

IMPORTANT
Use measuring
cup provided



ATLANTIS[®]WG

2 Kg e



A highly active herbicide (a combination of two sulfonylurea herbicides) with foliar and some root activity against black-grass, wild-oats, ryegrasses, meadow-grasses, common chickweed and mayweeds in winter wheat.

MAPP 12478

A water dispersible granule formulation containing 30 g/kg mesosulfuron-methyl and 6 g/kg iodosulfuron-methyl-sodium
The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.

Bayer CropScience Limited,
230 Cambridge Science Park
Milton Road, Cambridge CB4 0WB
Telephone: 01223 226500

**For 24 hour emergency information contact
Bayer CropScience Limited**
Telephone: 0800 220876

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 CLOTHING (COVERALLS), 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.

**SAFETY PRECAUTIONS CONTINUE ON
BACK LABEL ↓**

**MATERIAL SAFETY DATA SHEET IS
ENCLOSED IN THIS LABEL ➡**

GB79437145b rA10b

Section 6 of the Health and Safety at Work Act

Additional Product Safety Information (This section does not form part of the approved product label). 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. The information on this label is based on the best available information including data from test results.

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

ATLANTIS WG

Version 2 / GB Revision Date: 26.08.2009 102000011354

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product information

Trade name	ATLANTIS WG
Product code (UVP)	06402585
Usage	Herbicide
Company	Bayer CropScience Limited, 230 Cambridge Science Park Milton Road, Cambridge CB4 0WB
Telephone	+44(0)1223 226500
Telefax	+44(0)1223 426240
Responsible Department	Email: ukinfo@bayercropscience.com
Emergency telephone number	0800-220876 (UK 24 hr) +44(0)1603-242424 (Overseas 24 hr)

2. HAZARDS IDENTIFICATION

Risk advice to man and the environment

Irritating to skin. Risk of serious damage to eyes. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

Water dispersible granules (WG)

Mesosulfuron-methyl (3% w/w), Iodosulfuron-methyl sodium (0,6% w/w), Mefenpyr-diethyl (9% w/w)

Hazardous components

Chemical Name	CAS-No. / ECS-No.	Symbol(s)	R-phrase(s)	Concentration [%]
Mesosulfuron-methyl	208465-21-8	N	R50/53	3.00
Iodosulfuron-methyl-sodium	144550-36-7	N	R50/53	0.60
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5 265-198-5	Xn, N	R51/53, R65, R66	> 2.50 - < 25.00
Polyglycol ether	345642-79-7	Xi, N	R38, R41, R43, R51/53	> 2.50 - < 25.00
Sulphonated aromatic, polymer, sodium salt		Xi	R36/38	> 1.00 - < 20.00
Silica, amorphe	7631-86-9 231-545-4			> 1.00
Kaolin	1332-58-7 310-194-1			> 1.00

For the full text of the R-phrases mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

Inhalation

Move to fresh air. Keep patient warm and at rest. If symptoms persist, call a physician.

Skin contact

Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. Do NOT induce vomiting. If symptoms persist, call a physician.

Notes to Physician

Symptoms

Local:, Irritation, Systemic:, To date no symptoms are known.

Treatment

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water spray

Foam

Dry powder

Carbon dioxide (CO₂)

Extinguishing media which should not be used for safety reasons

High volume water jet

Specific hazards during fire fighting

In the event of fire the following may be released:

Carbon monoxide (CO)

Sulphur oxides

Hydrogen chloride (HCl)

Hydrogen iodide (HI)

Cyanides

Nitrogen oxides (NO_x)

Special protective equipment for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Further information

Do not allow run-off from fire fighting to enter drains or water courses.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Use personal protective equipment.

Environmental Precautions

Do not allow to get into surface water, drains and ground water.

If spillage enters drains leading to sewage works inform local water company immediately.

If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800 807060).

Methods for cleaning up

Use mechanical handling equipment.

Keep in suitable, closed containers for disposal.

Avoid dust formation.

Additional Advice

Information regarding safe handling, see section 7.

Information regarding personal protective equipment, see section 8.

Information regarding waste disposal, see section 13.

7. HANDLING AND STORAGE

Handling

Advice on safe handling

Use only in area provided with appropriate exhaust ventilation.

Avoid dust formation.

Advice on protection against fire and explosion

Care should be taken to avoid formation of dust from abraded granules.

Storage

Requirements for storage areas and containers

Store in original container.

