



DANGER

KEEP OUT OF REACH OF CHILDREN

HORTCARE®

GLYPHOSATE

680 WSG

HERBICIDE

A non-residual herbicide for the control of most annual and perennial weeds in agriculture, horticulture, forestry, drains, aquatic areas and a wide range of brush weeds.

ACTIVE INGREDIENT: Contains 680g/kg glyphosate as the mono ammonium salt in the form of a water soluble granule. Also contains ~4 % tallow alkyl amine ethoxylate.

GSHG079/F03



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HORTCARE®
GLYPHOSATE 680 WSG
NET CONTENTS: 5 kg

Grosafe®

HORTCARE® GLYPHOSATE 680 WSG

PEEL
HERE



HAZARD CLASSIFICATION:

Serious eye damage 1; Hazardous to the aquatic environment chronic Category 2

TOXICITY

DANGER: May cause serious eye damage.

ECOTOXICITY: Toxic to aquatic organisms with long-lasting effects. Avoid contamination of any water supply with product or empty container. Handle and apply with care, spray drift may cause severe damage to other desirable plants.

QUALIFIED HANDLER: Where **Hortcare® Glyphosate 680 WSG** is applied onto or into water and the water has the potential to leave the place containing the application area, clauses 62, 63 and 64 of the Hazardous Property Controls Notice apply as if the substance has a hazard classification of hazardous to the aquatic environment acute Category 1.

PERSONAL PROTECTION: When mixing or loading wear overalls, impervious gloves and eye/face protection. Wash hands and exposed skin after work.

STORAGE: Store in original container tightly closed and in a locked, dry, well ventilated area, away from foodstuffs, seeds and fertiliser. Storage must be in accordance with the current version of the New Zealand Standard for the Management of Agrichemicals (NZS8409). Stores containing more than 1000 L require signage, secondary containment and an emergency response plan. When stored appropriately this product should show no significant degradation for two years from the date of manufacture. Contact the supplier for further information about the use of this product if it is older than this.

SPILLS: Wear personal protective clothing and equipment as described in the PERSONAL PROTECTION section. Contain spilled material and store in properly labelled, sealed drums for safe disposal. If spray mixture is spilled, absorb and collect in drums as above. Deal with all spillages immediately. If contamination of drains, streams, watercourses, etc is unavoidable, contact the local water authority.

PRODUCT DISPOSAL: If possible, dispose of by using according to the label, otherwise dispose of in an approved landfill or bury below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots.

CONTAINER DISPOSAL: Crush empty packaging and dispose of at a suitable landfill.

SAFETY DATA SHEET: A safety data sheet is available from Grosafe Chemicals Ltd.

FIRST AID: For advice call the National Poisons Centre 0800 POISON (0800 764 766). Have product label or Safety Data Sheet at hand. IF SWALLOWED: Rinse mouth with water. Call the NATIONAL POISONS CENTRE or doctor for advice if person feels unwell. IF ON SKIN: Remove contaminated clothing and wash skin with plenty of soap and water. Get medical advice if irritation persists. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor. IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing. Call the NATIONAL POISONS CENTRE or doctor for advice if person feels unwell.

EMERGENCY RESPONSE: 0800 CHEMCALL (0800 243 622)

READ THE ATTACHED BOOKLET COMPLETELY BEFORE MIXING OR APPLYING

Registered pursuant to the ACVM Act 1997, No P008533. See www.foodsafety.govt.nz for registration conditions. Approved pursuant to HSN0 Act 1996, HSR 000219. See www.epa.govt.nz for approval conditions.

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 and distributed by: Grosafe Chemicals Ltd
20 Jean Batten Drive
Mt Maunganui 3116
POBox 14-450 Tauranga 3141
Tel: 0800 220 002
Email: info@grosafe.co.nz
www.grosafe.co.nz

Batch No:

Date of Manufacture:



GENERAL INSTRUCTIONS:

1. **Hortcare® Glyphosate 680 WSG** is a foliar absorbed and translocated herbicide for control of emerged weeds only and is not residual.
2. **Hortcare® Glyphosate 680 WSG** can be deactivated by soil particles and hard water containing calcium salts. If hard water cannot be avoided, the addition of Hybrid® SB is recommended.
3. Plants should be actively growing, free of stress with clean foliage at time of spraying. **Hortcare® Glyphosate 680 WSG** and solutions should only be mixed, contained in or sprayed by equipment made from stainless steel, fibreglass, plastic, aluminium, brass and copper. **WARNING:** A highly flammable gas may be formed from the contact of this product with galvanised or unlined steel.
4. The effects of **Hortcare® Glyphosate 680 WSG** may not be apparent for 3–7 days depending on the weather conditions, weed species and the herbicide rate used. Some perennial weeds may not show effects for 14–21 days.
5. Animal Safety Post treatment: A withholding period for grazing stock is not required (except where Ragwort or other poisonous weeds are present). Stock should be withheld from the treated area until these plants brown out. In other situations it is recommended that grazing or cultivation be delayed for three days to allow for absorption/translocation of the herbicide.

