



FIREFLY[®]155

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Fungicide

A fungicide for the control of stem-base, foliar and ear diseases in winter and spring wheat, winter rye and winter and spring oats.

MAPP 14818

An emulsifiable concentrate formulation containing 110 g/L prothioconazole and 45 g/L fluoxastrobin.

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 220876





FIREFLY 155

Contains 110 g/L prothioconazole
and 45 g/L fluoxastrobin



Warning

Very toxic to aquatic life with long lasting effects.
Wear protective gloves/protective clothing.
Protect from sunlight.

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 2-[2-(1-chlorocyclopropyl)-2-hydroxy-3-phenylpropyl]-2,4-dihydro-3H-1,2,4-triazole-3-thione. May produce an allergic reaction.

IMPORTANT INFORMATION FOR USE ONLY AS AN AGRICULTURAL FUNGICIDE

Crops:	Winter and spring wheat, winter rye, winter and spring oats
Maximum individual dose:	Wheat and rye 1.5 litres of product per hectare Oats: 1.25 litres of product per hectare
Maximum total dose:	3.0 litres product/ha on wheat and rye 2.5 litres product/ha on oats
Latest time of application:	Winter and spring wheat and winter rye: before grain milky ripe stage. Oats: up to beginning of anthesis
Other specific restrictions:	To avoid the build-up of resistance do not apply this or any other product containing QoI fungicides more than twice per cereal 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.

GB85367161c rA2b



To access the **Safety Data Sheet** for this product scan the code or use the link below:

www.cropscience.bayer.co.uk/firefly155sds
or alternatively contact your supplier

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Bayer

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 and handling contaminated surfaces.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) when applying 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 ANY CONTAMINATION from eyes immediately.

WASH HANDS AND EXPOSED SKIN before eating and drinking and after work.

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

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).



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 water body, unless a Local Environment 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, 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 REACH OF CHILDREN.

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

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.

PROTECT FROM FROST

Firefly¹⁵⁵ is a mixture of a strobilurin and a triazolinthione fungicide recommended for control of a wide range of diseases on winter and spring wheat, winter and spring oats and winter rye.

CROPS

Firefly¹⁵⁵ may be used on all commercial varieties of winter and spring wheat, winter and spring oats and winter rye.

RATE OF USE

Apply Firefly¹⁵⁵ at:- 1.5 litres per hectare for wheat and winter rye and 1.25 litres per hectare for oats.

The maximum total dose per crop is 3.0 litres per hectare for wheat and rye and 2.5 litres per hectare for oats.

APPLICATION

Water volume

Apply Firefly¹⁵⁵ in 100-300 litres of water per hectare. The higher spray volumes are recommended where the crop is dense or disease pressure / risk is high to ensure good penetration to the lower leaves and stem bases. Disease control may be compromised by reducing water volumes, where good spray coverage is difficult to achieve.

Pressure

A spray pressure of 2-3 bar is recommended.

Spray quality

Apply as a MEDIUM spray quality (as defined by BCPC).

Latest Permitted Timing

Winter and spring wheat and winter rye:

Firefly¹⁵⁵ may be applied at any stage before grain milky ripe stage.

Oats: Firefly¹⁵⁵ may be applied at any stage up to beginning of anthesis.

Mixing

Thoroughly shake the pack before use. Add the required quantity of Firefly¹⁵⁵ to the half-filled spray tank with the agitation system in operation and then fill to the required level. Continue agitation at all times during spraying and stoppages until the tank is completely empty. Spray immediately after mixing.

Tank washing

Any product rinsings should be added to the spray tank and sprayed on the crop to be treated.

The product can be removed from spray tanks by rinsing with water and detergent.

General

Sprayers should be thoroughly cleaned before use, and filters and jets checked for damage and blockages.

Boom height should be adjusted to ensure even coverage of the crop, particularly at later growth stages. The correct height is one at which the spray from alternate nozzles meets just above the crop. In dense crops, at later growth stages, higher water volumes should be used.

Thoroughly wash equipment with water and detergent after use.

