



# Centaur®

1Le

F

A contact and systemic fungicide for the control of a wide range of diseases on winter wheat, winter and spring crops of barley and oats, rye, winter oilseed rape, winter and spring field beans and sugar beet.

## MAPP 13852

An emulsifiable concentrate formulation containing 200 g/L (21.1% w/w) cyproconazole

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: 0800 220876

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

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

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

WASH CONCENTRATE from eyes immediately.

WASH HANDS AND EXPOSED SKIN before meals and after work.

WHEN USING DO NOT EAT, DRINK OR SMOKE.

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

### Environmental Protection

DO NOT CONTAMINATE SURFACE WATERS OR DITCHES with chemical or used container.

### Storage and Disposal

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

WASH OUT CONTAINER THOROUGHLY, empty washings into spray tank and dispose of safely.

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDINGSTUFFS.

KEEP OUT OF REACH OF CHILDREN.

### Safety Information

#### CENTAUR

Contains 200 g/L (21.1% w/w) cyproconazole.

### Warning

May cause an allergic skin reaction.  
Causes serious eye irritation.  
Suspected of damaging the unborn child.  
Toxic to aquatic life with long lasting effects.

Wear protective gloves/protective clothing/eye protection/face protection  
IF exposed or concerned: Call a POISON CENTER 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.

To avoid risks to human health and the environment, comply with the instructions for use.

### IMPORTANT INFORMATION

FOR USE ONLY AS AN AGRICULTURAL/HORTICULTURAL FUNGICIDE

Crops:	Winter wheat, winter and spring barley, winter and spring oats, rye, winter and spring field beans, winter oilseed rape and sugar beet
Maximum individual dose:	0.4 litres per hectare for winter wheat, winter and spring barley, winter and spring oats, rye, winter and spring field beans 0.5 litres per hectare for winter oilseed rape 0.3 litres per hectare for sugar beet
Maximum total dose per crop:	1.2 litres per hectare* for winter wheat, winter and spring barley, winter and spring oats, rye 0.8 litres per hectare for winter and spring field beans 1.0 litres per hectare for oilseed rape 0.6 litres per hectare for sugar beet
Latest time of application:	Up to and including ear emergence complete stage for barley and oats Before caryopsis watery ripe stage for wheat (winter) and rye Six weeks before harvest for field beans Before lowest pods are more than 2 cm long for winter oilseed rape 14 days before harvest for sugar beet
Other specific restrictions:	A minimum interval of 21 days must be observed between applications to sugar beet

\* 0.8 litres per hectare of this dose can be applied in the spring and summer

**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**

GB79089740g rA3

Bayer

## 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.

For best disease control and yield benefit Centaur should be applied at an early stage of disease development, before infection spreads to new crop growth.

### RESTRICTIONS

A minimum interval of 21 days must be observed between applications on sugar beet.

PROTECT FROM FROST

STORE IN A COOL DRY PLACE

SHAKE WELL BEFORE USE

The possible development of diseases resistant to Centaur cannot be excluded or predicted. Where such resistant strains occur, Centaur may not give satisfactory control and no responsibility can be accepted for any loss incurred. Centaur applied to winter wheat or winter oats in the spring at GS 30-33 may, on occasion, cause straw shortening. This effect causes no loss of yield and can be beneficial in a potential lodging situation.

### RESISTANCE MANAGEMENT

Repeated application of Centaur alone should not be used on the same crop against a high risk pathogen such as cereal powdery mildew. Tank-mixtures or alternation with fungicides having a different mode of action (eg morpholines) have been shown to protect against the development of resistant forms of disease.

### DISEASES CONTROLLED

#### Cereals

Septoria leaf blotch <i>Septoria tritici</i>	Winter wheat
Glume blotch <i>S. nodorum</i>	Winter wheat
Yellow rust	Winter wheat, winter and spring barley
Brown rust	Winter wheat, winter and spring barley, rye
Crown rust	Winter and spring oats
Ear disease	Winter wheat
Powdery mildew	Winter wheat, winter and spring barley, winter and spring oats and rye
Leaf blotch <i>Rhynchosporium</i>	Winter and spring barley
Net blotch	Winter and spring barley
Eyespot	Winter wheat and winter barley

#### Winter oilseed rape

- Light leaf spot
- Phoma leaf spot

#### Field Beans

- Chocolate Spot
- Bean Rust

#### Sugar Beet

- Powdery mildew
- Ramularia* leaf spot

## CROP SPECIFIC INFORMATION

### Application

Boom height should be adjusted so that the output from alternate nozzles meets just above the crop.

