

# Flexidor<sup>\*</sup>

## 125 Herbicide

Product Registration Number: MAPP 10946 (PCS 00638)

A suspension concentrate containing 125 g/litre (12.14% w/w) isoxaben

A residual herbicide for the control of BROAD-LEAVED WEEDS in TOP, BUSH, SUMMER FRUITING CANE and SOFT FRUIT, VINES, HOPS, FORESTRY ,ORNAMENTAL PLANT PRODUCTION and AMENITY VEGETATION.

Pack size: 1 litre

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

**COMPLIANCE WITH THE FOLLOWING CONDITIONS OF USE AND ALL SAFETY PRECAUTIONS MARKED # IS A LEGAL REQUIREMENT**

**FOR USE ONLY AS A HORTICULTURAL /FORESTRY HERBICIDE**

Crops	Maximum Individual Dose	Maximum Number of Treatments	Latest Timing of Application
Apple, cherry, pear, plum, blackcurrant, gooseberry, table grapes, wine grapes, blackberry, raspberry, strawberry, hop.	2.0 litres product per hectare	One per crop	Before 1st April in year of harvest
Forest nursery, ornamental plant production, amenity vegetation	2.0 litres product per hectare	Two per crop or two per annum	-

**READ ALL OTHER SAFETY PRECAUTIONS AND DIRECTIONS FOR USE BEFORE USE**

**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 GLOVES AND FACE PROTECTION (FACESHIELD) when handling the concentrate.

#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:**

#KEEP LIVESTOCK out of treated areas for at least 50 days following treatment

DO NOT CONTAMINATE SURFACE WATERS OR DITCHES with chemical or used container.

**Storage and disposal:**

KEEP OUT OF REACH OF CHILDREN

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.

READ DIRECTIONS FOR USE ON ATTACHED LEAFLET:

STORE IN AREAS FREE OF FROST

This label is compliant with the CPA Voluntary Initiative Guidance



Approval Holder:

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For further technical and safety advice during office hours contact:

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## 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

Flexidor\* 125 has residual activity which may influence husbandry prior to the next crop in the rotation.

Following crops of oilseed rape, stubble turnips, other brassicas, sugar and fodder beet are particularly sensitive to FLEXIDOR 125. Land must be mouldboard ploughed to at least 20cm following the use of FLEXIDOR 125 before drilling/planting succeeding crops other than cereals, fruit crops, herbage seed crops, grass leys and amenity grass, forestry plantings, hardy ornamental crops and plantings, potatoes and maize.

Do not use FLEXIDOR 125 in the 12 months prior to grubbing any fruit crop or lifting field grown hardy ornamental nursery stock or forestry plants if sugar beet, vegetables, oilseed rape or other brassica crops are to be grown as a following crop.

The practice of soil sterilisation may retard the normal degradation of FLEXIDOR 125 and thus may pose a risk to following crops. Do not therefore carry out both soil sterilisation and application of FLEXIDOR 125 within the two years prior to replanting.

When FLEXIDOR 125 is used in tank-mix or in sequence with other products, consult other manufacturer's recommendations for following crops.

In the event of crop failure treated soil should first be cultivated. Only cereals or grass may then be sown.

Before use on crops for processing, consult your processor.

### MIXING

To ensure thorough mixing of the product invert the container several times before opening. Add the required amount of FLEXIDOR 125 herbicide to a half filled spray tank under agitation and complete filling the tank.

### APPLICATION EQUIPMENT

FLEXIDOR 125 may be applied through tractor-mounted hydraulic sprayers and knapsack sprayers equipped with nozzles producing a medium spray quality as defined by the BCPC system. For tractor-mounted hydraulic sprayers use a standard boom sprayer with bypass agitation. Ensure the pump has sufficient capacity to provide good agitation and generate adequate pressure. The spray boom and nozzles should be set to provide even coverage which should be checked during application.

## VOLUME AND SPRAY QUALITY

For fruit crops apply FLEXIDOR 125 in a volume of 100 to 400 litres of water per hectare. For other crops and situations refer to the relevant section. Apply as a MEDIUM spray as defined in the BCPC system.

## SEEDBED PREPARATION

The best results will be obtained when FLEXIDOR 125 is applied to well prepared moist seedbeds free of clods. Rolling loose or fluffy seedbeds after drilling and prior to spraying will improve weed control

## SOILS

FLEXIDOR 125 can be safely applied to sand, light, medium and heavy soils. The activity of FLEXIDOR 125 may be reduced in soils with high levels of organic matter. Do not use on soils with more than 10% organic matter except on container grown hardy ornamental nursery stock. Application of organic manures will also reduce the level of weed control. FLEXIDOR 125 should be applied before mulching. Leaf litter and prunings should be removed before application to allow even coverage of the product.

