

Scorpion DRUM LABEL



- Herbicide

SCORPION

A foliar applied translocated herbicide for the control of annual and perennial grass and broad-leaved weeds before sowing or planting of all crops.

For use pre-emergence and pre-harvest in cereals and certain other crops, for destruction of grassland, and use in stubbles and orchards, and non-crop areas. For control of emerged weeds in amenity and forestry situations.

Degraded by micro-organisms/microbes in the soil.

GROUP	9	HERBICIDES
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UFI: KPF1-E0Y7-K009-RH2Q

A soluble concentrate containing 360 g/l glyphosate, present as 441g/l (35.3% w/w) of the potassium salt of glyphosate

MAPP Number 17516

Contents e XX

PROTECT FROM FROST

Batch/lot number:

Scorpion

Contains 360 g/l glyphosate, present as 441 g/l (35.3% w/w) of the potassium salt of glyphosate.

**WARNING**

Causes serious eye irritation.

Toxic to aquatic life with long lasting effects.

Wash hands thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

Keep only in original container.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

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

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

Returnable Bulk Containers

REFER TO OPERATING INSTRUCTIONS BEFORE USE (See Company Advisory Section).

This is a returnable container and when empty (and uncleaned) must be treated as if it contains pesticide.

SAFETY PRECAUTIONS

Additional operator protection

OPEN THE CONTAINER ONLY AS DIRECTED (see Company Advisory Section on main label).

DO NOT LIFT THIS CONTAINER WITHOUT MECHANICAL ASSISTANCE.

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

BOOKLET AND BASE LABEL



- Herbicide

SCORPION

This product is a soluble concentrate containing 360 g/l glyphosate, present as 441g/l (35.3% w/w) of the potassium salt of glyphosate

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Tel: 00800 1020 3333

**COMPLIANCE WITH THE FOLLOWING CONDITIONS OF USE AND ALL SAFETY
PRECAUTIONS MARKED * IS A LEGAL REQUIREMENT**

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

Crops/situations:

Wheat, (including Durum wheat), barley, oats, combining pea, vining pea,
field bean;

Oilseed rape, mustard, linseed;

Sugar beet, swede, turnip, bulb onion, leek;

All edible crops (stubble), all non-edible crops (stubble);

All edible and non-edible crops (destruction, before sowing/planting);

Grassland;

Apple, pear; plum, cherry damson;

Green cover on land not being used for crop production;

Farm non-crop areas including natural surfaces not intended to bear
vegetation, permeable surfaces overlying soil, hard surfaces;

Amenity Vegetation;

Forest nursery, forest (weed control, stump application and chemical thinning).

Maximum individual dose: }

Maximum number of treatments: } Full details are given in

Latest time of application: } the attached leaflet

Other specific restrictions: } (Crop Specific Information – marked #)

READ ALL OTHER SAFETY PRECAUTIONS AND DIRECTIONS FOR USE BEFORE USE

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 GLOVES AND FACE PROTECTION (FACE-SHIELD) when handling the concentrate and when handling contaminated surfaces.
- * WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES AND RUBBER BOOTS when using hand-held sprayers and hand-held rotary atomisers.
- * WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES, RUBBER BOOTS AND FACE PROTECTION (FACE-SHIELD) weed wiper equipment and cut stump treatments.
- * However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.

WASH HANDS AND EXPOSED SKIN before eating and drinking and after work.

Additional operator protection

*OPEN THE CONTAINER ONLY AS DIRECTED (see Company Advisory Section on main label).

*DO NOT LIFT THIS CONTAINER WITHOUT MECHANICAL ASSISTANCE.

Environmental protection

Do not contaminate water with the product or its container except when used as directed. Do not clean application equipment near surface water.

Avoid contamination via drains from farmyards and roads.

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.

Refer to Operating instructions for returnable containers on page 18.

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.

Warnings

EXTREME CARE SHOULD BE TAKEN TO AVOID SPRAY DRIFT AS THIS CAN SEVERELY DAMAGE NEIGHBOURING CROPS OR PLANTS.

DO NOT MIX, STORE OR APPLY SCORPION 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.

Restrictions

A period of at least 6 hours and preferably 24 hours rain-free must follow application of SCORPION.

Do not spray onto weeds which are naturally senescent, or where growth is impaired by drought, high temperatures, a covering of dust, flooding or frost at, or immediately after application, otherwise poor control may result.