RESTRICTIONS:

Do not spray if rain is likely within 6 hours. Do not allow spray contact with non target plants as severe injury may occur.

1. Clean spray tank of previous chemical residues, preferably with a chemical residue remover.
2. Half fill spray tank with clean water, add required amount of **Hortcare® Glyphosate 680 WSG** then fill with clean water.
3. Add surfactant where required.
4. Agitate well before spraying.
5. When tank mixing with other chemicals, add **Hortcare® Glyphosate 680 WSG** after other water soluble products, but before flowables.

APPLICATION:

Boom equipment: **Hortcare® Glyphosate 680 WSG** can be applied in spray volumes of up to 200 litres per hectare using fan nozzles at pressures in the range of 240–280 kPa.

Boom height should be set so a double overlap of nozzle pattern is achieved at the top of the target plant.

Aerial equipment: (Forest and non-crop areas only) **Hortcare® Glyphosate 680 WSG** can be applied by aircraft in spray volumes of up to 100 litres per hectare. 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. Spray to the point of run-off.

Wiper equipment: Mix at the rate of 1 part (1kg) product with 4 parts (4 litres) of water. 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. In cases of high weed density reduce speed and apply twice in opposing directions.

CLEANING EQUIPMENT:

All spray equipment including pumps, spray tanks, lines and nozzles, landing gear (aircraft) should be thoroughly washed with water after each day of spraying.

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.

Withholding Period:

Wheat, barley, oat grain: 7 days

RESISTANT WEEDS MANAGEMENT

GROUP	9	HERBICIDE
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Hortcare® Glyphosate 680 WSG contains glyphosate as the ammonium salt. Glyphosate is a glycine herbicide which inhibits EPSP synthase. Naturally occurring resistant biotypes are known to exist and can become more prevalent after many years of continuous or excessive use of this product. To prevent or delay resistance use **Hortcare® Glyphosate 680 WSG** in tank mixes as appropriate, and/or in rotation with herbicides that have a different mode of action. Refer to www.resistance.nzpps.org for further resistance management advice.

SITUATION	CROP	COMMENTS
Drains and waterways		<ol style="list-style-type: none"> 1. Do not spray until 75% of the weed is above water level. 2. Do not allow submergence for 6 hours post spraying.
Forestry For control of all listed weeds prior to planting offorest or nurse ry or around established trees.		<ol style="list-style-type: none"> 1. For rates for weeds see Weed Table. 2. Do not allow spray contact with established trees.
Industrial As a knockdown or selective, ie, spot spraying.		<ol style="list-style-type: none"> 1. Treat weeds as per Weed Table.
Market Gardens As a knockdown prior to seeding, transplanting and after harvest clean-up.	All vegetables	<ol style="list-style-type: none"> 1. For best results do not disturb weeds by grazing or cultivation for 1 day post spraying of annual weeds and 10 days post spraying of perennial weeds. 2. Cultivate within 21 days of spraying to ensure control. 3. Do not sow until a satisfactory seed bed has been prepared. 4. An appropriate residual herbicide can be used as a tank mix with Hortcare Glyphosate 680 WSG.
Minimum Tillage For total weed control prior to seeding.	Cereal, pasture and leguminous crops	<ol style="list-style-type: none"> 1. For best results do not disturb weeds by grazing or cultivation for 1 day post spraying of annual weeds and 10 days post spraying of perennial weeds. 2. To ensure control and avoid respraying newly germinated weeds, work sprayed area by full cultivation or the seeding operation within 3 weeks of spraying. 3. Do not sow until a satisfactory seed bed has been prepared. 4. For improved control of White Clover, tank mix with dicamba 20%ai at 1.5 litres/ha. Observe plant back periods of dicamba for respective crop.

