

# WARNING

KEEP OUT OF REACH OF CHILDREN



syngenta®

**Active Ingredient:**

**TENACITY** contains 480 g/L Mesotrione in the form of a suspension concentrate

**GROUP F2 HERBICIDE**

For the selective contact and residual control of weeds in turf as per the Directions for Use.

Net Contents: 1 litre

Approved pursuant to the HSNO Act 1996, Approval Code HSR002475  
See [www.epa.govt.nz](http://www.epa.govt.nz) for approval controls.

**Syngenta Crop Protection Limited**  
Tower 2, Level 7, 110 Symonds Street, Auckland

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**PLEASE READ THE LABEL COMPLETELY BEFORE USE**

**This product MUST NOT be used for any purpose or in any manner contrary to the controls and conditions of this registration.**

**This product MUST be under the control of an Approved Handler during use.**



**HSNO Classification 6.4A, 6.9A, 9.1A, 9.2A**

**WARNING**

May cause eye irritation.

May cause organ damage from repeated oral exposure at high doses.

Very toxic to aquatic organisms with long lasting effects.

Very toxic to the soil environment.

**PRECAUTIONS**

Store locked up in original container, tightly closed, away from foodstuffs.

Avoid contact with skin and eyes, and inhalation of spray mist.

When mixing, loading or applying wear protective clothing, including overalls, gloves, hood/visor and footwear including socks.

If clothing becomes contaminated with product, remove clothing immediately.

DO NOT eat, drink or smoke while using.

Wash hands and face before eating, drinking or smoking and after work.

Wash protective clothing daily after work.

Apply with well maintained and calibrated spray equipment.

**Re-entry Period:** DO NOT re-enter site until spray has dried unless wearing cotton overalls buttoned to the neck and wrist (or equivalent clothing) and chemical resistant gloves. Clothing must be laundered after each day's use.

Application and storage should be as described in the Management of Agrichemicals NZS8409.

Records of use must be kept.

DO NOT carry on a passenger service vehicle.

Avoid contamination of any water supply with chemical or empty container. DO NOT apply into or onto water.

**Container disposal:** Ensure the container is empty. Triple rinse the container and add rinsate to the spray tank. Recycle empty container through Agrecovery (0800 247 326, [www.agrecovery.co.nz](http://www.agrecovery.co.nz)). Otherwise crush and bury in a suitable landfill. DO NOT reuse this container for any other purpose.

**Product disposal:** Dispose of this product only by using according to the label, or at an approved landfill or other approved facility.

**FIRST AID**

If SWALLOWED, DO NOT induce vomiting. Rinse Mouth.

If SKIN or HAIR contact occurs, remove contaminated clothing and flush skin and hair with running water. DO NOT scrub the skin.

If splashed in the EYES, wash out immediately with water. 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.

If INHALED, move the victim to fresh air immediately.

Begin artificial respiration if breathing has stopped. Use mouth to nose rather than mouth to mouth.

Obtain medical attention. Take to hospital without delay.

For advice, contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. If medical advice is needed, have product container or label at hand.

**SPILLAGE**

Wear suitable protective clothing including face shield, impervious gloves and boots. Prevent the product or spilled material from entering water bodies. Absorb liquid spills with inert material such as earth or sand and place in waste containers. Wash area with water and absorb with further inert material. Dispose of safely.

## GENERAL INFORMATION

TENACITY is a systemic pre-emergence and post-emergence herbicide for the selective contact and residual control of weeds in turf grasses. When applied pre-emergence, weeds absorb TENACITY during emergence from the soil. Dry conditions following application may reduce the pre-emergence activity. If rainfall (4 mm) has not occurred within 10 days after a pre-emergence application, activate with 4 mm of irrigation.

When used post-emergence, susceptible weeds absorb TENACITY through foliar contact and soil absorption. Foliage of treated weeds cease growth after application, then turn white (loss of chlorophyll), death may take up to 3 weeks. A repeat application is required after two to three weeks for improved post-emergence weed control. A non-ionic surfactant should be added in post-emergence applications.

TENACITY may cause temporary whitening of turf grass foliage, particularly if applied when turf is stressed. Symptoms may appear 5 to 7 days after application and last for several weeks. A repeat application to the same site results in less whitening of the plant tissue.

TENACITY is an effective herbicide for weed control prior to or during seeding of certain turf grasses during turf renovation (see section on use in **New Seedings**).

TENACITY may be used for weed control in the turf grass species listed on this label. Do not use on golf course putting greens and maintain a 1.5 metre buffer between treated areas and putting greens.

Bent grass, *Poa annua*, Kikuyu, Zoysia, seashore paspalum and couch are sensitive to TENACITY applications. Avoid spraying these turf types unless control and/or injury can be tolerated. Maintain a 1.5 metre buffer between treated areas and bent grass or *Poa annua* greens. To reduce movement into sensitive areas such as bent grass, withhold traffic until spray has dried and irrigate lightly to move product from turf foliage before commencing normal irrigation. Clean sprayer thoroughly after an application of TENACITY if same equipment is used to apply products to bent grass and bent grass/*Poa annua* turf areas.