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

After application, large concentrations of decaying foliage, stolons, roots or rhizomes should be dispersed or buried by thorough cultivation before crop drilling. Applications of lime, fertilizer, farmyard manure and pesticides should be delayed until 5 days after application of SCORPION.

TREATED POISONOUS PLANT SPECIES MUST BE REMOVED BEFORE REGRAZING OR CONSERVING. 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. Animals should 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.

Weeds controlled

SCORPION is a foliar acting herbicide which controls annual and perennial grasses and most broadleaved weeds when used as directed. It is important that all weeds are at the correct growth stage when treated, otherwise some re-growth may occur and this will need re-treatment.

Apply SCORPION herbicide once grasses and broad-leaved weeds have emerged and they have ACTIVELY GROWING green leaves

- PERENNIAL GRASSES must have a full emergence of healthy, green leaf. (Common Couch, for example, becomes susceptible at the onset of tillering and new rhizome growth commences which usually occurs when plants have 4 - 5 leaves, each with 10 - 15 cm of new growth).
- 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. In set-aside, annual grasses are best treated at full ear emergence, or before stem elongation. Application during stem extension phase of annual grasses e.g. Black-grass and Brome species on set-aside between the end of April and end of May, may result in poor control and require re-treatment.
- OTHER SPECIES - recommendations for specific Areas of Use are given in the Recommendation Tables, pages 3 - 10.
- This product will not give an acceptable level of control of Horsetails (*Equisetum arvense*) – repeat treatment will be necessary.

Following Crops

Upon soil adsorption the herbicidal properties of SCORPION are lost permitting the drilling of crops 48 hours after application.

Planting of trees, shrubs etc may take place 7 days after application. Grass seed may be sown from 5 days after treatment; see the 'Recommendation Tables' for specific restrictions on direct drilled crops.

Weed resistance strategy

There is low risk for the development of weed resistance to SCORPION.

Strains of some annual weeds (e.g. Black-grass, Wild oats and Italian Ryegrass) 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 adviser or product manufacturer (Monsanto).

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 (Telephone: 01223 226500 or <https://cropscience.bayer.co.uk/>)

Sprayer Hygiene

It is essential to thoroughly clean-out spray tanks, pumps and pipelines and nozzle or disc assemblies, with a recommended detergent cleaner, between applying this product and other pesticides to avoid contamination from pesticide residues. Traces of SCORPION left in the equipment may seriously damage or destroy crops sprayed later

#Crop specific information

COMPLIANCE WITH THE FOLLOWING CONDITIONS OF USE AND ALL SAFETY PRECAUTIONS MARKED* IS A LEGAL REQUIREMENT			
Crops/situations	Maximum individual dose (kg product/hectare):	Maximum total dose (kg product/hectare/crop):	Latest time of application:

Pre-harvest, Winter wheat, winter barley, winter oats, spring wheat, spring barley, spring oats, durum wheat, combining peas, field beans	4.0	4.0 l/ha/crop	7 days before harvest
Post planting and pre-emergence of listed cereals, oilseed rape, combining peas, vining peas, field beans, mustard, linseed, sugar beet, swedes, turnips, bulb onions, and leeks	1.5	1.5 l/ha/crop	Pre-emergence
Pre-harvest of oilseed rape and linseed	4.0	4.0 l/ha/crop	14 days before harvest
Pre-harvest of mustard	4.0	4.0 l/ha/crop	8 days before harvest
Stubbles (of all crops)	5.0	5.0 l/ha/crop	5 days before drilling or planting of the following crop
And/or:	1.5	4.0 l/ha/crop	2 days before the drilling or planting of the following crop or 24 hours before cultivating
Grassland	6.0	6.0 l/ha/year	5 days before harvest, grazing or drilling
Apple and pear orchards.	5.0	5.0 l/ha/year	After harvest but before green cluster stage
Cherry, plum and damson orchards.	5.0	5.0 l/ha/year	After harvest but before white bud stage
Non-crop including natural surfaces not intended to bear vegetation, permeable surfaces overlying soil, hard surfaces	5.0 litres/hectare	-	-

All edible and non-edible crops (destruction before sowing/planting)	5.0	-	-
Green cover on land not being used for before crop production	6.0 litres/hectare	6.0	24 hours before cultivating

Other Specific Restrictions:

When applying through rotary atomisers, the spray droplet spectra produced must be of a minimum Volume Median Diameter (VMD) of 200 microns.