Keep containers tightly closed in a dry, cool and well-ventilated place.

Advice on common storage

Keep away from food, drink and animal feedingstuffs.

Temperature tolerance min. -10 °C max. 30 °C

Suitable materials

Coextruded containers with an internal barrier layer made of ethylene vinyl alcohol copolymer (EVOH)

Coextruded containers with an internal barrier layer made of polyamide (PA)

Aluminium composite film (min. 0,007 mm Aluminium)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Refer to COSHH assessment (Control of Substances Hazardous to Health (Amendment) Regulations 2004).

Engineering controls should be used in preference to personal protective equipment wherever practicable.

Refer also to COSHH Essentials.

Components with workplace control parameters

Components	CAS-No.	Control parameters	Update	Basis
Iodosulfuron-methyl-sodium	144550-36-7	1 mg/m ³ (TWA)		OES BCS*
Silica, amorphe (Inhalable dust.)	7631-86-9	6 mg/m ³ (TWA)	2007	EH40 WEL
Silica, amorphe (Respirable dust.)	7631-86-9	2.4 mg/m ³ (TWA)	2007	EH40 WEL
Kaolin (Respirable dust.)	1332-58-7	2 mg/m ³ (TWA)	2007	EH40 WEL

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

Additional Advice

Observe: Exposure Limits In Air, Group 3: 100 mg/m³/20 ppm. (aromatic-rich hydrocarbon mixes with > 25% aromatics TRGS 901, No. 72).

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory Protection

Wear respirator with a particle filter mask (protection factor 4) conforming to European norm EN149FFP1 or equivalent. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.

Acute Dermal Toxicity	LD50 (rat) > 5,000 mg/kg
Skin Irritation	Irritating to skin. (rabbit)
Eye Irritation	Severe eye irritation. (rabbit)
Sensitization	Non-sensitizing. (mouse) OECD Test Guideline 429, local lymph node assay (LLNA)

Further information

Information given is based on data obtained from similar substances.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Toxicity to Fish	LC50 (Rainbow trout (Oncorhynchus mykiss)) 7.5 g/l Exposure time: 96 h
Toxicity to daphnia	EC50 (Water flea (Daphnia magna)) 13.1 mg/l Exposure time: 48 h
Toxicity to algae	EC50 (Pseudokirchneriella subcapitata) > 10 mg/l Exposure time: 72 h
Toxicity to algae EC50	(Lemna gibba (duckweed)) 45.8 µg/l Exposure time: 7 d

Further information on ecology

Additional ecological information

Information given is based on data obtained from similar substances.

13. DISPOSAL CONSIDERATIONS

Product

In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant. Advice may be obtained from the local waste regulation authority (part of the Environment Agency in the UK).

Contaminated packaging

Small containers (< 10 l or < 10 kg) should be rinsed thoroughly using an integrated pressure rinsing device, or, by manually rinsing three times. Add washings to sprayer at time of filling. Dispose of empty and cleaned packaging safely. Large containers (> 25 l or > 25 kg) should not be rinsed or re-used for any other purpose. Return large containers to supplier. Follow advice on product label and/or leaflet.

Waste key for the unused product

020108 agrochemical waste containing dangerous substances

14. TRANSPORT INFORMATION

ADR/RID/ADNR

UN-Number: **3077**

Labels: 9

Packaging group: III

Hazard no.: 90

Description of the goods: ENVIRONMENTALLY

HAZARDOUS SUBSTANCE, SOLID, N.O.S.

(IODOSULFURON-METHYL SODIUM,

MESOSULFURONMETHYL, SOLVENT NAPHTHA

(PETROLEUM) HEAVY AROMATIC MIXTURE)

Tunnel Code: E

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

IMDG

UN-Number: **3077**

Labels: 9

Packaging group: III

EmS: F-A , S-F

Marine pollutant: Marine pollutant

Description of the goods: ENVIRONMENTALLY

HAZARDOUS SUBSTANCE, SOLID, N.O.S.

(IODOSULFURON-METHYL SODIUM,

MESOSULFURONMETHYL, SOLVENT NAPHTHA

(PETROLEUM) HEAVY AROMATIC MIXTURE)

IATA

UN-Number: **3077**

Labels: 9

Packaging group: III

Description of the goods: ENVIRONMENTALLY

HAZARDOUS SUBSTANCE, SOLID, N.O.S.

