



GROUP 27 HERBICIDE

Provides selective and residual control of weeds in Ornamental Turfgrasses

ACTIVE INGREDIENT	By Weight
Mesotrione: 2-[4-(methylsulfonyl)-2-nitrobenzoyl]-1,3-cyclohexanedione	40.0%
OTHER INGREDIENTS	60.0%
Total	100.0%

Contains 4 lbs. active ingredient mesotrione per gallon.

KEEP OUT OF REACH OF CHILDREN CAUTION

See additional precautionary statements and directions for use inside booklet.

FIRST AID

IF SWALLOWED 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 to an unconscious person.

IF ON SKIN OR CLOTHING 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 INHALED Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

IF IN EYES 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.

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

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For 24-Hour Medical Emergency Assistance (Human or Animal) call: **1-800-222-1222**. For Chemical Emergency Assistance (Spill, Leak, Fire, or Accident) call CHEMTREC: **1-800-424-9300**.

EPA Reg. No. 83100-41-83979

EPA Est. No. 65387-AR-002

Net Contents:

EPA Est. No. 069821-CHN-005

1 Quart (946 mL)

EPA Est. No. 089446-TWN-001

Manufactured for:

EPA Est. No. 088159-TWN-001

ROTAM NORTH AMERICA, INC.

4900 Koger Blvd., Suite #140, Greensboro, NC 27407

1-866-927-6826



LUC-A110716-REVA011617-1QT

TABLE OF CONTENTS

FIRST AID	1
PRECAUTIONARY STATEMENTS	2
DIRECTIONS FOR USE	3
NON-AGRICULTURAL USE REQUIREMENTS	3
PRODUCT USE INFORMATION	3
TURFGRASS SPECIES & APPLICATION RATES	5
RESISTANCE MANAGEMENT	5
APPLICATION INSTRUCTIONS	5
WEEDS CONTROLLED WITH PRE-EMERGENCE APPLICATIONS	7
WEEDS CONTROLLED USING POST-EMERGENCE APPLICATIONS	8
STORAGE AND DISPOSAL	10
CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY	11

FIRST AID

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 to an unconscious person.
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 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 by mouth-to-mouth, if possible.• Call a poison control center or doctor for further 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.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
HOT LINE NUMBER Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For 24-Hour Medical Emergency Assistance (Human or Animal) call: 1-800-222-1222 . For Chemical Emergency Assistance (Spill, Leak, Fire, or Accident) call CHEMTREC: 1-800-424-9300 .	

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Harmful if swallowed, or absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

Personal Protection Equipment (PPE)

Applicators and Other Handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves (e.g., barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride (PVC), or Viton \geq 14 mils)

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

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove and wash contaminated clothing before reuse.
- 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.

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.

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 or 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 of Federal law to use this product in a manner inconsistent with its 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.

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.

LUCTO PRODUCT USE INFORMATION

Make pre- and post-emergence applications to provide selective contact and residual control of turfgrass weeds. If applied pre-emergence, **LUCTO** is absorbed during weed emergence from the soil. Pre-emergence activity and control will be reduced in dry soil conditions. Activate **LUCTO** with 0.15 inches of irrigation if rain doesn't fall within 10 days of applying **LUCTO**. Post-emergent control is obtained through soil absorption and contact with foliage. Growth ceases, weeds whiten from loss of chlorophyll, and die within three weeks. Repeat application of **LUCTO** after 2-3 weeks to improve post-emergence weed control. Use a non-ionic surfactant with **LUCTO** when making post-emergence applications.

LUCTO treatments cause temporary whitening of foliage during treatment. Whitening typically occurs 5-7 days after application and lasts for several weeks. A second application to the same site will cause less whitening of plant tissue.

LUCTO controls weeds prior to and during seeding of certain turfgrasses during turf renovation (see New Seedings). If applying **LUCTO** pre-emergence application to established turf, tank mix **LUCTO** with other pre-emergence herbicides such as Barricade® 65WG for longer residual and broad spectrum control.

Approved Use Sites

LUCTO is approved for use on commercial and residential turfgrasses. Non-crop area use sites include golf courses, sod farms, athletic fields, parks, residential and commercial properties, cemeteries, airports, and lawns.

