

# Signum®

Signum is a fungicide with protectant and systemic activity for use against certain diseases in broccoli, Brussels sprout, cabbage, calabrese, cauliflower, strawberry (outdoor and protected), carrot, lettuce (outdoor and protected), field beans, combining peas, vining peas and blackcurrants.

A water dispersible granule containing 26.7% w/w boscalid and 6.7% w/w pyraclostrobin.

## Risk and Safety Information

### Warning

**Harmful if swallowed.  
Very toxic to aquatic life with long lasting effects.**

Wash with plenty of water and soap thoroughly after handling.  
Do not eat, drink or smoke when using this product.

**IF SWALLOWED:** Call a POISON CENTRE or doctor/physician if you feel unwell.

Rinse mouth.

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 protect aquatic organisms respect an unsprayed buffer zone of 5m to surface water bodies.

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

PCS No. : 03799



UFI : C3YD-9258-K00P-AXSE

### Marketing company:

BASF Ireland Limited, 4th and 5th Floors, 2 Stockport Exchange, Railway Road, Stockport SK1 3GG, UK. Telephone: 00 44 (0)161 475 3000

Emergency Information (24 hours freephone): 0049 180 227 3112

Technical Enquiries: 0044 (0)845 602 2553 (office hours)

### Authorisation holder:

BASF plc, 4th and 5th Floors, 2 Stockport Exchange, Railway Road, Stockport SK1 3GG, UK, Telephone: 00 44 (0)161 475 3000

**2.5 kg**

® = Registered trademark of BASF

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**FOR USE ONLY AS AN AGRICULTURAL/HORTICULTURAL FUNGICIDE, as directed below:**

<b>Crops</b>	<b>Maximum individual dose</b>	<b>Maximum total dose</b>	<b>Latest time of application</b>
Broccoli, Brussels sprout, cabbage, calabrese and cauliflower	1.0 kg/ha	3.0 kg/ha/crop	14 days before harvest
Strawberry (outdoor and protected)	1.8 kg/ha	3.6 kg/ha/year	3 days before harvest
Carrots	1.0 kg/ha	2.0 kg/ha/crop	14 days before harvest
Lettuce (outdoor and protected)	1.5 kg/ha	3.0 kg/ha/crop	14 days before harvest
Field beans and combining peas	1.0 kg/ha	2.0 kg/ha/crop	21 days before harvest
Blackcurrants (pre-harvest) (outdoor)	1.5 kg/ha	3.0 kg/ha/year	3 days before harvest
Blackcurrants (post-harvest) (outdoor)	1.5 kg/ha	1.5 kg/ha/year	Not applicable
Vining peas	1.0 kg/ha	1.0 kg/ha/crop	14 days before harvest

**Other specific restrictions:**

Applications to lettuce must only be made between 1 April and 31 October.

**READ ALL PRECAUTIONS BEFORE USE.**

**PCS No. : 03799**

**PRECAUTIONS**

WEAR SUITABLE PROTECTIVE GLOVES when handling the product or handling contaminated surfaces.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES when applying by hand held equipment.

WHEN USING DO NOT EAT, DRINK OR SMOKE.

WASH HANDS before meals and after work.

IF SWALLOWED, seek medical advice immediately and show this container or label.

VERY TOXIC TO AQUATIC ORGANISMS, may cause long-term adverse effects in the aquatic environment. Do not contaminate surface waters or ditches with chemical or used container.

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 of 5m to surface water bodies.

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

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDINGSTUFFS.

KEEP OUT OF REACH OF CHILDREN

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 safely.

**STORAGE**

Store in a suitable pesticide store. Keep dry and 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.

## Restrictions/Warnings

- Processed Crops – Consult processors before use on crops destined for processing. Tests have indicated that no taints were detected in blackcurrant juice; quick frozen or canned vining peas and canned combining peas.
- Applications to lettuce must only be made between 1 April and 31 October.
- DO NOT APPLY MORE THAN 6 kg Signum to the same area of land per annum.
- For professional use only.

## Disease control

Signum is a fungicide with protectant and systemic activity for the control of a range of diseases in broccoli, Brussels sprout, cabbage, calabrese, cauliflower, strawberry (outdoor and protected), carrot, lettuce (outdoor and protected), field beans, combining peas, vining peas and blackcurrants, as summarised below:

	Black-currant	Brussels sprout	Cabbage	Cauliflower, broccoli, calabrese	Strawberry*** (outdoor and protected)	Carrot	Lettuce (protected and outdoor)	Field beans (winter and spring)	Peas (combining and vining)
American gooseberry mildew <i>Sphaerotheca mors-uvae</i>	MC*								
Blackcurrant leaf spot <i>Drapenopeziza ribis</i>	MC*								
Grey mould <i>Botrytis cinerea</i>	C*				C		C		
Bean rust <i>Uromyces fabae</i>								C	
Chocolate spot <i>Botrytis spp.</i>								MC	