Weed wipers may be used in any recommended crop where the wiper or chemical does not touch the growing crop.

When using weed wipers, the maximum concentrations used must not exceed the following:

Weed wiper Mini	1:2 dilution with water
Other Wipers	1:1 dilution with water

For stump application the maximum concentration must not exceed 200ml product (i.e. a 20% solution)

RECOMMENDATION TABLES

AREA OF USE	TARGET WEEDS/USAGE	CROP	WEED INFESTATION	APPLICATION RATE l/ha	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
PRE-HARVEST ARABLE CROPS	Common Couch	WINTER and SPRING WHEAT, DURUM WHEAT, WINTER and SPRING BARLEY and WINTER SPRING OATS	1-25 shoots/m²	2.0	80-250 l/ha*	Grain/seed moisture must not exceed 30% at spraying.
			Up to 75 shoots/m²	3.0		Harvest intervals:
			Over 75 shoots/m²	4.0		CEREALS, PEAS, BEANS 7+ days
						OILSEED RAPE 14-21 days
					LINSEED 14-28 days	
						MUSTARDS 8-10 days
						Use high clearance, narrow wheeled tractors, wide booms and crop dividers.
						Where desiccating crops, check susceptibility of any weeds present.
						Do not attempt to desiccate OILSEED RAPE or MUSTARD crops with significant secondary growth, uneven maturity, disease or stress.
						Desiccate LINSEED when seeds are light brown and capsules brown; stems/leaves may be yellow/green.
						Effects on brewing and baking have not been tested. Consult grain merchant or processor before use.
						DO NOT TREAT CROPS GROWN FOR SEED.
						*Rotary atomisers may be used at a water volume of 40 l/ha. Ensure droplet diameter falls within the range 200-300 microns.

AREA OF USE	TARGET WEEDS/USAGE	CROP	WEED INFESTATION	APPLICATION RATE l/ha	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
PRE-HARVEST ARABLE CROPS (continued)	Common Couch	OILSEED RAPE MUSTARDS	Up to 75 shoots/m ² Over 75 shoots/m ²	3.0 4.0	100-250 l/ha#	# Use higher volumes for dense canopies. * Rotary atomisers may be used at a water volume of 40 l/ha. Ensure droplet diameter falls within the range 200-300 microns.
		COMBINING PEAS FIELD BEANS	Up to 75 shoots/m ² Over 75 shoots/m ²	3.0 4.0	80-250 l/ha*	
		LINSEED	Up to 75 shoots/m ² Over 75 shoots/m ²	3.0 4.0	80-250 l/ha	
	Perennial broad-leaved weeds and other perennial grasses	WINTER and SPRING WHEAT, DURUM WHEAT, WINTER and SPRING BARLEY and WINTER and SPRING OATS	All levels/species	4.0	80-250 l/ha*	
		OILSEED RAPE MUSTARDS	All levels/species	4.0	100-250 l/ha	
		COMBINING PEAS FIELD BEANS	All levels/species	4.0	80-250 l/ha*	
		LINSEED	All levels/species	4.0	80-250 l/ha	

AREA OF USE	TARGET WEEDS/USAGE	CROP	WEED INFESTATION	APPLICATION RATE l/ha	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
PRE-HARVEST ARABLE CROPS (continued)	Harvest management	WINTER and SPRING WHEAT, DURUM WHEAT, WINTER and SPRING BARLEY and WINTER and SPRING OATS	Annual grasses, crop stems and leaves Annual broad-leaved weeds	1.0 1.5	80-250 l/ha*	<p>At Harvest management rates, ANNUAL NETTLE, VOL. POTATO, ROSEBAYWILLOW HERB and POLYGONUM WEEDS will not be susceptible. WHEAT crops, WHEAT VOLUNTEERS and BROAD-LEAVED WEEDS may require up to 14 days before harvest.</p> <p>Treated straw must not be used as a horticultural mulch.</p> <p># Use higher volumes for dense canopies.</p> <p>* Rotary atomisers may be used at a water volume of 40 l/ha. Ensure droplet diameter falls within the range 200-300 microns.</p> <p>(+)For optimum results use an approved adjuvant at 0.5 % spray solution as described in 'Compatibility' section.</p>
	Crop desiccation and annual weeds, prior to direct combining	OILSEED RAPE MUSTARDS	All levels/species	3.0	100-250 l/ha#	
		LINSEED	All levels/species	3.0	80-250 l/ha	
ALL EDIBLE AND NON-EDIBLE CROPS (DESTRUCTION , BEFORE SOWING/ PLANTING)		Vegetation management	Annual weeds Perennial grasses Perennial broad- leaved weeds	1.5 4.0 5.0	80-250 l/ha* or hand-held equipment (p. 9-10)	<p>Do not use in or alongside hedgerows.</p> <p>Do not use under polythene or glass.</p> <p>Apply the annual weed dose at least 2 days before sowing/planting.</p> <p>Apply at perennial weed doses at least 5 days before sowing/planting.</p> <p>*Rotary atomisers may be used at a water volume of 40 l/ha. Ensure droplet diameter falls within the range 200-300 microns</p>

