



GROUP 27 HERBICIDE



Herbicide

A herbicide for the selective contact and residual control of weeds in ornamental turfgrasses

Active Ingredient:

Mesotrione*	40.0%
Other Ingredients:	60.0%
Total:	100.0%

Contains 4 lbs. of active ingredient mesotrione per gallon.

*CAS No. 104206-82-8

KEEP OUT OF REACH OF CHILDREN.

CAUTION

See additional precautionary statements and directions for use in attached booklet.

EPA Reg. No. 100-1267
EPA Est. 72344-MO-004

SCP 1267A-L3 1010

8 fl. oz.
Net Contents



FIRST AID

If on skin or clothing	<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
If in eyes	<ul style="list-style-type: none"> Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
If inhaled	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
If swallowed	<ul style="list-style-type: none"> Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

HOTLINE NUMBER

For 24 Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), Call
1-800-888-8372

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Harmful if absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin, eyes, or clothing.

Personal Protective Equipment (PPE)

Some materials that are chemical resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves - Category A (e.g. barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride (PVC), or Viton®)

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Control Statements

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate.

Surface Water Advisory

This product may contaminate water through drift of spray in wind. This product has a high potential for runoff for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

Physical and Chemical Hazards

Do not use or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation to use this product in a manner inconsistent with labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Shoes plus socks
- Chemical-resistant gloves – Category A (e.g., barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride (PVC), or viton)

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter treated areas without protective clothing until sprays have dried.

USE INFORMATION

Tenacity® is a systemic preemergence and postemergence herbicide for the selective contact and residual control of weeds in turfgrasses. When applied preemergence, weeds absorb Tenacity during emergence from the soil. Dry conditions following application may reduce the preemergence activity. If rainfall (0.15 inches) has not occurred within 10 days after a preemergence application, activate with 0.15 inches of irrigation. When used postemergence, susceptible weeds absorb Tenacity through foliar contact and soil absorption. Foliage of treated weeds cease growth after application, then turn white (loss of chlorophyll) and death may take up to three weeks. A repeat application is required after two to three weeks for improved postemergence weed control. A non-ionic surfactant should be added in postemergence applications.

Tenacity may cause temporary whitening of turfgrass foliage. In general, symptoms appear five to seven days after application and last for several weeks. A repeat application to the same site causes less whitening of the plant tissue.

Tenacity is an effective herbicide for weed control prior to or during seeding of certain turfgrasses during turf renovation (see section on use in **New Seedings**). If used preemergence in established turf, tank mixtures with pre-emergence herbicides such as Barricade® 65WG Herbicide are recommended for longer residual and broad spectrum weed control.

USE PRECAUTIONS AND RESTRICTIONS

- **Do not** apply more than 16 oz. of Tenacity per acre per year or per crop (equivalent to a maximum of 0.50 lb. of mesotrione per acre per year), whichever is shorter.
- **Do not** plant any crop other than turfgrass species for 18 months after the last application of Tenacity or injury may occur.
- **Do not** apply an organophosphate or carbamate insecticide within seven days of a Tenacity application as turf injury may occur.
- **Do not** apply through any type of irrigation system.
- **Do not** use aerial application to apply Tenacity.
- **Do not** use grass clippings from treated turf as mulch around trees or in vegetable/flower gardens.
- Residential Lawn Applications: Unless renovating and/or re-seeding the home lawn, avoid broadcast applications of Tenacity for pre and post-emergence weed control because undesirable whitening of some turfgrasses may occur.
- Tenacity has been tested in tank mixtures with Barricade 65WG Herbicide (prodiamine), Vanquish® (dicamba), Turflon® ester (triclopyr), Spotlight™ (fluroxypyr), Quicksilver™ (carfentrazone), Basagran® (bentazon), Princep® (simazine), and AAtrex® (atrazine) for safety and efficacy on turfgrasses. **Tenacity must be applied at reduced rates (4 fl. oz./A or less) if tank mixed with atrazine, bentazon or simazine.** Other tank mixture partners may be safe but have not been tested. Turf managers wanting to tank mix Tenacity with other herbicides should test on a small basis for compatibility, safety and efficacy before treating large areas. See product labels for directions and precautions.
- Bentgrass, *Poa annua*, kikuyugrass, zoysiagrass, seashore paspalum and bermudagrass are sensitive to Tenacity applications. Avoid spraying these turf types unless control and/or injury can be tolerated. Maintain a five foot buffer between treated areas and bentgrass or *Poa annua* greens.
- Clean sprayer thoroughly after an application of Tenacity if same equipment is used to apply products to bentgrass and bentgrass/*Poa annua* turf areas.
- To reduce movement into sensitive species such as bentgrass, keep people and pets off treated areas until spray has dried and irrigate lightly to move product from turf foliage before resuming normal irrigation.
- Avoid over-spray or drift of spray applications onto ornamentals or flower beds and gardens. Roses and daylilies are sensitive plant species.
- Avoid applications over the top of exposed roots of trees and ornamentals.

