



Alternator[®]



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Herbicide

A contact and residual herbicide for pre and post-crop emergence use against a range of annual grasses and broad-leaved weeds in winter wheat and winter barley.

MAPP 18267

A suspension concentrate formulation containing 60 g/L diflufenican, 240 g/L flufenacet and 70 g/L metribuzin

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: 00800 1020 3333



ALTERNATOR MET

Contains 60 g/L diflufenican,
240 g/L flufenacet and
70 g/L metribuzin

**Warning**

May cause damage to organs (nervous system) through prolonged or repeated exposure if swallowed.
Very toxic to aquatic life with long lasting effects.

Do not breathe dust/fumes/gas/mist/vapours/spray.
Wear protective gloves/protective clothing/eye protection/face protection.

IF exposed or if you feel unwell: Call a POISON CENTRE or doctor/physician.

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 flufenacet, 1,2-benzisothiazolin-3-one and 5-chloro-2-methyl-isothiazol-3-one/2-methyl-isothiazol-3-one. 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 AN AGRICULTURAL HERBICIDE

Crops:	Winter wheat, winter barley
Maximum individual dose:	Until end of September: 1.0 L product/ha OR Until end of November: 0.5 L product/ha
Maximum total dose:	Until end of September: 1.0 L product/ha OR Until end of November: 0.5 L product/ha
Latest time of application:	End of November in the year of planting, and up to the fifth tiller stage (GS 25)
Aquatic buffer zone distance:	6 metres
Other specific restrictions:	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.



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SAFETY PRECAUTIONS

Operator Protection

Engineering control of operator exposure must be used where reasonably practicable in addition to the following:

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES when handling the product and when handling contaminated surfaces.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) during application.

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

WHEN USING DO NOT EAT, DRINK OR SMOKE.

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.

To protect aquatic organisms, respect an unsprayed buffer zone to surface water bodies as specified for the crop. HORIZONTAL BOOM SPRAYERS MUST BE FITTED WITH THREE STAR DRIFT REDUCTION TECHNOLOGY.

Low drift spraying equipment must be operated according to the specific conditions stated in the official three star rating for that equipment as published on HSE Chemicals Regulation Division's website. Maintain three star operating conditions until 30 m from the top of the bank of any surface water bodies.

DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within the distance specified for the crop to the top of the bank of a static or flowing water body, or within 1 m of the top of a ditch which is dry at the time of application. Aim spray away from water.

NOTE: BUFFER ZONES OF MORE THAN 5 M CANNOT BE REDUCED UNDER THE LOCAL ENVIRONMENT RISK ASSESSMENT FOR PESTICIDES (LERAP) SCHEME.

The statutory buffer zone must be maintained and the distance recorded in Section A of the LERAP record form. The LERAP record form must be kept available for three years.

Extreme care must be taken to avoid spray drift onto non-crop plants outside of the target area.

Storage and Disposal

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.

KEEP OUT OF REACH OF CHILDREN.

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

EMPTY CONTAINER COMPLETELY and dispose of safely.

Shake well before use.

DIRECTIONS FOR USE ➡

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 treat undersown cereals or those due to be undersown.

Avoid treating crops suffering from stress as a result of drought, waterlogging, grazing, pests or disease attack, nutrient deficiency, soil compaction or other factors reducing crop growth.

Adverse crop effect (paling, reduction in vigour and biomass reduction) may occur when there is very wet weather before and after application, particularly on crops grown on light, free draining soils or where soils become waterlogged. These effects are usually transient in nature and will normally have no adverse effect on crop yield in most cases. Avoid use on waterlogged soils or on crops subject to temporary waterlogging by heavy rainfall, as there is a risk of transitory chlorosis and biomass reduction.

DO NOT use on sands or very light soils (ADAS 85 classification) or very stony or gravelly soils as there is a risk of crop damage. Shallow drilled crops must only be treated post-emergence.

DO NOT treat broadcast crops as uncovered seed may be damaged.

DO NOT soil incorporate.

Avoid spraying during periods of prolonged or severe frosts as sharp or severe frosts following application may cause transitory discoloration or scorch from which the crop will normally recover.

DO NOT use on soils containing more than 10% organic matter.

DO NOT disturb the soil after application (e.g. by harrowing or rolling).

Extreme care must be taken to avoid spray drift onto non-crop plants outside of the target area.

WEEDS CONTROLLED

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 HGCA, CPA, your distributor, crop advisor or product manufacturer.

Key aspects of the Alternator Met Resistance Management Strategy are:

- ALWAYS follow WRAG guidelines for preventing and managing herbicide resistant weeds
- DO NOT use Alternator Met as a stand-alone treatment for black-grass control. Use only in tank mix or sequence with effective herbicides with alternative modes of action
- DO NOT use Alternator Met as the sole means of grass weed or broad-leaved weed control in successive crops
- ALWAYS use grass and broad-leaved weed herbicides with alternative 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.

