

#### U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs

Biopesticides and Pollution Prevention Division (7511P) 1200 Pennsylvania Ave., N.W.

Washington, D.C. 20460

#### NOTICE OF PESTICIDE:

X Registration
Reregistration
(under FIFRA, as amended)

EPA Reg. Number: D	Date of Issuance:
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239-2754

11/6/2018

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Unconditional

Name of Pesticide Product:

NNS 8766314

Name and Address of Registrant (include ZIP Code):

The Scott's Company d/b/a The Ortho Group P.O. Box 190 Marysville, OH 43040

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Biopesticides and Pollution Prevention Division prior to use of the label in commerce. In any correspondence on this product, always refer to the above EPA Registration Number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA or the Act).

Registration is in no way to be construed as an endorsement or recommendation of this product by the U.S. Environmental Protection Agency (EPA). In order to protect health and the environment, the Administrator, on his or her motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under the Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration or registration review of your product when the EPA requires all registrants of similar products to submit such data.

Signature of Approving Official:

Andrew C. Bryceland, Team Leader Biochemical Pesticides Branch

Biopesticides and Pollution Prevention Division (7511P)

Office of Pesticide Programs

Date:

11/6/2018

- 2. Make the following labeling change before you release this product for shipment:
  - Revise the EPA Registration Number to read, "EPA Reg. No. 239-2754."
- 3. Submit one (1) copy of the final printed labeling for the record before you release this product for shipment.

Should you wish to add/retain a reference to your company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the EPA. If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA-approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6. A stamped copy of the labeling is enclosed for your records. Please also note that the record for this product currently contains the following acceptable Confidential Statement of Formula (CSF):

Basic CSF dated 10/11/2018

If you have any questions, please contact Alex Horansky of my team by phone at (703) 347-0128 or via email at horansky.alex@epa.gov.

Sincerely,

Andrew Bryceland, Team Leader Biochemical Pesticides Branch Biopesticides and Pollution

Prevention Division (7511P)

Office of Pesticide Programs

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Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

239-2754

# NNS 8766314

## [CONCENTRATE]

Non-selective Herbicide

NOT FOR FOOD USE

#### SUBLABEL A: FOR COMMERCIAL USE

FOR CONTACT SPRAY CONTROL OR BURNDOWN OF WEEDS AND GRASSES FOR ORNAMENTALS, TURF, LANDSCAPES, INTERIORSCAPES, GREENHOUSES AND RESIDENTIAL SITES

#### SUBLABEL B: FOR RESIDENTIAL USE

FOR CONTACT SPRAY CONTROL OR BURNDOWN OF WEEDS AND GRASSES FOR HOMES AND GARDENS

#### **Active ingredient:**

Ammonium Nonanoate	
Other ingredients	60.0 wt.%
Total	100 0 wt %

NNS 8766314 contains 3.3 lbs. of ammonium nonanoate per US gallon.

## KEEP OUT OF REACH OF CHILDREN

## **WARNING**

See back/side/top/bottom [panel/label] for additional precautionary statements

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#### SUBLABEL A: FOR COMMERCIAL USE

FOR CONTACT SPRAY CONTROL OR BURNDOWN OF WEEDS AND GRASSES FOR ORNAMENTALS, TURF, LANDSCAPES, INTERIORSCAPES, GREENHOUSES AND RESIDENTIAL SITES

## NNS 8766314

Non-selective Herbicide NOT FOR FOOD USE

**Active ingredient:** 

Ammonium Nonanoate	.40.0 wt.%
Other ingredients	. 60.0 wt.%
Total	100.0 wt.%

NNS 8766314 contains 3.3 lbs. of ammonium nonanoate per US gallon.

#### **KEEP OUT OF REACH OF CHILDREN**

#### **WARNING "AVISO"**

"Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)"

FIRST AID			
<ul> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continuring eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>			
If inhaled	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>		
<ul> <li>If on skin or clothing</li> <li>Take off contaminated clothing</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>			

**Emergency Number**: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-225-2883 for emergency medical treatment information.

EPA Reg. No. 239-NEW
EPA Est. No. XXXXX
[Superscript is first letter of lot number]
Lot No. XXXXX

NET CONTENTS: XX FL OZ (X [GAL/QT/PT]) XX [L/mL]

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## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**Warning.** Causes substantial, but temporary eye irritation. Do not get in eyes or on clothing. Wear goggles. Harmful if inhaled. Avoid breathing spray mist. Causes moderate skin irritation. Avoid contact with skin or on clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove and wash contaminated clothing before reuse.