	Black-currant	Brussels sprout	Cabbage	Cauliflower, broccoli, calabrese	Strawberry*** (outdoor and protected)	Carrot	Lettuce (protected and outdoor)	Field beans (winter and spring)	Peas (combining and vining)
White blister <i>Albugo candida</i>		C	C*						
Dark leaf spot <i>Alternaria spp.</i>			C	C					
Ringspot <i>Mycosphaerella brassicola</i>		UC	UC	UC					
Bottom rot <i>Rhizoctonia solani</i>							C**		
Watery soft rot <i>Sclerotinia spp.</i>							C**		
Powdery mildew <i>Erysiphe heraclei</i> <i>Sphaerotheca macularis</i>					C	C			
Alternaria leaf spot <i>Alternaria dauci</i>						MC			
Sclerotinia rot <i>Sclerotinia sclerotiorum</i>						MC			
Blackspot <i>Colletotrichum acutatum</i>					C				
Leaf and pod spot <i>Ascochyta pisi</i>									MC

C = control

MC = Moderate control

UC = Useful level of control

\* = 'Qualified minor use' based on limited data

\*\* = lower and more variable levels of control may be seen on outdoor crops

\*\*\* = reduced levels of control on protected strawberry are likely for the listed diseases

## Resistance Management

GROUP	7	11	FUNGICIDES
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In order to minimise risk of resistance:

Signum contains a QoI fungicide, pyraclostrobin and the SDHI (carboxamide) fungicide, boscalid. Signum should be used in accordance with FRAC resistance management advice for QoI and carboxamide mixtures.

Avoid using consecutive applications of Signum. Apply Signum in alternation with fungicides from a different cross-resistance group with satisfactory efficacy against the targeted diseases.

In line with FRAC guidance, the number of Signum applications should be no more than half of the total number of fungicide applications per season. Use no more than a maximum of three applications of Signum per crop in brassicas; no more than three applications per year in blackcurrants and no more than two applications per crop in other crops.

## Crop Specific Information

### Brassicas (broccoli, Brussels sprout, cabbage, calabrese, cauliflower)

#### Time of Application

Apply Signum as a protectant spray or at the first sign of disease. Repeat sprays at 3 – 4 week intervals depending on disease pressure. Three applications can be made but a minimum of 14 days must elapse between the last spray and harvest.

#### Rate of Application

Apply 1 kg of Signum in a minimum of 200 litres of water per hectare. In dense crops, increase the water volume up to a maximum of 1000 litres of water per hectare to achieve adequate penetration and good coverage of the crop.

## Strawberries

#### Time of Application

For optimum control of grey mould, apply Signum as a protectant spray from the beginning of bloom (white bud).

For the control of powdery mildew and Blackspot, apply Signum as a protectant spray before the appearance of disease symptoms.

Applications should be made in sequence with other products as part of a fungicide spray programme applied during flowering at 7–10 day intervals.

Two applications can be made but a minimum of 3 days must elapse between the last spray and harvest.

### **Rate of Application**

Apply 1.8 kg of Signum in a water volume of 450 – 2000 litres of water per hectare, ensuring good coverage of the foliage and fruitlets.

### **Qualified minor use recommendation**

Signum may be applied at 1.8 kg per hectare in 400 litres water per hectare although efficacy at this reduced volume has not been evaluated. Therefore application at 400 litres water per hectare is at user's risk with regard to biological efficacy.

## **Carrots**

### **Time of Application**

Apply Signum as a protectant spray or at the first sign of disease. Repeat sprays at 7–14 day intervals depending on disease pressure. Two applications can be made but a minimum of 14 days must elapse between the last spray and harvest.

### **Rate of Application: 0.75 –1.0 kg/ha**

For control of powdery mildew and moderate control of alternaria, apply 0.75 kg of Signum in a water volume of 200 – 900 litres of water per hectare, ensuring good coverage of the foliage.

For moderate control of sclerotinia rot, increase dose rate to 1kg/ha of Signum in a water volume of 200 – 900 litres of water per hectare, ensuring good coverage of the foliage.

## **Lettuce**

### **Time of Application**

Apply Signum as a protectant spray from 1–2 weeks after planting. Apply sprays at 10 –14 day intervals depending on disease pressure. Two applications can be made but a minimum of 14 days must elapse between the last spray and harvest.

### **Rate of Application**

Apply 1.5 kg of Signum in a water volume of 200 – 900 litres of water per hectare, ensuring good coverage of the foliage.

## **Field Beans**

### **Time of Application**

Apply Signum as a protectant spray or at the first sign of disease. For optimum control of rust and moderate control of chocolate spot, apply sprays from early flower and repeat

at a 3 – 4 week interval, depending on disease pressure. Two applications can be made but a minimum of 21 days must elapse between the last spray and harvest.