## RESISTANCE MANAGEMENT

TENACITY contains the Group F2 herbicide, Mesotrione. Mesotrione is a member of triketones group of herbicides and has the bleaching: 4-HPPD inhibitor mode of action. Some naturally occurring weed biotypes resistant to TENACITY and other triketone herbicides may exist through normal genetic variability in any weed population. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by TENACITY or other Group F2 herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Syngenta Crop Protection Ltd accepts no liability for any losses that may result from the failure of TENACITY to control the resistant weeds. Consult your local supplier, consultant, a Syngenta representative or New Zealand Plant Protection Society (Inc) - [www.resistance.nzpps.org](http://www.resistance.nzpps.org) for alternate modes of action and the details of resistance management strategies (if any).

## DIRECTIONS FOR USE

### Use Warning

DO NOT use on or around food crops.

DO NOT use in the home garden.

DO NOT apply more than 600 mL of TENACITY per hectare per application.

TENACITY must NOT be applied to the same area more than 2 times in any 330 day period and an interval of at least 14 full days must be observed before the substance is reapplied to the same area.

**Spray Drift Restraints**

DO NOT apply with spray droplets smaller than a **COARSE** spray droplet size.

DO NOT apply when wind speed is less than 3 or more than 20 kilometres per hour as measured at the application site.

DO NOT apply during surface temperature inversion conditions at the application site.

DO NOT apply with a nozzle height greater than 50 cm above the ground.

TENACITY must NOT be applied within 10 m of a downwind water body.

TENACITY must NOT be applied within 15 m of downwind non-target plants.

Situation	Grass Variety	Rate / hectare in minimum 300L water	Critical Comments
<b>Pre-emergence Application</b>	Perennial ryegrass, fine fescues or mixed stands that contain greater than 50% perennial rye grass and/or fine fescue.	292 to 365 mL	Apply <u>prior to</u> anticipated seed germination. <b>Follow immediately with minimum 3mm irrigation.</b>
	Buffalo grass	292 mL	
	Kentucky bluegrass, Centipede grass and Tall fescue	365 to 585 mL	
<b>New Seedings</b>	Perennial ryegrass, fine fescues or mixed stands that contain greater than 50% perennial rye grass and/or fine fescue.	292 to 365 mL	<b>TENACITY may reduce density of fine fescue seedings.</b> Tenacity can be used on grass seed blends that contain less than 20% by weight of hard or fine fescue. TENACITY will control grass and broadleaf weeds that compete with and slow the establishment of the turf grass plants. Apply at grass seeding, or close to seeding, for best performance. Avoid spraying on newly germinated turf grass plants. Wait until the newly germinated turf has been mowed twice, or 4 weeks after emergence, (whichever is longer) before making a post-emergence application.
	Buffalo grass	292 mL	
	Kentucky bluegrass, Centipede grass and Tall fescue	365 to 585 mL	
<b>Post-emergence application</b>	Perennial ryegrass, fine fescues or mixed stands that contain greater than 50% perennial rye grass and/or fine fescue.	292 to 365 mL	<b>Apply with a Non-Ionic type surfactant.</b> A repeat application at 2 to 3 weeks may be required for adequate weed control. Weed control is most effective on young, actively growing weeds. Efficacy will be reduced under moisture stress or from applications to mature weeds.
	Buffalo grass	292 mL	
	Kentucky bluegrass, Centipede grass and Tall fescue	365 to 585 mL	
<b>Control of bent grass (<i>Agrostis</i> spp)</b>	Perennial ryegrass, fine fescues or mixed stands that contain greater than 50% perennial rye grass and/or fine fescue.	292 to 365 mL	<b>Apply with a Non-Ionic type surfactant.</b> A repeat application at 2 to 3 weeks may be required for adequate weed control. Applications may be more effective in the late summer/early autumn just prior to onset of renewed bent grass growth.
	Buffalo grass	292 mL	
	Kentucky bluegrass, Centipede grass and Tall fescue	365 to 585 mL	