#### **ENVIRONMENTAL HAZARDS**

**For terrestrial uses:** This pesticide is toxic to fish and aquatic invertebrates. Use care when applying in areas adjacent to any body of water. Do not apply directly to water, 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. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. This product is toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product if bees are visiting the treatment area.

#### For containers greater than 5 gallon

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

## **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 State/Tribal agency responsible for pesticide regulation.

#### METHODS OF USE AND GENERAL APPLICATION INSTRUCTIONS

#### **General Instructions:**

NNS 8766314/this/the product is a contact non-selective herbicide for spray application only to undesirable plant growth. Do not allow spray to contact any green plant parts of desirable plants. NNS 8766314/this/the product provides control and burndown suppression of annual and perennial broadleaf and grass weeds. Spore producing plants such as mosses and liverworts are also controlled. The amount of burndown and the duration of weed suppression may be reduced when weed growth conditions are unfavorable or when plants are mature.

NNS 8766314/this/the product is non-volatile and water soluble for foliar application in manual pump sprayers. Complete and uniform coverage of weeds by the spray solution is required for the best weed control. Plant foliage will change from a green color to brown/black necrotic tissue within one to two hours after spray application of NNS 8766314/this/the product diluted with water. NNS 8766314/this/the product effect on plant tissue may be more rapid in warm weather than in cold conditions. However, weed control is normally unaffected by temperature.

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NNS 8766314/this/the product herbicide is a soap product which penetrates the cell walls of plants to disrupt the cellular organization of physiological functions which are compartmentalized by membranes within the cell walls. Plant growth ceases when cellular contents are mixed which causes brown necrotic plant tissue.

NNS 8766314/this/the product does not migrate through the soil and is not translocated in plants. **To ensure satisfactory control, plant leaves must be thoroughly and uniformly covered with the spray solution**. NNS 8766314/this/the product does not provide any residual weed control in soil to affect germinating weed seeds.

#### Mixing and Application Instructions:

For use, NNS 8766314/this/the product is diluted with water to the specified concentration for effective control of the undesirable vegetation. Apply using standard methods of liquid herbicide application. Dilution must be in accordance with label instructions. Do not apply this product through any type of irrigation system.

A 12% v/v dilution is recommended for most weed control situations and based on the results, applicators may increase or decrease spray concentrations as discussed in the following text and tables to obtain better control or to reduce herbicide use.

The degree of dilution for application is based on the concentration of active ingredient needed for the size of vegetation to be suppressed or the rate of herbicidal effect desired. The larger the vegetation, the higher the concentration (less dilution of NNS 8766314/this/the product) required for rapid action. See required concentration for variously sized weeds and grasses in Dosage and Application Rates Section. Hard to control or suppress weeds (perennial weeds and some grasses) may require several applications for complete control.

Spray equipment options include hand-held and hose-end sprayers. Spray nozzles that produce a uniform spray will give maximum coverage of the leaves and improved weed control.

NNS 8766314/this/the product is completely soluble in water and when uniformly mixed, no additional mixing or agitation is required.

#### **Application Precautions:**

- Do not apply to weeds when wet from dew, rain or water.
- Do not water within 2 hours after application
- Do not apply if rainfall is expected within 2 hours.

During application, some foaming may occur; however, weed control is unaffected if the foam is deposited on the plant surface and is not blown away as drift. Foaming can be reduced by using the minimum spray pressure required for a uniform application to the target weeds. Use low spray pressure to reduce foaming and avoid contact with desirable plants. Most spray nozzles are designed to operate at 10 to 15 psi and provide uniform spray coverage of weeds.

#### Mixing:

Fill sprayer tank with half the required amount of water, add the full amount of NNS 8766314/this/the product to be used (see Dilution Factors below), then fill the sprayer tank with the remainder of the water required for the desired final concentration. Since NNS 8766314/this/the product is completely soluble in water and when uniformly dispersed in water, continuous mixing or agitation is not required.

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#### **Hand-Held Equipment**

Thorough saturation of the foliage and stems is required for control, but stop sprays when run-off from weed leaves occurs. Use low spray pressure to reduce foaming and avoid contact with desirable plants. Most spray nozzles are designed to operate at 10 to 15 psi and provide uniform spray coverage of weeds.

#### **Directed Spray Equipment**

Use a shielded sprayer to prevent spray contact on desirable plants. Avoid spray contact of green plant stems or green bark of young trees and shrubs.

**NOTE:** In areas of hard water, the final mixture may appear milky. This condition does not change the effectiveness of the treatment. Some visible foam may appear on the leaves as the plants are sprayed. Overspray or drift onto desirable plants is usually not a serious problem because leaves and stems require a thoroughly wet spray coverage for significant injury. Repeat applications as often as necessary to obtain desired control.

