

**DANGER - COMBUSTIBLE LIQUID**  
**HARMFUL - KEEP OUT OF REACH OF CHILDREN ECOTOXIC**

  
**ravensdown**

**HERBICIDE**

# Valiant<sup>®</sup> 520

A selective herbicide for control of grass weeds in certain broadleaf crops, forestry, orchards, nurseries, non-crop areas and white clover

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**ACTIVE INGREDIENT:**

Contains 520g/litre haloxyfop-P present as the methyl ester in the form of an emulsifiable concentrate.

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**Registrant: Ravensdown Ltd**

292 Main South Road  
Hornby, Christchurch 8042  
New Zealand  
Phone: 03 353 4600

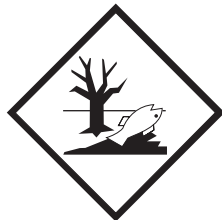
[ravensdown.co.nz](http://ravensdown.co.nz)

BATCH:

D.O.M:

**NET CONTENTS**  
**5 Litres**

Proper shipping name:  
**ENVIRONMENTALLY HAZARDOUS  
SUBSTANCE, SOLID, N.O.S.  
(haloxyfop-P 52%)**



## VALIANT® 520

In a 24 hour emergency phone 0800 Chemcall (0800 243 622)

UN NUMBER  
**3082**

PACKING GROUP  
**III**

HAZCHEM  
**3Z**

**DANGER - COMBUSTIBLE LIQUID**  
**HARMFUL - KEEP OUT OF REACH OF CHILDREN. ECOTOXIC**

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Contains 520g/litre haloxyfop-P  
present as the methyl ester in the  
form of an emulsifiable concentrate.

BATCH:

D.O.M:

**NET CONTENTS**  
**1 Litre**

ravensdown

# VALIANT 520®

| READ LABEL CAREFULLY BEFORE USE



**This product must not be used for any purpose, or in any manner, contrary to the label unless authorised under appropriate legislation.**

## HAZARD CLASSIFICATION: 3.1D, 6.1D, 6.3B, 6.4A, 6.9B, 9.1A, 9.3B

**QUALIFIED PERSON:** This product must be under the control of a Qualified Person or Contractor, as per Part 4C of the Hazardous Property Controls EPA Notice.

### FLAMMABILITY

**Warning** - Combustible Liquid. Keep away from sources of ignition.

### TOXICITY

**Harmful** - Harmful if swallowed. May be fatal if swallowed and enters airways. May cause skin or eye irritation. May cause organ damage from repeated oral exposure at high doses.

### ECOTOXICITY

**Very toxic to fish with long lasting effects.** Avoid contamination of any water supply with chemical or empty container. VALIANT 520 must not be applied into or onto water.

**Toxic to terrestrial vertebrates.**

**Beware** - apply this product carefully. Spray drift may cause serious damage to desirable plants. Ensure compliance with any relevant regional air management plans. Do not allow spray drift over aquatic environments.

## HANDLING PRECAUTIONS

### STORAGE

Do not store near heat or flame. Keep out of reach of children. Store in accordance with NZS 8409 Management of Agrichemicals. Store in original container tightly closed in a locked, dry, cool, well ventilated area away from sources of heat and ignition, foodstuffs, fertilisers and seeds. DO NOT store this product with Class 1, 2, 3.2, 4 or 5 substances. Stores containing 100L of VALIANT 520 are subject to signage and secondary containment. More than 100L require emergency response plans. Stores containing 500L of VALIANT 520 must have at least 2 fire extinguishers.

### PERSONAL PROTECTION

Avoid contact with skin, eyes and inhalation of spray mist. When handling wear protective clothing such as chemical resistant gloves and boots, eye protection and overalls. Wash splashes of concentrate from skin and eyes immediately. Remove protective clothing and wash hands and face thoroughly before meals and after work. Do not eat, drink or smoke while using.

### EQUIPMENT

Apply using well maintained and accurately calibrated equipment. Flush equipment thoroughly with clean water after use.

## RECORD KEEPING

Records of use as described in NZS 8409 Management of Agrichemicals must be kept.

## DISPOSAL

Triple rinse container and add rinsate to spray tank. Triple rinsed containers containing the Agrecovery logo on the label and that are free of all residues and have an intact legible label may be taken to an Agrecovery collection site for disposal. Otherwise crush or puncture and bury in an approved landfill. Do not burn container. Do not use container for any other purpose. Dispose of product only by using according to label or dispose of safely at a managed landfill.