(IODOSULFURON-METHYL SODIUM,

MESOSULFURONMETHYL, SOLVENT NAPHTHA

(PETROLEUM) HEAVY AROMATIC MIXTURE)

UK 'Carriage' Regulations

UN-Number: **3077**

Labels: 9

Packaging group: III

Hazard no.: 90

Emergency action code: 2Z

Description of the goods: ENVIRONMENTALLY

HAZARDOUS SUBSTANCE, SOLID, N.O.S.

(IODOSULFURON-METHYL SODIUM,

MESOSULFURONMETHYL, SOLVENT NAPHTHA

(PETROLEUM) HEAVY AROMATIC MIXTURE)

15. REGULATORY INFORMATION

This product has been classified in accordance with The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002: CHIP 3 and any subsequent amendments.

Classification:

Hazard warning labelling compulsory

Hazardous components which must be listed on the label:

- Mesosulfuron-methyl
- Iodosulfuron-methyl-sodium

Symbol(s)

Xi Irritant

N

Dangerous for the environment

- R-phrase(s)
- R38 Irritating to skin.
 - R41 Risk of serious damage to eyes.
 - R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- S-phrase(s)
- S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 - S35 This material and its container must be disposed of in a safe way.
 - S39 Wear eye/face protection.
 - S57 Use appropriate container to avoid environmental contamination.

Exceptional labelling

To avoid risks to man and the environment, comply with the instructions for use. Contains polyglycol ether.

May produce an allergic reaction.

Further information

WHO-classification: III (Slightly hazardous)

16. OTHER INFORMATION

Further information

Text of R-phrases mentioned in Section 3

- R36/38 Irritating to eyes and skin.
- R38 Irritating to skin.
- R41 Risk of serious damage to eyes.

- R43 May cause sensitization by skin contact.
- R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R65 Harmful: may cause lung damage if swallowed.
- R66 Repeated exposure may cause skin dryness or cracking.

The above information is intended to give general health and safety guidance on the storage and transport of the product. It is not intended to apply to the use of the product for which purposes the product label and any appropriate technical usage literature available should be consulted and any relevant licenses, consents or approvals complied with. The requirements or recommendations of any relevant site or working procedure, system or policy in force or arising from any risk assessment involving the substance or product should take precedence over any of the guidance contained in this safety data sheet where there is a difference in the information given. The information provided in this safety data sheet is accurate at the date of publication and will be updated as and when appropriate. No liability will be accepted for any injury, loss or damage resulting from any failure to take account of information or advice contained in this safety data sheet. This version replaces all previous versions.

ATLANTIS WG

A water dispersible granule formulation containing 30 g/kg mesosulfuron-methyl and 6 g/kg iodosulfuron-methyl-sodium with solvent naphtha (petroleum) heavy aromatic.



IRRITANT



**DANGEROUS FOR
THE ENVIRONMENT**

**IRRITATING TO SKIN
RISK OF SERIOUS DAMAGE TO EYES
VERY TOXIC TO AQUATIC ORGANISMS, MAY
CAUSE LONG-TERM ADVERSE EFFECTS IN THE
AQUATIC ENVIRONMENT**

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Wear eye/face protection.

This material and its container must be disposed of in a safe way.

Use appropriate containment to avoid environmental contamination.

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

IMPORTANT INFORMATION

FOR USE ONLY AS AN AGRICULTURAL HERBICIDE

Crops:	Winter wheat
Maximum individual dose:	0.4 kg product/ha
Maximum number of treatments:	One per crop
Latest time of application:	Flag leaf ligule just visible (GS39) of the crop

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

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
CONTINUE INSIDE LABEL**



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SAFETY PRECAUTIONS *(continued)*

Environmental Protection

Do not contaminate water with the product or its container.

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



To protect aquatic organisms respect an unsprayed buffer zone to surface water bodies in line with LERAP requirement.

DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 5 m of the top of the bank of a static or flowing waterbody, unless a Local Environmental Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1 m of the top of a ditch which is dry at the time of application. Aim spray away from water.

This product qualifies for inclusion within the Local Environment Risk Assessment for Pesticides (LERAP) scheme. Before each spraying operation

from a horizontal boom sprayer and broadcast air-assisted sprayer, either a LERAP must be carried out in accordance with PSD published guidance or the statutory buffer zone must be maintained. The results of the LERAP must be recorded and kept available for inspection for three years for inspection to any person entitled to exercise enforcement powers under or in connection with the Food and Environment Protection Act (as amended). (An electronic record will satisfy the requirement for a written record, providing it is similarly available for inspection and can be copied).