#### **Dosage and Application Rates:**

For general weed and grass control, rates are based on the size of the plants and/or the desired speed of kill. The larger the plants, the higher the dosage rates needed to ensure maximum herbicidal activity. Also, the higher the concentration, the quicker the plants wilt and turn brown. Apply NNS 8766314/this/the product spray solutions only when weed surfaces are dry.

The rate table presents the suggested percent volume/volume solutions of NNS 8766314/this/the product to use for application as follows:

- Use a 6 to 8 % V/V of NNS 8766314/this/the product spray solution for control of annual weeds of 1 inch height or less and for control of liverworts and mosses.
- Use an 8 to 10% V/V NNS 8766314/this/the product spray solution for control of annual weeds over 1 inch height and up to 4 inch height.
- Use a 10 to 13% V/V NNS 8766314/this/the product spray solution for weeds over 4 inch height and for hard to control weeds.
- A 15% V/V NNS 8766314/this/the product spray solution is the maximum labeled rate. Use this rate for hard to control perennial weeds or extremely dense weed growth.

Repeat spray applications as necessary to obtain the desired control or suppression of weeds from newly germinated weed seeds and regrowth from roots or stems.

#### **RATE TABLE**

Final Spray	Amount of NNS 8766314/this/the product for Percent V/V				
Volume	(Volume/Volume) Solution				
(gallons)	6%	8%	10%	13%	15%
1	8 fl oz	10 fl oz	13 fl oz	1 pt	1.2 pt
2	1 pt	1.3 pt	1.6 pt	2 pt	2.4 pt
5	2.5 pt	3.3 pt	4 pt	5 pt	6 pt
10	5 pt	6.5 pt	1 gal	1.3 gal	1.5 gal
20	1.3 gal	1.6 gal	2 gal	2.6 gal	3.0 gal

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Height of Plants

to be Controlled

1 inch or less

1 to 4 inches

Above 4 inches

Spray

Solution (% V/V)\_

6 to 8%

8 to 10%

10 to 13%

**NOTE**: Do not use spray concentrations higher than 15% in a pressure sprayer since unacceptable foaming and bubble formation may occur at the nozzle heads.

#### **Use Methods**

Determine the weed control situation and select the use method required as follows:

- **A. Vegetative Burndown:** Broadcast spray for weed control for no-till planting or seedbed preparation to control weeds prior to seeding or transplanting. Spot sprays may be used in ornamentals and turf.
- **B. Directed and shielded sprays:** Spray nozzle type or configuration for directed spray or a shield placed around the nozzle to prevent spray contact on the foliage or green stems or bark. Directed/shielded spray applications to area between plastic mulch strips and staked crops for weed control.

#### **PESTS**

I. Weeds controlled or suppressed by NNS 8766314/this/the product:

Note to PM: taxonomic names are optional on the market label.

COMMON NAMES	TAXONOMIC NAMES

301111011111111111111111111111111111111	17 0 (01 (01 (01 (01 (01 (01 (01 (01 (01 (		
Broadleaf Weeds:			
Algae	Gloeocapsa magma		
Bittercress, hairy	Cardamine hirsuta		
Chickweed, common	Stellaria media		
Chickweed, mouse-ear	Cerastium vulgatum		
Cocklebur, common	Xanthium strumarium		
Corn spurry	Spergula arvensis		
Cudweed, purple	Gnaphalium purpureum		
Groundsel	Senecio spp.		
Lambsquarters, common	Chenopodium album		
Liverwort	Machantia spp.		
Marestail or Horseweed rosettes	Conyza canadensis		
Morningglory, annual	lpomoea spp.		
Moss	Bryophyta		
Mustards	Brassica spp.		
Oxalis or Woodsorrel	Oxalis stricta		
Pansy, wild	Viola tricolor		
Plantain	Plantago spp.		
Pigweed, smooth and redroot	Amaranthus spp.		

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Mallow, roundleaved Malva spp.

