

orion AGRISCIENCE



WARNING

KEEP OUT OF REACH OF CHILDREN

Deal

360

HERBICIDE

Glyphosate Herbicide for control of many annual and perennial grasses and weeds

Active Ingredient:

360 g/litre glyphosate as the isopropylamine salt in the form of a soluble concentrate.



20 Litres

READ THE LABEL BEFORE USE

HAZARD CLASSIFICATION: Hazardous to the Aquatic Environment Chronic (Cat. 2)

WARNING

Toxic to aquatic life with long lasting effects.

PRECAUTIONS

Keep out of reach of children. Read carefully and follow all instructions. Avoid contact with eyes and skin.

Do not breathe in the spray mist. Wash hands thoroughly after use.

STORAGE

Store in the original container in a secure area. Keep container tightly closed. When stored appropriately this product should show no significant degradation for two years from the date of manufacture. Contact your supplier for further information about the use of product that is older than this.

PROTECTIVE EQUIPMENT

When mixing or applying, wear overalls, boots, gloves, and eye protection. Wear a respirator if spray mist could be inhaled.

USE

Apply with well maintained and calibrated spray equipment. This product should only be mixed, contained in or sprayed by, equipment made from stainless steel, fibreglass, plastic, aluminium, brass or copper. A highly flammable gas may be formed from the contact of this product with galvanised or unlined steel. All spray equipment, including pumps, spray tanks, lines, nozzles, and landing gear (aircraft) should be thoroughly washed with water after each day of spraying.

DISPOSAL

Dispose of this product by using it in accordance with this label. Dispose of the container via AgRecovery after triple rinsing (use the rinsate for spraying). Do not burn. Do not use the container for any other purpose.

ENVIRONMENTAL

Take all reasonable steps to ensure that this product does not cause any significant adverse effects to the environment beyond the application area. Do not apply directly into or onto water. Collect spillage.

FIRST AID

If medical advice is needed, have product container or label at hand.

For advice, call the Poisons Centre on **0800 POISON (0800 764 766)** or a Doctor.

EMERGENCY RESPONSE

In an emergency call **111, Police or Fire Brigade**. For specialist advice in an emergency only, call **0800 CHEMICAL (0800 243 6225)** (24 hrs).

SAFETY DATA SHEET

Additional information is provided in the safety data sheet. Freephone **0800 ORIONAS (0800 674 6627)** or visit www.orionagriscience.co.nz

WARRANTY

This formulation is warranted to contain the specified active ingredient within accepted analytical tolerance when packed. The user bears the risk for damage resulting from factors beyond the manufacturer's control. The manufacturer declines all liability for damage resulting from improper storage or use of the product.



Registered pursuant to the ACVM Act 1997, No. P9824

See www.foodsafety.govt.nz for registration conditions.

Approved pursuant to the HSN0 Act 1996, No. HSR007694

See www.epa.govt.nz for approval conditions.

TMBANDIT, DEAL, SIMATOP and TILLMATE are Trade Marks of Orion AgriScience Ltd

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Batch No:

Date of manufacture:



AGRISCIENCE

READ THE LABEL BEFORE USE

GENERAL INFORMATION

Deal® 360 is a non-selective herbicide for use in agriculture and horticulture:

- Before planting crops and trees
- In pasture renovation and reduced tillage systems
- For pre-harvest weed control
- In vineyards, orchards and market gardens
- On turf and recreational areas
- In drains and waterways.

Deal 360 is absorbed by green plant tissue, and is translocated throughout the plant, including the root system, to kill the entire plant. Plants should be actively growing, not under drought stress, and have clean foliage at the time of spraying.

The product degrades in the soil and has no residual weed control activity.

Deal 360 does not have adverse ecotoxic effects on fish or crustacea.

Visible effects may not be apparent for 14 days depending on weather conditions, weed species and rate of application. Some perennial weeds may not show effects for 2 - 3 weeks.

DIRECTIONS FOR USE

RATES OF APPLICATION AND TIMING

Refer to table. Rainfall within 2 hours of application may reduce effectiveness. The rainfast period can be reduced to 20 minutes if used in conjunction with a penetrant. Application to foliage which is already wet will increase the time required for rainfastness.

APPLICATION METHODS

Boom equipment: Application can be made in spray volumes up to 200 litres/ha using fan nozzles at pressures in the range of 200 – 280 kPa. Boom height should be set so that a double overlap of nozzle pattern is achieved at the top of the target plants.

Aerial equipment: Applicable to forest and non-crop areas only. It can be applied by aircraft in spray volumes of up to 100 litres/ha. Increase spray volumes in hilly terrain to ensure maximum target contact. Do not use in intensive horticultural cropping areas.