## FIRST AID

If medical advice is needed, have product container or label at hand. If swallowed Rinse mouth. DO NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician. If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If skin irritation occurs: Get medical advice. If splashed in eyes, wash out immediately with water. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. If inhaled, move the patient to fresh air immediately. Begin artificial respiration if breathing has stopped. For advice, contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor if you feel unwell.

## SPILLAGE

In case of spillage, extinguish all ignition sources. Wear appropriate protective clothing and prevent material from entering waterways. Exclude non-essential people from the area. Prevent material coming into contact with Class 1, 2, 3.2, 4 or 5 substances. Contain liquid spills and absorb with inert material such as soil or sand and place in waste containers. Wash area with water and absorb with further inert material. Dispose of waste safely in an approved landfill.

## EMERGENCY RESPONSE

In transport emergency call 111, Police or Fire Brigade. For 24hr specialist advice in an emergency only call **0800 CHEMICAL (0800 243 622).**

### SAFETY DATA SHEET

If additional safety information is required, refer to the Safety Data Sheet. For a copy contact the customer centre on 0800 100 123.

### TRANSPORT

To be transported only in the original sealed container. Maximum volume permitted on a public passenger service is 1L.

PHONE 0800 100 123



Agrecovery is available on plastic containers up to 60L and for plastic or steel large drums from 61L - 1000L.

Registered Pursuant to the ACVM Act 1997 P8459. See [www.foodsafety.govt.nz](http://www.foodsafety.govt.nz) for registration conditions. Approved pursuant to the HSN0 Act 1996, Code: HSR100054. See [www.epa.govt.nz](http://www.epa.govt.nz) for approval controls.

## GENERAL DIRECTIONS

Before opening, carefully read warning statement, precautions instructions, first aid instructions and directions for use. VALIANT 520 is taken up by the foliage and translocates to all parts of the target plant. Growth ceases almost immediately but symptoms are slow to appear, with plant death taking up to 4 weeks. VALIANT 520 will not control broadleaf weeds or sedges. Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

### APPLICATION

VALIANT 520 may be applied using conventional ground or aerial equipment. Flush equipment thoroughly with water after use. Decontaminate equipment before using on plants that are sensitive to VALIANT 520. These include, but are not limited to, cereals, maize and grasses.

**Aerial:** Use 100-300L of water per hectare applied as a coarse quality spray.

**Boom:** Use a minimum 200L of water per hectare applied as a medium quality spray.

**Handgun:** Apply as a wetting spray to achieve full coverage of the plant. Use a No.4 tip at 500-2000kPa to deliver 1000-1500L of water per hectare.

**Knapsack:** Apply as a wetting spray to achieve full coverage of the plant using at least 500L of water per hectare.

### SPRAYING OIL

Use VALIANT 520 with a spraying oil such as Collaborate to optimise grass weed control. Apply at 500ml per 100L of water. DO NOT use spray oil when applying to peas, lentils, nursery plants and when used in mixture with Multiple and Terbafo.

### MIXING

Mix required quantity in spray tank partly filled with water and maintain agitation through filling and spraying. When appropriate, spray oil such as Collaborate should be added once VALIANT 520 has been thoroughly mixed. When tank mixing with a compatible herbicide these should be thoroughly mixed and dispersed before VALIANT 520 is added to the tank.

### COMPATIBILITY

VALIANT 520 may be used in mixture with Atratec, Simaflo, Terbafo and Multiple. Do not apply within 7 days of phenoxo herbicides.

### RAINFALL

VALIANT 520 is rainfast one hour post application.

## SPRAYER DECONTAMINATION

If broadleaf herbicides, particularly sulfonyl urea herbicides, have been used in the spraying equipment at any time prior to using VALIANT 520, ensure the spraying equipment has been decontaminated in accordance with the relevant herbicide label directions prior to using the equipment to apply VALIANT 520. Always wash tank and flush equipment thoroughly with clean water after use. To avoid subsequent injury to sensitive crops, immediately after spraying thoroughly remove all traces of VALIANT 520 from mixing and spraying equipment as follows: DO NOT use chlorine based cleaners.

1. Drain tank, then flush tank, booms and hoses with clean water.
2. Quarter fill the tank with clean water and add 500g of an alkali detergent per 100L of water. Circulate through the system for at least 15 minutes with agitation then drain.
3. Drain the whole system.
4. Nozzles and filters should be removed and cleaned separately.
5. Finally, rinse tank thoroughly with clean water, flush through hoses and boom and allow to drain.

## SOIL RESIDUES

DO NOT plant cereals, maize or grass crops within 12 weeks of treatment.