USE SITES

Tenacity may be used for weed control in turfgrass species listed on this label in commercial and residential sites. Use sites include non-crop areas: golf courses, sod farms, athletic fields, parks, residential and commercial properties, cemeteries, airports, and lawns. Do not use on golf course putting greens and maintain a five foot buffer between treated areas and putting greens.

TURFGRASS SPECIES

Tenacity has been tested on these species and found to be safe under trial conditions.

Species		Rate per Acre
Kentucky bluegrass	<i>Poa pratensis</i>	5-8 fl. oz.
Centipedegrass	<i>Eremochloa ophiuroides</i>	5-8 fl. oz.
Buffalograss	<i>Buchloe dactyloides</i>	5-8 fl. oz.
Tall fescue	<i>Festuca arundinacea</i>	5-8 fl. oz.
Perennial ryegrass*	<i>Lolium perenne</i>	5 fl. oz.
Fine fescue* (creeping red, chewings and hard)	<i>Festuca</i> spp.	5 fl. oz.
St. Augustinegrass* (grown for sod)	<i>Stenotaphrum secundatum</i>	4 fl. oz.

*See additional rate instructions below.

RESISTANCE MANAGEMENT

Tenacity is a Group 27 Herbicide (active ingredient is mesotrione, a HPPD inhibitor).

There is no known resistance to Tenacity and no known instances of cross-resistance between mesotrione (HPPD inhibitor – Group 27) and other classes of herbicides. To help prevent the development of resistance, do not apply less than the label recommendations and rotate to a herbicide with a different mode of action if the maximum number of applications or rate of product has been met or weeds are not being controlled.

WEEDS CONTROLLED

Common Name	Scientific Name	Preemergence ¹	Postemergence ²
Barnyardgrass	<i>Echinochloa crusgalli</i>	Y	Y
Bentgrass, Creeping	<i>Agrostis stolonifera</i>	Y	Y
Bluegrass, Annual	<i>Poa annua</i>	Suppression	N
Buckhorn Plantain	<i>Plantago lanceolata</i>	Y	Y
Buttercup	<i>Ranunculus sardous</i>	.3	Y
Carpetweed	<i>Mollugo verticillata</i>	Y	Y
Chickweed, Common	<i>Stellaria media</i>	Y	Y
Chickweed, Mouseear	<i>Cerastium vulgatum</i>	Y	Y
Clover, Large Hop	<i>Trifolium aureum</i>	Y	Y
Clover, White	<i>Trifolium repens</i>	Y	Y
Crabgrass, Large	<i>Digitaria sanguinalis</i>	Y	Y ⁴
Crabgrass, Smooth	<i>Digitaria ischaemum</i>	Y	Y ⁴
Crabgrass, Southern	<i>Digitaria ciliaris</i>	Y	Y ⁴
Curly dock	<i>Rumex crispus</i>	-	Y
Dandelion, Catsear	<i>Hypochoeris radicata</i>	-	Y
Dandelion, Common	<i>Taraxacum officinale</i>	-	Y
Florida Betony	<i>Stachys floridana</i>	-	Y
Florida Pusley	<i>Richardia scabra</i>	-	Y
Foxtail, Yellow	<i>Setaria glauca</i>	Y	Y
Galinsoga	<i>Galinsoga ciliata</i>	Y	Y
Goosegrass	<i>Eleusine indica</i>	-	Y ⁴
Ground Ivy	<i>Glechoma hederacea</i>	-	Y
Healall	<i>Prunella vulgaris</i>	-	Y
Henbit	<i>Lamium amplexicaule</i>	-	Y
Lambsquarters, Common	<i>Chenopodium album</i>	Y	Y
Lawn Burweed	<i>Soliva sessilis</i>	-	Y
Lovegrass, Tufted	<i>Eragrostis pectinacea</i>	-	Y
Marestail	<i>Conyza canadensis</i>	-	Y
Nimblewill	<i>Muhlenbergia schreberi</i>	-	Y
Nutsedge, Yellow	<i>Cyperus esculentus</i>	-	Y
Oxalis	<i>Oxalis stricta</i>	-	Y
Pigweed, Redroot	<i>Amaranthus retroflexus</i>	Y	Y
Pigweed, Smooth	<i>Amaranthus hybridus</i>	Y	Y
Purslane, Common	<i>Portulaca oleracea</i>	Y	Y
Shepherd's purse	<i>Capsella bursa-pastoris</i>	Y	Y
Smartweed, Pale	<i>Polygonum lapathifolium</i>	Y	Y
Smartweed, Pennsylvania	<i>Polygonum pensylvanicum</i>	Y	Y
Speedwell, Persian	<i>Veronica persica</i>	Y	-
Speedwell, Purslane	<i>Veronica peregrina</i>	Y	-
Sowthistle	<i>Sonchus oleraceus</i>	-	Y
Swinecress	<i>Coronopus didymus</i>	-	Y
Thistle, Canada	<i>Cirsium arvense</i>	-	Y
Verbena	<i>Verbena hastata</i>	-	Y
Wild Carrot	<i>Daucus carota</i>	Y	Y
Wild Violet	<i>Viola pratensis</i>	-	Y
Windmillgrass	<i>Chloris verticillata</i>	-	Y