AREA OF USE	TARGET WEEDS/ USAGE	CROP/ SITUATION	WEED INFESTATION	APPLICATION RATE l/ha	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
POST SOWING/ PLANTING, PRE-EMERGENCE OF THE CROP	Volunteer cereals and annual weeds	LISTED CEREALS OILSEED RAPE, MUSTARD, LINSEED, PEAS, FIELD BEANS, SUGAR BEET, SWEDE, TURNIP, ONION and LEEK	All levels/species	1.5	80-250 l/ha*	CAUTION - Ensure that spraying precedes ANY crop emergence. * Rotary atomisers may be used at a water volume of 40 l/ha. Ensure droplet diameter falls within the range 200-300 microns.
STUBBLES, PRE-SOWING and PRE-PLANTING.	Common Couch	BEFORE ALL CROPS EXCEPT ORCHARDS	Up to 75 shoots/m ²	3.0	80-250 l/ha*	Do not cultivate immediately before spraying. For PERENNIAL weed control, allow: - 21+ days growth before spraying in spring - VOLUNTEER POTATOES to make ample top growth - 5 days before cultivating or drilling For ANNUAL weed control, allow: - 24 hours before cultivating - 48 hours before direct drilling Allow 7 days before planting trees * Rotary atomisers may be used at a water volume of 40 l/ha. Ensure droplet diameter falls within the range 200-300 microns. (+) For optimum results use an approved adjuvant at 0.5 % spray solution as described in 'Compatibility' section.
	Other perennial grasses; volunteer potatoes (autumn only)		Over 75 shoots/m ²	4.0		
	Perennial broad- leaved weeds		All levels/species	4.0		
	Volunteer cereals and annual weeds		All levels/species	5.0		
	Perennial grasses and broad-leaved weeds	BEFORE ORCHARD PLANTING	All levels/species	1.5		
			Arable weeds	4.0		
			Pasture weeds	5.0		
	Common Couch		Up to 75 shoots/m ²	3.0	80-250 l/ha*	

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GREEN COVER ON LAND NOT BEING USED FOR CROP PRODUCTION EG "SET ASIDE"		BEFORE or DURING REMOVAL FROM PRODUCTION	Over 75 shoots/m ²	4.0	or hand-held equipment or tractor mounted weed wiper	<p>Before using on land taken out of production as part of a grant aided scheme, ensure compliance with the management rules of that scheme. Do not 'top' or cultivate immediately before application.</p> <p>For PERENNIAL weed control, allow:- - 21+ days growth before spraying in spring - 5 days before cultivating or drilling.</p> <p>For ANNUAL weed control, allow: - 24 hours before cultivating.</p> <p>Do not direct drill after set aside. Avoid applications during stem elongation as reduced control and re-spray is likely.</p> <p>* Rotary atomisers may be used at a water volume of 40 l/ha. Ensure droplet diameter falls within the range 200-300 microns.</p>
	Perennial broad-leaved weeds and other perennial grasses		All levels/species	4.0		
	Annual weeds: • early autumn/spring • late spring/summer		All levels/species	1.5		
			All levels/species	3.0		
	Natural regeneration and cover crop destruction	AFTER SHORT ROTATION or LONG TERM REMOVAL FROM PRODUCTION	Annual weeds only Perennial grasses Perennial broad-leaved weeds Perennial broad-leaved weeds as listed below.	3.0 4.0 5.0 6.0 +	150 -250 l/ha*	<p>Best control of annual grasses is achieved between full ear emergence and senescence.</p> <p>+ Only for weeds listed as per grassland destruction application rate table below.</p>
PERMANENT GRASSLAND	Short rotation Ryegrass, longer leys and	GRASS	Short rotation Ryegrass with annual weeds	3.0	150-250 l/ha	Treat EITHER before grazing/mowing in June-Oct, when growth is 30-60 cm, not dense and lacking mature seeds, OR re-growth after grazing/mowing.

