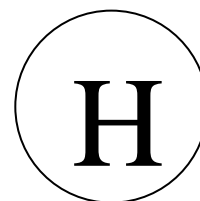


FRONT LABEL



## ASULOX

A post-emergence translocated herbicide for the control of bracken.  
MAPP 13175

A soluble concentrate containing 400 g/L (33.6% w/w) of the sodium salt of asulam

(Size and batch number)

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



This label is compliant with the CPA Voluntary Initiative Guidance

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## **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) AND SUITABLE PROTECTIVE GLOVES** 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.

**NO PERSON MAY CARRY OUT AERIAL SPRAYING OR CAUSE OR PERMIT ANOTHER PERSON TO CARRY OUT AERIAL SPRAYING** unless such spraying is authorised by an aerial spraying permit issued by the Chemicals Regulation Directorate.

**DO NOT BREATHE SPRAY.**

**WASH HANDS AND EXPOSED SKIN** before meals and after work.

**WHEN USING** do not eat drink or smoke

### **Environmental Protection**

**LIVESTOCK MUST BE REMOVED** from areas to be treated.

**LIVESTOCK MUST BE KEPT OUT OF TREATED AREAS** until poisonous weeds such as ragwort, have died and become unpalatable<sup>#</sup>.

**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 water body, unless a Local Environment 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 water body. Aim spray away from water.

This product qualifies for inclusion within the Local Environment 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 or the statutory buffer zone must be maintained. The results of the LERAP must be recorded and kept available for three years.

**TO PROTECT AQUATIC ORGANISMS**, respect an unsprayed horizontal buffer zone distance to surface water bodies of 160 m when spraying from aircraft using standard nozzles.

**TO PROTECT AQUATIC ORGANISMS**, respect an unsprayed horizontal buffer zone distance to surface water bodies of 50 m when spraying from aircraft using low drift nozzles such RD1000 Pencil Jets or Delavan RD 'Raindrop' type nozzles.

**EXTREME CARE MUST BE TAKEN** to avoid spray drift onto non-crop plants outside of the target area.

**OPERATORS MUST TAKE INTO ACCOUNT** ground nesting birds before treatment.

**TO PROTECT GROUND NESTING BIRDS** use before 1<sup>st</sup> July in the season of use is not allowed.

Where there is a risk to rare or sensitive species, or where spraying is to take place near a Site of Specific Scientific Interest then advice must be sought from the appropriate conservation agency -

Natural England, Scottish Natural Heritage, Natural Resources Wales or the Environment & Heritage Service in Northern Ireland.

# This may take several weeks following spraying, depending upon climatic conditions and growth stage of weeds.

**Storage and Disposal**

KEEP AWAY from food drink and animal feedingstuffs.

KEEP OUT OF REACH of children.

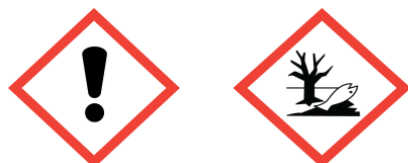
KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.

WASH OUT CONTAINER THOROUGHLY and dispose of safely.

## BACK LABEL

### **ASULOX**

A soluble concentrate containing 400 g/L (33.6% w/w) of the sodium salt of asulam



### **WARNING**

**H317 – May cause an allergic skin reaction.**

**H410 – Very toxic to aquatic life with long lasting effects.**

P280 – Wear protective gloves/protective clothing.

P302+P352 – IF ON SKIN: Wash with plenty of water.

P273 – Avoid release into the environment.

P391 – Collect spillage.

Sp1 – 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).

EUH 401 - To avoid risks to man and the environment, comply with the instructions for use.

### **IMPORTANT INFORMATION**

FOR USE ONLY AS AN AGRICULTURAL/HORTICULTURAL AND FORESTRY HERBICIDE

<b>Crops/Situations</b>	<b>Maximum individual dose</b>	<b>Maximum number of treatments</b>
Rough Grazing, Moorland and Amenity Grassland	11.0 litres/product/hectare	One per year
Forest	10.0 litres/product/hectare	One per year

Other specific restrictions:

This product must only be applied in accordance with the terms of this Emergency Authorisation and the product label.

