

ECOTOXIC

Keep out of reach of children

DIRECTOR™

CS



FREE RECYCLING



AGRECOVERY

www.agrecovery.co.nz

Active ingredients: 360g/litre clomazone in the form of a capsule suspension.

Pre-emergence herbicide for use against certain broadleaf and grass weeds in carrots, peas, pumpkin, buttercup squash, potatoes, dwarf green beans, oilseed rape, fodder beet, and certain fodder, seed and vegetable brassicas.

Net: 5L



03-16/PS/00900-5LNZ1.2



Grow a better tomorrow.

DIRECTOR™ CS

PEEL
HERE

HAZARD CLASSIFICATION

9,1B, 9,2A

APPROVED HANDLER

This product must be under the personal control of an approved handler when it is applied in a wide dispersive manner or used by a commercial contractor.

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

ECOTOXIC

- Toxic to fish and aquatic organisms with long lasting effects. Director CS must not be applied directly onto or into water. Avoid contamination of any water supply with product or empty container.
- Selective herbicide – very toxic to some plant species.
Beware: Apply this product carefully. Spray drift may cause serious damage to other desirable plants

HANDLING PRECAUTIONS

STORAGE

- Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs, seeds and fertilizers. Storage must be in accordance with NZS 8409 Management of Agrichemicals.
- Stores containing 100L of Director CS require signage, 1000L requires secondary containment and more than 1000L require emergency response plans.

PERSONAL PROTECTION

- Avoid skin or eye contact and inhalation of spray mist. When handling wear eye protection, waterproof gloves, boots, hat and cotton overalls. Do not eat, drink or smoke while using. Remove protective clothing and wash hands and face thoroughly before meals and after work.

EQUIPMENT

- Apply with well-maintained and calibrated equipment.

DISPOSAL

- Triple rinse empty container and add rinsate to the spray tank. Recycle empty container, otherwise crush and bury in a suitable landfill.
- Dispose of product only by using according to the label, or at an appropriate landfill.

First Aid: If swallowed do NOT induce vomiting. For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If splashed in eyes, flush with running water immediately for at least 15 minutes.

Spillage: Wear appropriate protective clothing and prevent material from entering waterways. Contain liquid spills and absorb with inert material. Dispose of waste safely in an approved landfill.

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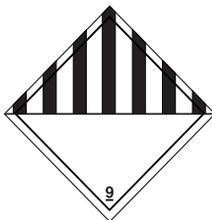
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PROPER SHIPPING NAME	HAZARD CLASS	UN No.	HAZCHEM	PACKING GROUP
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Clomazone 36%)	9	3082	2X	III

Batch No:
D.O.M.:



Marketed by:

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10064595 - 15091518
03-16/PS/00900-5LNZ2.2

Record Keeping: Records of use, as described in NZS 8409 Management of Agrichemicals, must be kept when using 3L or more of Director CS within 24 hours.

Resistance Management: Director CS contains a **GROUP 3 HERBICIDE** belonging to the isoxazolidinones group of chemistry, with the inhibition of carotenoid biosynthesis (bleaching) mode of action. Naturally occurring biotypes resistant to isoxazolidinone herbicides may exist. Resistance to these herbicides could develop from excessive use. Do not apply more than one application of Director CS per season. Use strictly in accordance with label instructions and resistance management strategies at www.resistance.nzpps.org/

Mixing and compatibility: Shake the container thoroughly before use. Director CS is compatible with a wide range of pre-emergence herbicides registered for use on the recommended crops. Where compatibility is unknown, check the mixture in a jar test before using large quantities. Observe the label precautions for both products.

Half fill the spray tank and commence agitation. Add any tank-mix partners in the following order and allow complete dispersion. Add wettable powders and dispersible granules, followed by suspension concentrates or flowables. Then add the measured quantity of Director CS. With the agitator running continue to top up with the remainder of the water. When nearly full add any emulsifiable concentrates. Apply mixtures immediately. Maintain agitation during spraying.

Tank Cleaning: Flush spray equipment thoroughly with several rinses of clean water after use.

GENERAL INFORMATION

Director CS is a pre-emergence herbicide which can be used in carrots, peas, pumpkin, buttercup squash, potatoes, dwarf green beans, oilseed rape, fodder beet and certain fodder, seed and vegetable brassicas.

Director CS is taken up through the roots and emerging shoots of weed seeds. It acts by inhibition of the biosynthesis of photosynthetic pigments causing bleaching in susceptible weed species. Susceptible weeds may emerge but are lacking in pigmentation and plant death occurs shortly afterwards. Director CS controls a wide range of annual grasses and broadleaf weeds. It has little contact action on weeds and must be applied pre-emergence of both weeds and crop. Crop plants that have emerged at the time of application may be damaged.