Handgun and Knapsack: Ensure a fine spray pattern to give complete coverage. For handguns, use pressures of 1000 – 2000 kPa and No. 4 to No. 6 spray tips.

Mistblower: Refer to table.

Wiper Equipment: Pre-mix 1 part Deal 360 in 2 parts clean water to make a 33% solution. Mix only enough for immediate use. Plants must be clean and dry and the wiper fully saturated. Apply up and down slopes for effective applications.

MIXING

Fill the clean spray tank with half the required amount of clean water. Add Deal 360 as required and mix well before adding the remaining water. If penetrant is required, add this last to minimise foaming. Agitate well before spraying. When tank-mixing with other chemicals, add Deal 360 after suspension concentrates such as Simatop (simazine), and other water soluble concentrates. Soil particles and hard water containing calcium salts deactivate Deal 360. If hard water cannot be avoided, the addition of a pH Buffer is recommended.

COMPATIBILITY

Deal 360 is compatible with commonly used herbicides.

WITHHOLDING PERIODS

It is an offence for users of this product to cause residues exceeding the relevant MRL in the Food Notice: Maximum Residue Levels for Agricultural Compounds.

Poisonous plants, such as ragwort, may become more palatable to stock after spraying, and livestock should be kept away until plants have died down. Otherwise, withholding is not required for stock grazing. However, it is recommended that grazing is delayed for one day for annual weeds, and three days for perennial weeds. This will allow Deal 360 to penetrate the weeds for maximum effectiveness.

WEED CONTROL NOTES

Agricultural Areas: May be used for the control of annual and perennial weeds as indicated in the Weeds Controlled Table prior to sowing any crop.

Asparagus: Pre-crop emergence and post-harvest applications. Apply prior to planting or crop emergence. Do not treat emerging spears. Application can also be made after removal of all spears but before crop regrowth occurs. In established ferns, apply as a directed or shielded spray or with wiper equipment. Do not allow spray, spray drift or the wiper surface to contact any part of the asparagus plant.

Broad-acre Crops: Wheat, barley, oats and threshing peas. Can be used to control weeds prior to cultivation or prior to harvest. Spray 7 - 12 days prior to harvest when the grain moisture is less than 30%. Do not harvest within 7 days after spraying. Do not spray undersown crops. Do not spray crops that will be harvested for seed. For threshing peas: Apply 7 - 14 days prior to harvest when the pods have dried. Avoid treating plants under drought stress.

Drains and Waterways: For best results ensure that 75% of the weed to be sprayed is above water level. Avoid treating silt-laden weeds. Following spraying do not submerge the weed, as this will cause the herbicide to be washed off.

Forestry: For the control of grasses and weeds as listed in the Weeds Controlled Table. Can be applied for weed control prior to burning or planting of forest or nursery or around already established trees. Do not allow spray or spray drift to come into contact with foliage or green bark of desirable trees.

Industrial and Non-Agricultural Areas: Treat specific problem weeds as indicated in the Weeds Controlled Table. Do not allow spray drift.

Market Gardens: Apply before or after seeding but prior to crop emergence. Spraying can also be made prior to transplanting or as a post-harvest clean up. For longer-term control of seedling weeds it may be tank mixed with an approved residual herbicide such as Simatop (simazine) in accordance with label recommendations.

Minimum Tillage: For total weed control prior to seeding in a reduced tillage system. Weeds should be actively growing and not under stress from frost, drought or waterlogging. For the improved control of white clover, tank mix with Bandit® (dicamba) at 625 mL per ha, or Tillmate™ (tribenuron-methyl). Do not plant legume crops within 28 days of applying dicamba. If using with tribenuron-methyl - Do not sow crops within 14 days of application, or sow brassicas if the soil pH exceeds 6.5, or use within 2 months after applying lime. Consult partner product label for further directions. Cultivation may start from 1 day after spraying annual weeds, and 3 days after spraying perennial weeds. Cultivation should occur within 21 days after spraying. Do not sow until a satisfactory seedbed is formed.

Orchards/Vines: Crops: citrus, apple, pear, stonefruit, kiwifruit, grapes. Apply as a directed or shielded spray. For long term control of annual weeds, Deal 360 may be tank mixed with an approved herbicide for residual control. Do not apply near unprotected trees less than 3 years old. Do not allow spray or spray drift to contact any part of the stonefruit tree, or green bark, suckers, buds, foliage or fruit of other trees. Spray before crops bud, sucker or bloom.

Pasture: For the control of existing pasture prior to renewal.

