



# Shirlan®

**MAPP 20198**

**An agricultural fungicide for the control of foliar blight (*Phytophthora infestans*) and protection against tuber blight in potatoes.**

A suspension concentrate containing 500 g/l (38.4% w/w) fluazinam

GROUP

29

FUNGICIDE

**24-hour emergency number:  
0032 14 58 45 45**

**FUNGICIDE**

Content:

**5L**

**F**

Production date / Batch number:  
see packaging

**FOR USE ONLY AS AN  
AGRICULTURAL FUNGICIDE  
FOR PROFESSIONAL USE ONLY  
PROTECT FROM FROST**

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



Approval holder:

**ISK**

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**SHIRLAN®** - A suspension concentrate containing 500 g/litre (38.4% w/w) fluazinam

- H317** May cause an allergic skin reaction  
**H361d** Suspected of damaging the unborn child  
**H410** Very toxic to aquatic life with long lasting effects

**WARNING**

- P102** Keep out of reach of children  
**P202** Do not handle until all safety precautions have been read and understood  
**P261** Avoid breathing dust/fume/gas/mist/vapours/spray  
**P280** Wear protective gloves/protective clothing.  
**P308+P313** IF exposed or concerned: Get medical advice/attention  
**P302+P352** IF ON SKIN: Wash with plenty of soap and water

- P332+P313** If skin irritation occurs: Get medical advice/attention  
**P391** Collect spillage  
**P501** 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

**EUH066** Repeated exposure may cause skin dryness or cracking

**EUH401** To avoid risks to human health and the environment comply with the instructions for use


**IMPORTANT INFORMATION - FOR USE ONLY AS AN AGRICULTURAL FUNGICIDE**

Crop/Situation	Max. individual dose: (ml product/ha)	Max. total dose per crop: (l product/ha)	Max. number of treatments:	Latest time of application:	Aquatic buffer zone distance (metres)
Potato	400	3	-	-	7

**Other specific restrictions:**

When used on potatoes with a greater than 5 metre aquatic buffer zone, this product must not be applied with hand-held equipment.

**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.**

## 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 or handling contaminated surfaces.
- WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) during application.

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

- TAKE off immediately all contaminated clothing.
- Wash concentrate from skin and eyes immediately.
- Wash all protective clothing thoroughly after use, especially the insides of gloves
- WASH HANDS and exposed skin before meals and after work.
- IF you FEEL UNWELL seek medical advice (show label where possible).

### Environmental Protection

- 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 7 metres of the top of the bank of a static or flowing water-body, unless a Local Environmental Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1 metre of the top of a ditch which is dry at the time of application.
- Do not allow direct spray from hand-held sprayers to fall within 1 metre of the top of the bank of a static or flowing water-body. Aim spray away from water.
- This product is not eligible for buffer zone reduction under the LERAP horizontal boom sprayers scheme.
- This product qualifies for inclusion within the Local Environmental 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 published guidance or the statutory buffer zone must be maintained.
- Note: all buffer zones more than 5 metres are not

reducible. The results of the LERAP must be recorded and kept available for 3 years.

- 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.

### Storage and Disposal

- KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.
- DO NOT RE-USE CONTAINER FOR ANY PURPOSE.
- 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.

### 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

#### ADDITIONAL ADVICE FOR OPERATORS

- SHIRLAN® may cause transient skin reaction in a small number of sensitive individuals.
- Do not come in contact with spray drift. Ensure spraying is carried out under good conditions and that the sprayer is adjusted to minimise drift.
- Do not allow contact of contaminated clothing with unprotected skin.
- Do not allow contact between contaminated sprayer parts and unprotected skin. Ensure sprayer is washed down daily.
- Wash all protective clothing (coveralls) regularly, preferably daily, when working with SHIRLAN®.
- When entering crops do not allow contact of unprotected skin with treated foliage.
- People who have been sensitised by SHIRLAN® should not use or have further contact with the product.

### DISEASE CONTROL

SHIRLAN® is an agricultural fungicide for the control of foliar blight (*Phytophthora infestans*) and protection against tuber blight in potatoes.

## BACKGROUND TO POTATO BLIGHT CONTROL

Late blight (*Phytophthora infestans*) is potentially a devastating disease of potatoes. In commercial production, a season long **disease prevention** policy is essential. First of all ensure that other control methods are being satisfactorily applied:

1. Prevent re-growth on potato dumps.
2. Destroy all groundkeepers.
3. Plant disease free seed.
4. Use generous soil ridges to protect tubers.

Integrate this approach with a fungicide programme:

### Early crops

In first and second early potato crops, particularly those grown in the same locality as main crop potatoes, an adequate and full blight protection programme should be applied right up to harvesting or haulm dessication. This will protect the early crop while helping to reduce disease risk to later crops.

### Maincrops

Disease prevention programmes require regular and season long fungicide use to limit foliar blight development. However, as an effective fungicide programme will preserve leaf area there may be more risk of infecting tubers at harvest, particularly during "heavy" blight years. Completion of the control programme should therefore include a complete haulm desiccant. Lifting of the crop should not take place for at least 10 days after **COMPLETE KILL** of the haulm. Crops intended for storage should not be lifted where there is any green tissue **AT ALL** on the leaves or the stem bases.