Apply Centaur in 200 to 400 litres of water per hectare. The higher spray volumes are recommended where the crop is dense to ensure good penetration to the lower leaves and stem bases.

A pressure of 2-3 bar (30-40 psi) is recommended.

Good spray cover of the target is essential. Ensure the sprayer is in good condition and that the correct nozzles are fitted and working correctly.

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

### CEREALS

Centaur may be used on all varieties of winter wheat, winter and spring barley and oats, and rye.

Maximum individual dose: 0.4 litre per hectare

Maximum total dose per crop: 1.2\* litre per hectare

\*0.8 L/ha of this dose can be applied in the spring and summer.

Barley and oats - Up to and including emergence of ear complete stage (GS 59).

Winter wheat and rye - Before caryopsis watery ripe stage.

#### • Diseases Controlled - Application Timing

##### **Septoria Leaf Blotch and Glume Blotch (*Septoria tritici* and *S. nodorum*) (Winter Wheat)**

Apply Centaur at the first signs of disease. Where infection may occur following a "rain-splash event" apply Centaur as soon as possible afterwards to prevent visible symptoms developing.

It is important to protect both the second leaf and flag leaf.

Centaur provides prolonged protection from re-infection but a repeat application may be made if necessary.

Centaur 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.

- \* A "rain-splash event" is defined as 10 mm or more of rain in up to 3 consecutive rain days i.e. days with 1 mm or more of rain; 5 mm of rain in any one day may be sufficient where stem elongation is incomplete or in short or thin crops.

##### **Yellow Rust** (Winter wheat, winter and spring barley)

Apply Centaur at the first signs of disease, before 1% of any leaf is infected. Applications made to established infections are likely to be less effective.

Centaur provides prolonged protection from re-infection. A repeat application may be made if necessary.

##### **Brown Rust** (Winter wheat, winter and spring barley, rye)

##### **Crown Rust** (Winter and spring oats)

Apply Centaur when rust is first detected. Centaur provides prolonged protection, but a repeat application may be made if necessary.

##### **Ear Diseases** (Winter wheat)

An application of Centaur during full ear emergence (GS 59) gives control of mildew, rusts and *Septoria* on ears and provides a useful reduction of *Cladosporium* sooty mould.

### **Powdery Mildew**

(Winter wheat, winter and spring barley, winter and spring oats, rye)

Apply Centaur at the start of mildew development when not more than 2% infection is present on the lower leaves.

Centaur provides prolonged protection from re-infection. A second treatment may be applied where crops are at risk from later attacks.

For autumn control of powdery mildew on winter barley drilled before October. On light land apply Centaur when 5% of the surface area of any of the lower leaves is infected. On heavy land only treat if mildew infects the upper leaves.

### ***Rhynchosporium*** (leaf blotch) (Winter and spring barley)

When applied to control other diseases, Centaur will give moderate control of *Rhynchosporium*. Centaur should be applied during the early stage of disease development.

### **Net Blotch** (Winter and spring barley)

When applied to control other disease Centaur will give a useful reduction of net blotch.

### **Eyespot** (Winter wheat, winter barley)

When applied between GS 30-34 to control other diseases, Centaur gives a useful reduction of eyespot.

### **• Effect on Crop Height**

Centaur applied to winter wheat or winter oats in the spring at GS 30-33 may, on occasion, cause straw shortening. This effect causes no loss of yield and can be beneficial in a potential lodging situation.

### **WINTER OILSEED RAPE**

Centaur may be used on all varieties of winter oilseed rape.

Maximum individual dose: 0.5 litre per hectare

Maximum total dose per crop: 1.0 litre per hectare

Centaur may be applied at any time before the lowest pods are more than 2 cm long.

### **• Diseases Controlled - Application Timing**

#### **Light Leaf Spot and *Phoma* Leaf Spot**

Apply Centaur in the spring at the start of stem extension.

In high risk situations and on more susceptible varieties, apply a two spray programme of Centaur; the first spray in the autumn between when ground cover has been achieved and cessation of growth in early winter and the second spray in the spring at the start of stem extension.