**WEEDS CONTROLLED**

Common name	Scientific name	Pre-emergence	Post-emergence
Barnyard Grass	<i>Echinochloa crusgalli</i>	Y	Y
Bent grass, Creeping	<i>Agrostis stolonifera</i>	Y	Y
Buttercup, Hairy	<i>Ranunculus sardous</i>	N	Y
Canadian Fleabane	<i>Conyza canadensis</i>	N	Y
Chickweed, Common	<i>Stellaria media</i>	Y	Y
Chickweed, Mouse ear	<i>Cerastium vulgatum syn fontanum</i>	Y	Y
Clover, White	<i>Trifolium repens</i>	Y	Y
Clover, Yellow	<i>Trifolium aureum</i>	Y	Y
Crowsfoot Grass	<i>Eleusine indica</i>	N	Y*
Curled Dock	<i>Rumex crispus</i>	N	Y
Dandelion, Cats Ear	<i>Hypochaeris radicata</i>	N	Y
Dandelion, Common	<i>Taraxacum officinale</i>	N	Y
Fat Hen	<i>Chenopodium album</i>	Y	Y
Ground Ivy	<i>Glechoma hederacea</i>	N	Y
Henbit	<i>Lamium amplexicaule</i>	N	Y
Nut Grass, Yellow	<i>Cyperus esculentus</i>	N	Y
Onhunga Weed	<i>Soliva sessilis</i>	N	Y
Plantain, Narrow Leaved	<i>Plantago lanceolata</i>	Y	Y
Purslane, Common/Pigweed	<i>Portulaca oleracea</i>	Y	Y
Redroot	<i>Amaranthus retroflexus</i>	Y	Y
Self Heal	<i>Prunella vulgaris</i>	N	Y
Shepherd's Purse	<i>Capsella bursa-pastoris</i>	Y	Y
Slim Amaranth	<i>Amaranthus hybridus</i>	Y	Y
Sow Thistle	<i>Sonchus oleraceus</i>	N	Y
Speedwell, Scrambling	<i>Veronica persica</i>	Y	N
Speedwell, Purslane	<i>Veronica peregrina</i>	Y	N
Summergrass	<i>Digitaria sp</i>	Y	Y*
Thistle, Californian	<i>Cirsium arvense</i>	N	Y
Twin Cress	<i>Coronopus didymus</i>	N	Y
Wild Carrot	<i>Daucus carota</i>	Y	Y
Winter Grass/Annual Poa	<i>Poa annua</i>	Suppression	N
Yellow Woodsorrel	<i>Oxalis stricta</i>	N	Y

\*For post-emergence control apply to less than 4 tiller Summergrass and Crowsfoot Grass

**MIXING**

Add the required amount of TENACITY to clean water in half filled spray tank with the agitator or bypass in operation. Maintain agitation while filling tank with remainder of water. Agitation must also be maintained throughout the spray operation. Unused spray mixture will settle overnight. If container has been standing for some time shake well several times before use. DO NOT mix with organophosphate or carbamate insecticides as severe damage to turf can occur.

**APPLICATION**

DO NOT apply by aerial application methods.

DO NOT use this product through any type of irrigation.

DO NOT apply an organophosphate or carbamate insecticide within 7 days of a TENACITY application as severe turf injury may occur.

Apply by ground boom sprayer, low pressure hand wand or hand gun sprayer.

Application volume should be adequate to ensure thorough and even coverage of the turf leaves and penetration to the crowns. Total application volume should be 300 to 500 L/ha. Use coarse droplets (e.g. Air Induction flat fan 025 to 04 nozzles). In higher cut turf ( $\geq 15$  mm) a significant spray shielding effect can occur, impacting negatively on spray penetration and even coverage at low application volumes. All pre-emergent applications should be immediately followed by minimum 3mm irrigation to activate the product.

**COMPATIBILITY**

As formulations of other manufacturers products are beyond the control of Syngenta Crop Protection, all mixtures should be tested before addition to a spray tank and before application to turf to establish safety.

**SUBSEQUENT CROPS**

DO NOT plant any crop other than turf grass species for 18 months after the last application of TENACITY or injury may occur.

**STORAGE**

Store in the closed, original container in a locked, cool, dry, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. See Safety Data Sheet for additional storage information. Stores containing quantities of 100 litres or more require signage and secondary containment.

**SAFETY DATA SHEET**

If additional hazard information is required, refer to the Safety Data Sheet. For a copy, visit our website at [www.syngenta.co.nz](http://www.syngenta.co.nz)

**DISCLAIMER**

This product complies with the specifications in its statutory registration. Implied terms and warranties are excluded. Syngenta's liability for breach of the express or any non-excludable implied warranty is limited to product replacement or purchase price refund. The purchaser must determine suitability for intended purpose and take all proper precautions in the handling, storage and use of the product including those on the label and/or safety data sheet failing which Syngenta shall have no liability.

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the SYNGENTA Logo and the PURPOSE ICON  
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Registered to and distributed by Syngenta Crop Protection Limited, Tower 2, Level 7, 110 Symonds Street, Auckland.

Bar Code:

Batch No.  
DoM.

**AGRECOVERY logo**

**UN 3082  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(mesotrione) MARINE POLLUTANT  
PACKING GROUP III, HAZCHEM 2X  
CONTAIN SPILLAGE**



**In a transport emergency dial 111, Police or Fire Brigade.  
For specialist advice in an emergency only, call 0800 734 607 (24 hours)**