Use Precautions:

Residential Lawns: Do not make broadcast applications of **LUCTO** for pre- and post-emergent weed control unless the residential lawn is being reseeded and/or renovated as whitening of some turfgrasses may occur.

Apply **LUCTO** at reduced rates of 4 fl. oz./A or less if tank mixing with atrazine, bentazon, or simazine. Before tank mixing **LUCTO** with other herbicides, conduct a compatibility, safety, and efficacy test prior to treating larger areas. See tank mix partner labels for directions and precautions. The most restrictive directions of the tank mix partner label apply.

To avoid injury to sensitive plants, thoroughly clean application equipment after use.

To avoid injury to sensitive species, keep traffic out of treated areas until sprays have dried; irrigate soil lightly to move **LUCTO** from turf foliage before resuming normal irrigation.

Use Restrictions:

- DO NOT overspray or allow spray to drift to ornamentals or flower beds and gardens. Roses and daylilies are particularly sensitive to **LUCTO**.
- DO NOT apply more than 16 oz. **LUCTO** (or 0.50 lb. mesotrione per acre per year) per acre per year or per crop whichever is shorter.
- DO NOT plant any crop other than turfgrass for 18 months post-application to avoid turfgrass injury.
- DO NOT apply organophosphate or carbamate insecticides within 7 days of applying **LUCTO**.
- DO NOT apply **LUCTO** through any type of irrigation system.
- DO NOT make aerial applications of **LUCTO**.
- DO NOT use clippings treated with **LUCTO** to mulch trees or vegetable/flower gardens.
- DO NOT apply **LUCTO** product on Bentgrass, *Poa annua*, kikuyugrass, zoysiagrass, seashore paspalum and bermudagrass if plant injury is unacceptable. Maintain a 5-foot buffer between treated areas and bentgrass or *Poa annua* greens.
- DO NOT apply **LUCTO** over the top of exposed roots of trees and ornamentals.
- Do not apply **LUCTO** to golf course putting greens; maintain a minimum of a 5-foot buffer between putting greens and treated areas.

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

*See additional rate instructions below.

RESISTANCE MANAGEMENT

There is no known resistance to **LUCTO** and no known instances of cross-resistance between mesotrione, a Group 27 HPPD inhibitor, (the active ingredient in **LUCTO**) and other classes of herbicides. Do not apply less than the specified label instructions of **LUCTO** and rotate to a herbicide product with a different mode of action to prevent the occurrence of weed resistance, and the maximum number of applications and/or rate of product has been met and weeds are not controlled.

APPLICATION INSTRUCTIONS

Pre-Emergence Applications:

Apply 4-8 fl. oz. **LUCTO** per acre in 30 gallons of water per acre prior to seed germination yet as close to seed germination as possible. Combine **LUCTO** with another pre-emergence herbicide such as Barricade 65WG for extended control of crabgrass and foxtail.

Pre-Emergence Application Precautions:

LUCTO is more effective on established turf when applied post-emergence unless it is combined with another soil active herbicide.

Pre-Emergence Application Restrictions:

DO NOT exceed 5 fl. oz. **LUCTO** per acre per application to perennial ryegrass, fine fescues, or mixed stands that consist of >50% perennial ryegrass and/or fine fescue.

St. Augustinegrass sod restriction: DO NOT exceed 4 fl. oz. **LUCTO** per acre.

Application Instructions to New Seedlings/New Lawns

Apply 5-8 fl. oz. **LUCTO** per acre in 30 gallons of water per acre prior to or after seeding of turfgrass species listed below, except fine

fescue. Applying **LUCTO** to fine fescue can reduce grass density. **LUCTO** is effective on grass seed blends that contain <20% by weight hard/fine fescue. For optimal control, apply **LUCTO** at grass seeding or as close to seeding as possible.

New Seedings/New Lawns Restrictions:

Do not spray **LUCTO** on newly germinated turfgrass. Delay application until grass has been mowed 2-4 times and/or 4 weeks post-emergence (whichever is longer).

Post-Emergence Application Instructions:

Apply 4-8 fl. oz. **LUCTO** per acre in 30 gallons of water per acre with a NIS surfactant. Repeat application 2-3 weeks later for optimal weed control. Apply to young, actively growing weeds.