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(DESTRUCTION) ROTATIONAL GRASSLAND (DESTRUCTION)	permanent pasture		Leys 2-4 years old with perennial grass weeds	4.0		Select the application rate which controls/destroys the least susceptible weed and grass species present in the sward.
			Long leys 4-7 years old with perennial broad- leaved weeds	5.0		Grass may be conserved or grazed by cattle, dairy cows or sheep 5+ days after spraying. REMOVE POISONOUS PLANTS BEFORE GRAZING/MOWING. If Ragwort is present, the guidance in the 'DIRECTIONS FOR USE must be followed.
			Permanent pasture	6.0		ONLY direct drill grass and clover EITHER into 1-2 year leys without mat, 5+ days after spraying, OR long leys with some mat, in the spring following autumn application.
			See Weed Table p. 9-10			

APPLICATION RATE FOR GRASSLAND DESTRUCTION							
3.0l/ha		4.0l/ha		5.0l/ha		6.0l/ha	
Annual Meadow-grass	Meadow Fescue	Black-bent	Creeping Soft-grass	Bracken**	Red Clover	Common Ragwort	Nardus (Mat grass)
Common Chickweed	Meadow Foxtail	Broad-leaved Dock	Curled Dock	Common Sorrel	Sedges	Hard Rush	Red Fescue
Common Mouse-ear	Rough Meadow-grass	Cock's-foot	Perennial Rye-grass	Common Nettle	Sheep's Sorrel	Heath Rush	White Clover*
Dock Seedlings	Speedwell species	Common Bent	Plantains	Creeping Buttercup	Soft Rush	Jointed Rush	Yellow Rattle
Italian Rye-grass	Timothy	Common Couch	Soft Brome	Creeping Thistle	Spear Thistle	Molinia (Purple Moor-grass)	Sheep's Fescue
Mayweed species		Creeping Bent	Yorkshire Fog	Daisy	Tufted Hairgrass		
				Dwarf Thistle	Yarrow		
				Perennial Sow-thistle			

* White Clover is best cut in June and sprayed one month later.

** At full frond expansion

AREA OF USE	TARGET WEEDS/ USAGE	CROP/ SITUATION	WEED INFESTATION	APPLICATION RATE l/ha	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
ORCHARDS	Perennial grasses, broad-leaved weeds	APPLE, PEAR, PLUM, CHERRY, DAMSON	All levels of most species	5.0		Trees must have been established 2+ years. Spray AFTER autumn leaf-fall and BEFORE: Apples, pears - green cluster stage Stone fruit - white bud stage Avoid contact with tree 30+ cm above ground. Treat suckers in late spring only
	Root suckers		All species	5.0		
IN-CROP (TRACTOR- MOUNTED WEED WIPER APPLICATION)	Bolters, weed beet, other weeds	ARABLE CROPS AND GRASSLAND SET ASIDE	All levels	1:1 dilution with water OR 1:2 dilution with water in hot, dry conditions. For 'new generation' wipers consult the manufacturer for guidance.		Weeds must be 10+ cm taller, and wiper 5+ cm higher, than desired vegetation. Wipe dense populations twice, in opposite directions. BOLTING BEET requires three applications, 2 weeks apart, from early July to early August. Contact Monsanto or your distributor for specific recommended weed wiper applicators. POISONOUS WEEDS and grazing/mowing interval - See GRASSLAND section.

