

GLYPHOSATE

Glyfos[®] ProActive

Herbicide

To access the Safety Data Sheet for this product, scan the QR code or use the website below: <http://www.landandag.co.nz/products/da/da.html.asp?ID=42>
Alternatively, contact your supplier.



A soluble concentrate containing 360 g/l glyphosate present as 480 g/l (41.2% w/w) of the isopropylamine salt and tallow alkyl amine ethoxylate.

A herbicide for the control of most annual and perennial weeds.

Product Registration No. MAPP 11976



Product identifier: Glyphosate 360 g/l SL

WARNING

Very toxic to aquatic life.

Toxic to aquatic life with long lasting effects.

Avoid release to the environment.

Collect spillage.

Dispose of contents/container as hazardous waste.

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

IMPORTANT INFORMATION

FOR USE ONLY AS AN HORTICULTURAL / INDUSTRIAL / FORESTRY / AQUATIC HERBICIDE

Crops	Maximum Individual Dose Litres/ha	Maximum Number of Treatments	Harvest interval/ latest time of application
Edible crops (before planting), non-edible crops (before planting), land prior to cultivation	6.0		7 days before cultivations, drilling or planting
Natural surfaces not intended to bear vegetation, permeable surfaces overlying soil, hard surfaces	6.0		
Enclosed waters, land immediately adjacent to aquatic areas	6.0		
Forest (weed control)	10.0		
Forest (chemical thinning)	2 mls per cut per 10 cm dia.		
Forest (stumps)	See 'Other Specific Restrictions'		

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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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 effective use of this product.

GENERAL INFORMATION

Mode of Action

Glyfos ProActive is an effective herbicide when used as directed against most annual and perennial grasses and broad-leaved weeds.

Glyfos ProActive is translocated from the treated leaves throughout the plant and to underground roots, rhizomes and stolons.

Symptoms such as reddening, yellowing and gradual wilting of the foliage are rapidly visible in grass weeds but are slower to appear in broad-leaved weeds.

Timing treatments

IT IS IMPORTANT WHEN TREATING PERENNIAL WEEDS THAT THERE IS 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 grass 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.

Reduced weed control may result when weeds are treated under poor growing conditions such as drought stress, flooding, frost or high temperatures, disease or insect damage. Reduced efficacy may also occur when treating weeds heavily covered with dust.

Weather Conditions

For best results a rainfree 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. The action of Glyfos ProActive will be slower in cooler weather. This product should not be used under frosty conditions while weed growth is reduced by natural senescence.

Tank Mixes

Glyfos ProActive should only be mixed with products recommended in this leaflet and should be used according to the directions for use.

Do not tank-mix with fertilisers or residual herbicides unless specifically recommended as this may result in reduced weed control.

DIRECTIONS FOR USE

Glyfos ProActive MUST ONLY BE USED FOR THE SPECIFIED FIELDS OF USE AND ACCORDING TO INSTRUCTIONS AND RECOMMENDED METHODS OF APPLICATION SPECIFIED ON THIS LABEL.

Glyfos ProActive may be applied to all areas which will be planted with food and feed crops. Do not use along hedgerows nor under glass or polythene.

1. Natural surfaces not intended to bear vegetation, permeable surfaces overlying soil, hard surfaces and land prior to cultivation.

Glyfos ProActive is a foliar non-selective herbicide for use against most annual and perennial grasses and broad-leaved weeds on land not intended to bear vegetation such as roadsides, paths hard surfaces, along fences and walls, for total weed control on industrial sites and land prior to cultivation.

All crops may be planted or sown at specified intervals after treatment with Glyfos ProActive. A slight retardation following germination may be seen if seeds are sown, particularly by direct drilling, amongst decaying treated vegetation, roots, rhizomes or stolons. For destruction of established vegetation prior to sowing allow 7 days before planting trees and shrubs and other crops.

Application Advice

Glyfos ProActive can be applied using hydraulic sprayers at water volumes 80-250 l/ha.

		MEDIUM VOLUME (200 l/ha)		LOW VOLUME (100 l/ha)	
Hydraulic Sprayers	Amount of Glyphos ProActive	Volume of Water	Area Treated	Volume of Water	Area Treated
Boom Sprayer Knapsack Sprayer	3 litres 150 ml	200 litres 10 litres	1.0 ha 500 m ²	100 litres 5 litres	1.0 ha 500 m ²
Boom Sprayer Knapsack Sprayer	4 litres 200 ml	200 litres 10 litres	1.0 ha 500 m ²	100 litres 5 litres	1.0 ha 500 m ²
Boom Sprayer Knapsack Sprayer	5 litres 250 ml	200 litres 10 litres	1.0 ha 500 m ²	100 litres 5 litres	1.0 ha 500 m ²
Boom Sprayer Knapsack Sprayer	6 litres 300 ml	200 litres 10 litres	1.0 ha 500 m ²	100 litres 5 litres	1.0 ha 500 m ²

See "Spray application techniques and equipment"

