of resistance do not apply this or any other product containing an ALS herbicide with claims of control of grass weeds more than once to any crop.

This product must not be applied via hand-held equipment.

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.

SAFETY PRECAUTIONS

Operator Protection

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

WEAR SUITABLE PROTECTIVE GLOVES AND FACE PROTECTION (FACESHIELD) when handling the product.

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

WHEN USING DO NOT EAT, DRINK OR SMOKE.

WASH HANDS AND EXPOSED SKIN before eating and drinking and after work.

Environmental Protection

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. Take extreme care to avoid drift onto crops and non-target plants outside the target area.

Since there is a risk to aquatic life from use, users not applying the statutory buffer zone must either themselves carry out or ensure that someone else has carried out a Local Environment Risk Assessment for Pesticides (LERAP) on their behalf before each spraying operation from a horizontal boom sprayer. Users must not allow direct spray from horizontal boom sprayers to fall within 5 m of the top of the bank of any static or flowing waterbody or within 1 m of a ditch which is dry at the

time of application (these distances to be measured as set out in the guidance documents available from HSE Chemicals Regulation Division's website and any amendments that are made to it) unless:

- (a) The LERAP indicates that a narrower buffer zone will be sufficient; and
- (b) Any measures indicated by the LERAP as justifying the narrower buffer zone are complied with in full and in accordance with any conditions applicable to them.

Spray must be aimed away from water.

The results of the LERAP must be recorded in written form and must be available for a period of three years for inspection to any person entitled to exercise enforcement powers under or in connection with the Plant Protection

Products Regulations 2011 or the Plant Protection Products (Sustainable Use) Regulations 2012. (An electronic record will satisfy the requirement for a written record, providing it is similarly available for inspection and can be copied). Detailed guidance on LERAPs and how to conduct a LERAP are contained in the guidance documents available from HSE Chemicals Regulation Division's website. All LERAPs must be carried out in accordance with this Guidance and any amendments that are made to it.

This product must not be applied via hand-held equipment.

Storage and Disposal

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

KEEP OUT OF REACH OF CHILDREN.

KEEP AWAY FROM FOOD, DRINK
AND ANIMAL FEEDING STUFFS.
WASH OUT CONTAINER THOROUGHLY
and dispose of safely.
PROTECT FROM FROST.

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 use Atlantis Star on crops undersown with grasses, clover or other legumes or any other broad-leaved crop.

Only use Atlantis Star in permitted ALS sequences and tank mixes and only in accordance with label

recommendations for every product in the sequence or tank mixture.

Atlantis Star must not be applied to any crop suffering from stress as a result of drought, water-logging, pest or disease attack, nutrient deficiency, soil compaction or other factors reducing crop growth.

Ensure that spray swaths do not overlap as this may result in crop phytotoxicity, such as bleaching or stunting. These symptoms are not always transient and may reduce the yield of winter triticale.

Due to the potential for yield loss, sometimes without prior signs of crop phytotoxicity, avoid use of Atlantis Star to control light infestations of grass weeds.

Because some non-target crops are sensitive to Atlantis Star, extreme care is required to avoid drift onto

plants outside the target area, or onto ponds, waterways or ditches.

Do not apply Atlantis Star when rain is imminent.

Do not apply during periods of frosty weather.

Store in a safe dry place designated as an agrochemical store.

WEEDS CONTROLLED

This product contains mesosulfuron-methyl, iodosulfuron-methyl and thien carbazon-methyl which are ALS inhibitors, 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. A strategy for preventing and managing resistance should be adopted. Guidelines have been produced by the Weed Resistance Action Group and copies are available from the AHDB, CPA, your distributor, crop advisor or product manufacturer.