### **FIELD BEANS**

Centaur may be applied to all varieties of winter and spring field beans.

Maximum individual dose: 0.4 litre per hectare

Maximum total dose per crop: 0.8 litre per hectare

Centaur must not be applied less than 6 weeks before harvest.

### **• Diseases Controlled - Application Timing**

#### **Bean Rust**

Centaur provides prolonged protection. Apply Centaur when rust is first detected. A repeat application may be necessary.

When bean rust continues to develop and further control is necessary, an alternative product must be used.

### **• Diseases Controlled - Application Timing**

#### **Rust**

Apply Centaur when rust is first detected, which usually occurs during periods of warm, humid weather. Repeat applications should be made at intervals of 14-21 days, allowing an interval of at least 14 days between the final application and harvest.

### **SUGAR BEET**

Maximum individual dose: 0.3 litre per hectare.

Maximum total dose per crop: 0.6 litre per hectare

A minimum interval of 21 days must be observed between applications.

Centaur must not be applied less than 14 days before harvest.

### **• Diseases Controlled - Application Timing**

#### **Powdery Mildew and *Ramularia* Leaf Spot**

Apply Centaur at the first signs of disease, before it becomes established. Centaur gives prolonged protection from re-infection, but a second application can be applied where crops are at risk from later attacks.

#### **Rust**

Apply Centaur at the first signs of rust infection, before the disease becomes established. Centaur gives prolonged protection from re-infection, but a second application can be applied if necessary.

### **MIXING**

Thoroughly shake the pack before use.

Add the required quantity of Centaur 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.

Wash out all spray equipment with water immediately after use. Triple rinse container before disposal and do not re-use container for any other purpose.

© Bayer CropScience 2014

## Section 6 of the Health and Safety at Work Act

Additional Product Safety Information (This section does not form part of the approved product label). The product label provides information on a specific pesticidal use of the product; do not use otherwise, unless you have assessed any potential hazard involved, the safety measures required and that the particular use has "off-label" approval or is otherwise permitted. The information on this label is based on the best available information including data from test results.

## SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

CENTAUR Version 4 / GB Revision Date: 19.05.2014 102000015664

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifier

Trade name CENTAUR

Product code (UVP) 06126013

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Use Fungicide

#### 1.3 Details of the supplier of the safety data sheet

Supplier Bayer CropScience Limited

230 Cambridge Science Park

Milton Road

Cambridge

Cambridgeshire CB4 0WB

United Kingdom

+44(0)1223 226500

+44(0)1223 426240

Telephone Email: ukinfo@bayercropscience.com

Telefax

Responsible Department Emergency telephone no. 0800-220876 (UK 24 hr)

1.4 Emergency telephone no. +44(0)1635-563000 (Overseas 24 hr)

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of

substances and mixtures, as amended.

Reproductive toxicity: Category 2

H361d Suspected of damaging the unborn child.

Skin sensitisation: Category 1

H317 May cause an allergic skin reaction.

Eye irritation: Category 2

H319 Causes serious eye irritation.

Chronic aquatic toxicity: Category 2

H411 Toxic to aquatic life with long lasting effects.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Repr.Cat.3, R63

Xi Irritant, R36

R43

N Dangerous for the environment, R51/53

#### 2.2 Label elements

Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Hazard label for supply/use required.

Hazardous components which must be listed on the label:

• Cyproconazole



Signal word: Warning

## Hazard statements

H317

H361d

H411

EUH401

May cause an allergic skin reaction.

Causes serious eye irritation.

Suspected of damaging the unborn child.

Toxic to aquatic life with long lasting effects.

To avoid risks to human health and the environment, comply with the instructions for use.

## Precautionary statements

P280

P308 + P311

P501

Wear protective gloves/protective clothing/eye protection/face protection.

IF exposed or concerned: Call a POISON CENTER/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 nonhazardous waste.