Dose rates for controlling weed species

Target weed Application rate litres/ha

Annual weeds	1.5
Perennial weeds	4.0
Perennial broad-leaved weeds	6.0

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

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 30cm swath covering the kerb edge and road gully – do not overspray drains

2. Aquatic Use

Glyphos ProActive may be used against aquatic weeds in and along waterways and irrigation ditches at a maximum rate of 6 l/ha. Before using Glyphos ProActive for control of aquatic weeds in or near waterways read the official recommendations entitled "Guidelines for the use of Herbicides on Weeds in or near Watercourses and Lakes". This document may be obtained from the Department of Environment Food and Rural Affairs (DEFRA) the Scottish Executive for Rural Affairs Department, the Department of Agriculture Northern Ireland and the National Assembly for Wales Agricultural Dept.

Consult the Regional Office of the Environment Agency/ Scottish Environment Protection Agency before applying Glyphos ProActive for control of weed in or near waterways.

Maximum permitted concentration should not exceed 0.06 parts per million, unless otherwise specified by the Environment Agency / Scottish Environment Protection Agency.

When using Glyphos ProActive following label recommendations, water subjected to spray drift may immediately be used for irrigation.

Application Rates and Timings

Apply Glyphos ProActive when the weeds are actively growing and the green leaf fully emerged, at flowering but before leaf senescence. Application to Water lilies should be made from mid-July to mid-August and application to reeds from mid-August to mid-September to achieve the best results.

Area of use	Target weeds	Hydraulic sprayer	Application rate	Area treated	Water volume	Application details
Aquatic emergent weeds	Common Reed, Soft Rush, Reed Canary-grass, Bulrush, Reed Sweetgrass, Sedges, Watercress, Whorl-grass, Creeping Bent	Boom sprayer	5.0 litres	1 ha	Hydraulic sprayers 200-400 l/ha optimum 250 l/ha (see "Spray Application Techniques and Equipment") or Rotary atomisers (Herbi [®]) 40 l/ha with droplet diameter between 200-300 microns	ONLY APPLY TO EMERGED WEEDS. DO NOT APPLY TO OPEN WATER. Apply using tractor or boat mounted sprayer. Observe all PRECAUTIONS for aquatic uses. Apply AGAINST the direction of flow if waterway is flowing. The speed of 8 km/h should not be exceeded for tractor mounted sprayers. With boat mounted sprayers use the slowest forward speed possible. When using a boat mounted sprayer it may be necessary to re-treat lilies that have been disturbed by the boat's passage.
		Knapsack Sprayer	50 ml	100 m ²		
Aquatic floating weeds	White Water-lily, Yellow Water-lily	Boom sprayer	6.0 litres	1 ha		
		Knapsack Sprayer	60 ml	100 m ²		

Maximum permitted concentration in treated water is 0.06 ppm.

3. Forestry

When conventional hydraulic sprayers are being used the performance or Glyphs ProActive can be improved by the addition of Mixture B[®] to the spray tank at a rate of 2% of the final volume, for all pre-plant and post-plant uses in forestry only.

Mixture B should not be added when using rotary atomiser sprayers.

Application Rates and Timings

Glyphs ProActive 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					All tree species may be planted 7 days after treatment.
Pre-planting on arable land and grassland areas	Arable weeds	All species at all levels	4.0	Hydraulic sprayers 200-400 l/ha optimum 250 l/ha or Rotary atomisers 40 l/ha with droplet diameter between 200-300 microns	
	Grassland weeds	All species at all levels	5.0		

Area of Use	Target weeds	Extent of weed infestation	Application rate in l/ha	Water volume	Application details
Post-planting For clean-up around trees with knapsack applicators	Perennial and annual grasses	All species At all levels	4.0	Hydraulic knapsack sprayers, apply at a concentration of 2% or 1 part of GLYFOS PROACTIVE to 50 parts of water (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). (+) for Rhododendron, use 10.0 litres/ha. If a suitable adjuvant is added this may be reduced to 8.0 litres/ha.
	Bracken, Beech-brush, Brambles, Ash, Oak, Willow, Sycamore, Hazel		3.0		
	Heather - peat soil - mineral soil		4.0 6.0		
	Rhododendron		10.0 or 8.0 (+)		
Overall spraying post-planting in season	Grass weeds: including Black Bent, Common Couch, Creeping Soft-grass, False Oat-grass, Cock's-foot, Purple Moor-grass, Wavy Hair-grass, Yorkshire Fog.	All levels - with optimum timing and conditions - under slightly less favourable conditions	3.0 4.0	Hydraulic sprayers 80-250 l/ha or hand held equipment ("see Spray Application Techniques and Equipment").	DO NOT OVERALL SPRAY trees grown for ornamental purposes including Christmas trees. When fully dormant and the leader growth has hardened it is safe to overspray the following species: Corsican, Lodgepole, and Scots Pines, Norway and Sitka Spruce, Lawson Cypress, Western Red Cedar. Douglas and Nobel Firs may be sprayed when fully dormant and when leader growth has hardened, but NOT in spring. It is a good idea to test crop safety by spraying a small area before conducting widespread overall treatment in following years. Bracken should be treated after frond tips are uncurled but pre-senescence.