No person may carry out aerial spraying or cause or permit another person to carry out aerial spraying unless such spraying is authorised by an aerial spraying permit issued by the Chemicals Regulation Directorate.

Applications made via hand-held equipment must be made in a maximum concentration of 1 part product to 100 parts water.

## INSIDE LABEL

### **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.

#### **Moorland, grassland and amenity vegetation**

### **BRACKEN CONTROL**

#### **RESTRICTIONS**

Fronds must not be damaged by stock, frost (bronzed and stunted fronds) or by cutting before treatment.

DO NOT apply during or immediately after drought periods or in conditions of high temperature and low humidity.

DO NOT cut bracken for at least 4 weeks after spraying to permit movement of ASULOX to rhizome buds; preferably leave undisturbed until late autumn.

DO NOT admit stock for 4 weeks after treatment to avoid a) trampling of treated fronds and b) the risk of poisonous weeds such as ragwort being rendered palatable by the treatment.

At least 6 weeks should elapse between applying ASULOX and sowing or planting any subsequent crop.

DO NOT use adjuvants with ASULOX in forestry situations when overspraying trees

#### **WEEDS CONTROLLED**

NOTE: No outward signs of the effects of ASULOX on bracken will be observed during the current season following application. The effects only become apparent the following spring when normal frond emergence in treated bracken fails to occur.

Apply ASULOX on a dry day. Ideally, there should be 24 hours without rain to allow for adequate uptake of ASULOX into the bracken plant. Light rain after 6 hours should not adversely affect activity.

#### **Primary clearance treatments and containment**

Bracken should be treated in full frond (all fronds fully expanded) but before yellowing (start of senescence). Normally this will be within the period mid July to late August

#### **Follow up treatments for bracken clearance**

Because of dormant buds on the rhizome system of bracken, complete control will not be achieved by a single application of ASULOX. If bracken is to be cleared, annual re-treatment of re-growth using spot applications is essential. Re-growth tends to be stunted but should be treated at the same timing as primary applications, irrespective of the state of frond development.

**IF NO FOLLOW-UP TREATMENT OR LAND IMPROVEMENT PROGRAMME IS CARRIED OUT, THE LAND IS LIKELY TO BE RE-INFESTED WITH BRACKEN WITHIN 5 YEARS OF A PRIMARY APPLICATION.**

#### **MIXING**

Depending on application method (see below), ASULOX can be applied in a water based system with or without a suitable adjuvant (See the Chemicals Regulation Directorate Official List for details). Adjuvants enhance the uptake of ASULOX by the bracken fronds thereby improving reliability under adverse conditions. Adjuvants should NOT be used in forestry situations when overspraying trees or other situations where selectivity of the applied spray may be critical.

Half fill the spray tank or container with water and then pour in the required amount of ASULOX. Top up with water then add an adjuvant where this is required. Ensure thorough mixing before commencing spraying.

## **CROP SPECIFIC INFORMATION**

Only one application should be made per crop/situation per year.

As a general rule, no bracken spraying should be attempted along stream banks, wet gulleys, screes and other locations where rare or unusual plants are often to be found.

### **Grassland species tolerance to ASULOX**

Some grasses and herbs may be damaged by ASULOX. In practice, a dense bracken canopy protects the underlying vegetation and any check to these species is usually only temporary. The more sensitive species include Yorkshire-fog, Timothy, Cock's-foot, bents, annual meadow-grass, daisy, docks, plantains, saxifrage and all other ferns.

### **Tree species tolerance to ASULOX**

Most species are unaffected. However, young specimens of the following may exhibit chlorosis and a slight check in growth if directly sprayed whilst actively growing:

Beech	Grand fir	Scots pine
Birch	Japanese larch	Bilberry
Corsican pine	Norway spruce	Gorse
Douglas fir	Poplar	Heathers
Elm	Sitka spruce	

Mature specimens of the above, as well as hawthorn, holly and rowan will be unharmed. Western hemlock and willows are more susceptible and spraying of these species should be avoided.