SITUATION	CROP	COMMENTS
Orchards and vineyards As a knockdown prior to establishment or where plants are 3 years old or over.	Apple, citrus, grapevines, kiwifruit, pear and stonefruit	<ol style="list-style-type: none"> 1. Use a directed or shielded spray. 2. DO NOT let spray contact any green foliage or new growth. 3. Spray before bloom stage of crop. 4. Hortcare Glyphosate 680 WSG can be tank mixed with an appropriate herbicide for residual control.
Pre-harvest weed control For control of emerged weeds and as a clean-up to enhance harvesting.	Wheat, barley, oats	<ol style="list-style-type: none"> 1. Spray 7–12 days pre-harvest. 2. Grain moisture should be below 30%. 3. Withholding period: 7 days. 4. Do not spray seed crops. 5. Do not spray undersown crop. 6. Do not apply more than 2.1 kg/ha. 7. Do not use as a pre-harvest desiccant.
Recreational areas For weed control prior to establishment and as a clean-up around established areas.	Lawns, ornamentals, parks and reserves.	<ol style="list-style-type: none"> 1. Established plants: Use a directed or shielded spray or with a wiper around plants avoiding any spray contact on green or growing points of plant.

RECOMMENDATIONS FOR USE

WEED CONTROLLED	RATE PER HECTARE	COMMENTS
Annual weeds (Seedlings)	Boom/aerial: 0.5 – 1.0 kg. Handgun: 100 g/100 litres. Knapsack: 10 g/10 litres Mistblower; 30 g/10 litres	1. Use the high rate on weeds greater than 14cm across or 14cm high.
Australian Sedge	Boom: 3.0 kg. Aerial: 4.5 kg. Handgun: 0.5 kg/100 litres Knapsack: 50 g/10 litres Mistblower: 150 g/10 litres	1. Best for 4 weeks post treatment. 2. Wiper: 33% solution.
Barberry	Handgun: 0.5 kg /100 litres Knapsack: 50 g/10 litres Mistblower: 150 g/10 litres	1. Best results when sprayed mid to late Summer after flowering to full fruit.
Barley grass	Boom/aerial: 0.5 kg. Handgun: 100 g/100 litres. Knapsack: 10 g/10 litres Mistblower: 30 g/10 litres	1. Apply September to December
Blackberry	Boom/aerial: 4.5 - 10.0 kg Handgun: 0.5 - 0.75 kg/100 litres Knapsack: 50 g/10 litres Mistblower: 150 g/10 litres	1. Best results when sprayed mid to late summer after flowering to full fruit. 2. Best results when plants have a full canopy and total leaf coverage achieved. 3. Use higher rate on heavy infestations where total coverage may not be achieved. 4. Regrowth can occur after 1-2 years. 5. Do not disturb treated plants until 8 weeks post treatment.
Bracken	Boom or aerial: 4.5 kg Handgun: 0.5 kg/100 litres Knapsack: 50 g/10 litres	1. Spray mid summer to mid winter when fronds are open 2. Burning after treatment will help pasture establishment. 3. The addition of Force® Penetrant at 250ml /100 litres is recommended.
Broom	Boom or aerial, handgun, knapsack as above Mistblower: 150 g/10 litres	1. Spray late spring to early summer when plants are in full leaf. 2. The addition of Force® Penetrant at 250ml /100 litres is recommended.
Browntop	Boom or aerial: 1.5 kg Handgun: 0.25 kg/100 litres Knapsack: 25 g/10 litres Mistblower: 75 g/10 litres	1. If plants are greater than 10 cm high, graze or burn then treat regrowth. 2. The addition of Force® Penetrant at 250ml / 100 litres is recommended.
Buddleja	Boom or aerial: 4.5kg Handgun: 0.5 kg/100 litres Knapsack: 50 g/10 litres	1. If actively growing treat at any time of year. 2. Aerial: treat Feb. to April.