WEED	POST-EMERGENCE SUSCEPTIBILITY TO 0.2 KG/HA	POST-EMERGENCE SUSCEPTIBILITY TO 0.333 KG/HA
Grass weeds		
Blackgrass	-	MR to GS 25
Brome, sterile/barren	-	MS to GS 32
Loose silky-bent	S to GS 31	-
Meadow grass, annual	S to GS 30	-
Rye-grass, perennial (from seed)	-	S to GS 31
Rye-grass, Italian	-	S to GS 30
Wild oats	-	MS to GS 29
Broad-leaved weeds		
Chickweed, common	S to GS 26	S to GS 39
Cleavers	-	MS to GS 14

WEED	POST-EMERGENCE SUSCEPTIBILITY TO 0.2 KG/HA	POST-EMERGENCE SUSCEPTIBILITY TO 0.333 KG/HA
Broad-leaved weeds cont.		
Mayweeds	S to GS 19	S to GS 29
Oilseed rape, volunteer	S to GS 30	-
Poppy, common	-	MS to GS 16
Shepherd's purse	S to GS 31	S to GS 39
Speedwell, common field	S to GS 26	S to GS 39
Speedwell, ivy-leaved	MS to GS 14	S to GS 25

S = Susceptible, MS = Moderately Susceptible, MR = Moderately resistant

* Situations where Enhanced Metabolism Resistance (EMR) has been confirmed as RR or RRR by a resistance test or where a significant reduction in performance of other herbicides has been noted previously.

Atlantis Star is readily translocated within the target weed, inhibiting growth within hours of application. The actual time taken for herbicidal symptoms

to appear and death varies between weed species, timing of application and weather conditions. In some cases symptoms may not be apparent for up to

4 weeks. Optimum grass weed control will be obtained when all grass weeds are emerged at spraying. Weeds germinating after application will not be controlled.

As Atlantis Star is active primarily via foliar uptake good spray coverage of the target weed is essential for optimal efficacy. For optimal activity, apply when weather conditions promote active weed growth. Atlantis Star controls emerged weeds on all soil types.

Atlantis Star has a moderate residual life in soil under normal conditions. As residual activity is important for optimal activity, avoid application under very dry conditions on to very dry soil. Residual efficacy will be enhanced where seedbeds are fine and moist. High soil temperatures and cloddy seedbeds may reduce the residual efficacy of Atlantis Star.

The presence of enhanced metabolism herbicide resistant grasses may lead to unacceptable levels of control. To reduce the risk of developing resistance or where resistance to sulfonylurea herbicides is suspected, applications should be made to young, actively growing weeds.

Key aspects of the Atlantis Star resistance management strategy are:

- ALWAYS follow WRAG guidelines for preventing and managing herbicide resistant grass and broad-leaved weeds.
- DO NOT use Atlantis Star as a stand-alone treatment for black-grass, ryegrass, common chickweed, common poppy or mayweeds. Use only in tank mixture or in sequence with herbicides with non-ALS modes of action.

- IDEALLY apply Atlantis Star as early as possible and before GS 31 of grass weeds.
- DO NOT use Atlantis Star as the sole means of grass weed or broad-leaved weed control in successive crops.
- ALWAYS use grass and broad-leaved weed herbicides with non-ALS modes of action throughout the cropping rotation.
- ALWAYS monitor weed control effectiveness and investigate any odd patches of poor grass or broad-leaved weed control. If unexplained contact your agronomist who may consider a resistance test appropriate.

CROP SPECIFIC INFORMATION

Winter Wheat and Triticale

Apply via a horizontal boom sprayer at a rate of 0.333 kg/ha or at 0.2 kg/ha (according to the growth stage of the target weed(s)). Apply in 200–300 L/

ha as a **FINE to MEDIUM** spray (BCPC category). Use application techniques which ensure good weed coverage and crop penetration. Spray overlaps in the treated cereal crop should be avoided in order to reduce the risk of localised adverse effects on following crops of winter oilseed rape. Always use Atlantis Star in mixture with authorised adjuvant biopower (ADJ: 0617) at a rate of 1 L/ha.

Only one application of Atlantis Star should be made to the crop.