## A. BRACKEN CONTROL IN ROUGH GRAZING, MOORLAND AND AMENITY GRASSLAND

<b>BRACKEN CONTROL IN GRASSLAND AND AMENITY VEGETATION</b>	
<p><b>HELICOPTER</b>  <b>- AERIAL application</b>                      NB. Fixed wing aircraft are not recommended for the application of ASULOX to bracken.</p>	<p>Apply ASULOX at 11 L/ha with an adjuvant (0.1%) in a total spray volume, including water, of 44 L/ha.</p>
<p><b>TRACTOR MOUNTED SPRAYER</b>                      (&amp; other vehicle mounted sprayers)  <b>- OVERALL treatment</b></p>	<p>Apply ASULOX at 11 L/ha in 400 - 500 L/ha of water as a MEDIUM or COARSE spray (BCPC category). Adjust boom height to give uniform coverage at the top of the bracken fronds.</p>
<p><b>KNAPSACK SPRAYER or HAND LANCE</b> (Hand-operated)  <b>- SPOT and OVERALL spray treatment</b></p>	<p>Mix 1 part ASULOX with 100 parts water (see Guide to Dilution Rates) and an adjuvant (0.1%).                      Avoid spraying to run-off.                      The knapsack lance should be fitted with a nozzle to apply a MEDIUM or COARSE spray (BCPC category).                      A red food-stuffs dye may be mixed with the spray to help identify treated fronds.</p>

## B. BRACKEN CONTROL IN FORESTRY AREAS

DO NOT use adjuvants / wetters with ASULOX in forestry situations when overspraying trees

### Releasing treatments in forestry and habitat management

Apply ASULOX at 5-10 L/ha depending on vegetation requirements. The higher rate (10 L/ha) will provide a longer period of bracken suppression and “release”.

### Bracken control for tree planting programmes in forestry

#### New planting:

Pre-planting: Treat mature bracken in late summer pre-planting. Leave bracken undisturbed until it dies back, then plant up in accordance with normal forestry practice. DO NOT re-plant for at least 4 weeks after spraying.

Post planting: Allow at least 4 weeks between application and cutting or clearing bracken from small trees.

#### Re-planting:

Spring & early summer felling: treat mature bracken re-growth in late summer pre-planting.

Late summer / autumn felling: treat area before felling (treatment after felling may show reduced efficacy where felling has damaged bracken stands). Leave at least 4 weeks between treatment and felling to allow translocation of ASULOX to the rhizomes.

(Mid-summer felling conflicts with the timing of ASULOX applications as the bracken is immature before felling and bracken re-growth has no time to mature after felling)

BRACKEN CONTROL IN FORESTRY AREAS	
<b>TRACTOR SPRAYER</b> (& other vehicle mounted sprayers) <b>- OVERALL treatment</b>	Apply ASULOX at 5-10 L/ha in 200 - 300 L/ha of water as a MEDIUM or COARSE spray. Adjust boom height to give uniform coverage at the top of the bracken fronds.
<b>KNAPSACK SPRAYER or HAND LANCE</b> (Hand-operated) <b>- SPOT and OVERALL spray treatment</b>	Mix 1 part ASULOX with 100 parts water (see Guide to Dilution Rates). Avoid spraying to run-off. A red food-stuffs dye may be mixed with the spray to help identify treated fronds.
<b>HELICOPTER</b> <b>- AERIAL application</b> N.B. Fixed wing aircraft are not recommended for application of ASULOX	Apply ASULOX at 5-10 L/ha in a total spray volume, including water, of 55 L/ha.

For guidance on dilution rates for spot treatments to control bracken, see COMPANY ADVISORY INFORMATION section of the label.



## COMPANY ADVISORY INFORMATION

### BRACKEN CONTROL: GUIDE TO DILUTION RATES FOR SPOT TREATMENT

Dilution rates for 1 part ASULOX to 100 parts water.

#### Knapsack Sprayer:

Sprayer Capacity (Litres)	Amount of ASULOX per filling (ml)
5	50
7	70
12	120
20	200

#### Standard Sprayer with Hand-lance:

Sprayer Capacity (Litres)	Amount of ASULOX per filling (Litres)
200	2
250	2.5
400	4
500	5

## RESISTANCE

Total reliance on one pesticide will hasten the development of resistance. Pesticides of different chemical types or alternative control measures should be included in the planned programme. Alternating with different modes of action is a recognised anti resistance strategy.