

GENERAL INFORMATION

Material Safety Data Sheet

A material safety data sheet for this product is available on request from Monsanto.

First aid information in the event of accidental exposure or ingestion

Eye contact	Immediately flush with plenty of water. If easy to do, remove contact lenses.
Skin contact	Take off contaminated clothing, wristwatch, jewellery. Wash affected skin with plenty of water. Wash clothes and clean shoes before re-use.
Inhalation	Remove to fresh air.
Ingestion	Immediately offer water to drink. Do NOT induce vomiting unless directed by medical personnel. If symptoms occur, get medical attention.
Advice to doctors	This product is not an inhibitor of cholinesterase. Medical guidance is available for doctors by telephoning the National Poisons Information Service on (01) 837 9964 or (01) 809 2566.
Antidote	Treatment with atropine and oximes is not indicated.

Trade Mark References

Roundup®, Biactive®, Monsanto® and the Vine symbol are registered trade marks of Monsanto Technology LLC.

All other brand names referred to are trade marks of other manufacturers in which proprietary rights may exist.

Monsanto does not warrant that the purchase or use of equipment mentioned in this document will not infringe any patent or trade mark registration.

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This product is a soluble concentrate containing 360 g/l (30.77 % ww) glyphosate, present as 480 g/l (41.6 % ww) of the isopropylamine salt of glyphosate.

Degraded by micro-organisms / microbes in the soil.

A foliar applied translocated herbicide for the control of emerged annual and perennial grass and broad-leaved weeds in industrial and amenity situations, around the farm and non-crop areas.

IE, 0704, F - 1067 4343

PCS Number: 02314



e 1Litre

VVP-EMB Monsanto B-2040
© Monsanto Apr. 2007 (Mdb)
Lot Number/Production Date:

PEEL HERE FOR DIRECTIONS FOR USE



FOR USE ONLY AS A NON-SELECTIVE HERBICIDE
IN NON-CROP AREAS.

SAFETY INFORMATION

KEEP OUT OF REACH OF CHILDREN.

WEAR SUITABLE GLOVES.

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.

IF SWALLOWED, SEEK MEDICAL ADVICE IMMEDIATELY AND SHOW THIS CONTAINER OR LABEL.

THIS MATERIAL AND ITS CONTAINER MUST BE DISPOSED OF IN A SAFE WAY.

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

PCS Number: 02314

Marketed in Ireland by:

MONSANTO IRELAND LIMITED

Unit C2, Dunshaughlin Business Park
Dunshaughlin, County Meath

Tel.: (01) 825 0555 / 825 0574, Fax: (01) 825 0570

Authorisation holder:

MONSANTO UK LIMITED

The Maris Centre, 45 Hauxton Road
Trumpington, Cambridge, CB2 9LQ, UK

In case of emergency day or night, telephone Chemical
Emergency Centre: 00 44 1865 407333

READ CAREFULLY THE RECOMMENDATIONS FOR USE
ATTACHED TO THIS CONTAINER

All users must ensure that they have read this leaflet and
follow its advice before using the product.

Protect from frost.

Imported

Roundup®, Biactive®, Monsanto® and the Vine symbol are registered trade marks of Monsanto Technology LLC.
Not for reformulation or repackaging.
No licence is granted under any patent.

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WARNING

TAKE EXTREME CARE TO AVOID DRIFT.

DO NOT MIX, STORE OR APPLY **ROUNDUP PRO BIACTIVE** IN GALVANISED OR UNLINED STEEL CONTAINERS OR SPRAY TANKS.

DO NOT leave spray mixtures in tank for long periods and make sure tanks are WELL VENTED.

GENERAL PROPERTIES

Roundup Pro Biactive herbicide is an aqueous solution containing 360 g/l glyphosate. It is a herbicide which is taken up by foliage and translocated to root systems. **Roundup Pro Biactive** is recommended for control of annual and perennial grasses and broad-leaved weeds in non-crop areas such as roadsides, paths, hard surfaces and along fences and walls. It is recommended for cleaning up weedy ground prior to planting or sowing, and for total weed control on industrial sites. **Roundup Pro Biactive** herbicide may also be used as a directed spray in ornamental plantings

Roundup Pro Biactive is an advanced glyphosate formulation which, having no hazard classification, offers a high standard of operator safety.

Roundup Pro Biactive is of exceptionally low toxicity to mammals, fish, birds, beneficial insects and both terrestrial and aquatic invertebrates.

Roundup Pro Biactive is rapidly adsorbed onto particulate matter in soils and water and is quickly degraded by the micro-organisms present in soil and aquatic bottom sediments. Upon adsorption, the herbicidal properties of **Roundup Pro Biactive** are lost, permitting drilling of crops within 24 hours of application or immediate extraction of irrigation water from treated aquatic areas. Prior to degradation, the active ingredient in **Roundup Pro Biactive**, glyphosate, is practically immobile in soils and is, therefore, unlikely to contaminate groundwater.

DIRECTIONS FOR USE

Weed Susceptibility

All target weeds must be actively growing at spraying:

- PERENNIAL GRASSES must have full emergence of healthy, green leaf
- PERENNIAL BROAD-LEAVED WEEDS are most susceptible around the flowering stage.
- ANNUAL GRASSES AND BROAD-LEAVED WEEDS should have at least 5 cm of leaf, or 2 expanded true leaves, respectively.
- BRACKEN should be treated at the onset of full frond expansion.

