

**SUNFIRE
MAPP 16745**

A suspension concentrate containing 500 g/litre flufenacet. SUNFIRE is a residual herbicide for use in winter cereals for the control of black grass, annual meadow grass and some broad-leaved weeds.



5 Litre e
Batch No:
Date of Manufacture:

THE (COSHH) CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS MAY APPLY TO THE USE OF THIS PRODUCT AT WORK.

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 CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES when handling the concentrate.

WEAR SUITABLE PROTECTIVE GLOVES when handling contaminated surfaces.

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/EXPOSED SKIN before eating and drinking/smoking/after work.

IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.

IF SWALLOWED, SEEK MEDICAL ADVICE IMMEDIATELY AND SHOW THIS CONTAINER OR LABEL.

IF YOU FEEL UNWELL, seek medical advice immediately (show the label where possible).

WASH ALL PROTECTIVE CLOTHING thoroughly after use, especially the insides of gloves.

CONTAINS FLUFENACET and *1,2-benzisothiazolin-3-one*. MAY PRODUCE AN ALLERGIC REACTION.

Environmental Protection

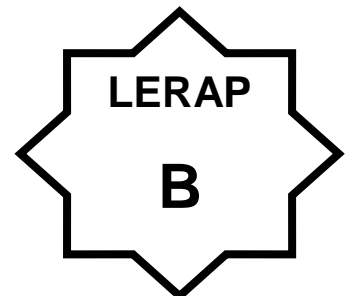
Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).

USE APPROPRIATE CONTAINMENT TO AVOID ENVIRONMENTAL CONTAMINATION.

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 water body, unless a Local Environmental 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 within the Local Environmental Risk Assessment for Pesticides (LERAP) scheme. Before each spraying operation from a horizontal boom sprayer either a LERAP must be carried out in accordance with CRD's published guidance or the statutory buffer zone must be maintained. The results of the LERAP must be recorded and kept available for three years.



Storage and Disposal

KEEP OUT OF THE REACH OF CHILDREN.

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.

STORE IN ORIGINAL CONTAINER, tightly closed, in a safe place.
 WASH OUT CONTAINER THOROUGHLY, empty washings into spray tank and dispose of safely.
 THIS MATERIAL AND ITS CONTAINER MUST BE DISPOSED OF IN A SAFE WAY.
 DO NOT RE-USE CONTAINER FOR ANY PURPOSE

IMPORTANT INFORMATION
 FOR USE ONLY AS AN AGRICULTURAL HERBICIDE

Crops/Situations	Maximum Individual Dose (litres product/ha)	Maximum Total Dose (litres product/ha/crop)	Latest Time of Application
Winter Wheat, Winter Barley,	0.48	0.48	Before third tiller detectable stage (GS 23) and before 31st December in the year of planting

Other Specific Restrictions:

This product qualifies for inclusion within the Local Environment Risk Assessment for Pesticides (LERAP) scheme. Before each spraying operation from a horizontal boom sprayer, either a LERAP must be carried out in accordance with CRD's published guidance or the statutory buffer zone must be maintained. The results of the LERAP must be recorded in written form and kept available for inspection for three years.

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.

SUNFIRE

A suspension concentrate containing 500 g/litre flufenacet.



WARNING

HARMFUL IF SWALLOWED

MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE

VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS

Do not breathe mist/spray.

Wash hands, forearms and face thoroughly after handling.

Do not eat, drink or smoke when using this product.

IF SWALLOWED; call a POISON CENTRE or doctor if you feel unwell.

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. Contains flufenacet and 1,2-benzisothiazolin-3-one. May produce an allergic reaction.



This label is compliant with the CPA Voluntary Initiative Guidance
Marketed by:

CERTIS

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For advice on medical emergencies, fires, spillages or chemical hazards ONLY –
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Approval Holder: Mitsui AgriScience International S.A./N.V. Molesworth House, 1-2 South Frederick Street, Dublin, DO2, N820, Ireland Tel: +353 1 862 4620

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CONDITIONS OF SUPPLY

The Seller warrants that the goods shall at the time of delivery to the Buyer conform to the Seller's standard specification but all other conditions and warranties, whether express or implied by statute or custom of the trade or otherwise and whether as to condition, quality, performance, merchantability, fitness for any purpose or otherwise, are expressly excluded and, subject as aforesaid, the Seller shall be under no liability whatsoever, in contract or in tort, for or in respect of any loss or damage whatsoever resulting from or arising out of the goods or supply or use thereof, whether caused by the negligence of the Seller or otherwise. The Seller shall be under no liability in respect of the warranty given above unless the Buyer allows the Seller reasonable opportunity of inspecting the goods where practicable. A consumer's statutory rights are not affected.

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. SUNFIRE is a herbicide with residual activity for the control of black-grass, annual meadow grass and some broad-leaved weeds in winter wheat and winter barley.

RESTRICTIONS

Soil moisture must be present for SUNFIRE to work.

Best results will be obtained if rainfall occurs within 7 days of application. Residual control may be reduced under prolonged dry conditions, on soils with a high kd factor, where organic matter exceeds 6%, and in soils where the ash content is high. Do not disturb the soil after SUNFIRE has been applied as this will result in reduced weed control.

Do not use in windy conditions in order to avoid the risk of drift onto other crops.

Avoid spraying within 6 metres of the field boundary to reduce effects on non-target insects or other arthropods.

Avoid spraying during periods of prolonged or severe drought or frost.

Where there is very wet weather before and after application and particularly where soils become water-logged, reduction in crop vigour which may result in yield reductions may occur.