DISEASES CONTROLLED

Wheat

Eyespot (reduction of incidence and severity), *Septoria* leaf and glume blotch, powdery mildew, yellow rust and brown rust.

Rye

Eyespot (reduction of the incidence and severity), powdery mildew, brown rust, *Rhynchosporium*.

Oats

Eyespot (reduction of the incidence and severity)

APPLICATION TIMING

Eyespot (*Oculimacula spp.*) reduction of disease incidence and severity.

Spray Firefly¹⁵⁵ in the spring at the first sign of disease, from when the leaf sheaths begin to become erect until the 2nd node is detectable (GS 30-32).

Septoria* Leaf blotch and Glume Blotch (*Septoria tritici* and *Stagonospora nodorum*)

Apply before disease is established in the crop. To protect the upper leaves and ear apply Firefly¹⁵⁵ at full flag leaf emergence up to mid-flowering (GS 65). Where disease pressure remains high application may be repeated.

Applications to upper leaves where *S. tritici* symptoms are present are likely to be less effective.

Firefly¹⁵⁵ contains a DMI fungicide. Resistance to some DMI fungicides has been identified in *Septoria* leaf blotch (*Mycosphaerella graminicola*) which may seriously affect the performance of some products. For further advice on resistance management in DMI's contact your agronomist or specialist advisor, and visit the FRAG-UK website.

Powdery Mildew (*Blumaria graminis*)*

When used for the control of other diseases, Firefly¹⁵⁵ will also give control of wheat powdery mildew.

Yellow Rust (*Puccinia striiformis*)

Apply Firefly¹⁵⁵ at the first signs of disease. A second application may be made 2-3 weeks later if re-infection occurs. Applications made to established infections are likely to be less effective.

Brown Rust (*Puccinia recondita*)

Apply Firefly¹⁵⁵ at the first signs of disease. A second application may be made 2-3 weeks later if re-infection occurs. Applications made to established infections are likely to be less effective.

Leaf Blotch (*Rhynchosporium secalis*)

Apply Firefly¹⁵⁵ in spring at the first signs of disease. For severe infections a second application may be necessary 2-3 weeks later.

* Strains of powdery mildew resistant to QoI fungicides are common in the UK. Where specific control measures are required, this should be achieved through a programme of measures including using products with recommendations for control of these diseases with different active substances used in mixture or sequence.

MANAGEMENT STRATEGY TO MINIMISE THE LIKELIHOOD OF RESISTANCE

Apply fungicides according to manufacturer's recommendations for the target disease (or complex) at the specific crop growth stage indicated. Effective disease management is a critical parameter in delaying the build-up of resistant pathogen populations. Firefly¹⁵⁵ is a mixture of two fungicides with different modes of action, a strobilurin and a triazolinthione.

Firefly¹⁵⁵ contains fluoxastrobin, a member of the QoI cross-resistance group. Firefly¹⁵⁵ should be used preventatively and should not be relied on for its curative potential.

Use Firefly¹⁵⁵ as part of an Integrated Crop Management (ICM) strategy incorporating other methods of control, including where appropriate other fungicides with a different mode of action. You must not apply more than two foliar applications of QoI-containing products to any cereal crop.

There is a significant risk of widespread resistance occurring in *Septoria tritici* populations in the UK. Failure to follow resistance management action may result in reduced levels of disease control.

Use of fungicides which have different modes of action have been shown to protect against the development of resistant forms of disease.

A programme of sprays should not include more than 2 sprays of Firefly¹⁵⁵ or any other product that contains a strobilurin fungicide.

CAUTION: The possible development of disease strains resistant to Firefly¹⁵⁵ cannot be excluded or predicted. Where such resistant strains occur, Firefly¹⁵⁵ is unlikely to give satisfactory control.

FACTORS AFFECTING CROP SAFETY

Occasionally, after the application of Firefly¹⁵⁵, some transient leaf chlorosis on wheat may occur, but these symptoms have not been shown to adversely affect yield responses accruing from the benefits of disease control.

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