

Asteroid™

A soluble concentrate containing 450 g/l glyphosate present as 607 g/l (50.5% w/w) of the isopropylamine salt
A non-residual herbicide for the control of annual and perennial broadleaved and grassy weeds.

Safety data sheet available on request.

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

Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site except for triple rinsed empty containers which can be disposed of as non-hazardous waste.

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).

Keep out of reach of children.

Keep away from food, drink and animal feeding stuffs.

Wear suitable protective clothing and gloves.

This material and its container must be disposed of in a safe way.

This container label is accompanied by a leaflet containing detailed instructions which must be read before use.

To access the Safety Data Sheet for this product, scan the QR code or use the weblink below:
<http://www.headland-ag.co.uk/product-download.asp?i=82>
Alternatively, contact your supplier.



IMPORTANT INFORMATION FOR PROFESSIONAL USE ONLY AS AN AGRICULTURAL / HORTICULTURAL / INDUSTRIAL / FORESTRY / NON SELECTIVE HERBICIDE

Crops	Maximum dose rate litres per hectare	Maximum number of treatments	Pre-harvest interval or Latest time of application
Winter and spring wheat, barley, oats, combining peas, field beans, linseed	3.2	1 per crop	7 days before harvest
Oilseed rape	3.2	1 per crop	14 days before harvest
Stubbles of all crops	3.2 1.2	1 per situation	Cultivation and drilling: 6 hours after spraying (annual weeds), 24 hours after spraying (annual grasses), 5 days after spraying (perennial weeds)
Grassland	3.2	1 per year	5 days before harvest or grazing
Land not intended to bear vegetation (Non crop – permeable)	3.2	1 per year	-
Land prior to cultivation (All crops – pre planting)	4.8	1 per year	Cultivation and drilling: 6 hours after spraying (annual weeds), 24 hours after spraying (annual grasses), 5 days after spraying (perennial weeds)
Green cover on land temporarily removed from production (Set-aside)	4.0	1 per year	5 days before harvest or grazing
Apple and pear orchards	5.0	1 per year	After harvest (post leaf fall) but before green cluster
Cherry, damson and plum orchards	5.0	1 per year	After harvest (post leaf fall) but before green cluster
Forestry situations	10.0	1 per year	-

PCS No. 01990

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.



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Registration Holder:



PROTECT FROM FROST
Batch number: see neck of bottle

CONTENTS: 15 Litres

PEEL BACK FOR DIRECTIONS FOR USE LEAFLET

10040462

Asteroid™

FOR PROFESSIONAL USE ONLY AS AN AGRICULTURAL / HORTICULTURAL / INDUSTRIAL / FORESTRY HERBICIDE

Active ingredient: 360 g/l glyphosate present as 480 g/l (41.0% w/w) of the isopropylamine salt of glyphosate.

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.

GENERAL INFORMATION

Asteroid™ is a water-soluble, non-selective, non-residual herbicide for the control of most annual and perennial grasses and broad-leaved weeds. The product is absorbed by the foliage and translocated throughout the plant and root systems. Visible symptoms, such as gradual wilting and yellowing are usually obvious within 3 to 7 days of application to annual weeds, but not for 14 to 21 days on perennial weeds. Complete browning and root deterioration may require 20 to 30 days, this process will take longer in cooler weather.

Asteroid is inactivated on contact with the soil.

Restrictions

1. Weather Conditions

For best results a rain-free period of 6 hours and preferably 24 hours is required after application of this product.

Treating weeds which are suffering from drought stress may result in reduced efficacy. Extreme care should be taken to avoid spray drift as this can severely damage or destroy neighbouring crops and plants.

2. Associated Farming Practices

Lime, chemical or natural fertilisers or other pesticides should not be applied before treatment or to treated areas for at least 5 days before or after application of **Asteroid**.

3. Product Degradation and Following Crops

Asteroid is inactivated on contact with soil, by binding to soil particles. All crops may be planted or sown at specified intervals after treatment with **Asteroid**. A slight growth retardation following germination may be seen if seeds are sown by direct drilling amongst decaying treated vegetation, roots, rhizomes or stolons.

The action of **Asteroid** will be slower in cooler weather. This product should not be used under frosty conditions while weed growth is reduced by natural senescence.

4. Mixing and Application

Half fill clean spray tank with clean water, add required quantity of product and mix well; add remaining water.

DO NOT use mechanical agitators. Place the filling hose below water level to prevent excessive foaming and remove immediately after filling to prevent back-siphoning. When tank mixing with other products recommended on the label add the other product before adding **Asteroid**, then add the remaining water.

