IMPORTANT INFORMATION

FOR USE ONLY AS A PLANT GROWTH REGULATOR IN FOOD STORAGE PRACTICE

Crop: Ware potatoes
Maximum total dose: 100 ml of product (50 g CIPC) per tonne of potatoes
Maximum individual dose: 36 ml product (18 g CIPC) per tonne of potatoes
Latest time of application: 14 days before removal from store for sale or processing

Other specific restrictions:
1. Whilst this product must be used within the rates specified above, note that if the total dose of chlorpropham applied from any combination of products containing chlorpropham is greater than 30g chlorpropham per tonne potatoes then the treated potatoes must only be used for commercial processing.
2. In any case the total dose of chlorpropham applied from any combination of products containing chlorpropham must not be greater than 50g chlorpropham per tonne potatoes to any stored potato crop.
3. The use of this product on ware potatoes is subject to discharges of chlorpropham into receiving waters from plants washing treated potatoes being within emission limits set by the UK monitoring authority.
4. The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.

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, APRON), SUITABLE PROTECTIVE GLOVES, RUBBER BOOTS, FACE PROTECTION (GOGGLES) AND SUITABLE RESPIRATORY PROTECTIVE EQUIPMENT** when handling the concentrate.
WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS, HOOD), SUITABLE PROTECTIVE GLOVES, RUBBER BOOTS, EYE PROTECTION (GOGGLES) AND SUITABLE RESPIRATORY PROTECTIVE EQUIPMENT*** when re-entering treated areas.

Consumer Protection
* DO NOT ENTER treated areas for at least 24 hours after treatment (unless appropriate personal protective equipment is worn – see above).

Environmental Protection
* DO NOT CONTAMINATE WATER WITH THE PRODUCT OR ITS CONTAINER. Do not clean application equipment near surface water. Avoid contamination via drains from yards and roads. The use of this product on ware potatoes is subject to discharges of chlorpropham into receiving waters from plant washing treated potatoes being within emission limits set by the UK monitoring authority.

Storage and disposal
KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS. KEEP OUT OF REACH OF CHILDREN. KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.
WASH OUT CONTAINER THOROUGHLY and dispose of safely. DO NOT RE-USE CONTAINER for any purpose.

PROTECT FROM FROST

BATCH NO.: 20 Litres

PROLONG/GB/20L/F/0915/UPL

UPL Europe Ltd
The Centre, Birchwood Park, Warrington, WA3 6YN
Telephone: 01925 819999 Fax: 01925 817425
For 24 hour emergency information contact: CARECHEM24 : +44 (0) 1235 239670

A3 3 PRO-LONG UK 2407/15 MDA 1783-15

PRO-LONG
A liquid sprout inhibitor for use on stored ware potatoes
Contains 500 g/l (52.0 % w/w) of chlorpropham (CIPC) in methanol.
The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.

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

Highly flammable liquid and vapour.
Toxic if inhaled.
Suspected of causing cancer.
Causes damage to organs.
May cause damage to organs through repeated or prolonged exposure.
Toxic to aquatic life with long lasting effects.
Obtain special instructions before use.
Keep away from heat/sparks/open flames/hot surfaces — No smoking.
Do not breathe dust/fume/gas/mist/vapours/spray.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
IF exposed: Call a POISON CENTER or doctor/physician.
Collect spillage. Hazardous to the aquatic environment.
Store in a well ventilated place. Keep cool.
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.

DANGER

Contains 500 g/l (52.0 % w/w) of chlorpropham (CIPC) in methanol.

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A3 3 PRO-LONG UK 2407/15 MDA 1783-15
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

PRO-LONG must not be used on potatoes required for seed. The maximum permitted residue level (MRL) for chlorpropham in potato tubers is 10ppm. Efficacy of the new application regimes/reduced doses has not been established. The product may not necessarily provide the expected duration of sprouting protection currently implied by this label.

CROP CONDITION

a) Potatoes intended for treatment with PRO-LONG must be:
   i) Clean, dry and free from soil/debris, as excess soil will cause uneven treatment.
   ii) Free from significant disease problems.

b) Do not apply PRO-LONG until the potatoes to be treated have cured.

c) After loading the store, ventilate the potatoes to avoid surface moisture occurring. After curing, the store should be maintained at normal storage temperature.
   Potatoes should be stored at temperatures related to the end use, either fresh or processing. The processor/pre packer can give instructions on what temperature will be required.

d) Potatoes should be inspected daily to check curing and for the onset of sprouting.

e) PRO-LONG may be less effective if potatoes are stored above 10°C. If stored at around this temperature check regularly for sprouting.

