

# PAN ISOXABEN 500

MAPP 18419

Contains 500 g/litre (12.14% w/w) Isoxaben as a suspension concentrate.

**A residual herbicide for the control of BROAD-LEAVED WEEDS in AMENITY VEGETATION, APPLE & PEAR ORCHARDS, ASPARAGUS, BLACKBERRY, BLACKCURRANT, CHERRIES, FORESTRY, FOREST NURSERY, GOOSEBERRY, HOPS, ORNAMENTAL PLANT PRODUCTION, PLUMS, RASPBERRY, REDCURRANT, and STRAWBERRY.**

## Warning

Very toxic to aquatic life with long lasting effects

Keep out of reach of children

Do not eat, drink or smoke when using this product

Wear protective gloves

Collect spillage

Dispose of contents/container to a licensed hazardous-waste disposal

contractor or collection site except for triple rinsed containers which can be disposed of as non-hazardous waste. Contains 1,2-benzisothiazolin-3-one.

May produce an allergic reaction.



## IMPORTANT INFORMATION

FOR USE ONLY AS AN AGRICULTURAL/HORTICULTURAL/FORESTRY HERBICIDE

Crops/Situations:

ASPARAGUS, CHERRIES, PLUMS, APPLE AND PEAR ORCHARDS, STRAWBERRY, BLACKCURRANT, REDCURRANT, GOOSEBERRY, BLACKBERRY, RASPBERRY, HOPS, AMENITY VEGETATION, ORNAMENTAL PLANT PRODUCTION, FORESTRY and FOREST NURSERY.

FULL DETAILS ARE GIVEN IN THE ATTACHED LEAFLET FOR Maximum Individual Dose, Maximum Number Of Treatments AND Latest Time Of Application.

**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: a) Operators must wear suitable protective gloves when handling the concentrate or handling contaminated surfaces. b) Operators must wear suitable protective clothing (coveralls) and suitable protective gloves when applying by hand-held equipment. However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection. WASH HANDS AND EXPOSED SKIN before meals and after work. WHEN USING, DO NOT EAT, DRINK OR SMOKE.

**Environmental Protection:** Extreme care must be taken to avoid spray drift onto non-crop plants outside of the target area. 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 5m of the top of a bank of a static or flowing water body, unless a Local Environmental Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1m 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 1m of the top of the bank of a static or flowing water body]. Aim spray away from water. This product qualifies for inclusion with 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's published guidance of the statutory buffer zone must be maintained. The results of the LERAP must be recorded and kept available for three years. DO NOT CONTAMINATE SURFACE WATERS OR DITCHES with chemical or used containers.

**Storage and Disposal:** KEEP OUT OF REACH OF CHILDREN. KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING-STUFFS. KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place. EMPTY CONTAINER COMPLETELY and dispose of safely.

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

**Triple Rinse Containers, Puncture and Invert to Dry at time of Use.**

**READ DIRECTIONS FOR USE ON ATTACHED LEAFLET. STORE IN AREAS FREE OF FROST.**

**Authorisation Holder: Pan Amenity Ltd.**

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Tel: 01480 467790 Email: info@panamenity.co.uk

**This product has been re-bottled at Grotech Productions Ltd, Britannia Road, Goole, DN14 6ET**



This product label is compliant with the CPA Voluntary Initiative (VI) guidance

# 500ml e

## 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.**

### ESSENTIAL INFORMATION

PAN ISOXABEN 500 is a residual herbicide: its effect on the following crop in the rotation must be taken into account when using the product. Following crops of brassicas, beet (Sugar and Fodder), stubble turnips, and Oilseed Rape are considered susceptible.

Following Crop	Precautions
Any crop EXCEPT Potatoes, Maize, Cereals, herbage and seed crops, grass leys, amenity grass, forestry plantings, fruit crops, hardy ornamental crops and plantings.	Plough the land to a depth of at least 20cm before planting.

