

GROUP 3 | 7 FUNGICIDES

CARLINE®

FUNGICIDE

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For the control of certain diseases in approved cereal crops.
See detailed label text for specific crop approval information.

WINTER & SPRING BARLEY OAT CROPS

MAPP 21462

60 g/L bixafen, 200 g/L prothioconazole
Emulsifiable concentrate (EC)

NET CONTENTS: **5L**

170550623804 V1



FOR USE ONLY AS A
PROFESSIONAL FUNGICIDE

lifescientific 
FIRST TO MARKET

CARLINE® - MAPP 21462

CARLINE® is a professional fungicide for selective use in winter barley, spring barley and oat crops.

Contains BIXAFEN + PROTHIOCONAZOLE 60.0 + 200.0 g/L (6.2% + 20.2% w/w) formulated as an emulsifiable concentrate formulation (EC).

WARNING



Harmful if swallowed
May cause an allergic skin reaction
Causes serious eye irritation
May cause respiratory irritation
Very toxic to aquatic life with long lasting effects

Keep out of reach of children.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If exposed or if you feel unwell: Call a POISON CENTRE or doctor/physician.
Collect spillage.
Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for triple rinsed empty 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.

IMPORTANT INFORMATION - FOR USE ONLY AS A PROFESSIONAL FUNGICIDE

Crops	Maximum individual dose (L product per hectare)	Maximum number of treatments	Latest time of application
Barley (winter and spring)	1.0 L/ha	2	Up to the beginning of flowering
Oats (winter and spring)	1.0 L/ha	2	Up to the beginning of flowering

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 PLANT PROTECTION PRODUCTS.

IMPORTANT: Note that goods treated under the terms of this Great Britain (GB) authorisation can be legally marketed in Northern Ireland if they are being moved under the Northern Ireland Retail Movement Scheme. All other treated goods can only be marketed in Northern Ireland if they are in accordance with the statutory EU Maximum Residue Level (MRL) set under Regulation No 396/2005. This may also apply to residues in animal products where treated crops are fed to livestock. Growers are advised to draw this to the attention of distributors and retailers so that EU MRL breaches and any associated enforcement against goods marketed in Northern Ireland are avoided.

AUTHORISATION HOLDER AND MARKETING COMPANY:

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

FOR 24 HOUR EMERGENCY INFORMATION CONTACT NHS 111

This product must be sold and used only in England, Scotland and Wales.

PROTECT FROM FROST

SHAKE WELL BEFORE USE

Production date / Batch number: see packaging



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), FACE PROTECTION (FACESHIELD) AND SUITABLE PROTECTIVE GLOVES when handling the concentrate.

WEAR PROTECTIVE CLOTHING (COVERALLS) when applying the product.

WEAR PROTECTIVE CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES when 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.

WASH ANY CONTAMINATION from eyes immediately.

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

Do not apply by hand-held equipment.

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).

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 5 metres of the top of the bank of a static or flowing water body, unless a Local Environmental Risk.

DO NOT ALLOW DIRECT SPRAY from hand-held sprayers to fall within 1 m of the top of the bank of a static or flowing water body.

Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1 metre from 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 AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.

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

RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of container safely.

Do not re-use container for any other purpose.

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.

CARLINE® is a selective protective and systemic fungicide. Up to two applications may be made to any individual crop, as part of a planned disease control programme.

Resistance strategy

CARLINE® contains active substances which are in the Fungicide Resistance Action Committee mode of action Groups 3 and 7; it includes Bixafen (an SDHI fungicide) and Prothioconazole (a DMI fungicide).

Resistance against these types of chemistry is known for several fungal species in field populations and lab mutants. A resistance management strategy is required.

Repeated applications of products with this mode of action should not be used against medium risk pathogens such as Septoria.

Follow the FRAC SDHI fungicide resistance management guidelines:

- Apply SDHI fungicides always in mixtures; CARLINE® is such a mixture.
- Apply a maximum of 2 SDHI fungicide containing sprays per cereal crop.
- Apply the SDHI fungicide preventively or as early as possible in the disease cycle. Do not rely only on the curative potential of SDHI fungicides.
- Strongly reduced rate programs including multiple applications must not be used. Refer to manufacturers' recommendations for rates.
- Tank mixtures or alternation with fungicides having a different mode of action against the diseases present have been shown to protect against the development of resistant forms of disease.