MoneywortLysimachia nummulariaShepherdspurseCapsella bursa-pastorisSorrel, sheepRumex acetosellaSpurge, spottedEuphorbia maculataField pennycressThiaspi arvenseVelvetleafAbutilon theophrasti

#### **Grass and Other Weeds:**

Bentgrass, colonial Agrostis tenuis
Bluegrass, annual Poa annua
Crabgrass, large Digitaria sangui

Crabgrass, large Digitaria sanguinalis
Fescue, creeping red Festuca rubra

Fescue, hard Festuca ovina

Nimblewill
Onion, wild
Ryegrass, perennial
Star-of-Bethlehem

Muhlenbergia scheberi
Allium canadense
Lolium perenne
Ornithogalum nutans

II. Weeds Moderately Difficult to Control<sup>1</sup>

Bermudagrass (Wireweed)

Bindweed, field

Convolvulus arvensis

Dandelion

Taraxacum officinale

Nutsedge, yellow

Ragweed, common

Cynodon dactylon

Convolvulus arvensis

Taraxacum officinale

Cyperus esculentus

Ambrosia artemisiifolia

#### STORAGE AND DISPOSAL

**DO NOT** contaminate water, food or feed by storage or disposal.

**Pesticide Storage:** Store container in cool place until used. Store at temperatures above 32° F. **Pesticide Disposal:** Wastes resulting from use of this product must be disposed of on-site or at an approved waste disposal facility.

#### **Container Handling:**

Non-refillable Containers: Do not reuse or refill this container. Offer for recycling if available.

Clean container promptly after emptying (liquid formulations).

Non-refillable container equal to or less than 5 gals: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Non-refillable container between 5- 55 gals: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ 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 application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

**Refillable container 5 gals to bulk:** Refill this container with this pesticide only. Do not reuse this

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<sup>&</sup>lt;sup>1</sup>Use 13 to 15% V/V of NNS 8766314/this/the product for control or suppression.

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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 refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a 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. Dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

#### **Warranty and Disclaimer Notice:**

To the extent consistent with applicable law, The Ortho Group, makes no warranty or guarantee of any kind, expressed or implied concerning the effects of use of this product, other than those specified on this label. Buyers or users accept all responsibility for results due to misuse or improper handling of this product.

Manufactured/Sold/Distributed by/for: The ORTHO Group P.O. Box 190 Marysville, OH 43040

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#### SUBLABEL B: FOR RESIDENTIAL USE

FOR CONTACT SPRAY CONTROL OR BURNDOWN OF WEEDS AND GRASSES FOR HOMES AND GARDENS

## NNS8766314

#### **Alternate Brand Names:**

- Ortho GroundClear Weed & Grass Killer2
- Ortho GroundClear Weed & Grass Killer Concentrate1

Non-selective Herbicide

NOT FOR FOOD USE

**Active ingredient:** 

 Ammonium Nonanoate
 .40.0 wt.%

 Other ingredients
 .60.0 wt.%

 Total
 .100.0 wt.%

NNS 8766314/this/the product contains 3.3 lbs. of ammonium nonanoate per US gallon

## KEEP OUT OF REACH OF CHILDREN WARNING

FIRST AID				
If in eyes	<ul> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>			
If inhaled	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>			
If on skin or clothing	<ul> <li>Take off contaminated clothing</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>			

**Emergency Number:** Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-225-2883 for emergency medical treatment information.

EPA Reg. No. 239-NEW
EPA Est. No. XXXXX
[superscript is first letter of lot number]
Lot No. XXXXX

NET CONTENTS: XX FL OZ (X [GAL/QT/PT]) XX [L/mL]

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## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**Warning.** Causes substantial, but temporary eye irritation. Do not get in eyes or on clothing. Wear goggles. Harmful if inhaled. Avoid breathing spray mist. Causes moderate skin irritation. Avoid contact with skin or on clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove and wash contaminated clothing before reuse.

#### **ENVIRONMENTAL HAZARDS**

**For terrestrial uses:** This pesticide is toxic to fish and aquatic invertebrates. To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, or gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems. This product is toxic to bees exposed to direct treatment or residues on blooming crop or weeds. Do not apply this product if bees are visiting the treatment area.

## **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

#### **APPLICATION PRECAUTIONS:**

- Do not apply to weeds when wet from dew, rain or water.
- Do not water within 2 hours after application.
- Do not apply if rainfall is expected within 2 hours.
- Not for food use.
- Do not allow spray to contact desirable green plant parts unless topical injury can be tolerated.
- Do not allow children and pets to enter application area until sprays have dried.

## Option 1

#### METHODS OF USE AND GENERAL APPLICATION INSTRUCTIONS

#### **General Instructions:**

[NNS 8766314/this/the product is a contact non-selective herbicide for spray application only to undesirable plant growth. Do not allow spray to contact any green plant parts of desirable plants. NNS 8766314/this/the product provides control and burndown suppression of annual and perennial broadleaf and grass weeds. Spore producing plants such as mosses and liverworts are also controlled. The amount of burndown and the duration of weed suppression may be reduced when weed growth conditions are unfavorable or when plants are mature.]