Weeds controlled and application timing

Roundup Pro Biactive herbicide controls most emerged grasses and broad-leaved weeds. It is important that all weeds are at the correct growth stage when treated, otherwise some regrowth may occur and this will need re-treatment.

Apply **Roundup Pro Biactive** herbicide where there is full emergence of grasses and broad-leaved weeds and they have ACTIVELY GROWING green leaves. All weeds should be treated before growth slows down or stops in the autumn.

Perennial grasses:	- at least 4 - 5 leaves of length 10 - 15 cm
Perennial broad-leaved weeds:	- around flowering
Annual grasses:	- 1 leaf or more
Annual broad-leaved weeds:	- 2 leaves or more

This product will not give an acceptable control of Horsetails (*Equisetum arvense*) - repeat treatment will be necessary.

Note: the effects of treatment on the long term control of perennial broad-leaved weeds has not been investigated.

Weed resistance strategy

There is low risk for the development of weed resistance to **Roundup Pro Biactive**. A strategy for preventing and

managing weed resistance should be adopted. This should include integrating herbicides with a programme of cultural control measures. Growers are encouraged to implement a weed resistance strategy based on (a) good agricultural practices and (b) good plant protection practices by:

- Following label recommendations
- The adoption of complimentary weed control practices
- Minimising the risk of spreading weed infestations
- The implementation of good spraying practice to maintain effective weed control
- Using the correct nozzles to maximise coverage
- Application only under appropriate weather conditions
- Monitoring performance and reporting any unexpected results to Monsanto Ireland (Tel: (01) 825 0555/825 0574)

Symptoms on the weeds

Symptoms of treatment are generally first seen 7 - 10 days, or longer (if growth is slow), after spraying. These take the form of leaf reddening followed by yellowing and are usually quicker to appear on grasses than on broad-leaved weeds. Reaction of nettles is slow. **IMPORTANT:** To obtain optimum weed control, weeds must be left undisturbed with no further treatment or cultivation for 7 days after application. Allow 2 - 3 weeks for symptoms to develop then re-treat any unaffected plants using spot treatments.

Effects of weather

A period without rain of at least 6 hours, and preferably 24 hours, must follow application of **Roundup Pro Biactive** herbicide.

Do not spray in windy conditions as drift onto desired plants or crops could severely damage or destroy them.

Do not spray on to weeds suffering from drought, water-logging, heat or frost, otherwise poor control may result.

Application Guidance

Roundup Pro Biactive can be applied using hydraulic sprayers at water volumes 80 - 400 l/ha. When a product application rate of 6 litres/hectare is required please use the following guidelines:

		MEDIUM VOLUME (250 l/ha) (2% spray solution)		LOW VOLUME (100 l/ha) (5% spray solution)	
HYDRAULIC SPRAYERS	AMOUNT OF ROUNDUP PRO BIACTIVE	VOLUME OF WATER	AREA TREATED	VOLUME OF WATER	AREA TREATED
Boom sprayer	6 litres	250 litres	1.0 ha	100 litres	1.0 ha
Knapsack sprayer	100 ml	5 litres	200 m ²	2 litres	200 m ²

5 litres = approximately 1 gallon, 2 litres = approximately ½ gallon. **Roundup Pro Biactive** can also be applied using rotary atomisers and weed wipers.

Sprayer Hygiene

It is essential to thoroughly clean out the entire sprayer system, using a recommended detergent cleaner, between applying **Roundup Pro Biactive** and other pesticides.

Tank-mixtures

Do not tank-mix **Roundup Pro Biactive** when using rotary atomiser sprayers. Always consult manufacturers' recommendations before use.

Areas of Use, Rates and Timing

Recommendation Table:

AREA OF USE	TARGET WEEDS USAGE	WEED INFESTATION	APPLICATION RATE L/HA	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
AMENITY INDUSTRIAL AND AROUND THE FARM	Vegetation management	Annual weeds Perennial grasses Perennial broad-leaved weeds	1.5 4.0 6.0	40 - 250 l/ha or hand-held equipment	Use areas include industrial sites, roadsides, paths, hard surfaces, along fences, walls and field edges. Use as a directed spray in ornamental plantings. See 'Weed Susceptibility' section for optimum timing of application.

Hand-held equipment: specific guidance

Knapsack Sprayer Applicators

When used at a walking speed of 1m/sec to apply a swath of 1 m width, most knapsack sprayers deliver 200 l/ha spray volume (or 10 litres per 500 m²). To apply 6 litres/ha of **Roundup Pro Biactive**, therefore, use 60 ml product for each 2 litres of spray liquid required.

Weedwiper Applicator (e.g. weedwiper mini)

Apply a solution of 400 ml **ROUNDUP PRO BIACTIVE** per 1 litre of water.

General cautions

Applications of lime, fertiliser, farmyard manure and pesticides should be delayed until 5 days after application of **Roundup Pro Biactive**.

Do not tank-mix **Roundup Pro Biactive** with adjuvants, pesticides or fertilisers, except as specified under the Tank

Mixtures section.

Reduced control is likely where weed growth is impaired by natural senescence, drought, high temperature, a covering of dust, flooding or severe/prolonged frost at, or immediately after, application.

Take extreme care when using near or alongside hedgerows.

A rain-free period of at least 6 hours should follow application.