AREA OF USE	TARGET WEEDS/ USAGE	CROP/ SITUATION	WEED INFESTATION	APPLICATION RATE l/ha	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
NATURAL SURFACES NOT INTENDED TO BEAR VEGETATION, PERMEABLE SURFACES OVERLYING SOIL. ALL SITUATIONS (DESTRUCTION, BEFORE PLANTING).	Vegetation management	Including farmyards roadsides, paths, and along fences and walls	Annual weeds	1.5	Hydraulic sprayers (boom and knapsack) at water volumes 80-400 l/ha or rotary atomisers*at water volumes 40 l/ha or hand-held equipment. See Mixing & Spraying section.	Do not use under polythene or glass. * Where rotary atomisers are used their droplet diameter must fall within the range 200-300µm.
			Perennial grasses and broad-leaved weeds	4.0-5.0		
HARD SURFACES	Vegetation management	Including farmyards roadsides, paths, hard surfaces and along fences and walls	Annual weeds	1.5	Hydraulic sprayers (boom and knapsack) at water volumes 80-400 l/ha or rotary atomisers*at water volumes 40 l/ha or hand-held equipment. See Mixing & Spraying section.	Apply this product carefully. Ensure spraying takes place only when weeds are actively growing (normally March to October) and is confined to only visible weeds including those in the 30cm swath covering the kerb edge and road gulley – do not overspray drains
			Perennial grasses and broad-leaved weeds	4.0-5.0		

Application guide for hydraulic sprayers

EQUIPMENT	AMOUNT OF SCORPION	AREA TREATED	MEDIUM VOLUME Amount of Water	Low Volume Amount of Water
Boom Sprayer	4 litres	1.0 ha	200 litres	100 litres
Knapsack Sprayer	80ml	200m ²	4 litres	2 litres

FORESTRY/FARM FORESTRY WEED CONTROL

SCORPION can be used for site preparation and for weed control in planted out trees

AREA OF USE	TARGET WEEDS/ USAGE	WEED INFESTATION	APPLICATION RATE l/ha	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
FORESTRY: - PRE-PLANTING	Arable land, planting, replanting, & grassland areas	Arable weeds Grassland weeds	4.0 5.0	Hydraulic sprayers: 80-250 l/ha or rotary atomisers: 40 l/ha*	All tree species may be planted 7 days or more after treatment. *Where rotary atomisers are used their droplet diameter must fall within the range 200-300µm.
FORESTRY: - POST-PLANTING (DIRECTED) IN CONIFERS & BROAD-LEAVED TREES	Clean-up around trees with knapsack applicators	Annual/ perennial grasses and broad-leaved weeds	4.0	Hand held equipment.	It is ESSENTIAL to use a TREE GUARD for all applications made in the growing season. Treat bracken after frond tips are unfurled but before senescence. Treat heather late August to end September. All other woody weeds are treated June to August, before leaf senescence but after new growth of crop has hardened.
		Woody weeds: Bracken/Beech Brush/Brambles Sycamore/Oak Hazel/Willow/ Ash (excluding Rhododendron	3.0	Knapsack: Apply as a 2% concentration or Weed wiper mini:	

AREA OF USE	TARGET WEEDS/ USAGE	WEED INFESTATION	APPLICATION RATE l/ha	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
		Heather (peat soils) Heather (mineral soils) Rhododendron (*)	4.0 6.0 10.0	apply as a concentration of 1 part SCORPION to 2 parts water (see Mixing & Spraying section)	(*) For improved control of Rhododendron apply 6.4 l/ha AZURAL, adding Mixture B (ADJ AO161) at 2% of spray volume. Application using a weed wiper is not suitable. (*)For improved control of Rhododendron apply 6.4 l/ ha SCORPION□□ adding Mixture B (ADJO570) at 2% of spray volume.
FORESTRY: - POST-PLANTING (OVERALL DORMANT SEASON IN CERTAIN CONIFERS – CONIFER RELEASE)	Grass weeds: -Lowland areas -Upland areas Bracken Beech & Birch	Black Bent, Cock's-foot, Common Couch, Creeping Soft-grass, False Oat-grass, Fescues, Meadow-grasses, other Bent species, Purple Moor-grass, Sweet Vernal-grass, Tufted Hair-grass, Wavy Hair-grass, Wood Small-reed (Bush grass) All levels of all species All levels of all species	1.5 2.0 2.0 2.0	Hydraulic sprayers: 200-250 l/ha or hand-held equipment - see 'Mixing and Spraying' section	DO NOT OVERALL SPRAY trees being grown for ORNAMENTAL PURPOSES, including CHRISTMAS TREES. Species safe to spray when fully dormant and leader growth has hardened: Corsican, Lodgepole and Scots Pine, Norway Spruce, Sitka Spruce, Lawson Cypress, Western Red Cedar. Douglas Fir and Noble Fir - safe to spray when fully dormant and leader growth has hardened but NOT in spring. If overall application takes place after the optimum timing weed control may be reduced. It is advisable to spray a limited area of forest to test crop safety under local conditions before widespread overall application in subsequent years. These recommended application rates refer to forestry usage only. Inadequate control may result if used in other areas. <u>Caution:</u> The timing of hardening of leader growth varies considerably between locations and between seasons. It may occur as early as the end of July or be delayed to October or later. To avoid damage

