



**BELCHIM**  
C R O P P R O T E C T I O N

## SHIRLAN®

Version and date: Version 1 Spring 2018

Changes since last version: N/A

**FORMULATION AND ACTIVE INGREDIENT:** A fungicide for the control of foliar blight and tuber blight (*Phytophthora infestans*) in potatoes. A suspension concentrate containing 500 g/L (38.4% w/w) fluazinam.

PACK SIZE: 5 L e

PCS No: 04393






PROTECT FROM FROST  
SHAKE WELL BEFORE USE

IMPORTANT INFORMATION FOR USE ONLY AS AN AGRICULTURAL FUNGICIDE				
Crop/situation	Max individual dose (L product/ha)	Max total dose per crop (L product/ha)	Maximum number of applications	Latest time of application
Potatoes	0.4	4	10	7 days before harvest

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE PRINCIPLES OF GOOD PLANT PROTECTION PRACTICE FOR USING PLANT PROTECTION PRODUCTS.

## RISK AND SAFETY INFORMATION

<b>WARNING</b>	<b>SHIRLAN</b>	A suspension concentrate containing 500 g/litre (38.4% w/w) fluazinam
		<b>May cause an allergic skin reaction</b> <b>Suspected of damaging the unborn child</b> <b>Very toxic to aquatic life with long lasting effects</b>
		If medical advice is needed, have the product container or label to hand. Avoid breathing mistvapours/spray Wash hands thoroughly after handling. Keep out of reach of children Wear protective gloves/protective clothing IF exposed or concerned: Get medical advice/attention IF ON SKIN: Wash with plenty of soap and water If skin irritation or rash occurs: Get medical advice/attention Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean triple rinsed containers which can be disposed of as non-hazardous waste.
		<b>To protect aquatic organisms respect an unsprayed buffer zone of 5m to surface water bodies</b> <b>To avoid risks to human health and the environment, comply with the instructions for use</b>

## SAFETY PRECAUTIONS

### Operator Protection

- Keep unprotected persons out of treated areas for at least 7 days.
- 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.
- WASH ALL PROTECTIVE CLOTHING thoroughly after use, especially the insides of gloves.
- WASH HANDS AND EXPOSED SKIN before meals and after work
- TAKE OFF IMMEDIATELY all contaminated clothing.
- WASH CONCENTRATE from skin and eyes immediately.
- Avoid all skin contact with product, spray mist and treated crops;
- Anyone developing skin reactions suggestive of skin sensitisation, such as severe itching, redness or swelling is advised to stop using SHIRLAN immediately and seek medical advice.
- 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.
- IF YOU FEEL UNWELL, seek medical advice (show label where possible).

### **Environmental Protection**

- Ensure spraying is carried out under good conditions and that the sprayer is adjusted to minimise drift;
- 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.

### **Storage and disposal**

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

## **PROPERTIES OF SHIRLAN**

### **BACKGROUND TO POTATO BLIGHT CONTROL**

Late blight (*Phytophthora infestans*) is a potentially devastating disease of potatoes. In commercial production, a season long disease prevention policy is essential. Use cultural control as far as possible, such as:

1. Prevent re-growth on potato dumps.
2. 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 desiccation. 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 while there is any green tissue AT ALL on the leaves or 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. Irrigation in warm weather provides ideal conditions for disease spread.

**NB:** 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.
2. Areas where climatic conditions that encourage disease development occur on a frequent basis.

## **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.

### **Application details**

1. Application equipment: Apply SHIRLAN through tractor 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.
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 tank, before continuing the filling of the spray tank. Agitate thoroughly whilst filling the spray tank and throughout the spraying operation.

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

### **Spray Timing and Intervals**

#### **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. Ensure no areas of the field are left untreated.

#### **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 10 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 AT 7 DAY INTERVALS.

**NB** 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.

Up to ten applications of SHIRLAN may be made to a crop.

### **Application Rate and Water Volume**

Apply 400 mL/ha of SHIRLAN at each treatment. 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.

### **Harvest Interval**

Allow at least 7 days to elapse between the last application of SHIRLAN and harvest of the crop.

### **Crops grown for processing**

Consult processor before use.

**Disease Resistance**

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

**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.**

<b>TECHNICAL ENQUIRIES:</b>	<b>+44 1480 403333</b>
-----------------------------	------------------------

**Marketing company: BELCHIM Crop Protection Limited  
1b Fenice Court, Phoenix Park, Eaton Socon, St. Neots, Cambridgeshire PE19 8EW**

<b>Tel : +44 1480 403333</b>	<b>Fax : +44 1480 403444</b>
<a href="http://www.belchim.co.uk">www.belchim.co.uk</a>	<a href="mailto:Info-uk@belchim.com">Info-uk@belchim.com</a>
<b>Weblink:</b> <a href="http://www.belchim.co.uk/pdf/MSDS/Shirlan_MSDS.pdf">www.belchim.co.uk/pdf/MSDS/Shirlan_MSDS.pdf</a>	

@Shirlan is a registered trademark of Ishihara Sangyo Kaisha Ltd, Japan

Authorisation holder:  
ISK BIOSCIENCES Europe N.V.  
Pegasus Park  
De Kleetlaan 12B  
B-1831 Diegem  
Belgium

Distributed by:  
Whelehan Crop Protection  
Suite 12, Bunkilla Plaza  
Bracetown Business Park,  
Clonee  
Co Meath  
Ireland

Tech enquiries: 01 4688900