[NNS 8766314/this/the product is non-volatile and water soluble for foliar application in manual pump sprayers. Complete and uniform coverage of weeds by the spray solution is required for the best weed control. Plant foliage will change from a green color to brown/black necrotic tissue within one to two hours after spray application of NNS 8766314/this/the product diluted with water. NNS 8766314/this/the product effect on plant tissue may be more rapid in warm weather than in cold conditions. However, weed control is normally unaffected by temperature.]

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[NNS 8766314/this [product] herbicide is a soap product which penetrates the cell walls of plants to disrupt the cellular organization of physiological functions which are compartmentalized by membranes within the cell walls. Plant growth ceases when cellular contents are mixed which causes brown necrotic plant tissue.]

NNS 8766314/this/the product does not migrate through the soil and is not translocated in plants. **To ensure satisfactory control, plant leaves must be thoroughly and uniformly covered with the spray solution**. NNS 8766314/this/the product does not provide any residual weed control in soil to affect germinating weed seeds.

#### Mixing and Application Instructions:

For use, NNS 8766314/this/the product is diluted with water to the specified concentration for effective control of the undesirable vegetation. Apply using standard methods of liquid herbicide application. Dilution must be in accordance with label instructions. Do not apply this product through any type of irrigation system.

A 12% v/v dilution is recommended for most weed control situations and based on the results, applicators may increase or decrease spray concentrations as discussed in the following text and tables to obtain better control or to reduce herbicide use.

The degree of dilution for application is based on the concentration of active ingredient needed for the size of vegetation to be suppressed or the rate of herbicidal effect desired. The larger the vegetation, the higher the concentration (less dilution of NNS 8766314/this/the product) required for rapid action. See required concentration for variously sized weeds and grasses in Dosage and Application Rates Section. Hard to control or suppress weeds (perennial weeds and some grasses) may require several applications for complete control.

Spray equipment options include hand-held and hose-end sprayers. Spray nozzles that produce a uniform spray will give maximum coverage of the leaves and improved weed control. NNS 8766314/this/the product is completely soluble in water and when uniformly mixed, no additional mixing or agitation is required.

During application, some foaming may occur; however, weed control is unaffected if the foam is deposited on the plant surface and is not blown away as drift. Foaming can be reduced by using the minimum spray pressure required for a uniform application to the target weeds. Use low spray pressure to reduce foaming and avoid contact with desirable plants. Most spray nozzles are designed to operate at 10 to 15 psi and provide uniform spray coverage of weeds.

### Mixing:

Fill sprayer tank with half the required amount of water, add the full amount of NNS 8766314/this/the product to be used (see Dilution Factors below), then fill the sprayer tank with the remainder of the water required for the desired final concentration. Since NNS 8766314/this/the product is completely soluble in water and when uniformly dispersed in water, continuous mixing or agitation is not required.

#### **Hand-Held Equipment**

Thorough saturation of the foliage and stems is required for control, but stop sprays when run-off from weed leaves occurs. Use low spray pressure to reduce foaming and avoid contact with desirable plants. Most spray nozzles are designed to operate at 10 to 15 psi and provide uniform spray coverage of weeds.

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## [Directed Spray Equipment

Use a shielded sprayer to prevent spray contact on desirable plants. Avoid spray contact of green plant stems or green bark of young trees and shrubs.]

**NOTE:** In areas of hard water, the final mixture may appear milky. This condition does not change the effectiveness of the treatment. Some visible foam may appear on the leaves as the plants are sprayed. Overspray or drift onto desirable plants is usually not a serious problem because leaves and stems require a thoroughly wet spray coverage for significant injury. Repeat applications as often as necessary to obtain desired control.

## **Dosage and Application Rates:**

For general weed and grass control, rates are based on the size of the plants and/or the desired speed of kill. The larger the plants, the higher the dosage rates needed to ensure maximum herbicidal activity. Also, the higher the concentration, the quicker the plants wilt and turn brown. Apply NNS 8766314/this/the product spray solutions only when weed surfaces are dry.

The rate table presents the suggested percent volume/volume solutions of NNS 8766314/this/the product to use for application as follows:

- Use a 6 to 8 % V/V NNS 8766314/this/the product spray solution for control of annual weeds of 1 inch height or less and for control of liverworts and mosses.
- Use an 8 to 10% V/V NNS 8766314/this/the product spray solution for control of annual weeds over 1 inch height and up to 4 inch height.
- Use a 10 to 13% V/V NNS 8766314/this/the product spray solution for weeds over 4 inch height and for hard to control weeds.
- A 15% V/V NNS 8766314/this/the product spray solution is the maximum labeled rate. Use this rate for hard to control perennial weeds or extremely dense weed growth.