For seedhead suppression on unimproved pasture. Deal 360 may be used for pasture topping to control the growth of pasture grasses by maintaining the vegetative growth stage and delaying flowering. Apply 250 mL/ha in spring at early grass seedhead emergence. Do not use penetrant. Do not use if soil moisture levels following application are too low for pasture growth. Do not use on ryegrass or on other improved pasture as suppression may occur. Brownout will occur, but this will be temporary until the pasture grows back. Grazing may commence 3 days after treatment, but for best results, grazing should be delayed for at least 21 days after treatment. As treatment will restrict grazing, limit the area to be treated.

For a spot application to control a wide range of weeds. It is non-selective and may damage or kill any plant in the sprayed area.

Recreational Areas: Lawns, turf, parks, reserves and ornamentals. Apply before the sowing and planting of these areas, or use as a spot application. In mown areas, allow sufficient regrowth before spraying. Can also be sprayed around the base of established trees or shrubs, as a directed or shielded spray. Avoid contact with any part of the shrub or tree.

Silage or Hay: Deal 360 can be applied before cutting silage or hay where the paddock is to be renewed or used for cropping afterwards. Apply 3 – 4 L/ha + penetrant at 100mL/100L of water. Use the high rate on perennial ryegrass or where silage is rank or lodged. Some regrowth may occur if silage is lodged at the time of spraying. For specific weeds, a higher rate may be needed (Refer to table). After spraying, leave for at least 4 days before cutting and cultivation. Grass quality will be maintained into the early stages of brownout. If spraying occurs after cutting, wait until there is at least 5 – 10 cm of actively growing green leaf on all tillers before spraying.

RESISTANCE MANAGEMENT

GROUP	9	HERBICIDE
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Deal 360 contains the active ingredient glyphosate, which belongs to the glycine chemical group. Some naturally occurring weeds may become resistant when excessive use of the same herbicide occurs. Consult <http://resistance.nzpps.org/index.php> for alternative modes of action and details of resistance management strategies (if any) for the weeds or crops listed on the label.

WEEDS CONTROLLED TABLE

Weed	Boom/ Aerial litres/ha	Handgun vol/100 litres	Knapsack ml/15 litres	Mistblower ml/10 litres	When to Apply
Annual weeds (Seedlings)	1 - 2	200ml	30	60	Use the higher rate for larger weeds. For residual control may be tank mixed with Simatop (simazine).
Australian sedge	6 - 9 (aerial)	1 litre	150	300	Apply from November to March. Burn or slash from 30 days after treatment.
Barberry	-	1 litre	150	300	Apply from flowering to late fruit stage (January - April). Regrowth should be 1.5m tall before spraying is carried out.
Barley grass	1	200ml	30	60	Apply when plants are at early seedhead stage (September - December). Simatop (simazine) may be tank mixed for residual control.
Blackberry	9 - 20	1.5 litres	150	300	Apply from flowering-fruiting stage (December - April), before frosts occur. For hard to kill blackberry, aerial application, or no follow-up action planned, use the higher rate. Allow 6 - 10 weeks before slashing or burning.
Boxthorn	-	1.25 litres	150	-	Apply to actively growing plants (November - April). Ensure complete coverage of dense thickets. Do not use extra surfactant, or treat salt damaged bushes.
Bracken/ broom	9 + 250ml/100L Penetrant (min 500mL/ha)	1 litre + 200ml/100L Penetrant	150 + 30 ml Penetrant	300 + 20 ml Penetrant	Apply after bracken fronds have unfurled (mid January - June), but before frosts occur. For ground application to broom anytime, but for aerial application when broom is in full leaf.
Browntop	6	1 litre	150	300	Apply when plants are 5 - 10cm high. For taller plants, graze or burn and allow regrowth of 5 - 10 cm height before treatment.
Buddleia	9	1	150	-	Apply using handgun anytime. Aerial-treat buddleia up to 2 metres high (February - April) using spray volume of 200 - 300 litres/ha.
Californian thistle	4	1 litre	150	300	Apply after flower bud development. Retreatment and/or cropping or pasture improvement may be necessary to restrict re-establishment from seed. Mowing thistles 10 days after spraying may assist control.
Cleavers	1.5	500 ml	75	150	Spray actively growing plants after most reach early seedhead.
Couch	3 - 6	1 litre	150	300	For suppression, apply 3 litres/ha in spring and repeat in autumn. For best results, apply 4 - 6 litres/ha in autumn to active growth of at least 10cm where no previous cultivation has occurred for at least 6 months.
Docks	4 - 9	1 litre	150	-	Spray plants in spring or summer when actively growing and before seedheads have formed. Use the lower rate for seedlings and the higher rate for mature plants. In pasture situations boom spray prior to re-seeding or establishing crops to restrict seedling re-establishment. Under trees or vines may be tank-mixed with Simatop (simazine) for residual seedling control.
Floating sweet grass	6	1 litre	150	300	Spray actively growing plants after most reach early seedhead. Spraying plants under drought stress may give reduced results.
Gorse	-	1 litre + 200ml/100L Penetrant	-	-	Apply anytime ensuring complete coverage of plants not stressed by drought, grazing or previous herbicide treatment.
Indian doab	9	1 litre	150	-	Apply at early seedhead stage before frosts occur.
Johnson grass	6	1 litre	150	300	Apply when actively growing.
Kikuyu/Mercer grass	6	1 litre	150	300	Apply at early seedhead stage. On dense infestations, cut and spray the regrowth.
Nodding thistle	-	1 litre	150	-	When applying by wiper ensure plants are actively growing (October - April) when at least 10cm of the plant can be wiped. A double pass is recommended and follow-up with spot treatments if necessary.

