

MAPP 21074

MILLINER is a herbicide mixture for control of some grass and broad-leaved weed species in winter wheat.

MILLINER contains 10 g/L mesosulfuron-methyl and 2 g/L iodosulfuron-methyl-sodium formulated as an oil dispersion (OD). Also contains mefenpyr-diethyl, solvent naphtha (petroleum), heavy aromatic, <1% naphthalene and solvent naphtha (petroleum), light aromatic.

PEEL BACK FOR DIRECTIONS FOR USE LEAFLET

WARNING



Causes serious eye irritation

Very toxic to aquatic life with long lasting effects

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

If eye irritation persists: Get medical attention.

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.

Contains fatty alcohol ethoxylate alkyl ether. May produce an allergic reaction.

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

Important Information FOR USE ONLY AS A PROFESSIONAL HERBICIDE

Crops	Maximum individual dose (L product per hectare)	Maximum number of treatments	Latest time of application
Winter wheat	1.2 L	One per crop	Flag leaf ligule just visible (GS 39) of the 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.

Other specific restrictions:

- The product must only be applied between 1st 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 inhibitor herbicide with claims for control of grass weeds more than once to any crop.
- Do not apply by hand-held equipment.

APPROVAL HOLDER AND MARKETING COMPANY:

Life Scientific Ltd, Block 4, Belfield Office Park, Beech Hill Road, Dublin 4, Ireland. Tel: +353 2832024

FOR 24 HOUR EMERGENCY INFORMATION CONTACT NHS 111

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

Batch number: see packaging

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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 AND FACE PROTECTION (FACESHIELD) 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.

DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT.

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.



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

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

This product qualifies for inclusion in the Local Environment Risk Assessment for Pesticides (LERAP) scheme. Before each application from a horizontal boom sprayer, either a LERAP must be carried out in accordance with the CRD's 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 to any person entitled to exercise enforcement powers under or in connection with the Food and Environment Protection Act (as amended). Electronic records will fulfil the requirement for a written record provided that it is available for inspection and that copies can be made.

Storage and Disposal

KEEP OUT OF REACH OF CHILDREN.

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.

KEEP IN ORIGINAL CONTAINER tightly closed in a safe place.

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.

MILLINER is a herbicide mixture for control of the listed grass and broad-leaved weed species in winter wheat. It contains two ALS-inhibitor herbicides and only one other ALS-inhibiting herbicide can be applied in mixture or sequence with MILLINER to the same crop. Details of permitted mixtures and sequences are given under 'SEQUENCES & TANK MIXTURES' later in this label. It must always be used in mixture with authorised adjuvant Probe (ADJ: 0874) or Biopower (ADJ: 0617) at a rate of 1 L/ha.

MILLINER is readily translocated within target weeds and inhibits growth within hours of application. However, the development of visual symptoms in the treated weeds varies according to species, weather conditions and growth

stage at application with some treated weeds taking up to 4 weeks to display clear signs of herbicide activity. The rapid cessation of growth after treatment means that the weeds are no longer competing with the crop for nutrients. Activity is mainly through foliar uptake and good coverage of the target weeds is essential for the best control. Initial activity is therefore independent of soil type but, for optimum control, some soil moisture is required to allow for slight residual action on emerging weeds. High soil temperatures and cloddy seedbeds will impair this residual action.

Treatment carries a slight risk of yield losses so application to low populations of weeds is not recommended.

- Do not apply to crops undersown with grasses, clover or other legumes or any other broad-leaved crop.
- Avoid treatment of crops suffering from stress caused by pest or disease attack, drought or waterlogging, grazing, nutrient deficiency, compacted soils or any other factor that reduces crop growth.
- Do not apply MILLINER during periods of frosty weather or when rain is likely to fall shortly after application.
- MILLINER is a very active herbicide. Be very careful to avoid drift on to other crops, non-target plants, waterways, ponds and ditches.
- Take extreme care to avoid drift onto crops and non-target plants outside the target area.
- Store in a frost-free, dry designated agrochemical store.

RESISTANCE MANAGEMENT

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 such resistance should be adopted. Guidelines have been produced by the Weed Resistance Action Group and copies are available from the AHDB, your distributor, crop advisor or product manufacturer. ALWAYS follow WRAG guidelines for preventing and managing herbicide resistant grass and broad-leaved weeds. 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 grassweed control. MILLINER contains mesosulfuron-methyl and iodosulfuron-methyl-sodium which are ALS inhibitors, also classified by the Herbicide Resistance Action Committee as 'Group 2' (previously 'Group B').