Repeat spray applications as necessary to obtain the desired control or suppression of weeds from newly germinated weed seeds and regrowth from roots or stems.

#### RATE TABLE

Final Spray	Amount of NNS 8766314/this/the product for Percent V/V (Volume/Volume)				
Volume	Solution				
(gallons)	6%	8%	10%	13%	15%
1	8 fl oz	10 fl oz	13 fl oz	1 pt	1.2 pt
2	1 pt	1.3 pt	1.6 pt	2 pt	2.4 pt
5	2.5 pt	3.3 pt	4 pt	5 pt	6 pt
10	5 pt	6.5 pt	1 gal	1.3 gal	1.5 gal
20	1.3 gal	1.6 gal	2 gal	2.6 gal	3.0 gal

Height of Plants to be Controlled 1 inch or less 1 to 4 inches Above 4 inches Spray
Solution (% V/V)
6 to 8%
8 to 10%
10 to 13%

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**NOTE**: Do not use spray concentrations higher than 15% in a pressure sprayer since unacceptable foaming and bubble formation may occur at the nozzle heads.

#### **Use Methods**

Determine the weed control situation and select the use method required as follows:

- **A. Vegetative Burndown:** Broadcast spray [for weed control for seedbed preparation] to control weeds prior to seeding or transplanting. Spot sprays may be used in ornamentals and turf.
- **B. Directed and shielded sprays:** Spray nozzle type or configuration for directed spray or a shield placed around the nozzle to prevent spray contact on the foliage or green stems or bark. Directed/shielded spray applications to area between plastic mulch strips and staked crops for weed control.

#### **PESTS**

Bentgrass, colonial

I. Weeds controlled or suppressed by NNS 8766314/this product:

COMMON NAMES TAXONOMIC NAMES

COMMON NAMES	TAXUNUMIC NAMES
Broadleaf Weeds:	
Algae	Gloeocapsa magma
Bittercress, hairy	Cardamine hirsuta
Chickweed, common	Stellaria media
Chickweed, mouse-ear	Cerastium vulgatum
Cocklebur, common	Xanthium strumarium
Corn spurry	Spergula arvensis
Cudweed, purple	Gnaphalium purpureum
Groundsel	Senecio spp.
Lambsquarters, common	Chenopodium album
Liverwort	Machantia spp.
Marestail or Horseweed rosettes	Conyza canadensis
Morningglory, annual	lpomoea spp.
Moss	Bryophyta
Mustards	Brassica spp.
Oxalis or Woodsorrel	Oxalis stricta
Pansy, wild	Viola tricolor
Plantain	Plantago spp.
Pigweed, smooth and redroot	Amaranthus spp.
Mallow, roundleaved	Malva spp.
Moneywort	Lysimachia nummularia
Shepherdspurse	Capsella bursa-pastoris
Sorrel, sheep	Rumex acetosella
Spurge, spotted	Euphorbia maculata
Field pennycress	Thiaspi arvense
Velvetleaf	Abutilon theophrasti
Grass and Other Weeds:	

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Agrostis tenuis

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Bluegrass, annual Crabgrass, large Fescue, creeping red Fescue, hard Nimblewill Onion, wild Ryegrass, perennial Star-of-Bethlehem

II. Weeds Moderately Difficult to Control<sup>1</sup>
Bermudagrass (Wireweed)
Bindweed, field
Dandelion
Nutsedge, yellow
Ragweed, common

Poa annua
Digitaria sanguinalis
Festuca rubra
Festuca ovina
Muhlenbergia scheberi
Allium canadense
Lolium perenne
Ornithogalum nutans

Cynodon dactylon Convolvulus arvensis Taraxacum officinale Cyperus esculentus Ambrosia artemisiifolia

**End of Option 1** 

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<sup>&</sup>lt;sup>1</sup>Use 13 to 15% V/V of NNS 8766314/this/the product for control or suppression.

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## Option 2

## [METHODS OF USE AND GENERAL APPLICATION INSTRUCTIONS]

#### **How It Works:**

Weeds will turn from green to brown within 1-2 hours. Perennial or more established weeds may take multiple applications.

NNS 8766314/the product's effect on plant tissue may be more rapid in warm weather than in cold conditions. However, weed control is normally unaffected by temperature. NNS 8766314/this/the product does not migrate through the soil and is not translocated in plants. **To ensure satisfactory control, plant leaves must be thoroughly and uniformly covered with the spray solution**. NNS 8766314/this/the product does not provide any residual weed control in soil to affect germinating weed seeds.

