

FIRESTORM[®]

(MAPP 17631)



Contains 400 g/l flufenacet and 100 g/l diflufenican
as a suspension concentrate.

FIRESTORM is a herbicide mixture for control of annual grass and broad-leaved weeds pre and post-emergence in winter wheat and winter barley.

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

FIRESTORM (MAPP 17631)

A suspension concentrate formulation containing 400 g/l flufenacet + 100 g/l diflufenican.



HARMFUL IF SWALLOWED



**MAY CAUSE DAMAGE TO ORGANS (NERVOUS SYSTEM)
THROUGH PROLONGED OR REPEATED EXPOSURE IF
SWALLOWED**



**VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING
EFFECTS**

Wear suitable protective clothing, suitable gloves and eye/face protection.

If exposed or concerned, call a POISON Centre, doctor or physician.

Contains flufenacet – may produce an allergic reaction.

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.

Made in EU

Contents: 5 litres^e

Batch No.:

Marketing Company: Certis Suite 5, 3 Riverside, Granta Park, Great Abingdon, Cambridgeshire, CB21 6AD Tel: 0044 (0)845 373 0305 Fax: 0044 (0)1223 891210 E-mail: certis@certiseurope.co.uk For technical and non-emergency calls – phone 0044 (0)1223 894261 For advice on medical emergencies, fires, spillages or chemical hazards ONLY – phone 0870 190 6777	Approval Holder: Life Scientific Limited NovaUCD Belfield Innovation Park University College Dublin Belfield Dublin 4, Ireland Tel: 00353 1283 2024 Registered company number: 237489
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FOR USE ONLY AS AN AGRICULTURAL HERBICIDE

Crops and situations:	Maximum individual dose (Litres Product/ha)	Maximum number of treatments	Latest time of application
Winter wheat	0.6 L/ha	One per crop	Before 3 rd tiller stage (GS23) and before 31 st December in year of planting
Winter barley	0.6 L/ha	One per crop	Before 4 th tiller stage (GS24) and before 31 st December in year of planting

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTANT 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 when handling the concentrate or handling contaminated surfaces.

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.

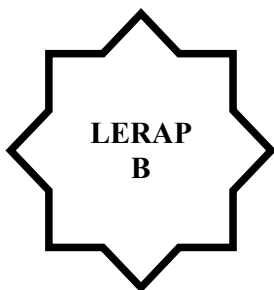
IF YOU FEEL UNWELL, seek medical advice immediately and show this container or label where possible.

Environmental Protection

DO NOT CONTAMINATE SURFACE WATER OR DITCHES with 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 in line with LERAP requirements.

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



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 Scheme (LERAPS). 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.

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, empty washings into spray tank and dispose of safely

DO NOT RE-USE CONTAINER for any purpose

DIRECTIONS FOR USE

NOTE: These Directions for Use form part of the Approved Product label and must be read before using the product.

FIRESTORM is a contact and residual herbicide mixture for broad-leaved and annual grass weed control in winter wheat and winter barley. It may be used on all varieties of winter wheat and winter barley and can be applied pre or post-emergence of weeds and crop. Effective weed control requires that all surface trash and straw is buried during seedbed preparation and when applied pre-emergence of the crop the seed must be covered by at least 32mm of settled soil. After application the soil surface should remain undisturbed so do not harrow or roll and do not incorporate the herbicide. Loose or cloddy seedbeds must be consolidated otherwise crop damage may result due to inadequate seed cover. Other points to consider for safe and effective use include:

- Avoid treatment of crops suffering from stress caused by pest or disease attack, drought or water-logging, grazing, nutrient deficiency, compacted soils or any other factor that reduces crop growth.
- Do not treat crops grown on waterlogged soils or on soil prone to waterlogging.
- Do not treat undersown crops or those that will be undersown.
- Do not use on sands, very light soils (ADAS 85 classification) or on very stony or gravelly soils due to the risk of crop injury.
- Do not use on soils with more than 10% organic matter content.
- Do not treat broadcast seed or shallow drilled crops since the seed may be damaged.

If very wet weather or sharp frosts occur before or after application, some crops may suffer from a loss of vigour or colour, particularly on light free draining soils or where soils become waterlogged. These effects are usually transitory in nature and the final yield of the crop is not normally affected.

Timing: One application of FIRESTORM should be applied to winter wheat or winter barley before 31st December in the year of drilling and wheat should be treated before the 3rd tiller stage (GS23) while winter barley should be treated before the 4th tiller stage (GS24).

