



# ASULOX<sup>®</sup>

## HERBICIDE

A post-emergence translocated herbicide for the control of bracken under the conditions of the emergency authorisation issued by Chemicals Regulation Division of the Health and Safety Executive.

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



### Warning

**May cause an allergic skin reaction.**  
**Very toxic to aquatic life with long lasting effects.**

Wear protective gloves/protective clothing.

IF ON SKIN: Wash with plenty of water.

Avoid release into the environment.

Collect spillage.

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).

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

## IMPORTANT INFORMATION

FOR PROFESSIONAL USE ONLY AS A HERBICIDE TO CONTROL BRACKEN

Crops/Situations	Maximum individual dose (L product/ha)	Maximum number of treatments (per year)	Latest time of application
Rough Grazing, Moorland and Amenity Grassland (see Other Specific Restriction 11)	11.0	One	13 September in the season of use
Forest (pre-planting and in first five years after planting)	10.0	One	13 September in the season of use

### OTHER SPECIFIC RESTRICTIONS

1. This product must only be applied in accordance with the terms of this Emergency Authorisation, the product label and/or associated leaflet.
2. This product must only be used for the control of bracken (*Pteridium aquilinum*).
3. If applied aerially, it must only be by helicopter using low drift nozzles.
4. 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 HSE
5. If applied aerially, this product must only be applied to dense bracken in continuous stands covering a minimum of 80% of the area to be treated
6. Livestock must be removed from areas to be treated and must not be allowed to return until at least 1 month after treatment.
7. Where ragwort is present users should consult the 'Code of Practice on How to Prevent the Spread of Ragwort'. Ragwort plants sprayed with this herbicide are more palatable and contain higher levels of toxins. Livestock must be excluded from treated areas until any ragwort has completely recovered or died and there is no visible sign of the dead weed. Do not include treated ragwort in hay or silage crops.
8. Containers must not be re-used.
9. A maximum concentration of 1 part product to 4 parts water must not be exceeded.
10. When this product is applied via helicopter with adjuvants, it must only be with adjuvants that have a List Entry that permits aerial application in mixture with asulam and all conditions of the List Entry must be followed.
11. Ground-based use is permitted only on areas with a statutory conservation designation (such as Sites of Special Scientific Interest or Areas of Special Scientific Interest) or Agri-Environment scheme agreement land, including:
  - Countryside Stewardship
  - Environmental Stewardship
  - Environmental Farming Scheme (Northern Ireland)
  - Agri-Environment Climate Scheme (Scotland)
  - Section 16 of the Environment (Wales) Act 2016 and Welsh Agri-Environment and Rural Development Programme grant schemes

where specific agreement for bracken control including the use of 'Asulox' has been made with Natural England, Scottish Natural Heritage, Natural Resources Wales or the Northern Ireland Environment Agency. Records of this agreement must be kept and made available on request.

# SAFETY PRECAUTIONS

## OPERATOR PROTECTION

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:

**OPERATORS MUST 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.

**DO NOT BREATHE SPRAY.**

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

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

## ENVIRONMENTAL PROTECTION

**TO PROTECT AQUATIC ORGANISMS**, respect an unsprayed horizontal buffer zone distance to surface water bodies of 90 m when spraying from helicopters using low drift nozzles such RD1000 Pencil Jets or Delavan RD 'Raindrop' type nozzles.

**SINCE THERE IS A RISK TO AQUATIC LIFE** from use, users not applying the statutory buffer zone must either themselves carry out or ensure that someone else has carried out a Local Environment Risk Assessment for Pesticides (LERAP) on their behalf before each spraying operation from a horizontal boom sprayer. Users must not allow direct spray from such sprayers to fall within 5 m of the top of the bank of any static or flowing waterbody or within 1 m of a ditch which is dry at the time of application (these distances to be measured as set out in the booklet 'Local Environment Risk Assessment for Pesticides - Horizontal Boom Sprayers' and any amendments that are made to it) unless:

- (a) The LERAP indicates that a narrower buffer zone will be sufficient; and
- (b) Any measures indicated by the LERAP as justifying the narrower buffer zone are complied with in full and in accordance with any conditions applicable to them.

Spray must be aimed away from water.

Spray from hand-held sprayers must not be allowed to fall within 1 m of the top of the bank of a static or flowing waterbody. Spray must be aimed away from water.

The results of the LERAP must be recorded in written form and must be available for a period of three years for inspection to any person entitled to exercise enforcement powers under or in connection with the Plant Protection Products Regulations 2011 or the Plant Protection Products (Sustainable Use) Regulations 2012. (An electronic record will satisfy the requirement for a written record, providing it is similarly available for inspection and can be copied).