NNS 8766314/this/the product is a contact non-selective herbicidal soap for foliar spray application in manual pump sprayers only to undesirable plant growth. Do not allow spray to contact any green plant parts of desirable plants. NNS 8766314/this/the product provides control and burndown suppression of annual and perennial broadleaf and grassy weeds. Spore producing plants such as mosses and liverworts are also controlled. The amount of burndown and the duration of weed suppression may be reduced when weed growth conditions are unfavorable or when plants are mature.

#### WHERE TO APPLY/USE

- For outdoor use only.
- Use on walkways, driveways, under trees, in landscape beds and gardens.

**IMPORTANT:** Do not spray plants or grasses you like - they will die. Not recommended for spot weed control in lawns since this product kills lawn grasses. Do not allow treated weeds to come in contact with desirable plants until spray has dried.

#### **HOW TO APPLY/USE**

- Apply using standard methods of liquid herbicide application. No shaking or agitation is required.
   Dilution must be in accordance with label instructions. Do not apply this product through any type of irrigation system.
- 1 pint (16 fl oz) per gallon of spray is recommended for most weed control situations and based on the results.
- 1.2 pints (19.2 fl oz) per gallon of spray is the maximum labeled rate and may be used for hard to control perennial weeds or extremely dense weed growth.
- Spray nozzles that produce a uniform spray will give maximum coverage of the leaves and improved weed control.
- [Adjust nozzle to the desired spray setting].
- Apply/spray until weeds are completely covered/run-off from weed leaves occurs.
- Apply to dry weed surfaces only.
- Use a cardboard or plastic shield to block spray from contact desirable plants nearby. If desirable plants are accidentally sprayed, rinse off immediately with water.
- Difficult to control weeds may require several applications for complete control.
- Repeat applications as often as necessary to obtain desired control.
- **NOTE**: Do not use spray pressure higher than 15 PSI in a pressure sprayer since unacceptable foaming and bubble formation may occur at the nozzle heads.

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**HOW MUCH TO APPLY/USE:** Fill sprayer tank with half the required amount of water, add the full amount of NNS 8766314/ product, then fill the sprayer tank with the remainder of the water required.

- Mix 1 pint (16 fl oz) of NNS 8766314/this/the product with 7 pints of water to treat up to 300 sq ft.
- For hard to control perennial weeds or extremely dense weed growth, mix 1.2 pints (19.2 fl oz) of NNS 8766314/this/the product with 6.8 pints of water to treat up to 300 sq ft.

#### WHEN TO APPLY/USE

- Apply any time of year when weeds are small [3 inches tall or wide] and actively growing.
- Apply when winds are calm.

#### **PESTS**

I. Weeds controlled or suppressed by NNS 8766314/this product:

## COMMON NAMES

#### *[TAXONOMIC NAMES]*

Broadleaf Weeds:	
Algae	Gloeocapsa magma
Bittercress, hairy	Cardamine hirsuta
Chickweed, common	Stellaria media
Chickweed, mouse-ear	Cerastium vulgatum
Cocklebur, common	Xanthium strumarium
Corn spurry	Spergula arvensis
Cudweed, purple	Gnaphalium purpureum
Groundsel	Senecio spp.
Lambsquarters, common	Chenopodium album
Liverwort	Machantia spp.
Marestail or Horseweed rosettes	Conyza canadensis
Morningglory, annual	lpomoea spp.
Moss	Bryophyta
Mustards	Brassica spp.
Oxalis or Woodsorrel	Oxalis stricta
Pansy, wild	Viola tricolor
Plantain	Plantago spp.
Pigweed, smooth and redroot	Amaranthus spp.
Mallow, roundleaved	Malva spp.
Moneywort	Lysimachia nummularia
Shepherdspurse	Capsella bursa-pastoris
Sorrel, sheep	Rumex acetosella
Spurge, spotted	Euphorbia maculata
Field pennycress	Thiaspi arvense
Velvetleaf	Abutilon theophrasti
Grass and Other Weeds:	
	As a set of the set
Bentgrass, colonial	Agrostis tenuis
Bluegrass, annual	Poa annua
Crabgrass, large	Digitaria sanguinalis]
Fescue, creeping red	Festuca rubra
Fescue, hard	Festuca ovina
Nimblewill	Muhlenbergia scheberi

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Onion, wild

Ryegrass, perennial

Star-of-Bethlehem

Allium canadense

Lolium perenne

Ornithogalum nutans

II. Weeds Moderately Difficult to Control<sup>1</sup>
Bermudagrass (Wireweed)
Bindweed, field
Dandelion
Nutsedge, yellow
Ragweed, common

Cynodon dactylon Convolvulus arvensis Taraxacum officinale Cyperus esculentus Ambrosia artemisiifolia]

#### **End of Option 2**

#### STORAGE AND DISPOSAL

**Pesticide Storage:** Store container in cool place until used. Store at temperatures above 32° F. **Pesticide Disposal:** Wastes resulting from use of this product must be disposed of on-site or at an approved waste disposal facility.