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

Restrictions:

Ensure the sprayer is free from residues from previous applications.

For professional use only.

For use by tractor mounted/trailed sprayers only.

Avoid spray drift on to neighbouring crops and field margins.

After spraying, wash out sprayer thoroughly according to manufacturer's guideline and dispose of washings and clean container according to local authority guidelines.

RATE OF USE

Apply CARLINE® at 1 L/ha in cereals.

The maximum number of treatments is two per crop.

Diseases Controlled

The following diseases are susceptible to CARLINE®. The susceptibility ratings in the following table refer to good spray cover and good growing conditions, with suitable application timings.

Botanical Name	Common name	Crops	Control level achieved
<i>Puccinia recondita</i>	Brown rust	Winter barley, spring barley	Control
<i>Puccinia coronata</i>	Crown rust	Oats	Control
<i>Oculimacula yallundae</i> , <i>O. acufomis</i>	Eyespot	Winter barley, spring barley, oats	Reduction of incidence and severity
<i>Fusarium</i> sp.	Fusarium ear blight	Winter barley, spring barley	Moderate control
<i>Pyrenophora teres</i>	Net blotch	Winter barley, spring barley	Control
<i>Blumeria graminis</i>	Powdery mildew	Winter barley, spring barley, oats	Control
<i>Ramularia collo-cygni</i>	Ramularia leaf spot	Winter barley, spring barley	Control
<i>Rhynchosporium secalis</i>	Rhynchosporium	Winter barley, spring barley	Control
<i>Cladosporium</i> sp., <i>Botrytis</i> sp.	Sooty moulds	Winter barley, spring barley,	Reduction
<i>Puccinia striiformis</i>	Yellow rust	Winter barley, spring barley	Control

Control of some diseases may be enhanced by the use of suitable spray programmes and mixtures.

Application timings

In general, application of CARLINE® should be made at the first signs of disease. Applications to established disease infection will be less effective.

Where disease pressure remains high after application, a second spray may be made 14-21 days after the first.

Common name	Crops	Optimum application timing
Brown rust	Winter barley, spring barley	Apply at the first sign of disease
Crown rust	Oats	Apply at the first sign of disease
Eyespot	Winter barley, spring barley, oats	Apply in 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)
Fusarium ear blight	Winter barley, spring barley	Apply between ear emergence and the beginning of flowering (GS 59-61)
Net blotch	Winter barley, spring barley	Apply at the first sign of disease
Powdery mildew	Winter barley, spring barley, oats	Apply at the first sign of disease
Ramularia	Winter barley, spring barley	Apply at the first sign of disease
Rhynchosporium	Winter barley, spring barley	Apply at the first sign of disease
Sooty moulds	Winter barley, spring barley	Apply between ear emergence and the beginning of flowering (GS 59-61)
Yellow rust	Winter barley, spring barley	Apply at the first sign of disease

PREPARATION OF THE SPRAY SOLUTION AND APPLICATION

CARLINE® is not to be applied through backpack or hand-held sprayers. Shake the container before use.

Half-fill the spray tank with clean water, add the necessary amount of CARLINE® and agitate while filling the tank.

Continue agitation at all times during spraying and stoppages until the tank is completely empty. Spray immediately after mixing.

Rinse container thoroughly by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of container safely.

Do not leave spray solution in the tank overnight.

Good spray coverage is necessary for effective control.

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 just above the crop, in dense crops, at later growth stages, higher water volumes should be used.

Sprayers should be thoroughly cleaned with water and detergent after use, and filters and jets checked for damage and blockages.

Apply at medium spray quality, through properly calibrated equipment.

Water volume

Apply CARLINE® in 100-300 L/ha of water. Good crop coverage and crop penetration are required for good disease control; therefore, 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.

A spray pressure of 2-3 bar is recommended.

COMPATIBILITY

CARLINE® is a fully optimised formulation; no additional surfactant is required.

Please contact your distributor for further information regarding tank-mix partners

SPRAY TANK CLEANING

Wash all equipment immediately after use, using clean water and a suitable cleaning agent, according to the manufacturer's instructions.

COMPANY ADVISORY INFORMATION

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.