For use on all varieties of winter wheat and triticale. Apply from the main shoot and 1 tiller stage (GS 21) of the crop up to second node detectable (GS 32).

This product is authorised in winter sown crops. Growers choosing to apply this product to winter sown spring varieties

should note that crop safety has not been demonstrated in spring varieties. As a result application of this product to winter sown spring varieties is done so at the growers own commercial risk (and this also applies to unclassified varieties).

SEQUENCES & TANK MIXTURES

Only one “ALS inhibiting” herbicide can be applied to the same crop in sequence or in tank mixture with Atlantis Star. Only wheat may be sown as the following crop when Atlantis Star is applied in tank mixture or sequence with another ALS inhibitor herbicide, such as a sulfonylurea

Atlantis Star may be applied to the same crop in sequence or in tank mixture with one of the following “ALS inhibiting” herbicides where wheat is established as the following crop in the normal rotation:

Alias SX	DP911 SX	Omnera LQM
Ally Max SX	Eagle	Presite SX
Answer SX	Finish SX	Provalia LQM
Avro SX	Galaxy	Quantum SX
Barton WG	Gartrel	Ratio SX
Biplay SX	GF-184	Refine Max SX
Boxer*	Gropper SX	Sekator OD
Calibre SX	Harmony M SX	Simba SX
Chekker	Hunter	Slalom
Chimera SX	Inka SX	Spitfire
Cleancrop Mondial	Jubilee SX	Starane XL
Concert SX	Lorate	Traton SX
Dakota	Mozaic SX	Zypar

* Maximum rate of 0.1 L/ha

These sequences and tank mixtures must only be applied in accordance with label recommendations for every product in the sequence or tank mixture and only if used in conjunction with a robust non-ALS inhibitor autumn herbicide programme. This is particularly important where both components are applied in the spring. Aside from those listed above, do not use in sequence or tank mixture with any other ALS inhibitors, such as sulfonylureas, unless specifically permitted on the label for either product.

As part of the Herbicide Resistant Management Strategy for Atlantis Star, do not apply Chekker or Sekator OD in sequence with Atlantis Star for the control of common chickweed

in order to avoid increased selection for herbicide resistant individuals.

FOLLOWING CROPS and CROP FAILURE

Wheat, barley, oats, oilseed rape, field beans, rye-grass, buckwheat, lucerne, vetch and clover may be sown in the year of harvest to succeed a crop treated with Atlantis Star. Wheat, barley, oilseed rape, sugar beet, maize, sunflower, peas and beans may be drilled in the spring following harvest of the Atlantis Star treated winter wheat crop. Plough prior to planting crops of oilseed rape, otherwise crop damage may occur. It is recommended to cultivate to a depth of at least 10 cm prior to sowing following crops of winter wheat, winter barley, oats, buckwheat, clover, vetch, lucerne, peas and beans.

In the event of crop failure for any reason, plough and sow only winter or spring wheat in the same cropping season as an application of Atlantis Star and only when there has been at least a 7 week interval between application and establishment of the replacement crop.

Where Atlantis Star is applied in sequence or tank mixture with other permitted “ALS inhibiting” herbicides, always follow the most restrictive label with regard to following crops and cultivation requirements for crop establishment.

MIXING

Add the recommended quantity of Atlantis Star to the spray tank half-filled with the required quantity of clean water. Add the remainder of the water with the sprayer agitation system in operation. Maintain

agitation during mixing and loading and until spraying is complete. Do not leave the sprayer standing with chemical in it.

To avoid subsequent damage to crops other than winter wheat it is important that the spray tank, boom, hoses, filters and nozzles are thoroughly washed out to remove all traces of Atlantis Star immediately after spraying using a proprietary sprayer cleaner (e.g. All Clear Extra®) according to the label instructions for that product.

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To access the **Safety Data Sheet** for this product scan the code or use the link below:

www.cropscience.bayer.co.uk/atlantisstarsds

or alternatively contact your supplier

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