DO NOT STORE, MIX OR APPLY THIS PRODUCT FROM AN UNLINED OR GALVANISED STEEL TANK. Do not leave mixtures in spray tanks over long periods. Ensure that spray tanks are thoroughly ventilated.

5. Timing treatments

It is important when treating perennial weeds that there is a full emergence of healthy green foliage and active growth at the time of application.

The efficacy of this product is increased if the leaf surface for absorption is large.

Common Couch is particularly susceptible at the 4-5 leaf stage, where there is about 10-15 cm of new growth, when tillering and new rhizome growth is starting.

Most perennial broad-leaved weeds are particularly susceptible to treatment when they are actively growing and shortly before flowering.

Annual weeds should be growing actively at the time of treatment. Grasses should have at least 5 cm of growth.

Broad-leaved weeds should have at least two sizeable true leaves.

Under conditions of drought, flooding, frost or high temperatures, disease or insect damage or weeds heavily covered with dust, where plant growth is restricted the efficacy of this product will be reduced.

DIRECTIONS FOR USE

Asteroid may be applied to all areas which will be planted with food and feed crops, pre-harvest to wheat and oats intended for milling and barley intended for brewing. CONSULT PROCESSOR BEFORE USING ON CROPS INTENDED FOR PROCESSING.

NEVER APPLY PRE-HARVEST TREATMENT TO CROPS GROWN FOR SEED.

Barley intended for brewing and contract grown crops should only be treated following prior approval from the grain merchant.

Strains of some annual grasses, e.g. Black-grass, Wild-oats and Italian Rye-grass, have developed resistance to herbicides which may lead to poor control. A strategy for preventing and managing such resistance should be adopted. This should include integrating herbicides with a programme of cultural control measures. Guidelines have been produced by the Weed Resistance Action Group and copies are available from the HGCA, CPA, your distributor, crop advisor or product manufacturer.

Do not use glyphosate repeatedly in the same field over several years, as selection of resistant biotypes can take place and may become prevalent.

No extra surfactant should be added if the product is to be applied using a rotary atomiser sprayer.

ARABLE APPLICATION, stubbles of all crops and pre-cultivated land

Area of use	Target weeds	Extent of weed infestation	Application rate in l/ha	Water volume	Application details
Pre-harvest wheat (including Durum wheat) barley and oats	Common Couch	<25 shoots/m ²	2.0	Hydraulic sprayers 80-250 l/ha or rotary atomisers at 40 l/ha*	Apply when the moisture content of the crop grains is less than 30%, and at least 7 days before harvest. Use high clearance tractors with narrow wheels and crop dividers. NEVER TREAT CROPS WHICH ARE GROWN FOR SEED. Treated straw should not be used for horticultural mulch but may be used for all other applications. Following harvest, incorporate or remove straw as required. Treated area may be used for further cultivation after straw clearance.
		26 to 75 shoots/m ²	3.0		
		>75 shoots/m ²	4.0		
	Perennial broad-leaved weeds, and other perennial grasses Annual grasses leaves, broad-leaved weeds	All species at all levels of infestation All species at all levels	4.0 1.5**		
Pre-harvest of oilseed rape	Crop desiccation prior to combine harvesting	-	3.0	Use only hydraulic sprayers at 200-250 l/ha	Apply when seeds contain less than 30% moisture. Apply to standing crop 14-21 days before harvest. Use high clearance tractors with narrow wheels and crop dividers. DO NOT TREAT CROPS WHICH ARE GROWN FOR SEED. For effective combining do not treat crops with a significant amount of secondary growth nor treat areas of crop with delayed maturing caused from damage by poor drainage or birds. Extreme heat, drought or disease may cause crops to mature unevenly after treatment. After treatment straw should be incorporated or removed. Following this process normal cultivation may resume.
	Common Couch Annual weeds	<75 shoots/m ² All species at all levels	3.0		
	Common Couch, Perennial broad-leaved weeds, other perennial grasses	>75 shoots/m ² All species at all levels	4.0		
Pre-harvest use on combining peas and field beans	Common Couch	<75 shoots/m ²	3.0	Hydraulic sprayers 80-250 l/ha or rotary atomisers at 40 l/ha*	Apply at least 7 days before harvest to crop seeds containing less than 30% moisture. DO NOT TREAT CROPS WHICH ARE GROWN FOR SEED. This treatment must not be used for crop desiccation. Use high clearance tractors with narrow wheels and crop dividers.
	Common Couch	>75 shoots/m ²	4.0		
	Perennial broad-leaved weeds, other perennial grasses	All species at all levels	4.0		
Pre-harvest use on linseed	Common Couch	<75 shoots/m ²	3.0	Use only hydraulic sprayers 80-250 l/ha	Apply at least 7 days before harvest to crop seeds containing less than 30% moisture. A period of 28 days may be necessary before combine harvesting. NEVER TREAT CROPS WHICH ARE GROWN FOR SEED.
	Common Couch	>75 shoots/m ²	4.0		
	Perennial broad-leaved weeds, other perennial grasses	All species at all levels	4.0		