TIMING

PRO-LONG should only be applied when the potatoes are dry and are correctly cured, this is generally 10 to 14 days after loading. The first treatment should be made directly after curing and before any sprouting is visible. The first application is critical. Repeat applications may be necessary and regular inspection for the onset of sprouting should be made to ensure timely application.
Do not sell treated potatoes for consumption or processing for at least 14 days after the final application.

CIRCULATION AND VENTILATION

It is important to get air re-circulation through the crop for evenness of CIPC deposition and improved efficacy.

The fog must have cleared and the CIPC has fully settled before the store is ventilated with outside air.

Please refer to the “Be CIPC compliant” website, www.cipccompliant.co.uk for details of positive ventilation and the Company Advisory section of this label.

For advice on post-treatment store ventilation to help keep sugar levels down, refer to the ‘Company Advisory Information’ section of this label.

STORAGE TEMPERATURE

Pull down temperatures as quickly as permitted by the end user and hold at the lowest acceptable temperature.

RATE OF APPLICATION

Application rates between 16ml product (8g CIPC) and 36ml product (18g CIPC) per tonne of potatoes are recommended. Refer to the Other Specific Restrictions in the Important Information.

Longer Term Storage

For potatoes stored in bulk or in boxes where storage beyond February is envisaged, PRO-LONG should be applied at the rate of 16 ml (8 g CIPC) to 36 ml (18 g CIPC) per tonne of potatoes. Repeat applications may be necessary, and regular inspection of the potato eyes should be made to determine the best timing and programme. An example of a long term storage programme is as follows:
Three treatments of 28 ml (14 g CIPC) or one treatment of 36 ml (18 g CIPC) plus up to four treatments of 16 ml (8 g CIPC) per tonne can be applied.
Shorter Term Storage
For potatoes stored in bulk or boxes destined for short term storage PRO-LONG may be applied at a minimum application rate of 16ml (8g CIPC) up to 24ml (12g CIPC). An example of a short term storage programme is as follows:-
An initial lower rate of 24 ml product (12g CIPC) per tonne followed by up to two subsequent applications at 16ml (8g CIPC) per tonne of potatoes.

Frequency of application
The frequency of application will be dependent upon the need to prevent the onset of sprouting and the avoidance of poorer fry colour resultant from build up of ethylene and CO2 gases released on fogging. Constant monitoring of sprouting is therefore critical. Only one application of CIPC per season is permitted in cold stores (holding temperature at or below 5°C).

METHOD OF APPLICATION

Thermal Foggers
PRO-LONG may be applied through a range of thermal fogging equipment. The manufacturer’s instructions must be followed when setting these machines.

Only treat potatoes stored in purpose designed or dedicated potato stores. The efficacy of PRO-LONG will decline in buildings without proper insulation and temperature controls.
Fogging must be carried out with the fogging machine outside the potato store and the fog being fed into the store via a treatment port or other secure means. Only treat potatoes in stores with forced draught ventilation.
Unprotected persons should be kept out of treated areas for a minimum of 24 hours.

WARNINGS
1. PRO-LONG must only be used on potatoes which are free from significant disease problems.
2. Traces of PRO-LONG can adversely affect the germination of seeds such as seed potatoes, bulbs and other crop seeds. Seed crops must not come into contact with PRO-LONG and should not be stored in boxes or buildings in which potatoes have been or are being treated with PRO-LONG.
3. No crops other than ware potatoes should be stored in stores previously treated with chlorpropham as there is a high risk of cross contamination which may result in illegal CIPC residues and render the crop unmarketable.
4. This product must be stored at a temperature of not less than 0°C (32°F). Store in a dry cool locked pesticide store away from seeds and fertilisers.
5. PRO-LONG has a flash point of 13°C (55°F) and care must be taken during application.
6. The engine of the fogging generator produces considerable heat during operation; care should be taken to avoid contact with flammable materials such as straw.
7. When ventilating with outside air always pass the air through an air-mix system, especially during frosty or windy weather.
8. At all times only handle this container with the assistance of mechanical means.
9. Consult processors before use on potatoes destined for processing.
10. Potatoes for processing - Darker fry colour has been linked to increased frequency of ‘hot fog’ application. Stored crops destined for crisp or chip production should be treated with the minimum number of applications, where a light fry colour is required.
11. DO NOT STORE SEED POTATOES, OTHER SEED CROPS, OTHER VEGETABLE CROPS OR CEREAL GRAIN IN STORES THAT HAVE BEEN PREVIOUSLY TREATED WITH CIPC.