## DRY SOIL CONDITIONS

Under dry soil conditions weed control may be reduced. Irrigation, where practicable, will enhance product performance. Tank-mix partners will also contribute to improved weed control - see relevant crop section.

## TOP, BUSH, SUMMER FRUITING CANE FRUIT, SOFT FRUIT VINES AND HOPS

Refer to Warning section before use.

### CROPS

FLEXIDOR 125 is safe on all varieties of established apple, cherry, pear, plum, blackcurrant, gooseberry, table grapes, wine grapes, blackberry, raspberry, strawberry, and hop.

### WEED SUSCEPTIBILITY

The following broad-leaved weeds are susceptible following application of FLEXIDOR 125 before weed emergence and under conditions of adequate soil moisture. FLEXIDOR 125 does not control grass weeds.

<b>Susceptible:</b> 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 Pinappleweed Red dead-nettle Redshank Scarlet pimpernel Scented mayweed Scentless mayweed Shepherd's-purse Small nettle Volunteer rape Wild radish	<b>Moderately Susceptible:</b> Groundsel  <b>Moderately Resistant:</b> Cleavers (Weeds germinating from depth will not be controlled)
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### RATE

Treat established top fruit (apples, pears, plums, cherries), bush fruit (blackcurrants, gooseberries), summer fruiting cane fruit (raspberries, blackberries), strawberries, table grapes, wine grapes and hops with a rate of 2.0 litres/ha in 100 to 400 litres of water per hectare.

### TIMING

Apply once a year, before weed emergence and during the dormant season of the crop. Treat between October and 1st April. The best results will be obtained when FLEXIDOR 125 is applied to moist, clod and weed free soil. Any existing weeds should be cleared prior to the application of FLEXIDOR 125 by treating either with amitrole (MAPP 11430) or paraquat (MAPP 10526/PCS 90694).

### TANK-MIXES

Flexidor 125 should be applied with an appropriate, approved tank-mix partner to enhance, widen and extend the period of broad-leaved weed control.

### TANK MIX TIMING

#### FLEXIDOR 125 + Kerb 50W/Kerb Flo

Treat apples, pears, plums, blackcurrants, gooseberries, blackberries, summer fruiting raspberries (England only) and strawberries between November and January.

#### FLEXIDOR 125 + Sovereign

Treat apples, pears, plums, cherries, blackcurrants, gooseberries, blackberries, summer fruiting raspberries, strawberries and hops between November and 1st April.

## FOREST NURSERY, ORNAMENTAL PLANT PRODUCTION, AMENITY VEGETATION

Refer to Warning section before use.

### WEED SUSCEPTIBILITY

**Crop/Situation: Forestry transplant lines, second year under-cuts, forests and woodlands, field grown hardy ornamental nursery stock, ornamental plantings of trees and shrubs**

For application rates, refer to the relevant section.

<b>Susceptible:</b> 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 Pinappleweed Red dead-nettle Redshank Ribwort plantain Scarlet pimpernel Scented mayweed Shepherd's-purse Small nettle Volunteer rape Wild radish	<b>Moderately Susceptible:</b> Groundsel**  <b>Moderately Resistant:</b> Cleavers (Weeds germinating from depth will not be controlled)
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**Crop/Situation: container grown hardy ornamental nursery stock**

For application rates, refer to the relevant label section

<b>Susceptible:</b> Common chickweed Hairy bitter-cress	Pearlwort Shepherd's-purse	<b>Moderately Susceptible:</b> Groundsel**
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\*\* Moderatly susceptible in forestry seedbeds

### FOREST NURSERY

In view of the large number of forestry species and cultivars grown, test FLEXIDOR 125 for crop safety on a small number of plants before overall application

Flexidor 125 may be applied to the following crop species and situations.

#### Forestry transplants, second year undercuts, forests and woodlands

Before application of Flexidor 125, ensure plants have good root development.

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

## APPLICATION

### Rates of use, water volumes and timing

Crop/Situation	Rate		Water Volume		Timing and Comments
	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	2.0	20.0	200-500	5	After transplanting apply to firm, moist soil, free of clods, prior to weed germination. Irrigate as necessary to prevent the soil surface from becoming dry. Where control of grasses and emerged broad-leaved weeds is needed tank-mix with KERB FLO. A repeat application may be necessary to control Groundsel.
Forest and woodland plantings	2.0	20.0	200-500	5	Apply to newly planted or established trees before weed emergence. Soil should be firm, moist and free of clods. Where control of grasses and emerged broad-leaved weeds is needed tank mix with KERB FLO. A repeat application may be necessary to control groundsel

## ORNAMENTAL PLANT PRODUCTION AND AMENITY VEGETATION

FLEXIDOR 125 may be applied to broad-leaved trees and shrubs as an overall spray in the dormant season or as a directed spray at other times, ensuring that the spray does not fall on any foliage present.