## 2.3 Other hazards

No other hazards known.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixtures

#### Chemical nature

Emulsifiable concentrate (EC)

Cyproconazole 200 g/l

#### Hazardous components

R-phrases according to EC directive 67/548/EEC

Hazard statements according to Regulation (EC) No. 1907/2006

Name	CAS-No. / EC-No.	Classification		Conc. [%]
		EC Directive 67/548/EEC	Regulation (EC) No 1272/2008	
Cyproconazole	94361-06-5 619-020-1	Repr.Cat.3 R63 Xn; R22 N; R50/53	Repr. 2, H361d Acute Tox. 4, H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	19.80
2-Ethylhexanol propylene ethyleneglycol ether	64366-70-7 613-582-1	R52/53	Aquatic Chronic 3, H412	> 1.00 - < 25.00
gamma- Butyrolactone	96-48-0 202-509-5	Xn; R22 Xi; R41 R67	Acute Tox. 4, H302 Eye Dam. 1, H318 STOT SE 3, H336	> 1.00 - < 25.00
N,N-Dimethyl decanamide	14433-76-2 238-405-1	Xi; R36/38	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 3, H412	> 5.00 - < 10.00

## Further information

Cyproconazole	94361-06-5	M-Factor: 10 (acute)
---------------	------------	----------------------

For the full text of the R-phrases/ Hazard statements mentioned in this Section, see Section 16.

**SECTION 4: FIRST AID MEASURES**

**4.1 Description of first aid measures**

General advice	Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.
Inhalation	Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.
Skin contact	Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. If eye irritation or redness persists, see an ophthalmologist.
Ingestion	Rinse mouth. Do NOT induce vomiting. Call a physician or poison control center immediately.
<b>4.2 Most important symptoms and effects, both acute and delayed</b>	
Symptoms	No symptoms known or expected.
<b>4.3 Indication of any immediate medical attention and special treatment needed</b>	
Treatment	Treat symptomatically. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. There is no specific antidote.

**SECTION 5: FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

**Suitable** Water spray, Carbon dioxide (CO2), Foam, Sand

**5.2 Special hazards arising from the substance or mixture**

In the event of fire the following may be released: Hydrogen chloride (HCl), Hydrogen cyanide (hydrocyanic acid), Carbon monoxide (CO), Nitrogen oxides (NOx)

**5.3 Advice for firefighters**

**Special protective equipment for fire-fighters**

In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.

**Further information** Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures**

Precautions Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

**6.2 Environmental precautions**

Do not allow to get into surface water, drains and ground water. If spillage enters drains leading to sewage works inform local water company immediately. If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800 807060).

**6.3 Methods and materials for containment and cleaning up**

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

Information regarding safe handling, see section 7.  
Information regarding personal protective equipment, see section 8.  
Information regarding waste disposal, see section 13.

**SECTION 7: HANDLING AND STORAGE**

**7.1 Precautions for safe handling**

**Advice on safe handling** No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Ensure adequate ventilation.

**Hygiene measures** Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands immediately after work, if necessary take a shower. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt).

**7.2 Conditions for safe storage, including any incompatibilities**

**Requirements for storage areas and containers**

Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Keep away from direct sunlight.

**Advice on common storage** Keep away from food, drink and animal feedingstuffs.  
**Suitable materials** HDPE (high density polyethylene)  
Coextruded containers with an internal barrier layer made of ethylene vinyl alcohol copolymer (EVOH)  
Refer to the label and/or leaflet.

**7.3 Specific end uses**

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Cyproconazole	94361-06-5	0.08 mg/m3 (TWA)		OES BCS*

\*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

**8.2 Exposure controls**

**Refer to COSHH assessment (Control of Substances Hazardous to Health (Amendment) Regulations 2004).**

**Engineering controls should be used in preference to personal protective equipment wherever practicable.**

**Refer also to COSHH Essentials.**

**Personal protective equipment**

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

**Respiratory protection**

If product is handled while not enclosed, and if contact may occur: Wear respirator with an organic vapours and gas filter mask (protection factor 10) conforming to EN140 type A or equivalent. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.  
Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness of 0,4 mm). Wash when contaminated and dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.  
Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).  
Wear standard coveralls and Category 3 Type 4 suit. If there is a risk of significant exposure, consider a higher protective type suit. Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently. If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.

**Hand protection**

**Eye protection**

**Skin and body protection**

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties**

**Form** Liquid, clear to slightly turbid  
**Colour** light yellow to light brown  
**Odour** weak, amine-like  
**pH** 4.0 - 6.0 at 1 % (23 °C) (deionized water)  
**Flash point** >100 °C  
**Density** ca. 1.01 g/cm³ at 20 °C  
**Water solubility** emulsifiable  
**Partition coefficient: n-octanol/water:** Cyproconazole: log Pow: 3.1  
**9.2 Other information** Further safety related physical-chemical data are not known.