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 FEEDINGSTUFFS.

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

Only the following 'ALS inhibiting' herbicides can be applied to the same crop in sequence or in tank- mixture with ATLANTIS WG: CHEKKER, SEKATOR, EAGLE or PURSUIT.

ATLANTIS WG must not be applied to any crop suffering from stress as a result of drought, waterlogging, pest or disease attack, nutrient deficiency, soil compaction or other factors reducing crop growth.

Because some non-target crops are sensitive to ATLANTIS WG, extreme care is required to avoid drift onto plants outside the target area, or onto ponds, waterways or ditches.

Do not apply ATLANTIS WG when rain is imminent.

Do not apply during periods of frosty weather.

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

PROTECT FROM FROST

WEEDS CONTROLLED

This product contains mesosulfuron-methyl and iodosulfuron-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 ryegrass) 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 HGCA, CPA, your distributor, crop advisor or product manufacturer.

Weed	Susceptibility
Black-grass (sensitive)	Post-emergence to GS39
Black-grass (Resistant* - EMR)	Post-emergence to GS29
Wild oats	Post-emergence to GS29
Annual meadow-grass	Post-emergence to GS31
Rough-stalked meadow grass	Post-emergence to GS31
Perennial ryegrass (from seed)	Post-emergence to GS31
Italian ryegrass	Post-emergence to GS30
Common chickweed	Post-emergence to GS18 (8 expanded true leaves)
Mayweeds	Post-emergence to GS18 (8 expanded true leaves)

*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 WG 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.

Due to the potential for yield loss without prior signs of crop phytotoxicity, avoid use of ATLANTIS WG to control light infestations of grass weeds. As ATLANTIS WG 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 WG controls emerged weeds on all soil types.

ATLANTIS WG 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 WG.

The presence of enhanced metabolism herbicide resistant populations of Italian ryegrass 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 WG resistance management strategy are:

- ALWAYS follow WRAG guidelines for preventing and managing herbicide resistant grass and broad-leaved weeds.

- DO NOT use ATLANTIS WG as a stand-alone treatment for black-grass, ryegrass or common chickweed. Use only in tank-mixture or in sequence with herbicides with non-ALS modes of action.
- IDEALLY apply ATLANTIS WG as early as possible and before GS 31 of grass weeds.
- DO NOT use ATLANTIS WG 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

Apply via a horizontal boom sprayer at a rate of 0.4 kg/ha. Apply in 100-300 L/ha as a **FINE to MEDIUM** spray (BCPC category). Use application

techniques which ensure good weed coverage and crop penetration, using flat fan nozzles. Ensure that spray swaths do not overlap. Always use ATLANTIS WG in mixture with authorised adjuvant BIOPOWER (ADJ: 0454 or 0617) at a rate of 1.0 L/ha.

Only one application of ATLANTIS WG should be made to the crop.

For use on all varieties of winter wheat. Apply from the 2 leaf stage (GS12) of the crop up to flag leaf ligule just visible (GS39).

SEQUENCES & TANK-MIXTURES

Only one of the following 'ALS inhibiting' herbicides can be applied to the same crop in sequence or in tank-mixture with ATLANTIS WG: CHEKKER; SEKATOR; EAGLE; or PURSUIT 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. These sequences and tank-mixtures must only be applied in accordance with label recommendations for every product in the sequence or tank-mixture. Aside from those

listed above, do not use in sequence or tank-mixture with any other ALS inhibitors, such as sulphonylureas.

As part of the Herbicide Resistance Management Strategy for ATLANTIS WG, do not apply CHEKKER or SEKATOR in sequence with ATLANTIS WG for the control of common chickweed in order to avoid increased selection for herbicide resistant individuals.

Do not tank-mix with chlorpyrifos. Allow at least 14 days before or after chlorpyrifos treatments.

FOLLOWING CROPS and CROP FAILURE

Only winter wheat, winter barley or winter oilseed rape may be sown in the year of harvest to succeed a winter wheat crop treated with ATLANTIS WG. Spring wheat, spring barley, spring oilseed rape and sugar beet may be drilled in the spring following harvest of the ATLANTIS WG treated winter wheat crop. Plough prior to planting crops of oilseed rape, otherwise crop damage may occur. In the event of crop failure for

any reason, sow only winter wheat in the same cropping season as an application of ATLANTIS WG.

MIXING

Add the recommended quantity of ATLANTIS WG 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 WG 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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