AREA OF USE	TARGET WEEDS/ USAGE	WEED INFESTATION	APPLICATION RATE l/ha	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
	Brambles	All levels of all species	3.0		to Lammas growth, sprays should be directed away from leaders.
FORESTRY: - STUMP APPLICATION FOR CHEMICAL THINNING	Deciduous trees Coniferous trees	All species All species	10% solution of SCORPION in water 20% solution of SCORPION in water		Apply the solution to saturate the rim of the newly cut surface, with a suitably adapted clearing saw, spot gun or paintbrush. Treat as soon as possible after felling, in the period November to March/April. Do not apply in the period of active sap flow in the spring/early summer. Do not cut trenches or drill holes and fill with the solution or use undiluted product. Note: for ease of identification of treated areas a suitable, commercially available, water-soluble dye may be added to the prepared spray solution.

AREA OF USE	TARGET WEEDS/ USAGE	WEED INFESTATION	APPLICATION RATE l/ha	WATER VOLUME	APPLICATION TIMING AND GUIDANCE
FORESTRY: - CHEMICAL THINNING BY INJECTION OF TREE STEMS	Coniferous and deciduous species	-	2 ml neat SCORPION per cut per 10 cm diameter (or less) of tree		Use a hatchet to cut one notch in trees up to 10cm diameter and apply 2 ml of the solution to each cut. Use two or three notches in trees over 10cm diameter. Do not treat in the period of active sap flow in the spring/early summer.

Mixing and spraying

Correctly calibrate all sprayers under field or use conditions prior to application.

a) Conventional Hydraulic Sprayers

Knapsack sprayers and tractor mounted or powered sprayers may be used. These should be capable of applying accurately 80-400 l/ha within a pressure range of 1.5-2.5 bars (20-35 psi).

Medium Volume application (150 - 300 l/ha)

Avoid high water volumes (>300 l/ha) which may lead to run-off from the treated vegetation, resulting in reduced control. Low drift nozzles such as air induction and pre-orifice types producing a medium or coarse spray (BCPC definition) should be used to minimise the risk of drift.

e.g. Knapsack Hypro AN 1.2 - 2.4, Cooper Pegler Floodjet green, red
Tractor Hypro GuardianAIR, or standard F110 -04, -05 or -06 Tee Jet 11004, 11008

Low Volume Application (minimum 80 l/ha)

Low volume application can be achieved by reducing pressure and the appropriate nozzle selection. Low drift nozzles which produce a medium spray quality (BCPC definition) should be used to minimise the risk of drift.

e.g. Knapsack Cooper Pegler VLV 100 Tractor Hypro Lo Drift LD110-025

Filling the Sprayer

- Knapsack Half fill the spray tank with clean water, add the correct amount of SCORPION and top up with water. Mix thoroughly.
- Tractor Mounted To avoid foaming do not use top tank agitation. Half fill the spray tank with clean water, start gentle agitation, then add the correct amount of SCORPION. Top up the tank with water to the required level. Use of a defoamer may be necessary.

b) Rotary Atomisers - for use in orchards

When rotary atomisers are used to apply SCORPION ensure that the droplet diameter falls within the range 200-300 microns for all uses.

c) Weed Wipers

SCORPION may be applied through the weed wiper mini. Use a concentration of 1 part SCORPION to 2 parts of water and add a scarlet dye if required. Care should be taken to avoid dripping onto wanted vegetation.

d) Cut Stump Applicators

Enso attachment to rotary saws: This technique is specific to scrub clearance in forestry. A water-soluble dye may be added to SCORPION to help identify treated stumps.

HAND-HELD EQUIPMENT: SPECIFIC GUIDANCE

e) Knapsack Sprayer Applicators

When used at a walking speed of 1 m/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 4.0l/ha of SCORPION, therefore, use a 2% solution (e.g. 200 ml SCORPION made up to 10 litres).

