

# REFLECT<sup>®</sup>

MAPP 18573 PCS 05462

A fungicide for the control of powdery mildew (*Erysiphe heraclei*) and moderate control of *Alternaria* Leaf Blight (*Alternaria dauci*) in carrots; powdery mildew (*Leveillula taurica*, *Oidium lycopersici*) in protected tomato, aubergine; powdery mildew (*Erysiphe cichoracearum*, *Sphaerotheca fuliginea*) in protected cucumber, courgette, summer squash and melon.

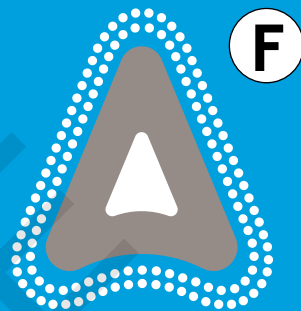
An emulsifiable concentrate containing 125 g/l (13.1% w/w) isopyrazam.  
Also contains 2-ethylhexan-1-ol.

FOR PROFESSIONAL USE ONLY

UFI: 5M6M-EDVU-1V06-2YW6



Scan for Safety Data Sheet or use weblink:  
<https://bit.ly/2NBqJSc>



F

ADAMA

FR R3.0.4 NOV20



10Le

## Warning

**Harmful if swallowed.**

**Causes serious eye irritation.**

**Harmful if inhaled.**

**Suspected of causing cancer.**

**Suspected of damaging fertility or the unborn child.**

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

**Contains isopyrazam. May produce allergic reaction.**

Do not handle until all safety precautions have been read and understood.

Avoid breathing vapours/spray.

Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

Wear protective gloves/eye protection/face protection.

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

IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

If exposed or concerned: Get medical advice/attention.

Call a POISON CENTRE or doctor/physician if you feel unwell.

Rinse mouth.

If eye irritation persists get medical advice/attention.

Collect spillage.

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

Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site except for triple rinsed empty, clean containers which can be disposed for as non-hazardous waste.

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

MAPP 18573 PCS 05462

L20385IPFR\_05

# REFLECT®

MAPP 18573 PCS 05462

SHAKE WELL BEFORE USE

PROTECT FROM FROST

DIRECTIONS FOR USE:

full instructions in this leaflet.

Batch No.: see packaging

## Authorisation holder & marketing company:

Adama Agricultural Solutions UK Ltd

Third Floor East, 1410 Arlington Business Park, Theale, Reading RG7 4SA

Telephone: +44 (0)1635 860555 | Technical Helpline: +44 (0)1635 876622

www.adama.com | ukenquiries@adama.com

For advice on medical emergencies, fires or major spills telephone  
the UK National Chemical Emergency Centre on +44 (0)1865 407333

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

OPEN HERE ►

## SAFETY PRECAUTIONS

### Operator protection

UK only: Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:

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

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

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

WHEN USING DO NOT EAT, DRINK OR SMOKE.

WASH SPLASHES from skin immediately.

WASH HANDS AND EXPOSED SKIN before meals and after work.

### Environmental protection

UK only: To protect aquatic organisms, respect an unsprayed buffer zone distance to surface water bodies in line with LERAP requirements.

UK only: DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 5 m of the top of the bank of a static or flowing waterbody, unless a Local Environmental Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1 m 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 m of the top of the bank of a static or flowing waterbody. Aim spray away from water.

UK only: 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 HSE'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.

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 AWAY FROM FOOD, DRINK AND ANIMAL FEEDINGSTUFFS.

KEEP OUT OF REACH OF CHILDREN.

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.

EMPTY CONTAINER COMPLETELY

and dispose of safely.

DO NOT RE-USE CONTAINER for any purpose.

## IMPORTANT INFORMATION

FOR PROFESSIONAL USE ONLY AS AN AGRICULTURAL FUNGICIDE

**Crops:** Carrot, aubergine (protected), courgette (protected), summer squash (protected), cucumber (protected), tomato (protected) and melon (protected).

**Maximum individual dose**

**Maximum number of applications**

**Latest time of application**

**Other specific restrictions**

Full details are given in the information box within this leaflet

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.

BK.R3.0.4.NOV20

L20385IPBB\_05



## This leaflet is part of the approved label.

For advice on medical emergencies, fires or major spills telephone  
the National Chemical Emergency Centre on 01865 407333

**A fungicide for the control of powdery mildew (*Erysiphe heraclei*)  
and moderate control of *Alternaria* Leaf Blight (*Alternaria dauci*) in carrots;  
powdery mildew (*Leveillula taurica*, *Oidium lycopersici*) in protected tomato, aubergine;  
powdery mildew (*Erysiphe cichoracearum*, *Sphaerotheca fuliginea*)  
in protected cucumber, courgette, summer squash and melon.**

An emulsifiable concentrate containing 125 g/l (13.1% w/w) isopyrazam. Also contains 2-ethylhexan-1-ol.

