

# SOLITAIRE®

MAPP 15792 / PCS 04219

GROUP 3 HERBICIDE

Solitaire is a residual herbicide used on a range of crops.

A suspension concentrate containing 400 g/litre (35.4% w/w) propyzamide.

## SOLITAIRE

UFI NI : UFI:YF99-X0UA-Y00Y-NVAF UFI IRE: NHW9-A02F-Y00V-H77Q

A suspension concentrate containing 400 g/litre (35.4% w/w) propyzamide.

## WARNING

**SUSPECTED OF CAUSING CANCER  
VERY TOXIC TO AQUATIC LIFE WITH LONG  
LASTING EFFECTS**

Obtain special instructions before use.

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

Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection/face protection.

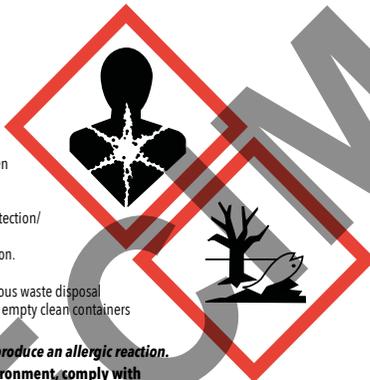
If exposed or concerned: Get medical advice/attention.

Store locked up.

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 of as non-hazardous waste.

**Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.**

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



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HERBICIDE

Net content

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**READ CAREFULLY  
BEFORE USE**

**PROTECT FROM FROST  
SHAKE WELL BEFORE USE**

Production date / Batch number:  
see packaging

**For advice on medical  
emergencies, fires, spillages  
or chemical hazards ONLY -  
phone 0870 190 6777**

For technical and non-emergency calls  
phone 0044 (0)845 373 0305

Authorisation Holder:

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## IMPORTANT INFORMATION

FOR USE ONLY AS AN AGRICULTURAL/HORTICULTURAL/FORESTRY HERBICIDE

Crop	Maximum individual dose (litres product/ha)	Maximum number of treatments	Latest time of application
Oilseed rape (winter), field bean (winter), sugar beet (seed crop)	2.1	1 per crop	Before 1st of February in year of harvest
Apple, blackberry, blackcurrant, gooseberry, loganberry, pear, plum, raspberry, redcurrant	4.25	1 per year	Before 1st of February in year of harvest
Strawberry (outdoor use only)	3.5	1 per year	Before 1st of January in year of harvest
Fodder rape (seed crop), kale (seed crop), red clover (seed crop), turnip (seed crop), white clover (seed crop)	1.75	1 per crop	Before 1st of February in year of harvest
Lettuce (outdoor)	3.5	1 per crop	6 weeks before harvest
Lucerne	1.75	1 per crop	Before 1st of February in year of harvest
Rhubarb (outdoor)	4.25	1 per year	Before 1st of January in year of harvest
Amenity vegetation	4.25	1 per year	-
Farm forestry, forest, forest nursery, hedgerow	3.75	1 per year	-

### Other Specific Restrictions:

- Applications to outdoor lettuce must only be made between 1st October and 1st March.
- Do not harvest crops for human or animal consumption for at least 6 weeks after last application.
- This product may only be applied to edible crops except lettuce between 1st October and the specified 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 PLANT PROTECTION PRODUCTS.**

## 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.**

### WARNINGS

Take care to avoid local over dosing.

Do not make more than one application of SETANTA® FLO within 9 months to the same area of land.

Treated clover, brassicas and sugar beet must not be used for human or animal consumption.

### NOTE

Best results are achieved in moist soils of fine tilth and good structure. Efficacy is reduced in the presence of excessive surface organic debris, straw, ash or ploughed up turf.

Moisture is required for root uptake and so SOLITAIRE works best in moist soils. Weed control may be reduced in dry conditions. SOLITAIRE can be applied in frosty conditions, but shouldn't be applied where the soil is frozen and run-off is likely to occur.

### PROCESSED CROPS

Consult processors before application to any crop grown for processing.

### SOLITAIRE

A suspension concentrate containing 400 g/litre (35.4% w/w) propyzamide.