Soil Type: Do not use Director CS on very light soils (CEC<10). Use the highest rate on heavier soils (CEC>20). On soils with very high CEC values (>30), eg peat and heavy clay, Director CS may be locked onto soil particles reducing efficacy.

Direct drilled crops: Ensure these are adequately covered with soil before treatment. If drill slots are open, harrow or roll across them before spraying. Weeds emerging from open drill slots may be unaffected due to the lack of direct contact between the herbicide and roots or growing shoots.

Moisture: Soil moisture is required to activate Director CS. On dry soils a minimum of 13mm of rainfall or irrigation is required for optimum weed control. Under dry conditions on cultivated land, shallow incorporation may improve weed control.

Transitory Crop Whitening: Some whitening of treated crops may occur under certain conditions. It is typically seen on the 1st or 2nd true leaves but not on the cotyledons. Plants will generally grow through these symptoms with no carry over effect on vigour or yield, provided plant growth is not stalled by cold wet conditions. **Do not** use in late autumn/ early winter when declining soil temperatures and poor growing conditions are likely to occur after emergence. Slow growing, stunted crops may exhibit severe whitening and may not recover from treatment.

Off Target Whitening: Director CS can cause whitening of desirable plants either by spray drift or volatilisation following product dilution or application. The Capsule Suspension formulation reduces, but may not fully prevent this from occurring. The effects may last several weeks and plants usually grow out with no long term effects. All steps should be taken to minimise off-target whitening occurring.

- 1) Ensure that when the product is being mixed into the spray tank it is done away from desirable plants.
- 2) Use the lowest rate necessary for adequate weed control.
- 3) Apply only with accurately calibrated equipment.
- 4) Apply in 150-400 litres of water/ha using coarse droplets.
- 5) **Do not** apply to very wet soils or under cold conditions (eg autumn, early winter) when conditions are not conducive to crop emergence and when slow growth may occur.
- 6) **Do not** spray in winds over 12 kph or in still conditions.
- 7) Avoid spraying within 100 meters of homes, or desirable plants.
- 8) **Do not** empty or clean sprayers near homes or sensitive plants.
- 9) **Do not** apply through irrigation systems
- 10) **Take extra precautions if applying by air. Add a drift control agent.**

Weeds Controlled:

Susceptible *		Moderately Susceptible	Not susceptible
Barnyard grass	Cleavers	Black nightshade	Clovers
Chickweed	Cornbind	Fathen (if moisture available)	Docks
Henbit	Groundsel	Fumitory	Field pansy
Shepherd's purse	Portulaca	Mallows	Mayweeds
Sowthistle	Speedwells	Redroot	Oxalis
Summer grass		Spurrey	
Twincress		Willow weed	
Wireweed		Yarrow	

*Subject to rate, soil type, and adequate soil moisture

Susceptible weeds will not be controlled if they:

- 1) Have emerged before treatment
- 2) Are growing from an old root system
- 3) Emerge through untreated soil such as open drill slots or from underneath soil clods.

DIRECTIONS FOR USE:

It is an offence for users of this product to cause residues exceeding the relevant MRL in the New Zealand (Maximum Residue Limits of Agricultural Compounds) Food Standards.

Apply to a moist, firm seedbed free from clods, before both weeds and crop have emerged. Use sufficient water to obtain even coverage of the soil. A contact herbicide such as Weedmaster® TS 540 may be added to control emerged weeds.

CROP	RATE/HA	NOTES
Carrots	250-330ml	Apply pre-emergence in combination with a suitable carrot herbicide (eg linuron)
Fodder beet	150-200ml	Apply pre-emergence of the crop and weeds. Use the high rate on heavier soils. Refer to " Soil Type " notes and precautions under " General Information " May be tank mixed with ethofumesate or other pre-emergence herbicides. Follow up with a post emergence programme.
Green beans (Dwarf)	660ml	Apply prior to crop emergence in tank mixture with a suitable partner herbicide (eg. Frontier®-P) at recommended label rates for a broader spectrum of weed control.
Peas	250-660ml	Apply prior to crop emergence in tank mixture with a suitable partner herbicide eg. Nu-Terb® 900WDG or cyanazine at recommended label rates for a broader spectrum of control. Use the light rate on light soils (silts, loams) and higher rates on heavy soils (clay loams) or soil high in organic matter (peats) and where moderately susceptible weeds are present.
Potatoes	330ml	Apply in tank mixture with a suitable pre-emergence potato herbicide (eg. Gesagard® 500FW, Topogard® 500FW, linuron or Sencor® DF) at its lowest registered rate, after ridging but before crop emergence.
Pumpkins, Butternut squash	400-660ml	Use the low rate on light soils (silts, loams) and the higher rates on heavy soils (clay loams) and soils high in organic matter (peats).
Vegetable Brassicas*1 - Broccoli - Brussels sprouts - Cabbage - Kohlrabi	250-330ml	Apply in tank mixture with a suitable partner as soon as possible following the sowing of the crop and before emergence of both the crop and the target weeds, or use alone immediately prior to transplanting. Avoid sprayer overlap. Transient whitening may occur on early foliage but yield will not be affected.