### Warning

**Harmful if swallowed.**

**Causes serious eye irritation.**

**Harmful if inhaled.**

**Suspected of causing cancer.**

**Suspected of damaging  
fertility or the unborn child.**

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

**Contains isopyrazam. May  
produce allergic reaction.**

Do not handle until all safety  
precautions have been read  
and understood.

Avoid breathing vapours/spray.  
Wash hands thoroughly after  
handling.

Do not eat, drink or smoke  
when using this product.

Wear protective gloves/eye  
protection/face protection.

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

IF INHALED: Remove person  
to fresh air and keep at rest  
in a position comfortable for  
breathing.

IF IN EYES: Rinse cautiously  
with water for several minutes.  
Remove contact lenses if present  
and easy to do – continue rinsing.  
If exposed or concerned: Get  
medical advice/attention.  
Call a POISON CENTRE or doctor  
/physician if you feel unwell.  
Rinse mouth.  
If eye irritation persists get  
medical advice/attention.  
Collect spillage.

To protect aquatic organisms  
respect an unsprayed buffer zone  
of 5 m to surface water bodies.  
Dispose of contents/container  
to a licensed hazardous waste  
disposal contractor or collection  
site except for triple rinsed  
empty, clean containers which  
can be disposed for as non-  
hazardous waste.

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

**MAPP 18573 PCS 05462**



# IMPORTANT INFORMATION

FOR PROFESSIONAL USE ONLY AS AN AGRICULTURAL FUNGICIDE

Crop	Maximum individual dose	Maximum number of applications	Latest time of application
Carrot	1 litre product/ha	2 per crop (See 'Other Specific Restriction' 1)	14 days before harvest
Aubergine (protected), Courgette (protected), Summer squash (protected), Cucumber (protected), Tomato (protected)	0.1 litres product per 100 litres	2 per crop (See 'Other Specific Restriction' 2)	1 day before harvest
Melon (protected)	0.1 litres product per 100 litres	2 per crop (See 'Other Specific Restriction' 2)	7 days before harvest

## Other specific restrictions:

1. A minimum interval of 14 days must be observed between applications to carrots.
2. A minimum interval of 7 days must be observed between applications to protected crops.

**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

UK only: Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:

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

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

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

WHEN USING DO NOT EAT, DRINK OR SMOKE.

WASH SPLASHES from skin immediately.

WASH HANDS AND EXPOSED SKIN before meals and after work.

### Environmental protection

UK only: To protect aquatic organisms, respect an unsprayed buffer zone distance to surface water bodies in line with LERAP requirements.

UK only: DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 5 m of the top of the bank of a static or flowing waterbody, unless a Local Environmental Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1 m 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 m of the top of the bank of a static or flowing waterbody. Aim spray away from water.

UK only: 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 HSE'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.

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 AWAY FROM FOOD, DRINK AND ANIMAL FEEDINGSTUFFS.

KEEP OUT OF REACH OF CHILDREN.

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.

EMPTY CONTAINER COMPLETELY and dispose of safely.

DO NOT RE-USE CONTAINER for any purpose.

## **DIRECTIONS FOR USE**

**IMPORTANT:** This information is approved as part of the Product Label. All instructions within this section must be carefully read in order to obtain safe and successful use of this product.

### **GENERAL INFORMATION**

Isopyrazam is an orthosubstituted pyrazole carboxamide fungicide belonging to the sub-class of the benzonorbornenes. REFLECT® is predominantly protectant but has significant biochemical potency and can deliver disease control away from the point of application.

Isopyrazam is an SDH inhibitor (FRAC group #7 carboxamides). No cross resistance to any compound of a different fungicide class is expected.

REFLECT can be used on all varieties of carrots, aubergines, courgettes, summer squash, cucumber, tomato and melon.

REFLECT shows good crop safety and disease control which results in significant yield benefits.

REFLECT is best used as a protectant treatment or in the earliest stages of disease development.

### **RESTRICTIONS**

Do not use on crops intended for seed production

### **RESISTANCE**

Use REFLECT as part of an Integrated Crop Management (ICM) strategy incorporating other methods of control including, where appropriate, other fungicides with a different mode of action. Follow the FRAC guidelines for application of SDH inhibitors in vegetables. The current guidelines are as follows:

- When mixtures are used for SDHI fungicide resistance management, applied as tank-mix or as a co-formulated mixture, the mixture partner:
  - Should provide satisfactory disease control when used alone on the target disease.
  - Must have a different mode of action.

The following spray table should be used as a guideline irrespective of the targeted disease in the crops specified above.