Soil Types

SUNFIRE may be used on all mineral soil types. Do not use on soils with more than 10% organic matter. On stony or gravelly soils, crop damage could occur, particularly if heavy rain follows treatment. Control of black-grass may be reduced on soils with a high clay content. Do not use on waterlogged soils or soils prone to water logging.

Seedbed preparation

Trash and straw should be incorporated evenly to a depth of 15 cm during seedbed preparation. Seedbed must have a fine, firm tilth. Consolidate loose or cloddy seedbeds before use.

Following pre-emergence applications, unconsolidated clods, if they are larger than 7.5cm in diameter may reduce the level of weed control and cause seed to be inadequately covered, which could result in crop damage.

Crop Safety

Extreme caution must be taken to avoid spray drift onto non target crops.

Do not use on crops suffering from stress, which may be caused for example by pests, disease, water logging, poor seedbed preparation or previous chemical treatment.

Seed should be covered with a minimum of 3.2cm of settled soil.

Shallow drilled crops should be treated post-emergence.

Do not soil incorporate. Do not spray undersown crops.

CROP SPECIFIC INFORMATION

CEREALS

SUNFIRE can be used on all varieties of Winter Wheat and Winter Barley.

Apply from the pre-emergence to before third tiller stage (GS 23) of the crop and before 31st December in year of planting.

WEEDS CONTROLLED

Susceptibility of weeds to single application of SUNFIRE.

Weeds are controlled both pre-emergence and post-emergence up to the size specified.

Weeds	Pre-emergence Rate (0.48 litres/ha)	Post-emergence Rate (0.48 litres/ha)
Black-grass	-	MR (up to 2 leaves)
Annual Meadow Grass	-	S (up to 1 tiller)
Common Field Speedwell	-	S (up to 2 leaves)
Common Chickweed	R	R (up to 5cm)

Where black-grass is present always use SUNFIRE in tank mixture with another product containing a different mode of action and which is effective against black-grass.

MIXING AND APPLICATION

Half-fill the spray tank and start the agitation. Shake the product several times before opening to ensure thorough mixing and add the required amount of SUNFIRE to the spray tank while re-circulating. Fill up the tank with water and continue agitation until spraying is complete. When using tank mix partners, carefully follow the instructions on the partner product. Each product should be added separately to the spray tank and fully dispersed before the addition of any further product.

Ensure that all packaging is rinsed thoroughly by using an integrated pressure rinsing device or manually rinsing three times. Add washings to the spray tank at the time of filling and dispose of container safely.

When applying the product, ensure even spray cover of the target using a MEDIUM quality spray as defined by BCPC.

Apply SUNFIRE in a minimum of 200 L/ha of water.

For tractor-mounted or trailed sprayers a travel speed of 6-8 km/h is advised to avoid the risk of uneven cover due to excessive boom whip and bounce.

The slower speed is recommended where the target is in a thick crop or weed cover and the ground conditions are rough.

COMPATIBILITY

When tank mixing with other products use a minimum water volume of 200 litres/ha. Any use restrictions of products in the mixture should be observed.

The following products have been shown to be compatible when used in mixture with SUNFIRE:

*Hurricane® SC MAPP 16027

**Toppel 100® MAPP 17071

*Hurricane is a registered trademark of Adama Agricultural Solutions UK Ltd

**Toppel 100 is a registered trademark of UPL

SUNFIRE may be tank mixed with a variety of plant protection products providing that the application timing is correct for both SUNFIRE and the partner(s) in the mixture. For further information on the approval status of mixture partners, consult your local Certis representative.

SPRAYER CLEANING

After spraying, thoroughly clean and flush out application machinery with a minimum of three rinses to ensure that all traces of product are removed.

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 Cereals and Oilseeds, CPA, your distributor, crop adviser or product manufacturer.

Populations of black-grass and Italian rye-grass with high levels of enhanced metabolism resistance will not be fully controlled.

Always follow the WRAG guidelines for preventing and managing herbicide resistant weeds.

Maximise the use of cultural control measures wherever possible (e.g. crop rotation etc.)

Use tank mixes or sequences of effective herbicides with different modes of action within individual crops, or successive crops.

For the control of herbicide resistant grass weeds, always use SUNFIRE in tank mix or sequence with other effective graminicides with different modes of action.

Apply pre-emergence of weeds wherever possible. If applications are delayed, apply post-emergence products/mixtures to small actively growing weeds if high levels of resistance are suspected and to reduce the risk of resistance development.

Investigate the reasons for any poor control by inspecting fields regularly.

FOLLOWING CROPS

After normal harvest:

There are no restrictions on following crops after the use of SUNFIRE. Plough to at least 150 mm before planting all following crops except for wheat, barley, peas and potatoes.

In the event of crop failure:

Plough to at least 150 mm. The following crops may then be sown; wheat, barley, peas and potatoes.

Please refer to the following crop recommendations of any other tank-mix or sequence partner products.

Company Advisory Information

This section is not part of the Product Label under Regulation 1107/2009. It provides additional advice on product use at the discretion of the applicant.

Certis cannot recommend a mixture with flupyr-sulfuron containing products. Combining flufenacet with flupyr-sulfuron is covered by patents held by Bayer CropScience. Certis is clear that Bayer's permission must be obtained before mixing SUNFIRE with any product containing flupyr-sulfuron.

Material Safety Data Sheet

The Material Safety Data Sheet (MSDS) for this product is available on the Certis UK website or by calling the technical helpline number 0044 (0)845 373 0305