### Blight risk assessment

The risk of disease is affected by **weather conditions** (during the crop life) and **crop location**:

**Weather conditions** - Spread of disease occurs under warm, humid conditions. Preferably use a reliable decision support system to determine what frequency of fungicide is appropriate and fungicide type required. Note: Blight forecasting has often been based on the occurrence of "Smith periods". A "Smith period" is a 48 hour period in which the minimum temperature is 10°C or more and the relative humidity exceeds 90% for at least 11 hours during the first 24 hours and for at

least 11 hours again during the final 24 hours. However, any period of warm, humid weather increases blight risk.

**Crop location** - Locations with the highest probability of blight problems are:

1. Areas of the country where extensive main crop or early production takes place e.g. East Anglia, the South West or the West.
2. Areas where climatic conditions that encourage disease development occur on a frequent basis e.g. the South West, the West and the Fens.

## RESISTANCE MANAGEMENT

Disease control may be reduced if strains of pathogen less sensitive to SHIRLAN® develop.

## CROP SPECIFIC INFORMATION

### Timing

#### 1. Initial application

SHIRLAN® is a protectant fungicide and therefore the spray programme must start **BEFORE** blight enters the crop.

Irrespective of crop growth stage, commence spraying at the first blight warning or when local weather conditions are favourable for the disease, **whichever is the sooner**. Otherwise, in the absence of weather conducive to disease development, the first application should be made just before foliage of adjacent plants IN THE ROWS begins to meet.

#### 2. Repeat applications

Intervals between applications of SHIRLAN® **MUST** be reduced as blight risk increases, so that protection of the crop can be maintained, as follows:

**"Low risk" situations** - applications should be made as a precautionary measure, before conditions conducive to blight development have occurred - **APPLY AT 14 DAY INTERVALS**.

**"High risk" situations** - following two warm, humid days or in irrigated crops - **APPLY AT 7-10 DAY INTERVALS**.

**"Severe risk" situations** - during continued warm, humid weather and when blight is in nearby crops, potato dumps or volunteer plants - **APPLY 400 ML AT 5-7 DAY INTERVALS OR 400 ML AT 7 DAY INTERVALS**

AS APPROPRIATE, ACCORDING TO BLIGHT WARNINGS AND DISEASE PREDICTION SYSTEMS.

N.B. Potato blight fungicides may not give complete protection when the disease risk is severe. However, disease development will be delayed dramatically with a well timed spray programme.

Do not apply more than a total maximum dose of 3 litres product/ha per crop.

### 3. For protection against Tuber Blight

To reduce the risk of problems with tuber blight at harvest SHIRLAN® should be used regularly at the recommended intervals from full canopy development to complete haulm desiccation.

#### Rates of Use

Apply 400 ml/ha of SHIRLAN® at each treatment.

#### Crops grown for processing

Consult processor before use.

#### MIXING AND SPRAYING

Apply SHIRLAN® in 200 to 500 litres of water per hectare. Use adequate water to ensure complete coverage of the foliage and stems, increasing the volume as haulm growth progresses, particularly in dense crops and under high or severe blight risk conditions.

#### Application details

- 1. Application equipment:** Apply SHIRLAN® through tractor drawn or mounted, conventional hydraulic crop spraying equipment.
- 2. Sprayer preparation:** Ensure that the sprayer is clean and calibrated correctly, to give even application. Apply at the recommended water volumes using a MEDIUM quality spray (as defined by British Crop Protection Council guidelines).
- 3. Spray pressure:** At least 2 bar.
- 4. Mixing:** Before mixing SHIRLAN®, first part fill the spray tank with clean water and commence agitation. Then, shake the SHIRLAN® container and add the required amount of product to the sprayer using a filling device (e.g. induction bowl, probe etc.), or otherwise by direct addition to the spray tank.

Wash out empty container thoroughly and add washings to the sprayer. Preferably use an integrated

pressure rinsing device, otherwise manually rinse the container three times. DO NOT RE-USE CONTAINER FOR ANY PURPOSE.

Agitate spray tank contents thoroughly whilst filling and throughout the spraying operation.

Do not leave the spray liquid in the sprayer for long periods (such as during meal-breaks or overnight.)

#### CONDITIONS OF SUPPLY

All goods supplied by us are of high grade and we believe them to be suitable, but as we cannot exercise control over their storage, handling, mixing or use, or the weather conditions before, during and after application which may affect the performance of the goods, all conditions and warranties, statutory or otherwise, as to the quality of 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.

**This product is to be used only in accordance with the recommendations and instructions given on the label provided with this pack. Use in any other circumstances is entirely at the user's risk.**

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



WEBLINK to specific data sheet on manufacturer's website:

[www.certisbelchim.co.uk/pdf/MSDS/Shirlan\\_MSDS.pdf](http://www.certisbelchim.co.uk/pdf/MSDS/Shirlan_MSDS.pdf)

Alternatively, contact your supplier.