* Droplet size should be within 200-300 microns.

***) Some weeds such as Annual Nettle, Volunteer Potato, Polygonums, Rosebay Willow herb may not be controlled when using low rates.

A pre-harvest interval of 14 days should be observed during dull weather conditions.

Area of use	Target weeds	Extent of weed infestation	Application rate in l/ha	Water volume	Application details
Autumn and spring application to stubbles of all crop	Common Couch	<75 shoots/m ²	3.0	Use only hydraulic sprayers 80-250 l/ha or rotary atomisers at 40 l/ha*.	Drilling, direct drilling or cultivation may take place 5 days after spraying perennial weeds. For best results allow sufficient weed growth before spraying. In spring a period of at least 21 days of weed growth should be allowed prior to treatment. NEVER CULTIVATE BEFORE SPRAYING
	Common Couch	>75 shoots/m ²	4.0		
	Other perennial grasses, autumn volunteer potatoes	All species at all levels	4.0		
Stubbles of all crops land prior to cultivation	Volunteer cereals, other annual grasses, annual broad-leaved weeds	All species at all levels	1.5	Hydraulic sprayers 80-250 l/ha or rotary atomisers at 40 l/ha*.	Cultivation and drilling may take place 6 hours after spraying and annual broad-leaved weeds and 24 hours after spraying annual grasses. NEVER CULTIVATE BEFORE SPRAYING

* Droplet size should be within 200-300 microns.

**) Some weeds such as Annual Nettle, Volunteer Potato, Polygonums, Rosebay Willowherb may not be controlled when using low rates.

A pre-harvest interval of 14 days should be observed during dull weather conditions.

GRASSLAND

Asteroid should be applied at a maximum rate of 6 l/ha once per year at least 5 days before harvest, grazing or drilling.

Area of use	Target weeds	Extent of weed infestation	Application rate in l/ha	Water volume	Application details
Grassland destruction and control of associated weeds	Short rotation Rye-grass with annual weeds	Application rates should be adapted to control the least susceptible weeds present. See the following table for dose rates.	3.0	Hydraulic sprayers 150-250 l/ha	Do not apply lime, chemical or natural fertilisers or other pesticides before treatment, or onto treated areas within 5 days of ASTEROID application. Treat following regrowth or after grazing or mowing. Clear treated grass crop before planting or drilling the next crop. Remove poisonous plants before grazing or mowing. Grass and dower may be direct drilled after treatment on: - 1-2 year leys without mat, with all surface vegetation removed before drilling, 14 days after spraying. - Long leys with some mat should be sprayed in the autumn and not directdrilled until the following spring.
	Perennial grasses in leys of 2-4 years		4.0		
	Perennial broad-leaved weeds in long leys of 4-7 years		5.0		
	Permanent pasture		6.0		

DOSE RATES FOR CONTROLLING WEED SPECIES IN GRASSLAND

Application Rate-3.0 l/ha					
Annual Meadow-grass	Creeping Bent	Italian Rye-grass	Smooth Meadow-grass	Yorkshire-fog	Perennial Rye-grass
Application Rate-4.0 l/ha					
Red Fescue	Bracken	Broad-leaved Dock	Creeping Soft-grass	Plantains	Common Couch
Creeping Buttercup	Common Ragwort	Cock's-foot			
Application Rate-6.0 l/ha					
Yarrow	Creeping Thistle	Perennial Sow-thistle	Common Nettle		

NATURAL SURFACES NOT INTENDED TO BEAR VEGETATION, PERMEABLE SURFACES OVERLYING SOIL, HARD SURFACES AND LAND PRIOR TO CULTIVATION

Asteroid* should be applied at a maximum rate of 6.0 l/ha on land not intended for cropping.