**SECTION 10: STABILITY AND REACTIVITY**

**10.1 Reactivity**

**Thermal decomposition**

**10.2 Chemical stability**

**10.3 Possibility of hazardous reactions**

**10.4 Conditions to avoid**

**10.5 Incompatible materials**

**10.6 Hazardous decomposition products**

Stable under normal conditions.  
Stable under recommended storage conditions.  
No dangerous reaction known under conditions of normal use.  
Extremes of temperature and direct sunlight.  
Store only in the original container.  
No decomposition products expected under normal conditions of use.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

Acute oral toxicity	LD50 (rat) > 5,000 mg/kg
Acute inhalation toxicity	LC50 (rat) 5.266 mg/l Exposure time: 4 h Determined in the form of a respirable aerosol.
Acute dermal toxicity	LD50 (rat) > 2,000 mg/kg
Skin irritation	No skin irritation (rabbit)
Eye irritation	Irritating to eyes. (rabbit)
Sensitisation	Sensitising (mouse) OECD Test Guideline 429, local lymph node assay (LLNA)
Assessment repeated dose toxicity	Cyproconazole did not cause specific target organ toxicity in experimental animal studies.
Assessment Mutagenicity	Cyproconazole was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Assessment Carcinogenicity	Cyproconazole was not carcinogenic in a lifetime feeding study in rats. Cyproconazole caused at high dose levels an increased incidence of tumours in mice in the following organ(s): liver. The tumours seen with Cyproconazole were caused through peroxisome proliferation. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.
Assessment toxicity to reproduction	Cyproconazole did not cause reproductive toxicity in a two-generation study in rats.
Assessment developmental toxicity	Cyproconazole caused developmental toxicity only at dose levels toxic to the dams. Cyproconazole caused an increased incidence of non-specific malformations.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 19 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient cyproconazole.
Toxicity to aquatic invertebrates	EC50 (Water flea (Daphnia magna)) 8.2 mg/l Exposure time: 48 h
Toxicity to aquatic plants	IC50 (Desmodesmus subspicatus) 1.14 mg/l Growth rate; Exposure time: 72 h

### 12.2 Persistence and degradability

Biodegradability	Cyproconazole: not rapidly biodegradable
Koc	Cyproconazole: Koc: 309

### 12.3 Bioaccumulative potential

Bioaccumulation	Cyproconazole: Does not bioaccumulate.
-----------------	--

### 12.4 Mobility in soil

Mobility in soil	Cyproconazole: Moderately mobile in soils
------------------	---

### 12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment	Cyproconazole: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
-------------------------	--

### 12.6 Other adverse effects

Additional ecological information	No other effects to be mentioned.
-----------------------------------	-----------------------------------

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

Product	In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant. Advice may be obtained from the local waste regulation authority (part of the Environment Agency in the UK).
Contaminated packaging	Small containers (< 10 l or < 10 kg) should be rinsed thoroughly using an integrated pressure rinsing device, or, by manually rinsing three times. Add washings to sprayer at time of filling. Dispose of empty and cleaned packaging safely. Large containers (> 25 l or > 25 kg) should not be rinsed or re-used for any other purpose. Return large containers to supplier. Follow advice on product label and/or leaflet.
Waste key for the unused product	020108 agrochemical waste containing dangerous substances

## SECTION 14: TRANSPORT INFORMATION

### ADR/RID/ADN

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CYPROCONAZOLE SOLUTION)

14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES
Hazard no.	90
Tunnel Code	E

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

### IMDG

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CYPROCONAZOLE SOLUTION)

14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Marine pollutant	YES

### IATA

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CYPROCONAZOLE SOLUTION )

14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES

### UK 'Carriage' Regulations

14.1 UN number	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CYPROCONAZOLE SOLUTION)

14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES
Emergency action code	3Z

### 14.6 Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No transport in bulk according to the IBC Code.

## SECTION 15: REGULATORY INFORMATION

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### UK and Northern Ireland Regulatory References

This material may be subject to some or all of the following regulations (and any subsequent amendments).

Users must ensure that any uses and restrictions as indicated on the label and/or leaflet are followed.