In view of the large number of ornamental species and cultivars grown, test FLEXIDOR 125 for crop safety on a small number of plants before overall application

In amenity plantings of trees and shrubs bedding plants should not be treated as crop safety has not been determined. FLEXIDOR 125 may be applied to the following ornamentals:

<b>Conifers:</b>	Chamaecyparis	Juniperus	Pseudotsuga	Tsuga
	Cupressocyparis	Pinus	Thuja	
<b>Broad-leaved trees and shrubs:</b>	Acer	Corylus	Hibiscus	Rosa
	Alnus	Crataegus	Hypericum	Salix
	Amorpha	Deutzia	Laburnum	Skimmia
	Berberis	Escallonia	Ligustrum	Sophora
	Betula	Euonymus	Philadelphus	Spirea
	Calutea	Fagus	Populus	Tamarix
	Campsis	Forsythia	Potentilla	Tilia
	Caragana	Fraxinus	Prunus	Weigela
	Carpinus	Gleditsia	Quercus	
	Cassia	Groesillier	Ribes	
	Cornus	Hebe	Robinia	

## APPLICATION

### Rates of use, water volumes and timing

Crop/Situation	Rate		Water Volume		Timing and Comments
	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)	2.0	20.0	600-1000	10	Apply to newly potted or established plants. For newly potted plants allow compost to settle for 7- 10 days before application. Repeat as necessary but no more than two applications per year. The compost should be firm and free of emerged weeds at application. Rainfall or irrigation (20-30 mm) is required within 3 days after treatment to activate FLEXIDOR 125 and to ensure its correct positioning in the upper layer of the compost. A repeat application may be necessary to control groundsel.
Field grown hardy ornamental nursery stock	2.0	20.0	200-500	5	Apply to new or established plantings. Soils should be firm, moist, free of clods and emerged weeds at application. Repeat as necessary but no more than two applications per year. Irrigate as necessary to prevent soil surface becoming dry. Where control of grasses and emerged broad-leaved weeds is needed tank-mix with KERB FLO. A repeat application may be necessary to control groundsel
Amenity plantings of trees and shrubs	2.0	20.0	200-400	5	Apply to newly planted or established trees and shrubs before weed emergence. Soils should be firm, moist, free of clods Where control of grasses and emerged broad-leaved weeds is needed tank-mix with KERB FLO. A repeat application may be necessary to control groundsel

## COMPATIBILITY

For the latest advice on tank mixes please contact Dow AgroSciences

## TRADEMARK ACKNOWLEDGEMENTS

FLEXIDOR and KERB are trademarks of Dow AgroSciences LLC

Sovereign is a trademark of BASF plc

## Conditions of Supply

All goods supplied by us are of high grade and we believe them to be suitable but, as we cannot exercise control over their storage, handling, mixing or use, or the weather conditions before, during or after application which may affect the performance of the goods, all conditions and warranties, statutory or otherwise, as to the quality or fitness for any purpose of our goods are excluded. No responsibility will be accepted by us or re-sellers for any failure in performance, damage or injury whatsoever arising from their storage, handling, application or use. These conditions cannot be varied by our staff or agents whether or not they supervise or assist in the use of such goods.

# SAFETY DATA SHEET

This safety data sheet does not form part of the label approved under the Control of Pesticides Regulations 1986. Following the instructions on the pesticide label for the specified uses should ensure that the product is used safely and efficaciously for those uses.

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Product Name: **FLEXIDOR\* 125 HERBICIDE (SP)**

LV70: 60608

Issue Date: June 94

Ref: H8512

Revised: Nov 04 (Section(s) 3,15&16)

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## 2. COMPOSITION/INFORMATION ON INGREDIENTS

**Dangerous components (see section 16 for complete R-phrases):**

			CAS	EC No
Isoxaben	12.5 %	R53	082558-50-7	407-190-8
	Balance			
Inert ingredients				
	000491			
Composition Code				

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## 3. HAZARDS IDENTIFICATION

This product is not hazardous according to EC criteria

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## 4. FIRST-AID MEASURES

Never give fluids or induce vomiting if patient is unconscious or is having convulsions.

### Ingestion

Do not induce vomiting. Call a physician. The decision of whether to induce vomiting or not should be made by a physician

### Eye Contact

Irrigate immediately with water for at least 5 minutes.