Do not apply PAN ISOXABEN 500 for one year, if fruit crops are being grubbed out, or if field grown hardy ornamental nursery stock or forestry plants are being lifted, and if the following crop is oilseed rape, brassicas, vegetables or sugar beet. The degradation of PAN ISOXABEN 500 in the soil can be slowed down if soil sterilisation techniques are being used. To avoid any residual damage to following crops, do not apply the product and perform soil sterilisation together for two years before replanting.

When PAN ISOXABEN 500 is to be applied with a tank mix partner(s), read the label for information on other products, with particular regard to any effects on following crops. Should any treated crop fail, then the soil should be thoroughly cultivated and then only planted with cereals or grass. If the product is to be used on crops intended for processing, take advice from your processor.

### RESISTANCE MANAGEMENT

Continual use of a herbicide with a single mode of action should be avoided. It is advisable to use products (either in combination or in sequence) which have different modes of action to minimise the risk of resistance occurring. The use of tank mixtures in which two or more elements work to control the target weeds are also advised.

### MIXING

Avoid making excess spray solution. Fill the spray tank halfway with clean water. Add the correct quantity of PAN ISOXABEN 500 and continue to fill. Turn on the agitation and commence spraying straight away.

### SPRAYING

Apply PAN ISOXABEN 500 using either a knapsack or tractor mounted hydraulic sprayers fitted with nozzles which deliver a MEDIUM quality spray as defined by the BCPC. A standard boom sprayer with bypass agitation should be used for all tractor mounted hydraulic sprayers. The pump must guarantee good agitation and deliver sufficient pressure. Check the nozzles during treatment to make sure they achieve even coverage. Apply at the recommended rates in 100 to 400 litres of water per hectare. When applying using a knapsack sprayer, refer to the instructions below.

### CLEANING THE SPRAY TANK

Ensure that all equipment associated with the spraying process are thoroughly cleaned after using PAN ISOXABEN 500, to avoid damage to other crops. After completing the spraying operation, drain the tank completely and wash the inside and outside of the sprayer with clean water. Using a water volume of at least 1/10th of the spray tank volume, flush the clean water through the booms and hoses and drain the tank completely again. Finally, half fill the spray tank with clean water, agitate and flush some water through the booms and hoses. Now fill the tank completely and agitate for at least 15 minutes. Again, flush the booms and hoses, and empty the tank completely. Remove the nozzles and filters and wash separately. Take care when disposing of washings, and most importantly do not spray onto a sensitive crop, or onto land which will be planted with a sensitive crop.

### PREPARATION OF THE SEEDBED

In order to obtain optimum results from applications of PAN ISOXABEN 500, apply to moist seedbeds which are clod free, and preferably have been rolled to consolidate the soil.

### SOIL TYPE AND CONDITIONS

Although PAN ISOXABEN 500 can be applied to all soil types, weed control may be less than adequate on soils which have a high organic matter content. Due to this factor, do not apply to soils which have an organic matter content in excess of 10%, with the exception of hardy ornamental nursery stock which is grown in containers.

Additionally, be aware that weed control may be reduced when organic manures are applied. Ideally, apply the product before mulching, and remove any extraneous organic matter (e.g. cuttings or leaf litter) prior to mulching. Weed control may be less than desired if the soil is very dry; if dry soil conditions persist, some irrigation will certainly help to get better results from the product.