Weed	Boom/ Aerial litres/ha	Handgun vol/100 litres	Knapsack ml/15 litres	Mistblower ml/10 litres	When to Apply
Old mans beard		1 - 2 litre	300	-	Apply November - March prior to first leaf browning. Use higher rates on stems over 1cm in diameter. If complete coverage is not possible plants should be cut at ground level in winter and the regrowth sprayed with the higher rate when plants are at least 50cm long (March).
Pampas grass/toetoe	-	1 litre	150	-	Spray Spring - Autumn. Reduced control may result if plants are in flower at the time of spraying. Ensure complete coverage.
Paspalum	4 - 6	1 litre	150	300	Spray at low rate if plants are at early seedhead stage. Use 6 litres/ha on mature vegetative plants, before onset of frosts.
Potato (self set)	3	500 ml	75	150	Spray actively growing plants after most reach early seedhead.
Prairie grass	1.5	200 ml	30	-	Apply at early seedhead stage.
Ragwort	6	1 litre	150	-	Spray when actively growing and ensure there is sufficient leaf area for herbicide uptake. When applying by wiper use on plants 10 - 15cm above the pasture. For best results, a double pass is recommended with a follow-up spot treatment if necessary. Caution: Ragwort becomes more palatable after treatment. Keep stock away from treated areas until plants brown-off.
Ratstail	5	1 litre	150	-	Apply at a spray volume of 200 litres/ha in autumn. In dry conditions, delay spraying until sufficient green foliage is present.
Rautahi (cutty grass)	6	1 litre	150	300	Spray to actively growing plants from January - March. Burning or slashing may begin 30 days after treatment following brown-off.
Ring fern	1 - 3	300 ml	50	-	For effective control, apply 3 litres/ha. For pasture manipulation, apply 1 - 2 litres/ha from December - April. Use higher rates for dense infestations. Burn 4 - 6 weeks after treatment.
Rushes	6	1 litre	150	300	Burning or slashing may begin 30 days after treatment following brown-off. Wiper application to be carried out in November - May.
Ryegrass (annual, Italian, short rotation hybrids)					
Established < 8 months	3 - 4 + 100ml/100L Penetrant	1 litre + 100ml/100L Penetrant	150 + 15 ml Penetrant	300 + 10 ml Penetrant	Spray to actively growing plants with at least 5 - 10cm of green leaf. A higher rate may be necessary that reflects the weed spectrum present.
Established > 8 months	4 + 100ml/100L Penetrant	1 litre + 100ml/100L Penetrant	150 + 15 ml Penetrant	300 + 10 ml Penetrant	
Ryegrass (perennial)	4 + 100ml/100L Penetrant	1 litre + 100ml/100L Penetrant	150 + 15 ml Penetrant	-	Spray to actively growing plants with at least 5 - 10cm of green leaf. A higher rate may be necessary that reflects the weed spectrum present.
Sweet brier	12 + 250ml/100L Penetrant (min 500mL/ha)	1 litre + 200ml/100L Penetrant	150 + 30 ml Penetrant	-	Spray when plant is in late flowering to early leaf yellowing stage. Ensure full coverage.
Tall fescue	6	1 litre	150	300	Apply January - March to active growth.
Willow	9	1 litre	-	-	Apply before leaf fall begins (January - April). Total spray coverage is essential for best results.
Yarrow	3 - 6	-	-	-	Apply to plant with 5 - 10cm of leaf. For best results cultivate 10 days after treatment. Use the low rate when a crop to be drilled is competitive to yarrow and higher rate when it is a poor competitor.