### Skin Contact

Wash skin thoroughly with soap and water.

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**Inhalation**

Remove to fresh air. Consult a physician.

**Note to Physician**

No known antidote, however due to the low acute oral toxicity it is unlikely that one would be required. Supportive care. Treatment based on judgement of physician in response to symptoms of patient.

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**5. FIRE-FIGHTING MEASURES****Extinguishing Media**

Water fog or fine spray. Carbon dioxide. Dry chemical fire extinguishers. Foam

**Hazardous Combustion Products**

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.

**Protection of Firefighters**

Wear protective clothing and use self-contained breathing apparatus.

**Additional Information**

Keep containers cool by spraying with water. Contain runoff to prevent entry into water or drainage systems.

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**6. ACCIDENTAL RELEASE MEASURES****Personal Precautions**

Wear appropriate safety clothing and eye/face protection (see Section 8).

**Environmental Precautions**

Do not wash into sewers or into any body of water. Advise water authority if spillage has entered watercourse or drainage system

**Methods of Cleaning Up**

Soak up with sand or other non-combustible absorbent material and place into containers for disposal. For large spills, barricade area and consult manufacturer. If further assistance is required, telephone the emergency contact number.

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**7. HANDLING AND STORAGE****Handling**

Use good personal hygiene. Do not consume or store food in the work area. Wash hands and exposed skin before eating, drinking or smoking and after work.

**Storage**

Product should be stored in compliance with local regulations. Store in a cool, dry, well-ventilated place in the original container. Protect from excessive heat and cold. Do not store near food, drink, animal feeding stuffs, pharmaceuticals, cosmetics or fertilisers. Keep out of reach of children.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Exposure Guidelines**

None established.

**Engineering Controls**

Good general ventilation should be sufficient.

**Respiratory Protection**

No respiratory protection should be needed.

For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

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**Hand/Skin Protection**

Wear clean, long-sleeved, body-covering clothing. Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur.

For emergency conditions: Use protective clothing impervious to this material.

**Eye/Face Protection**

Use safety glasses. Where contact with the liquid is likely, chemical goggles are recommended.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	: liquid
Colour	: milky white
Rel. density (water=1)	: 1.00-1.06 (20 deg.C)
Boiling point/range	: >100 deg.C
pH	: 7.0 (1% aqueous suspension)
Water solubility	: miscible
Flash point	: none

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**10. STABILITY AND REACTIVITY****Chemical Stability**

Is stable under normal storage conditions.

**Conditions to Avoid**

Avoid extremes of temperature.

**Materials to Avoid**

Strong basic, acidic or oxidising materials.

**Hazardous Decomposition Products**

None under normal conditions of storage and use.

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**11. TOXICOLOGICAL INFORMATION****Acute toxicity**

Assessment largely or completely based on data for active ingredient.

**Ingestion**

Very low toxicity if swallowed

The estimated oral LD50 for rats is >10,000 mg/kg.

**Skin Contact**

The estimated dermal LD50 for rats is >2000 mg/kg

Prolonged skin contact is unlikely to result in absorption of harmful amounts

Essentially non-irritating to the skin

**Eye Contact**

May cause slight eye irritation.

**Inhalation**

No adverse effects anticipated by this route of exposure incidental to proper handling.

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## 12. ECOLOGICAL INFORMATION

Assessment largely or completely based on data for active ingredient

### Persistence and Degradability

Undergoes microbial degradation in the soil. In soil, the half-life is approximately 150-180 days. There is no evidence of any significant leaching, therefore it is unlikely to contaminate ground water.

### Aquatic Toxicity

Toxicity to aquatic species occurs at concentrations greater than the water solubility.

### Avian Toxicity

Material is practically non-toxic to birds on an acute basis (LD50 >2000 mg/kg).

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## 13. DISPOSAL CONSIDERATIONS

Do not contaminate ponds, waterways or ditches with chemical or used container. Wash out thoroughly. Container and washings must be disposed of safely and in accordance with applicable regulations. The preferred options are to send to licensed reclaimer or to permitted incinerators. Do not re-use container for any purpose.

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## 14. TRANSPORT INFORMATION

Product is not classified for any mode of transportation.

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## 15. REGULATORY INFORMATION

**Hazard Symbol :** None required.

**Risk Phrases :** None required.

**Safety Phrases :** None required

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## 16. OTHER INFORMATION

Risk-phrases in Section 2

R53 – May cause long-term adverse effects in the aquatic environment

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The information herein is given in good faith and to the best of our knowledge but no warranty, express or implied, is made.