#### Transport

Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No 1348)

Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations 1997 (SI 1997 No 2367)

Air Navigation Dangerous Goods Regulations 2002 (SI 2002 No 2786)

#### Supply and Use

Chemical (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No 716)

Chemical (Hazard Information and Packaging for Supply) (Northern Ireland) Regulations 2009

Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No 2677)

EH40 Occupational Exposure Limits - Table 1 List of approved workplace exposure limits

Control of Pesticide Regulations 1986

Dangerous Substances and Explosive Atmospheres Regulations 2002

Waste Treatment

Environmental Protection Act 1990, Part II  
Environmental Protection (Duty of Care) Regulations 1991  
The Waste Management Licensing Regulations 1994 (as amended)  
Hazardous Waste Regulations 2005 (Replacing Special Waste Regulations 1996 as amended)  
Landfill Directive  
Regulation on Substances That Deplete the Ozone Layer 1994 (EEC/3093/94)  
Water Resources Act 1991  
Anti-Pollution Works Regulations 1999

Further information

WHO-classification: III (Slightly hazardous)

15.2 Chemical Safety Assessment

A chemical safety assessment is not required.

SECTION 16: OTHER INFORMATION

Text of R-phrases mentioned in Section 3

R22	Harmful if swallowed.
R36/38	Irritating to eyes and skin.
R41	Risk of serious damage to eyes.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R63	Possible risk of harm to the unborn child.
R67	Vapours may cause drowsiness and dizziness.

Text of the hazard statements mentioned in Section 3

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Reason for Revision: Section 12. Ecological information. Safety Data Sheet according to Regulation (EU) No. 453/2010.

This version replaces all previous versions.



# Centaur®

1Le

F

A contact and systemic fungicide for the control of a wide range of diseases on winter wheat, winter and spring crops of barley and oats, rye, winter oilseed rape, winter and spring field beans and sugar beet.

## MAPP 13852

An emulsifiable concentrate formulation containing 200 g/L (21.1% w/w) cyproconazole

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: 0800 220876

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

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

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

WASH CONCENTRATE from eyes immediately.

WASH HANDS AND EXPOSED SKIN before meals and after work.

WHEN USING DO NOT EAT, DRINK OR SMOKE.

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

### Environmental Protection

DO NOT CONTAMINATE SURFACE WATERS OR DITCHES with chemical or used container.

### Storage and Disposal

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

WASH OUT CONTAINER THOROUGHLY, empty washings into spray tank and dispose of safely.

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDINGSTUFFS.

KEEP OUT OF REACH OF CHILDREN.

### Safety Information

#### CENTAUR

Contains 200 g/L (21.1% w/w) cyproconazole.

### Warning

May cause an allergic skin reaction.  
Causes serious eye irritation.  
Suspected of damaging the unborn child.  
Toxic to aquatic life with long lasting effects.

Wear protective gloves/protective clothing/eye protection/face protection  
IF exposed or concerned: Call a POISON CENTER 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.

To avoid risks to human health and the environment, comply with the instructions for use.

### IMPORTANT INFORMATION

FOR USE ONLY AS AN AGRICULTURAL/HORTICULTURAL FUNGICIDE

Crops:	Winter wheat, winter and spring barley, winter and spring oats, rye, winter and spring field beans, winter oilseed rape and sugar beet
Maximum individual dose:	0.4 litres per hectare for winter wheat, winter and spring barley, winter and spring oats, rye, winter and spring field beans 0.5 litres per hectare for winter oilseed rape 0.3 litres per hectare for sugar beet
Maximum total dose per crop:	1.2 litres per hectare* for winter wheat, winter and spring barley, winter and spring oats, rye 0.8 litres per hectare for winter and spring field beans 1.0 litres per hectare for oilseed rape 0.6 litres per hectare for sugar beet
Latest time of application:	Up to and including ear emergence complete stage for barley and oats Before caryopsis watery ripe stage for wheat (winter) and rye Six weeks before harvest for field beans Before lowest pods are more than 2 cm long for winter oilseed rape 14 days before harvest for sugar beet
Other specific restrictions:	A minimum interval of 21 days must be observed between applications to sugar beet

\* 0.8 litres per hectare of this dose can be applied in the spring and summer

**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**

GB79089740g rA3

Bayer