### **Rate of Application**

Apply 1.0 kg of Signum in a minimum volume of 200 – 300 litres of water per hectare, ensuring good coverage of the foliage.

## **Combining peas**

### **Time of Application**

Apply Signum as a protectant spray or at the first sign of disease. For moderate control of leaf and pod spot (*Ascochyta pisi*), apply sprays from early flower and repeat at a 2 – 3 week interval, depending on disease pressure. Two applications can be made but a minimum of 21 days must elapse between the last spray and harvest.

### **Rate of Application**

Apply 1.0 kg of Signum in a minimum volume of 200 – 400 litres of water per hectare, ensuring good coverage of the foliage.

## **Vining peas**

### **Time of Application**

For moderate control of leaf and pod spot (*Ascochyta pisi*), apply Signum as a protectant spray or at the first sign of disease. One application can be made and a minimum of 14 days must elapse between application and harvest. To maintain disease control a subsequent treatment with another product may be required 2 – 3 weeks later depending on disease pressure.

### **Rate of Application**

Apply 1.0 kg of Signum in a minimum volume of 200 – 400 litres of water per hectare, ensuring good coverage of the foliage.

## **Blackcurrants (qualified minor use based on limited efficacy data)**

### **Time of Application**

#### *Pre-harvest treatment*

For control of grey mould (*Botrytis cinerea*), apply Signum as a protectant spray from the start of flowering.

For moderate control of American gooseberry mildew and blackcurrant leaf spot, apply Signum as a protectant spray before the appearance of disease symptoms.

Applications should be made in sequence with other products as part of a disease control programme, in which case the interval between use of Signum and subsequent fungicide treatment should be between 10–14 days, depending on disease pressure.

Two applications of Signum can be made but a minimum of 3 days must elapse between the application of Signum and harvest.

#### *Post-harvest-treatment*

Signum may be used as post-harvest treatment to help protect against American gooseberry mildew and blackcurrant leaf spot infections, thus reducing the possibility of infection-induced premature leaf drop and reduced bush vigour, which may adversely affect crop yield in the subsequent year. Apply Signum as a protectant spray after blackcurrants have been harvested and before leaf senescence.

#### **Rate of Application**

Apply 1.5 kg of Signum in a water volume of 200 – 1000 litres of water per hectare, ensuring good coverage of the foliage and fruit.

### **Mixing and Application**

#### **Mixing**

Apply as a FINE or MEDIUM spray as defined by BCPC.

Half fill the spray tank with clean water and start agitation.

Slowly add in the required amount of product.

Rinse empty containers and add rinsings to the spray tank.

Add the remainder of the water and continue agitation until spraying is complete.

#### **Compatibility**

For details of compatibilities contact your distributor, local BASF representative or the BASF Technical Services Hotline: 0044 845 602 2553. Alternatively, visit our website at [www.agricentre.basf.ie](http://www.agricentre.basf.ie).

### **The following does not form part of the product label under S.I. No. 159 of 2012**

With many products there is a general risk of resistance developing to the active ingredients. For this reason a change in activity cannot be ruled out. It is generally impossible to predict with certainty how resistance may develop because there are so many crop and use connected ways of influencing this. We therefore have to exclude liability for damage or loss attributable to any such resistance that may develop. To help minimise any loss in activity the BASF recommended rate should in all events be adhered to.

Numerous, particularly regional or regionally attributable, factors can influence the activity of the product. Examples include weather and soil conditions, crop plant varieties, crop rotation, treatment times, application amounts, admixture with other products, appearance of organisms resistant to active ingredients and spraying techniques. Under particular conditions a change in activity or damage to plants cannot be ruled out. The manufacturer or supplier is therefore unable to accept any liability in



such circumstances. All goods supplied by us are of high grade and we believe them to be suitable, but as we cannot exercise control over their mixing or use or the weather conditions during and after application, which may affect the performance of the material, 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 for any damage or injury whatsoever arising from their storage, handling, application or use; but nothing should be deemed to exclude or restrict any liability upon us which cannot be excluded or restricted under the provisions of any applicable law.

### **Additional Product Safety Information**

This section does not form part of the product label under S.I. No. 159 of 2012.

The information on this label is based on the best available information including data from test results.

### **Safety Data Sheet**

To access the Safety Data Sheet for this product scan the QR code or use the weblink below:



[agricentre.basf.ie/Signum-IE/MSDS](http://agricentre.basf.ie/Signum-IE/MSDS)

Alternatively, contact your supplier.

**■ - BASF**

We create chemistry

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**Very toxic to aquatic life with long lasting effects.**

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Rinse mouth.

Collect spillage.

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