When used as above, knapsack sprayers fitted with low volume nozzles typically deliver 100 l/ha spray volume (or 10 litres per 1000 m²). To apply 4.0l/ha SCORPION in this case, use a 4% solution.

Filling the sprayer - hand-held machines

Stir the correct amount of SCORPION into the sprayer half filled with clean water. Top up with water, close the top and shake gently to ensure good mixing.

f) Spot Gun Applicators – for treatment of individual weeds Apply 5 ml of spray to target weed using narrow cone TG-3 or TG-5 nozzle.

Spot Diameter (metres)	Amount of SCORPION (ml) per 5 litres spray solution for targeted dosages of:		
	3.0 l/ha	4.0 l/ha	5.0 l/ha
0.3	20	28	35
0.6	85	110	140

Compatibility

Do not tank mix SCORPION with adjuvants, pesticides or fertilisers except as advised by Monsanto. For up to date information on compatible products contact Monsanto UK Limited (Telephone: 01223 226500). SCORPION is compatible with Mixture B (ADJ0570).

Where conventional hydraulic sprayers are being used Mixture B may be added to the spray tank solution, at a rate of 2% of the final water volume, for all pre-plant and post-plant directed sprays only.

Do not tank-mix SCORPION when using rotary atomiser sprayers.

For hydraulic sprayers: maintain continuous agitation when using SCORPION in tank mixture.

For knapsack sprayers: mix thoroughly and use immediately when using SCORPION in tank mixture.

COMPANY ADVISORY INFORMATION

This section is not part of the Product Label under the Plant Protection Products Regulations 1995 and provides additional advice on the product.

General Information

SCORPION is an advanced glyphosate formulation. To maximise the safe use of **SCORPION** to operator, consumer and environment, the label recommendations and the DEFRA/HSC publication "Code of Practice for using Plant Protection Products, 2006" should be adhered to.

SCORPION herbicide is a foliar-acting herbicide with broad-spectrum activity. It is taken up by foliage and translocated to underground roots, rhizomes and stolons, providing control of both annual and perennial grasses and broad-leaved weeds. **SCORPION** 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 **SCORPION** are lost, permitting drilling of crops within 48 hours of application. When used as directed, any water subjected to **SCORPION** spray drift may be used immediately for irrigation purposes. Until degraded, the active ingredient in **SCORPION**, glyphosate, is practically immobile in soils and is, therefore, unlikely to contaminate groundwater.

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.

General Cautions

Take extreme care to avoid drift, particularly when using near or alongside hedgerows. The use of low drift nozzles such as 'air induction' and 'pre-orifice' nozzles are recommended.

New generation weed wipers

All sprayers should always be calibrated before use. This is essential when nozzles are changed or if a different dose of product is to be applied.

Unused Spray Mixture

Once **SCORPION** has been diluted in the spray tank, it should be used as soon as possible. However, if unexpected delays occur the diluted spray can be safely stored. Agitate well before use. Storage for longer than 3 days may result in reduced efficacy.

Sprayer Maintenance

Ensure the sprayer is in good working order and replace damaged, worn or malfunctioning parts before use. Carry out maintenance according to the instructions of the sprayer manufacturer.

Sprayer Hygiene

It is essential to thoroughly clean-out spray tanks, pumps and pipelines and nozzle or disc assemblies, with a recommended detergent cleaner, between applying this product and other pesticides to avoid contamination from pesticide residues.

Disposal

Follow the guidance on the disposal of surplus spray solution, tank washings, concentrate and containers as given in Section 5 of the DEFRA / HSC / NAW publication "Code of Practice for Using Plant Protection Products" of January 2006 Operating instructions for returnable containers

The product must only be transferred and measured using a closed transfer system that meets or exceeds British Standard BS 6356 Part 9. If any doubt exists regarding equipment suitability contact the equipment manufacturer or your agronomist for further advice.

Remove the tamper evident plastic cap from valve unit fitted to the top of the IBC. Attach the coupler of the transfer system as instructed in the equipment manual to the IBC and operate using the equipment manufacturer's instructions to transfer the required amount of product. Remove the coupling after use and rinse the equipment in line with the instructions ensuring that the transfer system is clean and empty before placing in the storage position. The container must be empty of product and left in a clean condition for collection. Do not attempt to rinse the inside - external clean only.

Trademark References

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