Further advice is available in The Potato Council’s latest Growers Advice Sheet for the use of CIPC.

COMPANY ADVISORY INFORMATION
This section is not part of the statutory recommendations under the Plant Protection Products Regulations 2005 (amended). It provides additional advice on product use at the discretion of the approval holder. However it contains advice that is strongly recommended to be CIPC compliant. Visit www.cipccompliant.co.uk
**Bulk stores**
Potatoes can only be treated successfully in stores with proper under-floor or ducted forced air circulation. It is important to get slow speed air recirculation through the crop for evenness of CIPC deposition and improved efficacy. Slow speed air recirculation must run continuously during and after the fogging treatment until the fog has cleared. If necessary, fit frequency drives to reduce fan speed in order to achieve this and reduce buildup of crystals on fans and fan guards.

**Box stores**
Preferably, fogging should only be done while employing positive ventilation which ensures an active movement of the fog between the tubers inside the boxes. Run fans during and after the fogging treatment until the fog has cleared in order to achieve even distribution of the CIPC product and improved efficacy.

For stores without positive ventilation (ambient air flows), maintain gentle movement of air during the fogging operation. For potatoes stored at 5°C or below, only one application of chlorpropham up to a maximum individual dose of 32 ml product (16g chlorpropham) per tonne per season is allowed. The application should be made before the temperature is reduced below 7°C.

Recirculate store air for at least 6 hours without cooling prior to application.

Note that sprouting may occur if optimum storage conditions are not in place or maintained.

**STORAGE TEMPERATURE**
Pull down temperatures as quickly as permitted by the end user and hold at the lowest acceptable temperature.

Only **one** application of chlorpropham per season is permitted in cold stores (holding temperature at or below 5°C).

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**KEY REQUIREMENTS**

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<tr>
<th>Equipment</th>
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<td>Personnel</td>
<td>Applicators must adhere to the CIPC code of best practice, be qualified to NPTC PA1, PA9. They should be current members of the National Association of Agricultural Contractors (NAAC) CIPC Applicators Group.</td>
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<td>Advisors</td>
<td>Recommendations for CIPC must be made by BASIS qualified advisors.</td>
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<td>Stores</td>
<td>Stores must be inspected and comply with the CIPC Stewardship Store Checklist audited under the Red Tractor Farm Assurance Scheme.</td>
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<td>Responsibility</td>
<td>Overall responsibility for CIPC use lies with the crop owner—not the store manager or the CIPC applicator.</td>
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**BEST PRACTICE** Reference is made to Potato Council publications for current best practices (www.potato.org.uk; www.cipccompliant.co.uk)

**Store loading, curing and timing of first application**

First treatment recommended within 3 weeks of harvest (or earliest occasion thereafter) and in the **absence** of signs of breaking dormancy. At store loading remove as much soil as possible. Avoid storing varieties with dissimilar dormancy in the same store. Avoid treating part filled stores.

**Do not overestimate time taken for curing.**

Pull down temperatures as quickly as possible and hold at the lowest acceptable temperature that crop condition and end use permit. CIPC should ideally be first applied at temperatures above 7°C.
CONDITIONS OF SUPPLY
All goods supplied are manufactured to our usual standard of quality, but all conditions and warranties, statutory or otherwise, as to the quality or fitness for any purpose of the goods are excluded and no liability (save as to the liability to replace defective goods herein provided) will be accepted by us for any damage, loss or injury whatsoever arising out of or in connection with the goods or drums or other containers thereof, or from the storage, handling, applications or use thereof. In the case of alleged defects in the manufacture of the goods proved by the customer to our satisfaction we will at our expense replace or otherwise remedy the defective goods. In particular liability in tort arising in or out of the manufacture, distribution, sale or use of the product is hereby expressly excluded. All our goods are sold and supplied on the terms contained in our standard Conditions of Sale (of which the above is part) which shall prevail over any other terms and which may be inspected on request.

BEST PRACTICE Reference is made to Potato Council publications for current best practices (www.potato.org.uk; www.cipccompliant.co.uk)

| Ventilation management | Positive ventilation is recommended in all store types. Fridge coils should be bypassed. Bulk stores are best treated with low-speed recirculation of fog (with the fan linked to an inverter, or variable frequency drive, for speed control) using the store ventilation system. Initial treatment should take place before there is significant pile settling and after the main duct has been ‘balanced’. If there is a fan-house, apply CIPC here allowing the fans to mix fog with the recirculating air. Recirculation should continue until fog has cleared. |

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