Application: A dose of 0.6 L/ha FIRESTORM should be applied as a MEDIUM spray as defined by BCPC in a water volume of 200 – 400 L/ha. Avoid overlapping spray swaths. To prevent damage, care must be taken to avoid drift onto neighbouring crops.

Weed Control: The speed of activity is dependent upon the prevailing conditions in the treated field. Some soil moisture is required to activate the herbicide and light rain within 7 days of application gives the best control. If the soil is dry then the residual activity will be limited and cold weather will delay the appearance of herbicide effects. In the presence of adequate soil moisture FIRESTORM will control the following weeds:

Weed species	Pre-emergence activity	Post-emergence activity
Annual meadow-grass	S	S up to 3 leaves & 1 tiller (GS13, 21)
Black-grass	MS	MS up to 3 leaves (GS13) but before tillering has commenced (GS21)
Common chickweed	S	S up to early branching (5cm) stage
Common field speedwell	S	S up to 4 leaf stage (GS14)
Field pansy	S	S up to 4 leaf stage (GS14)
Field forget-me-not	S	-
Groundsel	S	-
Ivy-leaved speedwell	MR	S up to 2 leaf stage (GS12)
Mayweeds	S	S up to 2 leaf stage (GS12)
Red dead-nettle	S	-
Cleavers	MR	MR up to 1 whorl stage (GS11) ¹

¹ Useful suppression may be achieved but where cleaver populations are significant a cleaver-specific follow-up treatment is likely to be necessary.

S = Susceptible; MS = Moderately Susceptible; MR = Moderately Resistant; R = Resistant; - = no information.

Note: broad-leaved weeds growing from rootstocks and perennial grasses will not be controlled.

RESISTANCE MANAGEMENT

FIRESTORM is classified as having the HRAC mode of action code 'F1 + K3'. Weeds which are subject to repeated exposure to the same modes of action are at risk of developing resistance to these herbicides. When devising an herbicide programme, incorporate herbicides with different modes of action within crop programmes and throughout crop rotations and, where possible, include physical methods of weed control. Strains of 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 adviser or product manufacturer. To reduce the risk of the development of resistance:

- Do not use as a stand-alone treatment for black-grass control but use in sequence or tank-mix with other herbicides that are effective against black-grass and which work by a different mode of action.
- Consider your strategy across the whole rotation in treated fields and do not rely on FIRESTORM for grass or broad-leaved weed control in successive crops. Use effective herbicides with an alternative mode of action.
- Investigate any patches of poor control and if no obvious cause is apparent, consider appropriate resistance testing on surviving plants.

MIXING and SPRAYING

Shake the container well before use. 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 FIRESTORM. Add the remainder of the water and agitate the mixture thoroughly before and during

spraying. A water volume of 200-400 l/ha is recommended with the higher volumes within this range used where weed and crop cover is dense to ensure good coverage of the target weeds. Do not overlap spray swaths. Do not leave the sprayer standing for long periods when filled with the spray solution. After use, wash out the sprayer thoroughly with a minimum of two rinses using a wetting agent or a proprietary tank cleaner.

FOLLOWING CROPS after normal harvest or crop failure

Following a cereal crop treated with FIRESTORM the soil should be ploughed or cultivated to at least 15 cm before planting oilseed rape, field beans, carrots, onions sugar beet, peas or edible Brassicae to disperse any residues throughout the soil. Wheat, barley and potatoes can be planted with no special cultivations.

In the event of crop failure, the soil should be ploughed or cultivated to at least 15cm and only wheat, barley and potatoes can be sown. A period of at least 12 weeks should elapse after application before wheat or barley are sown.

Where products containing diflufenican are applied to successive cereal crops, the level of diflufenican can build up in the soil. Ploughing with complete inversion in the furrow is essential before any non-cereal crop other than potatoes is planted. Particularly sensitive crops such as onions, leeks, other alliums and clover may still suffer some damage from diflufenican residues. Where the land is to be rented out to growers of these crops it is advisable to avoid use of diflufenican for a few years before the field is hired out.

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.

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 flupyrsulfuron containing products. Combining flufenacet with flupyrsulfuron is covered by patents held by Bayer CropScience. Certis is clear that Bayer's permission must be obtained before mixing FIRESTORM with any product containing flupyrsulfuron.