- Always use grass and broad-leaved weed herbicides with non-ALS modes of action throughout the cropping rotation.
- Apply MILLINER as early as possible after 1st February.
- Do not use MILLINER as the sole means of grass weed or broad-leaved weed control in successive crops.
- MILLINER can contribute to the control of black-grass as part of a herbicide resistance management strategy, involving mixtures and sequences with herbicides of alternative modes of action. DO NOT use MILLINER as the sole method for grass or broad-leaved weed control – integrate your chemical control with a programme of cultural control measures.
- 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.
- The presence of enhanced metabolism or target site resistant populations may lead to unacceptable levels of control.

MIXING and SPRAYING

Before spraying it is important to check all hoses, filters and nozzles, and to ensure that the sprayer is clean and correctly set to give an even application at the correct volume. Half fill the spray tank with clean water. Begin agitation and add the required quantity of MILLINER, together with authorised adjuvant Probe (ADJ: 0874) or Biopower (ADJ: 0617) at a rate of 1 L/ha. Add the remainder of the water and agitate the mixture thoroughly before and during spraying. Do not leave the sprayer standing with the diluted spray in the tank.

Timing:

- One application of 1.2 L/ha MILLINER, plus authorised adjuvant Probe (ADJ: 0874) or Biopower (ADJ: 0617) at a rate of 1 L/ha should be applied to small, actively growing weeds from when the wheat has two leaves (GS12) up until the flag leaf ligule is just visible (GS39).
- The product must only be applied between 1st February in the year of harvest and the specified latest time of application.

Application

Apply as a FINE or MEDIUM spray as defined by BCPC in a water volume of 100 – 300 L/ha using flat-fan nozzles and settings that ensure good coverage of the target weeds and penetration of the crop. Use the water volume at the higher end of the range where weed foliage or crop cover is dense. DO NOT overlap spray swaths since this may result in crop injury that causes yield reductions.

Cleaning of application equipment

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 MILLINER immediately after spraying using a proprietary sprayer cleaner (e.g. All Clear Extra) according to the label instructions for that product.

Weeds Controlled

If present at application, the following weeds will be controlled. Optimal efficacy will be obtained from earlier timings but the table indicates the latest stages controlled.

Weed	Susceptibility
Black-grass	MR to GS 25
Wild oats	S to GS 29
Annual meadow-grass	S to GS 31
Rough-stalked meadow-grass	S to GS 31
Perennial rye-grass (from seed)	MR to GS 31
Italian rye-grass	MR to GS 30
Common chickweed	S to GS 18 (8 expanded true leaves)
Mayweeds	S to GS 18 (8 expanded true leaves)

SEQUENCES and TANK-MIXTURES

Only one "ALS inhibiting" herbicide can be applied to the same crop in sequence or in tank-mixture with MILLINER. It may be applied to the same crop in sequence or in tank-mixture with one of the following "ALS inhibiting" herbicides:

Active	Product
amidosulfuron	Eagle
amidosulfuron + iodosulfuron-methyl-sodium	Chekker Sekator OD
clopyralid + florasulam + fluroxypyr	Dakota Galaxy
clopyralid + florasulam	Gartrel
florasulam	Barton WG Boxer Sumir
florasulam + fluroxypyr	Hunter Slalom Spitfire Starane XL
Fluroxypyr, metsulfuron-methyl + thifensulfuron-methyl	Omnera LQM Provalia LQM

<u>Active</u>	<u>Product</u>
metsulfuron-methyl	Alias SX Cleancrop Mondial Simba SX Gropper SX Jubilee SX Lorate
metsulfuron-methyl + tribenuron-methyl	Ally Max SX Biplay SX Treaton SX DP911 SX
metsulfuron-methyl + thifensulfuron-methyl	Avro SX Chimera SX Concert SX Finish SX Harmony M SX Presite SX Refine Max SX Mozaic SX
thifensulfuron-methyl + tribenuron-methyl	Calibre SX Inka SX Ratio SX
tribenuron-methyl	Quantum SX

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.

FOLLOWING CROPS and CROP FAILURE

Only winter barley, winter wheat or winter oilseed rape may be sown in the year of harvest to succeed a winter wheat crop treated with MILLINER.

Spring barley, spring wheat, spring oilseed rape and sugar beet may be drilled in the spring following harvest of the MILLINER 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 MILLINER. Where MILLINER is applied in sequence or tank-mixture with other permitted "ALS inhibiting" herbicides, always follow the most restrictive label with regard to following crops.

CONDITIONS OF SUPPLY

All goods supplied by the company are of good quality and we believe them to be fit for purpose. However, as we cannot exercise control over their storage, handling, mixing or use or the weather conditions before, during or after application, which may affect the performance of the goods, 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 or re-sellers for any failure in performance, damage or injury whatsoever arising from their storage, handling, application or use. These conditions cannot be varied by our staff or agents whether or not they supervise or assist in the use of such goods.

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