¹For broad spectrum preemergence activity apply with a grass preemergence herbicide such as Barricade 65WG Herbicide, except when used for weed control in new seedings.

²Weed control with postemergence applications require a second application after 2 to 3 weeks. Apply to young, actively growing weeds with a NIS type surfactant.

³–“ Not tested.

⁴For best postemergence control, apply to less than 4 tiller crabgrass and goosegrass.

APPLICATION INFORMATION

Please read and understand the USE PRECAUTIONS AND RESTRICTIONS under the USE INFORMATION section above prior to making applications.

Preemergence Application - Apply Tenacity at 4-8 fl. oz. per acre in at least 30 gallons of water per acre prior to weed seed germination. Do not exceed 5 fl. oz. per acre per application to perennial ryegrass or fine fescues or mixed stands that contain greater than 50% perennial ryegrass and/or fine fescue. Do not exceed 4 fl. oz. per acre to St. Augustinegrass sod. Make application close to anticipated weed seed germination. Tenacity should be combined with a preemergence herbicide such as Barricade 65WG Herbicide for extended control of key annual monocot weeds such as crabgrass and foxtail. In established turf, Tenacity is more effective as a postemergence application unless combined with another soil active herbicide.

New Seedings/New Lawn Establishment – Apply Tenacity at 5-8 fl. oz. per acre in at least 30 gallons of water per acre prior to seeding or post seeding of tolerant turfgrass species listed on this label, **except fine fescue**. Tenacity may reduce density of fine fescue seedings. Tenacity can be used on grass seed blends that contain less than 20% by weight of hard or fine fescue.

Tenacity will control many monocot and dicot weeds that compete with and slow the establishment of the turfgrass stands. Apply at grass seeding or close to seeding for best performance. Avoid spraying on newly germinated turfgrass plants. Wait until the newly germinated turf has been mowed two times or four weeks after emergence (whichever is longer) before making a postemergence application.

Postemergence Application – Apply Tenacity at 4-8 fl. oz. per acre in at least 30 gallons of water per acre. Apply with a NIS type surfactant. A repeat application at two to three 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.

Control of bentgrass (*Agrostis* spp.) and nimblewill (*Muhlenbergia schreberi*) – Apply Tenacity at 5 fl. oz. per acre in at least 30 gallons of water per acre at two to three week interval for up to three applications. Apply with a NIS surfactant. Bentgrass control may be more effective in the late summer/early fall just prior to onset of renewed bentgrass growth, than spring/early summer applications.

St. Augustinegrass (sod uses only) and Centipedegrass, if Tenacity is tank mixed with AAtrex (atrazine) or Princep (simazine) do not exceed 4 fl. oz. of Tenacity and 0.5 lb. active ingredient per acre of atrazine or simazine. Apply combination to established turf only. See AAtrex and Princep labels for restrictions.

Dormant bermudagrass applications only – Apply Tenacity at 5 fl. oz./A to control winter weeds (listed in the WEEDS CONTROLLED Table) on dormant bermudagrass. Repeat application in 2 to 3 weeks. Applications made to semi-dormant turf will cause whitening of the bermudagrass.

Spot Application of Tenacity (apply at 1 gallon per 1000 sq. ft.)

Spray Mix	Rate of Tenacity (teaspoons)	NIS adjuvant (teaspoons)
2 gal	1	3

Do not apply more than 16 oz. of Tenacity per acre per year or per crop (equivalent to a maximum of 0.50 lb. of mesotrione per acre per year), whichever is shorter.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

Pesticide Storage

Keep container tightly closed when not in use. Do not store near seed, fertilizers, or foodstuffs. Can be stored at temperatures as low as -20°F. Keep away from heat and flame.

Pesticide Disposal

Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Container Handling

Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or mix tank or store rinsate for later use and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, Inc. or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and (2) Buyer and User assume the risk of any such use. To the extent permitted by applicable law, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.

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