Total number of spray applications per crop	1	2	3	4	5	6	7	8	9	10	11	12	>12
Maximum recommended solo SDHI fungicides sprays (apply in strict alternation)	1	1	1	1	2	2	2	3	3	3	3	4	*
Maximum recommended SDHI fungicides sprays in mixture (apply a maximum of 2 consecutive applications)	1	1	1	2	2	3	3	3	3	3	4	4	*

\* When more than 12 fungicide applications are made, observe the following guidelines:

- When using a SDHI fungicide as a solo product, the number of applications should be no more than ½ (33%) of the total number of fungicide applications per season
- For programs in which tank-mixes or pre-mixes of SDHI are utilised, the number of SDHI containing applications should be no more than ½ (50%) of the total number of fungicide applications per season.
- In programs where SDHIs are made with both solo products and mixtures, the number of SDHI containing applications should be no more than ½ (50%) of the total number of fungicides applied per season.

Disease control may be reduced if strains of pathogens less sensitive to REFLECT develop.

## DISEASES CONTROLLED

### Carrots

Powdery mildew (*Erysiphe heraclei*)

*Alternaria* leaf blight (*Alternaria dauci*): MODERATE CONTROL

### Protected tomato, aubergine

Powdery mildew (*Leveillula taurica*, *Oidium lycopersici*)

### Protected cucumber, courgette, summer squash and melon (including water melon)

Powdery mildew (*Erysiphe cichoracearum*, *Sphaerotheca fuliginea*)

## CROP SPECIFIC INFORMATION

### Crops and growing conditions

Apply REFLECT under good growing conditions with adequate soil moisture. Avoid poor growing conditions which may give less reliable results.

Always inspect crops to assess disease development immediately before spraying. Best results will be achieved from applications made as a protectant treatment or in the earliest stages of disease development following a disease risk assessment or the use of appropriate decision support systems.

### CARROTS

#### Rate of use

Apply REFLECT at 1.0 litres product per hectare.

#### Timing

For optimum results apply REFLECT at the first signs of disease, from 4th true leaf unfolded onwards (BBCH 14). A further application may be required if disease pressure remains high. Allow a minimum of 14 days between applications.

### Processing

Where a crop is destined for processing, consult your processor before treating with REFLECT.

## PROTECTED CROPS

### Rate of use

Apply REFLECT at 0.1 litres product per 100 litres.

### Timing

For optimum results apply REFLECT at the first signs of disease, from BBCH 51 (first flower). A further application may be required if disease pressure remains high. Allow a minimum of 7 days between applications.

### Processing

Where a crop is destined for processing, consult your processor before treating with REFLECT.

## FOLLOWING CROPS

There are no restrictions on succeeding crops in a normal rotation.

## MIXING AND SPRAYING

### Mixing procedure

Make sure the sprayer is set to give an even application at the correct volume. Fill the spray tank with half the required volume of water and begin agitation. Add the required amount of REFLECT to the spray tank. Add the rest of the water and continue to agitate the mixture thoroughly. Always agitate during spraying.

### Spray volume

#### Carrots

Apply REFLECT in a recommended 200-600 litres of water per hectare through conventional crop spraying equipment.

#### Protected crops

Apply REFLECT in a recommended 300-1000 litres of water per hectare through hand-held crop spraying equipment or hydraulic nozzle applicator e.g. motorised sprayer with hand lance or boom lance.

## Rainfastness

REFLECT is rainfast in 2 hours.

## After spraying

Thoroughly wash out sprayer according to manufacturer's guidelines and dispose of washing and clean containers according to DEFRA Code of Practice and local water authority guidelines.

Crops should not be re-entered until spray residues are dry.

## DISCLAIMER/CONDITIONS OF SUPPLY

The specified properties of our products and the mode of application stated on this label have been established on the basis of research and experience. Products conform to specification at the time of delivery but, as we exercise no control over their subsequent storage, handling, mixing or use or the weather conditions before, during and after application, all of which may affect the performance of the products, no responsibility or liability will be accepted by us or our re-sellers for any failure in performance, damage or injury to person or property whatsoever arising from the storage, handling, application or use of the products. These conditions cannot be varied by our staff or agents whether or not they supervise or assist in or make recommendations concerning the use of such products. We recommend you contact your dealer to request advice on the suitability of this product for any new and/or unusual growing methods or for new varieties not listed on this label.

## Authorisation holder & marketing company

Adama Agricultural Solutions UK Ltd  
Third Floor East, 1410 Arlington Business Park  
Theale, Reading RG7 4SA  
Telephone: +44 (0)1635 860555  
Technical Helpline: +44 (0)1635 876622  
www.adama.com  
Email: ukenquiries@adama.com

REFLECT® is a registered trademark of a company of the Adama Group.  
© Adama Agricultural Solutions UK Ltd