## ASPARAGUS, CHERRIES/PLUMS/APPLE & PEAR ORCHARDS, BLACKCURRANT/REDCURRANT/GOOSEBERRY/BLACKBERRY/RASPBERRY, STRAWBERRY, HOPS

Crops/Situations	Recommended/Max Individual Dose	Max Number of Applications	Application Method	Aquatic Buffer Zone (m)	Timings
Asparagus	0.5 Litres of product per hectare	One per crop	Treat as a banded application within the planted row, not exceeding 0.25L of product per hectare, meaning only 50% of a hectare may be sprayed.	N/A	Apply annually, prior to weed emergence, between October and the beginning of April. For optimum results, apply product to moist, fine, weed free soil.
Cherries/Plums/Apple & Pear Orchards	0.5 Litres of product per hectare	One per crop	Treat as a banded application within the planted row, not exceeding 0.15L of product per hectare, meaning only 30% of a hectare may be sprayed.	5	Apply when the crop is dormant, prior to weed emergence.
Blackcurrant, Redcurrant, Gooseberry, Blackberry, Raspberry	0.5 Litres of product per hectare	One per crop	-	N/A	Apply when the crop is dormant, prior to weed emergence.
Strawberry	0.4 Litres of product per hectare	One per crop	-	N/A	Apply when the crop is dormant, prior to weed emergence.
Hops	0.5 Litres of product per hectare	One per crop	Treat as a banded application within the planted row, not exceeding 0.15L of product per hectare, meaning only 30% of a hectare may be sprayed.	N/A	Apply when the crop is dormant, prior to hop and weed emergence.

### PAN ISOXABEN 500 + AN APPROVED FORMULATION OF PROPYZAMIDE

Use this tank mix on the following crops from November to January: Apples, Blackberries, Blackcurrants, Gooseberries, Pears, Plums, Strawberries and summer fruiting Raspberries.

### SUSCEPTIBILITY OF WEEDS

Providing that the soil moisture is adequate, an application of PAN ISOXABEN 500 will control the following weeds if they have not already emerged: Charlock, Common Chickweed, Common Field-Speedwell, Common Fumitory, Common Hemp-Nettle, Common Mouse-Ear, Common Poppy, Corn Marigold, Corn Spurrey, Fat-Hen, Field Forget-Me-Not, Field Pansy, Green Field-Speedwell, Ivy-Leaved Speedwell, Knotgrass, Parsley-Piert, Pineappleweed, Red Dead-Nettle, Redshank, Scarlet Pimpernel, Scented Mayweed, Scentless Mayweed, Shepherd's-Purse, Small Nettle, Volunteer Rape, Wild Radish.

PAN ISOXABEN 500 will moderately control Groundsel, and a moderate resistance may be observed with Cleavers. However, there is no control of Cleavers that germinate from depth. This product will not control grassweeds.

## AMENITY VEGETATION AND ORNAMENTAL PLANT PRODUCTION

During the dormant season, PAN ISOXABEN 500 may be applied to shrubs and broad-leaved trees as an overall treatment. At other times of the year, it may be used as a spray directed in such a way that the spray does not touch growing leaves, stems and other foliage.

Treat within the planted row, as a banded application. Use the dose rates outlined below, not exceeding 0.25L of product per hectare, meaning only 50% of a hectare can be sprayed.

Due to the fact that there are a large number of ornamental plants grown, it is advisable to test spray on a small area before overall treatment.

PAN ISOXABEN 500 can be applied to the following crops:

**Conifers:** Chamaecyparis, Cupressocyparis, Juniperus, Pinus, Pseudotsuga, Thuya, Tsuga.

**Broad-Leaved trees and shrubs:** Acer, Alnus, Amorpha, Berberis, Betula, Calutea, Campsis, Caragana, Carpinus, Cassia, Cornus, Corylus, Crataegus, Deutzia, Escallonia, Euonymus, Fagus, Forsythia, Fraxinus, Gleditsia, Groseillier, Hebe, Hibiscus, Hypericum, Laburnum, Ligustrum, Philadelphus, Populus, Potentilla, Prunus, Quercus, Ribes, Robinia, Rosa, Salix, Skimmia, Sophora, Spirea, Tamarix, Tilia, Weigela.

Do not treat bedding plants, as crop safety data is not available.