Area of use	Target weeds	Extent of weed infestation	Application rate in l/ha	Water volume	Application details
Natural surfaces not intended to bear vegetation, permeable surfaces overlying soil, NATURAL, SURFACES NOT INTENDED TO BEAR VEGETATION, PERMEABLE SURFACES OVERLYING SOIL, HARD SURFACES, land prior to cultivation.	Annual weeds	All species at all levels	1.5	Hydraulic sprayers 80-250 l/ha, rotary atomisers at 40 l/ha*, or knapsack sprayer (see "Spray Application Techniques and Equipment").	<p>DO NOT USE IN OR ALONG HEDGEROWS. DO NOT USE UNDER GLASS OR POLYTHENE.</p> <p>For use for weed control;</p> <ul style="list-style-type: none"> - along fence lines, around buildings and storage areas, along roads, paths and ditch edges. - for clearance of land prior to sowing. For annual weed control, allow 6 hours and for perennial weed control 5 days before cultivating. Allow 7 days before planting trees shrubs and other crops. - To control regrowth in root crop storage areas. - Apply this product carefully. Ensure spraying takes place only when weeds are actively growing (normally March to October) and is confined only to visible weeds including those in the 30 cm swath covering the kerb edge and road gully – do not overspray drains.
	Perennial grasses	All species at all levels	4.0		
	Perennial broad-leaved weeds	All species at all levels	6.0		

*Droplet size should be within 200-300 microns

GREEN COVER ON LAND NOT BEING USED FOR CROP PRODUCTION e.g. SET-ASIDE

Before using on land temporarily taken out of production as part of a grant aided scheme, ensure compliance with the management rules of the scheme.

Area of use	Target weeds	Extent of weed infestation	Application rate in l/ha	Water volume	Application details
Green cover on land temporarily removed from production e.g. set-aside	Annual weeds including volunteer and Wild-oats, Black-grass, Brome	Germinating seedlings	1.5	Hydraulic sprayers 80-250 l/ha, rotary atomisers 40 l/ha or knapsack sprayer (see Spray Application Techniques and Equipment").	When green cover crop is predominantly grass, refer to the recommendations and application details in section "Grasslands".
	Various perennial grasses.	<75 shoots/m ²	3.0		
		>75 shoots/m ²	4.0		
Annual and perennial broad-leaved weeds	All species at all levels	4.0			

*Droplet size should be within 200-300 microns.

ORCHARDS

Asteroid should be applied at a maximum rate of 5.0 l/ha once per year.

Area of use	Target weeds	Extent of weed infestation	Application rate in l/ha	Water volume	Application details
Apple, pear, plum, cherry and damson orchards pre-planting	Perennial grasses and broad-leaved weeds in; - arable stubbles - pastures	All species at all levels	4.0	Hydraulic sprayers 200-250 l/ha or rotary atomisers 40 l/ha*.	Refer back to the "Timing of Treatments" section. Allow 7 days after spraying before planting top fruit crops.
			5.0		
Within orchards containing apples, pears, plums, cherry and damsons	Perennial grasses and broad-leaved weeds	All species at all levels	5.0	Hydraulic sprayers 200-400 l/ha (optimum 250l/ha) or knapsack sprayer (see "Spray Application Techniques and Equipment")	<p>Fruit trees should be established for at least two years before treatment. AVOID CONTACT WITH BRANCHES AND TRUNKS 30 CM ABOVE GROUND LEVEL.</p> <p>Treatment should be timed after trees have lost their leaves in autumn or for apples and pears in spring before green cluster and before white bud stage for stone fruit.</p>

*Droplet size should be within 200-300 microns

FORESTRY

When conventional hydraulic sprayers are being used the performance of **Asteroid** can be improved by the addition of a suitable authorised adjuvant to the spray tank, for all pre-plant and post-plant uses in forestry only.

Adjuvants should not be added when using rotary atomiser sprayers.

Asteroid should be applied post-planting in forestry at a maximum rate of 10 l/ha.

Area of use	Target weeds	Extent of weed infestation	Application rate in l/ha	Water volume	Application details
Forestry Pre-planting on arable land and grassland areas	Arable weeds Grassland weeds	All species at all levels All species at all levels	4.0 5.0	Hydraulic sprayers 200-400 l/ha (optimum 250 l/ha) or rotary atomisers 40 l/ha*.	All tree species may be planted 7 days after treatment.
Post-planting for clean-up around trees with knapsack applicators	Perennial and annual grasses Bracken, Beech-brush, Brambles, Ash, Oak, Willow, Sycamore, Hazel Heather - peat soil - mineral soil Rhododendron	All species at all levels	4.0 3.0 4.0 6.0 10 or 8.0 (+)	Hydraulic knapsack sprayers, (see Spray Application Techniques and Equipment).	Always use TREE GUARD when treating during the growing season. Bracken should be treated after frond tips are uncurled but pre-senescence. Apply to heather late August to end of September. Apply to all other woody weeds from June to August before leaf senescence (but after new crop growth has hardened). (+) Rhododendrons may be controlled at 8.0 l/ha if a suitable authorised adjuvant is added.