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



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### CAUTION

**DO NOT APPLY SOLITAIRE** to crops grown under protection.

**DO NOT APPLY SOLITAIRE** at the higher rate of 3.5 litres/ha to matted strawberries.

**DO NOT APPLY SOLITAIRE** in windy weather. Avoid drift onto non-target crops or areas.

**ALWAYS** clean out spraying equipment thoroughly with water and detergent immediately after use.

**DO NOT APPLY SOLITAIRE** within 9 months of a previous application on that land.

**ONLY ONE APPLICATION OF SOLITAIRE** may be made per crop, or per year (see statutory conditions of approval).

**DO NOT HARVEST CROPS FOR HUMAN OR ANIMAL CONSUMPTION** for at least 6 weeks after last application.

**Take care to avoid local over dosing.**

### SOIL TYPES AND WEATHER CONDITIONS

SOLITAIRE can be used on all soil types with the following exceptions.

- Do not use on soils containing more than 10% organic matter except in forestry.
- Do not use on strawberries or winter field beans grown in certain soil types. See Tables for crop recommendations.

### SOIL TEXTURE (ADAS 85 system)

Textural Group	Textural Class
Sands	Coarse sand, sand, fine sand, loamy coarse sand
Very light soils	Loamy sand, loamy fine sand, coarse sandy loam
Light soils	Sandy loam, fine sandy loam, sandy silt loam, silt loam (85)
Medium soils	Sandy clay loam, clay loam, silty clay loam
Heavy soils	Sandy clay, clay, silty clay

SOLITAIRE requires moisture for root uptake. Best residual action is obtained in moist soils of fine tilth. It can be applied under frosty conditions but should not be used where run-off from the soil surface is likely.

Best results are achieved when growth of weeds (especially blackgrass and volunteer cereals) is slow, but transpiration continues. In mild Autumns/Winters, emerged weeds may take longer to be controlled, the residual activity of SOLITAIRE will be shortened and overall control may be reduced.

The efficacy of SOLITAIRE may be reduced in organic soils and in the presence of excessive surface organic debris, burnt straw, ash, or ploughed up turf.

Please ensure a firm seedbed before spraying winter field beans.

## MIXING AND SPRAYING

Before spraying it is important to check all hoses, filters and nozzles, and to ensure that the sprayer is clean and correctly set to give an even application at the correct volume. Shake the container vigorously before use. Fill the sprayer tank with half the required amount of water and add the required quantity of SOLITAIRE. Wash out the empty container with water and add the washings to the spray tank.

Agitate while topping up the sprayer tank to the required level, and maintain agitation until spraying is completed. Spray immediately, do not allow the spray mixture to stand. Thoroughly wash all spraying and measuring equipment with water immediately after use.

## APPLICATION EQUIPMENT

Do not apply through broadcast air-assisted sprayers.

Application may be made through a ground crop sprayer on all crops.

Application may also be made via a knapsack sprayer on forestry, farm forestry, forest nursery, hedgerow and amenity vegetation.

## WATER VOLUMES

Apply SOLITAIRE in 200 to 1000 litres of water per hectare on the following crops:

Winter oilseed rape, sugar beet (seed crops), winter field beans, lucerne, brassicas (for seed production) and clover (seed crops).

Apply SOLITAIRE in 400 to 1000 litres of water per hectare on the following crops:

**Apple, blackcurrant, blackberry, gooseberry, loganberry, pear, plum, raspberry, redcurrant, rhubarb (outdoor use only), strawberry (outdoor use only), lettuce (outdoor use only), forestry, farm forestry, forest nursery, hedgerow and amenity vegetation.**

## Weeds Controlled - Agricultural Crops

When applied to Winter Oilseed Rape, Winter Field Beans, Lucerne or Seed Crops of any of the following: Red or White Clover, Fodder Rape, Kale, Turnip or Sugar Beet, the susceptibilities of common weed species to SOLITAIRE at 1.75 litres/ha are given in the following table:

**(Note: Please refer to Section on Winter Field Beans and Sugar Beet for their recommended rates of use).**

	Stage of Development		
	Germinating	Up to 2 leaves	Established
Annual Meadow-grass	S	S	S
Barren Brome	S	S	S
Black-bindweed	S	S	MR
Blackgrass	S	S	MS

Cleavers	MS	MR	R
Chickweed, Common	S	S	S (Note 1)
Fat-hen	S	S	MR
Forget-me-not, field	MS	MS	R
Knotgrass	S	S	MR
Nettle, Small	S	S	MR
Nightshade, Black	S	S	MR
Redshank	S	S	MR
Speedwells	S	S	MR
Volunteer Cereals	S	S	S
Wild oat	S	S	S

S - Susceptible MS - Moderately susceptible

MR - Moderately resistant R - Resistant

Note 1 - Chickweed control may be reduced where it is well established (over 10 cm in diameter).