**AMENITY VEGETATION AND ORNAMENTAL PLANT PRODUCTION**

Crop/Situation	Rate		Water Volume		Timings	Aquatic Buffer Zone
	Litres/ha	ml / 100m <sup>2</sup>	Tractor mounted machine (litres/ha)	Knapsack sprayer (litres/100m <sup>2</sup> )		
Container grown hardy ornamental nursery stock (protected and unprotected stock)	0.5	5.0	100-400	10	Apply the product to either new or established plants. When applying the product to plants that have been recently planted, the compost must first be allowed to settle for 7 – 10 days. One further repeat application may be made. Ensure that the compost to be treated is moist, firm and no weeds have emerged. Irrigation (20-30mm) or rainfall is necessary within 3 days of applying the product for best results.	5
Field grown hardy ornamental nursery stock	0.5	5.0	100-400	5	Apply the product to either new or established plants. When applying the product to plants that have been recently planted, the compost must be allowed to settle for 7 – 10 days. One further repeat application may be made. Ensure that the compost to be treated is moist, firm and no weeds have emerged. Irrigation (20-30mm) or rainfall is necessary within 3 days of applying the product for best results.	5
Amenity plantings of trees and shrubs	0.5	5.0	100-400	5	Applications may be made to trees and shrubs, which are either newly planted or established, before the weeds emerge. Ensure that the soil is moist, firm and clod free.	N/A

**FOREST NURSERY**

Due to the fact that there are many forestry species and cultivars, it is advisable to test the product on a small area before widespread application. Treat within the planted row, as a banded application. Use the dose rates outlined below, not exceeding 0.25L of product per hectare, meaning only 50% of a hectare can be sprayed.

Crop/Situation	Rate		Water Volume		Timings	Aquatic Buffer Zone
	Litres/ha	ml / 100m <sup>2</sup>	Tractor mounted machine (litres/ha)	Knapsack sprayer (litres/100m <sup>2</sup> )		
Forestry transplants and second year undercuts.*	0.5	5.0	100-400	5	After transplanting the trees, and before the weeds emerge, apply the product to soil that is moist, firm and clod free. If possible, use irrigation. If grass control is required or if broad leaved weeds have emerged, use with a tank mix of an approved formulation of Propyzamide.	5
Forest and woodland plantings.*	0.5	5.0	100-400	5	Apply to new or established trees, prior to weed emergence. Apply the product to soil that is moist, firm and clod free. If possible, use irrigation. If grass control is required or if broad leaved weeds have emerged, use with a tank mix of an approved formulation of Propyzamide.	5

**SUSCEPTIBILITY OF WEEDS**

PAN ISOXABEN 500 will control the following weeds if they have not already emerged for both Forest Nursery Crops and Amenity Vegetation and Ornamental Plant Production: Common Chickweed, Common Field-Speedwell, Common Fumitory, Common Mouse-Ear, Common Orache, Common Poppy, Corn Marigold, Corn Spurrey, Fat-Hen, Field Forget-Me-Not, Field Pansy, Green Field-Speedwell, Hairy Bitter-Cress, Ivy-Leaved Speedwell, Parsley-Piert, Pearlwort, Pineappleweed, Red Dead-Nettle, Redshank, Ribwort Plantain, Scarlet Pimpernel, Scented Mayweed, Shepherd's-Purse, Small Nettle, Volunteer Rape, Wild Radish. PAN ISOXABEN 500 will moderately control Groundsel, and a moderate resistance may be observed with Cleavers. However, there is no control of Cleavers that germinate from depth.

PAN ISOXABEN 500 may also be used on the following crops, and fields of use:  
**Conifers:** Austrian Pine, Caucasian Fir, Colorado Spruce, Douglas Fir, European Larch, Japanese Larch, Noble Fir, Norway Spruce, Scots Pine, Serbian Spruce, Sitka Spruce.  
**Broad-Leaved Trees:** Alder, Ash, Beech, Birch, Cherry, Oak, Poplar, Sweet Chestnut, Sycamore, Willow.

**SAFETY PRECAUTIONS**

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