WEED SUSCEPTIBILITY TO ALTERNATOR MET

		At 0.5 L/ha		At 1.0 L/ha	
		Pre-emergence	Post-emergence	Pre-emergence	Post-emergence
Grass weeds	Black-grass	-	-	Moderately resistant (MR)	May provide some control up to and including 2 leaf stage (GS 12)
	Meadow-grass, annual	Susceptible (S)	Moderately susceptible (MS) up to and including 2 leaf stage (GS 12)	-	-
Broad-leaved weeds	Chickweed, common	-	Susceptible (S) up to and including early branching stage (GS 22)	Susceptible (S)	Susceptible (S) up to and including early branching stage (GS 22)
	Dead-nettle, red	Moderately susceptible (MS)	Moderately susceptible (MS) up to and including 4 leaf stage (GS 14)	Susceptible (S)	Susceptible (S) up to and including 4 leaf stage (GS 14)
	Scented mayweed	Moderately susceptible (MS)	Susceptible (S) up to and including 2 leaf stage (GS 12)	Susceptible (S)	-
	Pansy, field	Moderately resistant (MR)	Susceptible (S) up to and including 3 leaf stage (GS 13)	Susceptible (S)	Susceptible (S) up to and including 3 leaf stage (GS 13)
	Speedwell, common field	Susceptible (S)	Susceptible (S) up to and including 6 leaf stage (GS 16)	-	-
	Wild radish	-	Susceptible (S) up to and including 2 leaf stage (GS 12)	-	-

Established perennial grasses and broad-leaved weeds growing from rootstocks will not be controlled by Alternator Met. Speed of activity can be slow and is dependent on temperature and growing conditions. Activity can be slow under cool conditions and the final level of weed control may take some time to appear. Some soil moisture is required for Alternator Met to be activated. Moist soil at and after application is required to give the best results. Best results will be obtained if rain falls within 7 days of application. Residual control may be reduced under prolonged dry conditions. Effectiveness using three star drift reduction technology may be reduced.

CROP SPECIFIC INFORMATION

Good weed control depends on burying any trash or straw before or during seedbed preparation. Seed beds must have a firm, fine tilth. Loose or cloddy seed beds must be consolidated otherwise crop damage may result due to inadequate seed cover. For pre-emergence treatments, seed should be covered with a minimum of 32 mm of settled soil.

Use at a rate of 0.5 or 1.0 litres of product/ha according to weeds present and growth stage. Apply via a horizontal boom sprayer. Apply in 100–400 L/ha as a **MEDIUM** spray (BCPC category). Use the higher volume where crop or weed foliage is dense. A spray pressure of at least 2 bars is advised. Good, even spray coverage of soil and weeds is essential. Take extreme care to avoid overlapping spray swaths, particularly when applying pre-emergence, or damage may occur and this may result in yield reductions in some cases. To prevent damage, extreme care must be taken to avoid drift onto neighbouring crops.

Chlorosis or stunting of the crop may be observed, particularly where applications are made to crops grown on light free draining soils. This effect is transitory in nature and there will normally be no adverse impact on grain yield.

Apply pre or post-emergence of the crop, up to and including the fifth tiller stage (GS 25) and before the end of November in the year of planting. If applications are made after the end of September, the maximum total dose must not exceed 0.5 L/ha.

FOLLOWING CROPS and CROP FAILURE

Crops which can be established in the autumn following harvest of a treated cereal crop:

Winter oilseed rape, mustard and edible brassicae where soil is ploughed or cultivated to at least 15 cm and soil is thoroughly mixed before planting.

Wheat, durum wheat and barley can be established without any cultivation requirements.

Crops which can be established in the spring following harvest of a treated cereal crop:

Spring wheat, spring barley, spring oilseed rape, sugar beet, mustard, peas, sunflowers and maize can be established without any special cultivations.

In the event of crop failure, for any reason, spring wheat and spring barley can be established after an interval of 5 months has elapsed between an application of Alternator Met and replacement crop establishment. An interval of 6 months should elapse between treatment and subsequent sowing of maize or sunflowers.

Where Alternator Met and other products containing diflufenican are applied to successive cereal crops, levels of diflufenican (DFF®) will build up in the soil. Ploughing or cultivation, with complete inversion of the furrow, must take place before planting any following non-cereal crop, except potatoes. Even where ploughing or cultivation is carried out there may still be a risk of damage to following crops of onions, leek and related species, or clover. As a precaution, users who rent out their land to growers of these crops should not use DFF-containing products in successive years before renting out the land.

MIXING

Half fill the spray tank with clean water and add the required amount of Alternator Met. Wash out the container and add the washings to the spray solution, before topping up with clean water. Maintain continuous agitation of spray solution during mixing and loading and until spraying is complete. Do not leave the sprayer filled with the spray solution standing for long periods. Wash out the sprayer thoroughly after use using a wetting agent or proprietary tank cleaner with two rinses.

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