*1 The use of Director CS on Chinese cabbage and other vegetable brassica species not listed above is not recommended as crop damage is likely.

FORAGE and SEED BRASSICAS*2: Kale, Swede, Forage & Oilseed Rape and **SPRING AND SUMMER SOWN** Turnips and Turnip related crops eg Pasja

SITUATION	RATE/HA	NOTES
Direct Drilled	250-330ml	To enhance crop establishment and reduce the need for post emergence herbicide treatments, add to the last glyphosate treatment applied before sowing. Moisture after application is critical to activate Director CS. Soil type and the availability of moisture will affect the degree of weed control. A post emergence herbicide may be required.
Drilled- Cultivated Ground	250-330ml	Ensure that the seedbed is moist, firm and free from clods. Apply after drilling and before crop emergence in combination with a suitable partner. Rainfall or irrigation after treatment will improve control.
Pre-plant soil incorporated	400ml	Apply in mixture with trifluralin and incorporate before drilling. Ensure even incorporation using a Dutch Harrow or discs set to a fine cut. Avoid sprayer overlaps.
Ridged Seed Bed	400ml	Application of pre-emergence herbicides prior to ridging is common practice, but results in very uneven distribution of the herbicides between and within the ridges. Poor and patchy weed control can result. If this method is adopted, use of a Cambridge roller to compact the ridge tops is recommended to optimise soil moisture retention and reduce aerated soil conditions. Best practice: Apply pre-emergence after ridging. Apply in combination with a suitable partner (eg Frontier-P, trifluralin) as soon as possible following ridging of the crop and before crop and weed emergence. Use of a Cambridge roller to compact ridge tops is recommended prior to herbicide application. To improve evenness of coverage, adjust spray boom to ensure that the nozzle overlap is focused at the top of the ridged soil.
Surface Seeding Forage and Oilseed Rape	250-330ml	To reduce post emergence weed pressure Director CS may be applied pre-broadcast sowing of seed. Seed may be sown once spray has dried. The addition of Weedmaster TS540 is recommended to control established growth. Moisture (13 mm) is required to activate Director CS and to promote germination of seed.

*2 Director SC is **not recommended for use on turnip species when Autumn sown** and subject to cold slow growing conditions.

Use of Director CS on other brassicas, not mentioned above, is not recommended as crop damage may occur. **Do not apply to mustard.**

Crop Rotation:**Crop failure:** Should a crop failure occur:

- If 660ml-1L/ha was used, replant only with cucurbits or legumes (peas, beans etc) within 4 months of application.
- If 250-330ml/ha was used, any of the labelled crops may be replanted immediately.

Do not reapply Director CS. Plough the land prior to replanting any other crops.**Follow-on crops:** When used on light soils, especially under minimum tillage and dry conditions, Director CS may persist in the soil for several months. Deep ploughing, if practical, is recommended before re-cropping. If not, avoid planting annual grass species such as cereals, sweet corn, maize, and annual ryegrass. The presence of residues will be evident as whitening on broadleaf weed species. If these symptoms are present sow a crop recommended on this label, or sow a small area of the intended crop to test for any negative effects before any major planting.**Do not reapply Director CS.** Plough the land prior to replanting any other crops.**CONDITIONS OF SALE:****CAUTION: READ THIS NOTICE BEFORE OPENING THE CONTAINER****If you open this container you will be deemed to have accepted the conditions below.**

The results from use of this product may be affected by factors beyond Nufarm's control, including mixing, use, climatic conditions, time of application, crop or crop stage and the possible development of resistance to the active ingredient, even though the product is reasonably fit for the purposes stated in this label, and even though label directions are followed. Nufarm will replace, free of charge, any product which is found to have a manufacturing defect. To the extent permitted by law, all other warranties, guarantees, representations and conditions, whether expressed or implied by law, trade, custom or otherwise are expressly excluded.

When you use this product, you agree that neither Nufarm Limited nor any manufacturer of any component of the product will be liable for any damage, injury or loss including consequential loss which arises in any way from the storage, handling, or use of the product. This exclusion of liability includes loss caused by negligent acts or omissions of Nufarm Limited or any supplier or manufacturer of the product or any of their employees and agents.

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