## CONTROL OF BLACKGRASS

Established (well-tillered) blackgrass is moderately susceptible.

Where populations of blackgrass and/or volunteer cereals exceed 50 per square metre, SOLITAIRE should be applied in an approved tank mix with an approved specific graminicide in accordance with the manufacturer's recommendations or following an effective approved graminicide to ensure optimum weed control. Deeper germinating blackgrass within the soil profile could reduce product efficacy. Where partial resistance (R or RR) to the partner graminicide is known to exist, the dose of SOLITAIRE may be increased to 2.1 l/ha. This may also be done if applications are made early in the season, under warm conditions, and an increase in the duration of residual control is required (see comments under DIRECTIONS FOR USE above). Where absolute resistance (RRR) to the partner graminicide occur there is no advantage in using this graminicide with SOLITAIRE for Blackgrass control, and SOLITAIRE even at 2.1 l/ha will not give acceptable levels of Blackgrass control in these circumstances. (R=1\*, RR=2\*/3\*, RRR=4\*/5\*)

## Winter Oilseed Rape

SOLITAIRE may be applied to all soil types with less than 10% organic matter, between 1st October and 31st January. It should be applied as soon as possible after the crop has reached the 3rd true leaf stage. Crop selectivity is by depth protection. Factors which cause shallow rooting may reduce crop safety.

**Rate of Use:** 1.75 - 2.1 litres/ha in 200-1000 litres water.

## Winter Field Beans

SOLITAIRE may be applied to Medium Soils and Heavy Soils (as defined in the ADAS 85 system) with less than 10% organic matter, between 1st October and 31st January. It should be applied within 7 days after drilling but before crop emergence.

Ensure a firm seedbed before spraying.

**Rate of Use:** 2.1 litres/ha in 200-1000 litres water.

## Seed Crops of Sugar Beet

SOLITAIRE may be applied to all soil types with less than 10% organic matter, between 1st October and 31st January. It should be applied as soon as possible after the crop has reached the 4th true leaf stage.

**Rate of Use:** 2.1 litres/ha in 200-1000 litres water.

## Seed Crops of Fodder Rape, Kale, Turnip, Red or White Clover

SOLITAIRE may be applied to all soil types with less than 10% organic matter, between 1st October and 31st January. It should be applied as soon as possible after the crop has reached the 3rd true leaf stage on fodder rape, kale or turnips.

**Note:** On Clover it should only be applied to established crops grown for at least one season.

**Rate of Use:** 1.75 litres/ha in 200-1000 litres water.

## Lucerne

SOLITAIRE may be applied to all soil types with less than 10% organic matter, between 1st October and 31st January.

It should only be applied to established crops grown for at least one season and not sooner than 7 days after the last cut.

**Rate of Use:** 1.75 litres/ha in 200-1000 litres water.

## Weeds Controlled - Horticultural Crops

When applied to apple, blackberry, blackcurrant, gooseberry, loganberry, pear, plum, raspberry, redcurrant, strawberry (outdoor use only) and rhubarb (outdoor use only) the susceptibilities of common weed species to SOLITAIRE at 2.1 litres/ha are given in the following table:

	Stage of Development		
	Germinating	Up to 2 leaves	Established
Annual Meadow-grass	S	S	S
Barren Brome	S	S	S
Black-bindweed	S	S	MR
Blackgrass	S	S	MS
Chickweed, Common	S	S	S
Fat-hen	S	S	MR

Knotgrass	S	S	MR
Nettle, Small	S	S	MR
Nightshade, Black	S	S	MR
Redshank	S	S	MR
Speedwells	S	S	MR
Volunteer Cereals	S	S	S
Wild oat	S	S	S

S - Susceptible MS - Moderately susceptible

MR - Moderately resistant R - Resistant

Where the rate of 3.5 - 4.25 litres/ha is used, black-grass which is listed as moderately susceptible (MS), when established becomes susceptible (S).