Detailed guidance on LERAPs and how to conduct a LERAP are contained in the booklet 'Local Environment Risk Assessment for Pesticides - Horizontal Boom Sprayers', available from HSE Chemicals Regulation Division's website. All LERAPs must be carried out in accordance with this Guidance and any amendments that are made to it.

**TO PROTECT NON-TARGET PLANTS** respect an untreated buffer zone of 5 metres to non-crop areas. **HORIZONTAL BOOM SPRAYERS MUST BE FITTED WITH AT LEAST THREE STAR DRIFT REDUCTION TECHNOLOGY.** Low drift spraying equipment must be operated according to the specific conditions stated in the official three-star rating for that equipment as published on HSE Chemicals Regulation Directorate's website.

**TO PROTECT NON-TARGET TERRESTRIAL PLANTS**, respect an unsprayed horizontal buffer zone distance to non-target environment of 90 m when spraying from aircraft using low drift nozzles such as 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.

**TO PROTECT GROUND NESTING BIRDS**, use before 1 July in the season of use is not allowed.

Operators must take into account ground nesting birds. There is a potentially significant risk to ground nesting birds towards the end of the breeding season.

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 Northern Ireland Environment Agency.

### **STORAGE AND DISPOSAL**

KEEP AWAY from food drink and animal feedingsuffs.

KEEP OUT OF REACH of children.

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

WASH OUT CONTAINER THOROUGHLY and dispose of safely.

CONTAINERS MUST NOT be re-used.

## **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.

## **BRACKEN CONTROL**

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.

AT LEAST 6 WEEKS should elapse between applying ASULOX and sowing or planting any subsequent crop.

DO NOT admit livestock for at least 1 month after treatment to avoid trampling of treated fronds.

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. 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**

ASULOX can be applied in a water-based system. If you wish to use it with an adjuvant, see the Chemicals Regulation Division Official List for details of approved adjuvants. Adjuvants must 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 and top up with water. When ASULOX is used with an adjuvants, all conditions of the List Entry must be followed. Ensure thorough mixing before commencing spraying.

### **CROP SPECIFIC INFORMATION**

Only one application should be made per year.

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.

Some forestry trees may be susceptible to damage at high rates of asulam. It is not possible to predict the tolerance of all forestry plants to asulam.

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

#### **AERIAL application by HELICOPTER only**

Apply ASULOX at 11 L/ha in a total spray volume, including water, of 44 L/ha.

#### **TRACTOR MOUNTED SPRAYER (& other vehicle mounted sprayers) - OVERALL treatment**

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.

#### **KNAPSACK SPRAYER or HAND LANCE (Hand operated) - SPOT and OVERALL spray treatment**

Mix 1 part ASULOX with minimum 4 parts water.

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.

### **B. BRACKEN CONTROL IN FORESTRY AREAS**

#### **AERIAL application by HELICOPTER only**

Apply ASULOX at 5-10 L/ha in a total spray volume, including water, of 55 L/ha.

#### **TRACTOR MOUNTED SPRAYER (& other vehicle mounted sprayers) - OVERALL treatment**

Apply ASULOX at 10 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.

#### **KNAPSACK SPRAYER or HAND LANCE (Hand operated) - SPOT and OVERALL spray treatment**

Mix 1 part ASULOX with minimum 4 parts water.

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.

#### **Releasing treatments in forestry and habitat management**

Apply ASULOX at 5-10 L/ha as an aerial overspray to saplings for the control of bracken as a releasing treatment. The higher rate (10 L/ha) will provide a longer period of bracken suppression and "release". Do not use adjuvants with ASULOX in forestry situations when overspraying young trees.

#### **Bracken control for tree planting programmes in forestry**

##### **New planting:**

Treat mature bracken only after 1 July and before the end of August 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. Allow at least 4 weeks between application and cutting or clearing bracken from small trees to permit movement of ASULOX to the rhizome.

##### **Re-planting:**

After spring & early summer felling: treat mature bracken re-growth in late summer before the end of August and before re-planting.

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.

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.

#### **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.

#### **COMPANY ADVISORY INFORMATION**

##### **CONDITIONS OF SUPPLY**

All goods supplied by the company are of good quality and we believe them to be fit for purpose. However, 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, and 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. Brand names used in this label may be registered trademarks of UPL Europe Ltd, or other manufacturers in which propriety rights may exist.

To access the Safety Data Sheet for ASULOX please use the link below or scan the code.



[upl-ltd.com/uk/product-details/asulox](http://upl-ltd.com/uk/product-details/asulox)

Alternatively, contact your local supplier.

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**SHAKE WELL BEFORE USE**  
**PROTECT FROM FROST**

For Batch Number and Manufacturing Date see bottle.

**20 Litres**

**UPL Europe Ltd**  
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**CARECHEM24 : +44 (0) 1235 239670**

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