**Container Disposal: If empty: Non-refillable.** Do not reuse or refill this container. Offer for recycling if available. **If partly filled:** Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

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<sup>&</sup>lt;sup>1</sup>Use 1.2 pints of NNS 8766314/this product per gallon for control or suppression

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## Optional Marketing Claims For use with Residential label Option 2

(Claims may appear on any or all label panel(s))

The following Product Facts format is optional and the information may appear inside or outside of a box. Appropriate formula and company specific information will be inserted on Final Printed Label to replace "X"

#### **Product Facts:**

Kills weeds & grasses

Acts on Contact

See results in 15 minutes

Absorbs on Contact

Starts Working Immediately

Rainproof in 2 hours

[For/use on] Patios\*, landscape beds\*, gardens\*

#### WHERE TO USE [Insert Graphics]

- [Fence Lines/ Along Fences]
- [Driveways & Walkways/ Patios\*]
- [Tree Rings/ Around Trees]
- [Flower Beds/ Landscaped Beds]
- [Edging]
- \*apply directly to weeds

#### **Efficacy Claims**

- 1. See Results in 15 Minutes
- 2. Starts working immediately
- 3. Concentrate
- 4. Fast Acting
- 5. Kills to the root
- 6. Acts on contact

#### General & Product Facts

- 7. Controls annual and perennial weeds \* \* when used as directed
- 8. Controls grasses and broadleaf weeds
- 9. Weed and Grass Killer
- 10. Broad Spectrum
- 11. For non-selective control of weeds and grasses. Do not spray in/the lawn.
- 12. Rainproof/Rainfast in 2 hours
- 13. [Homeowners] [Can] Plant new flowers, trees & shrubs in treated areas once application dries.\* 
  \*upon drying

#### **Promotional Claims**

- 14. Value [pack/size/buy]
- 15. Great Value
- 16. X bottles [included]
- 17. Not for individual sale

#### Coverage

- 18. Covers [up to] XXXX SQ. FT
- 19. Treats [up to] XXXX SQ. FT
- 20. Covers (XX) sq. ft. (qt.) (gal.)
- 21. 1 qt covers up to 600 sq ft

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#### **Use Areas**

22. For/use on patio[s]/driveways/walkways/flower beds/mulch beds/hardscapes/pavers/fence lines/tree rings/around trees/landscaped beds and/or gardens
\*Apply directly to weeds.

#### **Other Product Claims**

23. Non-selective Herbicide

#### Guarantee:

- 24. Guaranteed<sup>†</sup>
- 25. Guaranteed [results] †
- 26. Guaranteed Satisfaction<sup>†</sup>
- 27. [Company/Brand] Guarantee[d]
- 28. [Company/Brand] Satisfaction guarantee[d]<sup>†</sup>
- 29. [Company/Brand] [Promise your] satisfaction guaranteed [or your money back]

#### Other:

- [Open] Resealable Label for Directions and Precautions
- Press to Reseal
- See inside booklet for details
- Peel Here

#### Questions &/or Comments [icon phone] [icon computer]

Call 1-800-225-2883 or [visit our website] at www.ortho.com

**NOTICE:** To the extent consistent with applicable law, the buyer assumes all risks of use, storage or handling of this product not in accordance with label directions.

## <sup>†</sup>The ORTHO<sup>®</sup> Guarantee

If for any reason you, the consumer, are not satisfied with this product, mail us your original proof of purchase to obtain a full refund of your purchase price.

#### Ortho [subregistrant name] & Your Environment

Your yard is a place for family and pets to enjoy. That's why Ortho<sup>®</sup> [subregistrant name] products are designed with care to provide effective solutions to weed problems. Follow instructions for appropriate usage, storage and disposal.

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Manufactured/Sold/Distributed by/for: The ORTHO Group P.O. Box 190 Marysville, OH 43040

EPA Reg. No. 239-NEW
EPA Est. No. XXX-XXX-X
[Superscript is first letter of lot number]

[Product of] [Made in] [Country Name] [USA]

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