Post-Emergence Application Precautions:

Moisture stress and application to mature weeds can reduce herbicide efficacy.

Bentgrass (*Agrostis* spp.)/Nimbleweed (*Muhlenbergia schreberi*) Control:

Apply 5 fl. oz. **LUCTO** per acre in 30 gallons of water per acre combined with a NIS surfactant at 2-3 week intervals for a maximum of three applications. For optimal Bentgrass control, apply **LUCTO** in late summer/early fall just prior to new growth.

St. Augustinegrass (Sod uses only) and Centipedegrass

Treatment:

Apply **LUCTO** to established turf ONLY.

St. Augustinegrass (Sod uses only) and Centipedegrass

Restrictions:

DO NOT exceed 4 fl. oz. **LUCTO** if tank mixing with Atrazine or Simazine.

DO NOT exceed 0.5 lb. atrazine or simazine active ingredient. See atrazine/simazine labels for precautions and restrictions.

Dormant Bermudagrass Application Instructions:

Apply 5 fl. oz. per acre **LUCTO** to control winter weeds listed in the Weeds Controlled table below. Repeat application 2-3 weeks later. Applying **LUCTO** to semi-dormant turf will cause bermudagrass whitening.

Spot Applications Instructions:			
Spray Mix	Application Rate	Rate of LUCTO	Rate of NIS adjuvant
2 gallons	1 gallon per 1,000 sq. ft.	1 teaspoon	3 teaspoons

Spot Application Restrictions:

DO NOT apply more than 16 oz. **LUCTO** per acre per year or per crop (equivalent to 0.5 lb. mesotrione per acre per year), whichever is shorter.

WEEDS CONTROLLED WITH PRE-EMERGENCE APPLICATIONS OF LUCTO

Apply **LUCTO** with a grass pre-emergence herbicide such as Barricade 65WG Herbicide, except when used to control weeds in new seedings. **LUCTO** will control the following weeds using pre-emergence application:

WEEDS CONTROLLED – PRE-EMERGENCE APPLICATIONS
Barnyardgrass (<i>Echinochloa crusgalli</i>)
Bentgrass (<i>Creeping</i>) (<i>Agrostis stolonifera</i>)
Bluegrass (<i>Annual</i>) (<i>Poa annua</i>)*
Buckhorn Plantain (<i>Plantago lanceolata</i>)
Carpetweed (<i>Mollugo verticillata</i>)
Chickweed (Common) (<i>Stellaria media</i>)
Chickweed (Mouseear) (<i>Cerastium vulgatum</i>)
Clover (Large Hop) (<i>Trifolium aureum</i>)
Clover (White) (<i>Trifolium repens</i>)
Crabgrass (Large) (<i>Digitaria sanguinalis</i>)
Crabgrass (Smooth) (<i>Digitaria ischaemum</i>)
Crabgrass (Southern) (<i>Digitaria ciliaris</i>)
Foxtail (Yellow) (<i>Setaria glauca</i>)
Galinsoga (<i>Galinsoga ciliate</i>)
Lambsquarters (<i>Chenopodium album</i>)
Pigweed (Redroot) (<i>Amaranthus retroflexus</i>)
Pigweed (Smooth) (<i>Amaranthus hybridus</i>)
Purslane (Common) (<i>Portulaca oleracea</i>)
Shepherd's purse (<i>Capsella bursa-pastoris</i>)
Smartweed (Pale) (<i>Polygonum lapathifolium</i>)
Smartweed (Pennsylvania) (<i>Polygonum pensylvanicum</i>)
Speedwell (Persian) (<i>Veronica persica</i>)
Speedwell (Purslane) (<i>Veronica peregrine</i>)
Wild Carrot (<i>Daucus carota</i>)

*Suppression only

WEEDS CONTROLLED USING POST-EMERGENCE APPLICATION

Make a second application of **LUCTO** 2-3 weeks after initial treatment. For optimal weed control, add a NIS-type surfactant with **LUCTO** and apply to young, actively growing weeds. **LUCTO** controls the following weeds using post-emergence application:

WEEDS CONTROLLED – POST EMERGENCE APPLICATIONS
Barnyardgrass (<i>Echinochloa crusgalli</i>)
Bentgrass (Creeping) (<i>Agrostis stolonifera</i>)
Buckhorn Plantain (<i>Plantago lanceolata</i>)
Carpetweed (<i>Mollugo verticillata</i>)
Chickweed (Common) (<i>Stellaria media</i>)
Chickweed (Mouseear) (<i>Cerastium vulgatum</i>)
Clover (Large Hop) (<i>Trifolium aureum</i>)
Clover (White) (<i>Trifolium repens</i>)
Crabgrass (Large) (<i>Digitaria sanguinalis</i>)*
Crabgrass (Smooth) (<i>Digitaria ischaemum</i>)*
Crabgrass (Southern) (<i>Digitaria ciliaris</i>)*
Curly dock (<i>Rumex crispus</i>)
Dandelion (Catsear) (<i>Hypochoeris radicata</i>)
Dandelion (Common) (<i>Taraxacum officinale</i>)
Florida Betony (<i>Stachys floridana</i>)
Florida Pusley (<i>Richardia scabra</i>)
Foxtail (Yellow) (<i>Setaria glauca</i>)
Galinsoga (<i>Galinsoga ciliate</i>)
Goosegrass (<i>Eleusine indica</i>)*
Ground Ivy (<i>Glechoma hederacea</i>)
Heal-All (<i>Prunella vulgaris</i>)
Henbit (<i>Lamium amplexicaule</i>)
Lambsquarters (Common) (<i>Chenopodium album</i>)

WEEDS CONTROLLED – POST EMERGENCE APPLICATIONS <i>Cont.</i>
Lawn Burweed (<i>Soliva sessilis</i>)
Lovegrass (Tufted) (<i>Eragrostis pectinacea</i>)
Marestail (<i>Conyza Canadensis</i>)
Nimbleweed (<i>Muhlenbergia schreberi</i>)
Nutsedge (Yellow) (<i>Cyperus esculentus</i>)
Oxalis (<i>Oxalis stricta</i>)
Pigweed (Redroot) (<i>Amaranthus retroflexus</i>)
Pigweed (Smooth) (<i>Amaranthus hybridus</i>)
Purslane (Common) (<i>Portulaca oleracea</i>)
Shepherd's purse (<i>Capsella bursa-pastoris</i>)
Smartweed (Pale) (<i>Polygonum lapathifolium</i>)
Smartweed (Pennsylvania) (<i>Polygonum pensylvanicum</i>)
Sowthistle (<i>Sonchus oleraceus</i>)
Swinecress (<i>Coronopus didymus</i>)
Thistle (Canada) (<i>Cirsium arvense</i>)
Verbena (<i>Verbena hastate</i>)
Wild Carrot (<i>Daucus carota</i>)
Wild Violet (<i>Viola pratincola</i>)
Windmillgrass (<i>Chloris verticillata</i>)

*For optimal control, apply to less than 4 tiller crabgrass and goosegrass.

STORAGE AND DISPOSAL

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

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

Pesticide Disposal: Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Open dumping is prohibited.

Container Handling ≤ 5 Gallons: 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 formulation equipment. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into formulation equipment or store rinsate for later use or disposal. 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.

Container Handling ≥ 5 Gallons: Refillable container. Refill this container with pesticide only. Do not use this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing 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 for 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 this product, which are beyond the control of Rotam North America, Inc., or Seller. The Buyer and User shall assume all such risks, and Buyer and User agree to hold Rotam North America, Inc. and Seller harmless for any claims relating to such factors.

To the extent consistent with applicable law, Rotam North America, Inc. 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. This warranty does not extend to the use of the product contrary to proper instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Rotam North America, Inc., and Buyer and User assume the risk of any such use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ROTAM NORTH AMERICA, INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR NEITHER A PARTICULAR PURPOSE NOR ANY OTHER EXPENSES OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent consistent with applicable law, Rotam North America, Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ROTAM NORTH AMERICA, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ROTAM NORTH AMERICA, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.

Rotam North America, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sales and limitations of warranty and of liability, which may not be modified except by written agreement signed by a duly authorized representative of Rotam North America, Inc.