* Droplet size should be between 200-300 microns.

(+) Add a suitable authorised adjuvant.

SPRAY APPLICATION TECHNIQUES AND EQUIPMENT

Hydraulic sprayers mounted on tractors

Use any equipment which can apply at 80-250 l/ha as a BCPC defined Medium or Coarse quality spray with a pressure ranging from 1.5 to 2.5 bars with 80° or 110° nozzles.

Pre-harvest applications should be made using high clearance tractors with narrow wheels and crop dividers, where spray boom can be raised to the height just above the top of the crop.

For most applications 200-250 l/ha water volume should be used. Spray pressure (typically 1.5-2.5 bars) must be adjusted and related to tractor speed, water volume and nozzle type. However, specific low volume nozzles may be used with a reduced water volume ranging from 80-120 l/ha. When using low volume nozzles, spray pressure and tractor speed should be adjusted.

A typical speed range would be 4-9 km/hour. When applying pre-harvest to crops, a low speed to avoid excessive bounce is recommended.

All spray equipment should be calibrated before use particularly if nozzles have been changed. Check at least one nozzle from each side of the boom.

Before starting spray application be sure to check that;

the boom is level

the boom height is correct for the particular application

all nozzles along the boom are aligned at the correct angle to the forward direction of the tractor.

Rotary Atomisers

Select one of the following applicators;

CDA Boom™ and CDA Lightweight™

Microdrop™,

Girojet™,

Dual-Option Sprayer™,

Hydraspin™

Applications should be made using a water volume of 40 l/ha, at a speed of 4-9 km/h with a droplet diameter set at 200-300 µm, equivalent to the BCPC definition 'Medium' or 'Coarse'. The spray equipment should be correctly calibrated according to the manufacturers instructions.

Directed application/knapsack

(e.g. Cooper Pegler)

Knapsack sprayers may be used in forestry, orchards, setaside land and land not intended to bear vegetation and pre-cultivation. Spray volumes normally range from 200-300 l/ha, but may be reduced to 100-150 l/ha if low pressure nozzles have been fitted. Spray quality should be adjusted to a "medium" or "coarse" spray as defined by BCPC.

When using a knapsack sprayer with a total capacity of 10 litres, applying at 4.0 l/ha with a spray volume of 200 l/ha, gives a concentration of 2%, thus requiring 0.2 litres of **Asteroid** in 9.8 litres of water. A 10 litre spray volume will cover a 500 m² area using a 1m wide swath and a 1m/sec walking speed.

Weedwiper Applicator (e.g. Weedwiper Mini)

Weedwiper Applicator may be used in Orchards, Non-Crop and Aquatic areas.

Do not exceed the following dilutions: Weedwiper Mini – 0.7:2 dilution with water; other weedwipers – 0.7:1 dilution with water.

Spot Gun- Tree Injection

The applicator must be fitted with a solid stream nozzle, either a Spraying Systems 0006 or a Delevan LF 6.0. Set the gun to apply 2.0 ml of neat **Asteroid** per cut

Spot Gun-Stump treatments

The applicator must be fitted with narrow angle cone nozzles, TG3 or TG5 or solid stream nozzle tips either a Delavan LF 6.0 or Spraying Systems 0006.

Set the gun to deliver 4 ml per squeeze and select the concentration of **Asteroid** according to usage recommendations. A dose of 4 ml should be applied for each 5 cm diameter of tree stump.

Sprayer maintenance

Be sure that all spraying equipment is functioning correctly and that equipment is maintained in accordance with manufacturers instructions. Ensure that any damaged, malfunctioning or worn parts are replaced before re-using the spray equipment.

Cleaning spray equipment

Always clean spray tanks and all parts of the equipment adequately after use, using the recommended

detergents to be sure to avoid contamination with residues. Contamination with product residues could damage crops when the sprayer is next used for another pesticide.

Trade Mark References

Asteroid is a registered trademark of Cheminova A/S.

SPECIMEN -
Use by 30 Sept 2025