## WITHHOLDING PERIODS

**Peas, Lentils:** DO NOT apply later than flowering.

**Asparagus:** DO NOT apply during the cutting season.

**Onions:** DO NOT apply within 5 weeks of harvest.

## SHELF LIFE

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 any product that is older than this.

## RESISTANCE MANAGEMENT

VALIANT 520 contains haloxyfop-p, a **GROUP A HERBICIDE** from the aryloxyphenoxypropionate chemical group with the inhibition of acetyl CoA Carboxylase (ACCase) mode of action. Naturally occurring weed biotypes resistant to haloxyfop may exist. These can become more prevalent after many years of continuous use of the product. To prevent or delay development of resistant biotypes, use VALIANT 520 in tank mixture or rotation with herbicides of a different mode of action against the weed. Consult [www.resistance.nzpps.org/](http://www.resistance.nzpps.org/) for alternative modes of action and details of resistance management strategies (if any) for the crops listed on the label.

**DIRECTIONS FOR USE****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**

Asparagus	Use in mixture with a spray oil, after the final cut.
Clover, lucerne	Use in mixture with a spray oil. Do not apply in mixture with triazine herbicides.
Citrus, pipfruit	Use in mixture with a spray oil as a directed spray around the base of the tree. Avoid contact with the fruit.
Forestry tree release	May be applied over forestry species including radiata pine and eucalyptus species. Atratec, Simaflo, Terbafo and Multiple may be added to control broadleaf species in radiata pine. To control broadleaf weeds in eucalyptus species, Multiple may be added.
Onions	Use in mixture with a spray oil. DO NOT exceed more than 300ml per hectare.
Peas, lentils	DO NOT mix with spray oil. DO NOT exceed more than 300ml per hectare. Do not apply in mixture with triazine herbicides.
Tree nurseries	DO NOT mix with spray oil. VALIANT 520 may be applied over seedling radiata pine, eucalyptus, acacia, casuarinas and other seedling plantation and ornamental tree species. Where there is no previous experience, apply over a few plants before treating larger areas. Consult with your local agrochemical specialist.

**RECOMMENDATIONS** - Chewing fescue and hair grass are not controlled at the rates listed below

Grass weeds	Boom spray and aerial	Handgun ml per 100L water	Knapsack ml per 10L water	Critical comments
Annual grass weeds: annual ryegrass, summer grass, barnyard grass, bristle grass, volunteer cereals	0.12L/ha	-	2.5ml	Use with spray oil when weeds are at an advanced growth stage, slow growing or under stress.
Perennial ryegrass	0.25-0.5L/ha	50ml	5ml	For broadcast application use the low rate with the addition of spray oil or the higher rate without oil. Use the high rate with the addition of spray oil for perennial ryegrass at an advanced growth stage, slow growing or under stress.
Annual poa	0.3L/ha	60ml	6ml	Use with spray oil when weeds are at an advanced stage, slow growing or under stress.
Cocksfoot, prairie grass, Yorkshire fog, sweet vernal, soft brome (goosegrass)	0.25-0.5L/ha	50ml	5ml	Use the high rate for grass weeds at an advanced growth stage, slow growing or under stress.
Cultivated couch	0.25-0.5L/ha	-	-	Use the low rate on young or actively growing, regenerated couch after extensive cultivation has broken roots into small pieces. Use the high rate on tillering couch. Use the low rate for suppression and the high rate for longer term control.
Sod bound couch, mercer grass, browntop, ratstail, Indian doab, kikuyu, paspalum	0.75-1L/ha	75ml	12ml	Use the high rate for grass weeds at an advanced growth stage, slow growing or under stress. Use the high rate for sod bound couch. For suppression of these weeds in Lucerne use a rate of 0.5L per hectare.
Wild oat	0.1L/ha	-	2.5ml	Use with spray oil when weeds are at an advanced growth stage, slow growing or under stress.
Pampas grass	1.5L/ha	100ml	30ml	For best results treat plants less than 1m high.
African feather grass				Repeat application may be required.

**WARRANTY AND LIMITATION**

**IMPORTANT:** Read this notice before opening the container.

The registrant warrants that when packed the active ingredient of this product is as specified on this label within accepted analytical tolerances. The registrant gives only those other warranties that are required by law in relation to this product and limits its liability to the cost paid by the claimant for the product. The registrant declines all liability for damage resulting from the handling, storage or use of this product. The user bears the risk from the handling, storage or use of this product. The registrant is not liable for any use of this product which is contrary to the label directions given or any Act or Regulation.

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PHIL STIC MULTIFOLD®