Furthermore the following weeds may also be controlled pre-emergence.

	Stage of Development		
	Germinating	Up to 2 leaves	Established
Broad-leaved dock	S	MS	MS
Cleavers	S	S	R
Common fumitory	MS	MS	R
Common Couch (see Note below)	S	S	S
Creeping buttercup	S	MS	MS
Field horsetail	MS	MS	MS
Sheep's Sorrel	S	MS	MS
Shepherd's-purse	MS	MS	R

S - Susceptible MS - Moderately susceptible

MR - Moderately resistant R - Resistant

**Note:** For heavy infestation of common couch, a repeat application may be required the following winter. Avoid deep burying of rhizomes when preparing land prior to SOLITAIRE treatment.

## Apple, blackberry, blackcurrant, gooseberry, loganberry, pear, plum redcurrant and raspberry

SOLITAIRE may be applied to all soil types with less than 10% organic matter, between 1st October and 31st January.

It should only be applied to established crops grown for at least one season.

## Rate of Use:

Annual Weeds - 2.1 litres/ha in 400-1000 litres water.

Perennial and Annual Weeds - 4.25 litres/ha in 400 - 1000 litres water.

## Rhubarb (Outdoor only)

SOLITAIRE may be applied to all soil types with less than 10% organic matter, between 1st October and 31st December. It should only be applied to established crops grown for at least one season.

### Rate of Use:

Annual Weeds - 2.1 litres/ha in 400 - 1000 litres water.

Perennial and Annual Weeds - 4.25 litres/ha in 400-1000 litres water.

## Strawberry (Outdoor Use only)

For use only on outdoor crops and on non matted row crops.

Use SOLITAIRE only on heavy soil types (as defined in the ADAS 1985 system) with less than 10% organic matter, between 1st October and 31st December.

It should only be applied to established crops grown for at least one year.

### Rate of Use:

Annual Weeds - 2.1 litres/ha in 400 - 1000 litres water.

Perennial and Annual Weeds - 3.5 litres/ha in 200 - 1000 litres water.

**DO NOT APPLY SOLITAIRE** at the higher rate of 3.5 litres/ha to matted strawberries.

## Lettuce (outdoor crops only)

SOLITAIRE may be applied to all soil types with less than 10% organic matter, at any time of year. It should be applied before or after drilling, up to 6 weeks before harvest.

**Rate of Use:** 2.75 - 3.5 litres/ha in 400 - 1000 litres water.

Use the higher rate under dry soil conditions or warm weather, and irrigate or incorporate.

When used at these rates on lettuce, the susceptibilities of common weed species to SOLITAIRE are given in the following table:

	Stage of Development		
	Germinating	Up to 2 leaves	Established
Annual Meadow-grass	S	S	S
Barren Brome	S	S	S
Black-bindweed	S	S	MS
Blackgrass	S	S	S
Cleavers	MS	MS	R
Chickweed, Common	S	S	S
Common Fumitory	MS	MS	R
Fat-hen	S	S	MS
Knotgrass	S	S	MS
Nettle, Small	S	S	MS

Nightshade, Black	S	S	MS
Redshank	S	S	MS
Shepherd's-purse	MS	MS	R
Speedwells	S	S	MS
Volunteer Cereals	S	S	S
Wild oat	S	S	S

S - Susceptible MS - Moderately susceptible  
MR - Moderately resistant R - Resistant

## Forestry, farm forestry, forest nursery, hedgerow

SOLITAIRE is recommended for use on the following species: *Alder*, *Beech*, *Southern Beech*, *Birch*, *Douglas Fir*, *Grand Fir*, *Noble Fir*, *Horse Chestnut*, *Larch*, *Lawson Cypress*, *Oak*, *Bishop Pine*, *Corsican Pine*, *Lodgepole Pine*, *Monterey Pine*, *Scots Pine*, *Poplar*, *Norway Spruce*, *Sycamore*, *Sitka Spruce*, *Western Hemlock* and *Wild Cherry*.

SOLITAIRE should be applied between 1st October and 31st January, North of a line from Aberystwyth to London and on the following soil types: **Mineral Soils** (surface water gleys, brown earths and sands).