WEED CONTROLLED	RATE PER HECTARE	COMMENTS
Californian Thistle	Boom or aerial: 2.0kg Handgun: 0.5 kg/100 litres Knapsack: 50 g/10 litres Mistblower: 150 g/10 litres	1. Spray plants after flower bud stage. 2. Improved results obtained when thistles are mowed 10 days post spraying.
Couch	Boom or aerial: 1.5 - 3.0 kg. Handgun: 0.5 kg/100 litres Knapsack: 50 g/10 litres	1. Spray at early seedhead stage when plants are actively growing. 2. Use the low rate for suppression only. 3. Pre-harvest: Use 4.0 litres/ha. Hortcare® Glyphosate 680 WSG will not control unemerged growth.
Docks	Boom or aerial: 2 - 4.5 kg Handgun: 0.5 kg/100 litres Knapsack: 50g/10 litres	1. Best results when sprayed Spring Summer before seed-heads have formed. 2. Use high rate on established plants.
Floating Sweet Grass, Reed Sweet Grass	Boom or aerial: 3.0kg Handgun: 0.5 kg/100 litres Knapsack: 50 g/10 litres Mistblower: 150 g/10 litres	Apply to actively growing plants.
Gorse	Handgun Only: 0.5 kg/100 litres	1. Use Force® Penetrant at 200ml/100 litres. 2. Spray at any time of year. 3. Ensure complete coverage. 4. Regrowth may occur after 1 year. Re-treat if required.
Indian Doab	Boom or aerial: 4.5kg Handgun: 0.5 kg/100 litres Knapsack: 50 g/10 litres	1. Best results when plants are at early seedhead stage.
Kikuyu	Boom or aerial: 3.0kg Handgun: 0.5 kg/100 litres Knapsack: 50g/10 litres Mistblower: 150 g/10 litres	1. Best results when plants are in the early seedhead stage.
Mercer Grass - Aquatic (A) - Non Aquatic (NA)	Boom or aerial: (A) 4.5kg, (NA) 3.0kg Handgun: (A) (NA) 0.5 kg/100 litres Knapsack: (A) (NA) 50g/10 litres Mistblower: (NA) 150g /10 litres	1. Best results when plants are in the early seedhead stage.
Nodding Thistle	Handgun: 0.5 kg/100 litres Wiper : 15 g/100 ml.	1. Wiper: A double pass may be required for good coverage. 2. Treat Spring to Autumn on actively growing plants with at least 10cm of growth exposed to wiper.
Old Mans Beard	Handgun: 0.5 - 1.0 kg/100 litres Knapsack: 100 g/10 litres	1. Apply before the first leaf browns off. 2. Use the higher rate on plants with stems greater than 1 cm in diameter. 3. If complete coverage is not possible, cut plants in the winter and treat at the high rate when regrowth is at 0.5-1.0 cm in length.
Pampas Grass, Toetoe	Handgun: 0.5 -1.0 kg/100 litres Knapsack: 50g/10 litres	1. Spray Spring to Autumn. 2. Do not spray flowering plants.

WEED CONTROLLED	RATE PER HECTARE	COMMENTS
Paspalum	Boom or aerial: 2 - 3.0 kg Handgun: 0.5 - 1.0 kg/100 litres Knapsack: 50 g/10 litres Mistblower: 150 g/10 litres	1. Spray when plants are at early seedhead (Jan-Apr.)
Potato (self set)	Boom or aerial: 1.5 kg Handgun: 0.25 kg/100 litres Knapsack: 25 g/10 litres Mistblower: 75 g/10 litres	
Ragwort	Boom or aerial: 3.0 kg Handgun: 0.5 kg/100 litres Knapsack: 50 g/10 litres Mistblower: 15 g/100 ml	1. Ensure adequate leaf area for spray uptake. 2. Wiper: Plants should be above pasture to avoid non-target contact. Use a double pass for best results. 3. Plants become more palatable to stock after treatment so remove until brownout occurs.
Ratstail	Boom or aerial: 2.5 kg	1. Use high water volumes (200 litres/ha) in Autumn when foliage is green. 2. Do not disturb treated plants for 21 days post spraying.
Rautahi (Cutty Grass), Rushes, Tall Fescue	Boom or aerial: 3.0 kg Handgun: 0.5 kg/100 litres Knapsack: 50 g/10 litres Mistblower: 150 g/10 litres	1. Spray Jan-March. 2. Do not burn or slash for 4 weeks post spraying.
Ring Fern	Boom or aerial: 0.5 - 1.5 kg Handgun: 0.15 kg /100litres Knapsack: 15 g/10 litres	1. Use the high rate for control. 2. Use 0.5 -1.0 kg /ha for Pasture Manipulation.
Ryegrass (Perennial)	Boom or aerial: 0.75 - 1.5 kg Handgun: 0.25 kg/100litres Knapsack: 25 g/10 litres	1. Use the low rate only when cultivation is to follow treatment. 2. Add Force® Penetrant at 200ml /100 litres
Sweet Briar	Boom or aerial: 6 kg Handgun: 0.5 kg/100 litres Knapsack: 50 g/10 litres	1. Add Force® Penetrant at 250ml/100 litres. 2. Spray to ensure full coverage any time from late flowering to early leaf yellowing.
Willow	Boom or aerial: 4.5 kg Handgun: 0.5 kg/100 litres Knapsack: 50 g/10 litres	1. Spray to ensure good leaf coverage from mid to late Summer.
Yarrow	Boom or aerial: 1.5 - 3.0 kg	1. For best results cultivation should follow treatment. 2. Only use the low rate when a competitive crop is planted after treatment.