(+) Add surfactant (e.g. Mixture B) at 2% concentration of the tank water volume.

SPRAY APPLICATION TECHNIQUES AND EQUIPMENT

1. 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.

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/h.

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 forward direction of the tractor.

2. Directed application/Knapsack

Knapsack sprayers may be used in forestry and on land not intended to bear vegetation and prior to cultivation. Spray volumes normally range from 200-300 l/ha, but may be reduced to 100-150 l/ha if low volume nozzles have been fitted. Spray quality should be as defined by BCPC "MEDIUM" or "COARSE". Do not reduce the spray volume below 200 l/ha when applying the 10 l/ha rate.

When using a knapsack sprayer with a total capacity of 10 litres if applying at 4.0 l/ha with a spray volume of 200 l/ha, giving a concentration of 2%, thus requiring 0.2 litres of Glyphs ProActive in 9.8 litres of water. Similarly when required application rate is 6.0 l/ha use 0.3 litres Glyphs ProActive in 9.7 litres of water. A 10 litre spray volume will cover a 500 m² area using a 1 m wide swath and a 1 m/sec walking speed.

3. 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 microns, equivalent to the BCPC spray definition "MEDIUM" or "COARSE".

The spray equipment should be correctly calibrated according to the manufacturer's instructions.

4. Spray Application in or near waterways

Before using GLYFOS ProActive for control of aquatic weeds in or near waterways read the official recommendations entitled "Guidelines for the use of Herbicides on Weeds in or near Watercourses and Lakes". This document may be obtained from the department for Environment Food and Rural Affairs, Scottish Executive Environment and Rural Affairs Department (SEERAD), The Department of Agriculture Northern Ireland and the National Assembly for Wales Agricultural Department (NAWAD).

Consult the Regional Office of the Environment Agency/Scottish Environment Protection Agency before applying Glyphs ProActive for control of weed in or near waterways.

Maximum permitted concentration should not exceed 0.06 parts per million, unless otherwise specified by the appropriate water regulatory body (Environment Agency/Scottish Environment Protection Agency)

When using Glyphs ProActive following label recommendations, water subjected to spray drift may immediately be used for irrigation.

APPLICATION

1. Filling Spray Tank

Half fill clean spray tank with clean water, add required quantity of product and mix well: add remaining water. Do NOT use mechanical agitators. When tank-mixing with other products recommended on the label add the other product before adding Glyphs ProActive, then add the remaining water. Use only with clean water.

Warning: DO NOT STORE, MIX OR APPLY GLYFOS PROACTIVE FROM UNLINED OR GALVANISED STEEL TANKS.

DO NOT leave spray mixtures in spray tanks over long periods. Ensure that tanks are adequately ventilated.

2. Compatibility

Do NOT add wetting agents, oils or other pesticides unless recommended on this label.

3. Sprayer Maintenance

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

4. Cleaning Spray Equipment – Sprayer Hygiene

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.

SAFETY PRECAUTIONS

a. 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 when handling the concentrate and handling contaminated surfaces.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES AND RUBBER BOOTS when using hand-held sprayers, rotary atomisers, weedwiper equipment, spot gun equipment or when making cut stump treatments.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES, RUBBER BOOTS AND FACE PROTECTIVE (FACESHIELD) When carrying out stem injection.

However engineering controls may replace personal protective equipment if a CoSHH assessment shows they offer an equal or higher standard of protection.

b. Environmental Protection

DO NOT CONTAMINATE water with the product (except when used as directed) or its container. Do not clean application equipment near surface water, Avoid contamination via drains from farmyards and roads. The maximum concentration of active ingredient in treated water must not exceed 0.06 ppm or such lower concentrations as the appropriate regulatory body may require.

Users must consult the appropriate regulatory body (Environment Agency / Scottish Environmental Protection Agency) before using the product near water and must obtain their agreement before using this product to control aquatic weeds.

c. Storage and Disposal

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

WASH OUT CONTAINER THOROUGHLY, empty washings into spray tank and dispose of safely.

DO NOT RE-USE CONTAINER for any purpose.

d. Other Specific Restrictions

When applying through rotary

atomisers, the spray droplet specrum must be of a minimum Volume Median Diameter (VMD) of 200 microns.

For stump applications, the maximum concentration must not exceed 200 ml of product made up to a total volume of 1 litre with water (i.e. a 20% solution).

Glyfos Proactive is approved by the Chemicals Regulation Directorate for use as a herbicide. Registration No. MAFF 11976

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Glyfos Proactive is distributed in the UK by Nomix Enviro Ltd.

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Headland Agrochemicals Ltd.

Rectors Lane, Pentre, Flintshire CH5 2DH

Tel: 01244 537370 - Fax: 01244 532097

E-mail: enquiry@headlandgroup.com

www.headland-ag.co.uk