SOLITAIRE should be applied between 1st October and 31st December South of a line from Aberystwyth to London and on the following soil types: Peat Soils (peaty gleys and **peat soils** with a depth of organic matter greater than 10 cm).

**Rate of Use:** 3.75 litres/ha in 400-1000 litres water.

**Note:** For Nurseries treat no earlier than one month after transplanting. For Forests treat at any stage including pre-planting.

When used at this rate the susceptibilities of common weed species to SOLITAIRE are given in the following table:

	Stage of Development		
	Germinating	Up to 2 leaves	Established
Cocks foot	S	S	MR
Common Bent	S	S	S
Common couch (see note below)	S	S	S
Creeping soft grass	S	S	MS
Field horsetail	MS	MS	MS
Foxglove	R	R	R
Other perennial grasses	S	S	S
Sedges	MS	MS	MS
Sweet vernal grass	S	S	S

Tufted hair-grass	S	S	S
Willowherbs	R	R	R
Yorkshire fog	S	S	S

S - Susceptible MS - Moderately susceptible  
MR - Moderately resistant R - Resistant

**Note:** For heavy infestation of common couch, a repeat application may be required the following winter. Avoid deep burying of rhizomes when preparing land prior to SOLITAIRE treatment.

## Amenity Vegetation- trees, Shrubs and Ornamental plants

SOLITAIRE is recommended for use on the following species which have been planted out not later than the previous spring: *Berberis darwinii*, *Buddleia davidii*, *Chamaecyparis* spp (False Cypress), *Cotoneaster* spp, *Crataegus* spp (Hawthorns), *Fagus sylvatica* (Beech), *Forsythia x intermedia*, *Ilex aquifolium* (Holly), *Larix decidua* (Larch), *Philadelphus* spp (Mock Orange), *Picea* spp (Spruces), *Pinus* spp (Pines), *Prunus glandulosa*, *Quercus* spp (Oak), *Rosa* spp (Roses including Rose rootstocks), *Spiraea x bumalda* 'Froebelii', *Syringa vulgaris* (Lilac), *Taxus baccata* (Yew), *Thuja orientalis*, 'Rosedalis'.

SOLITAIRE should be applied between 1st October and 31st January on established crops planted for at least one season and on all soils with less than 10% organic matter.

**Rate of Use:** 2.1 - 4.25 litres/ha in 400-1000 litres water.

At the 2.1 litres/ha rate the susceptibilities of common weed species to SOLITAIRE are given in the following table:

	Stage of Development		
	Germinating	Up to 2 leaves	Established
Annual Meadow-grass	S	S	S
Barren Brome	S	S	S
Blackgrass	S	S	S
Chickweed, Common	S	S	S
Volunteer cereals	S	S	S
Wild oat	S	S	S
Black-bindweed	S	S	MR
Black nightshade	S	S	MR
Fat-hen	S	S	MR
Knotgrass	S	S	MR

Redshank	S	S	MR
Small Nettle	S	S	MR

When a **higher rate** of use of 4.25 litres/ha is used, the weeds in the table above which are listed as moderately resistant (MR) when established become moderately susceptible (MS). Furthermore the following weeds may also be controlled at the higher rate.

	Stage of Development		
	Germinating	Up to 2 leaves	Established
Common couch (see note below)	S	S	S
Other perennial grasses	S	S	S
Cleavers	S	S	R
Common fumitory	MS	MS	R
Shepherd's purse	MS	MS	R
Creeping buttercup	S	MS	MS
Broad-leaved dock	S	MS	MS
Sheep's sorrel	S	MS	MS
Field Horsetail	MS	MS	MS

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**Note:** For heavy infestation of common couch, a repeat application may be required the following winter. Avoid deep burying of rhizomes when preparing land prior to SOLITAIRE treatment.

## ALL LISTED CROPS

For all soil types at all rates at any time of the year and at any stage of the crop the following will apply:

	Stage of Development		
	Germinating	Up to 2 leaves	Established
Common poppy	R	R	R
Gallant soldier	R	R	R
Grousel	R	R	R
Mayweed	R	R	R
Scarlet pimpernel	R	R	R
Clover	R	R	R