228-540





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

OFFICE OF PREVENTION. PESTICIDES AND FOXIC SUBSTANCES

August 17, 2007

Mr. George Meindl Nufarm American, Inc. 150 Harvester Drive, Suite 200 Burr Ridge, IL 60527

Subject:

Application for Pesticide Notification (PRN 98-10)

Request Primary Brand Name "Dynamo 40 WSP Herbicide"

EPA Reg. No. 228-540

Your Application Dated July 13, 2007

Dear Mr. Meindl:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated July 13, 2007 for the above mentioned product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested fall within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, please call me directly at 703-305-6249 or Owen F. Beeder of my staff at 703-308-8899.

Sincerely,

Linda Arrington

Notifications & Minor Formulations Team Leader

Registration Division (7505P)

Office of Pesticide Programs

Flease read instructions on reverse before completing form.	*	Form Approved. OMB No. 2070-0060
United States Environmental Protect Washington, DC 2	tion Agency	Registration Amendment Other
Applica	tion for Pesticide - Sectio	n l
1. Company/Product Number 228-540	2. EPA Product Manage Joanne Miller	3. Proposed Classification None Restricted
4. Company/Product (Name) Dynamo 40 WSP Herbicide	PM# 23	
5. Name and Address of Applicant (Include ZIP Code) Nufarm Americas, Inc. 150 Harvester Drive Suite 200 Burr Ridge, IL 60527 Check if this is a new address	(b)(i), my product is s to:	w. In accordance with FIFRA Section 3(c)(3) similar or identical in composition and labeling
	Section - II	
Amendment - Explain below. Resubmission in response to Agency letter dated X Notification - Explain below.	Final printed la	lication.
Explanation: Use additional page(s) if necessary. (For sectional page(s) if necessary. (For sectional page) and EPA regulations at 40 CFR 152.46, and no other product. I understand that it is a violation of 18 U.S.C. Sec. notification is not consistent withe terms of PR Notice 98-10 enforcement action and penalties under sections 12 and 14	r for detailed explanation. This notific changes have been made to the labe 1001 to willfully make false statemen and 40 CFR 152.46, this product ma of FIFRA.	eling or the confidential statement of formula of this nts to EPA. I further understand that if this
	Section - III	
1. Material This Product Will Be Packaged In: Child-Resistant Packaging Yes No * Certification must be submitted Unit Packaging Wgt. No. per Unit Packaging wgt.	Water Soluble Packaging Yes No If "Yes" No. per Package wgt container	2. Type of Container Metal Plastic Glass Paper Other (Specify)
3. Location of Net Contents Information 4. Size(s) F	Retail Container 5.	Location of Label Directions
6. Manner in Which Lebel is Affixed to Product Lith Pap Stel	ograph Other er plued nciled	
	Section - IV	
1. Contact Point (Complete items directly below for identifica		
Name George Meindl george.meindl@us.nufarm.com Title Registration Manager Telephone No. (Include Area 630.455.2017		
Certific I certify that the statements I have made on this form at I acknowledge that any knowlingly false or misleading so both under applicable law. 2. Signature	nd all attachments thereto are true, ac	
JESK IV Just	Registration Man	ager iji
4. Typed Name George Meinel	^{5, Date} 7/13/2007	, , , , , , , , , , , , , , , , , , ,



Nufarm Americas, Inc. George Meindl Registration Manager 150 Harvester Drive, Suite 200 Burr Ridge, IL 60527 Phone: 630.455-2017 Fax: 630.455.2030 george.meindl@us.nufarm.com

July 13, 2007

Via Overnight Courier

Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
U. S. Environmental Protection Agency
Room S4900, One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202

Subject:

Dithiopyr E-Pro 40 WSP Herbicide

EPA Reg. No. 228-540 (transferred from 79676-39)

Change primary brand name to Dynamo™ 40 WSP Herbicide

Dear Ms. Hobgood:

Nufarm Americas Inc. would like to make a change to the primary brand name for the subject registration. We would like the primary brand name for the subject registration to be: Dynamo™ 40 WSP Herbicide. We feel that this label change is permitted and consistent with PRN98-10 section II (Labeling notifications) part A (Changing primary brand name). The new primary brand name is not false and misleading.

To process this request please find enclosed the following:

- Application for Pesticide Registration (EPA form 8570-1)
- Final print labeling with new primary brand name (1 copy)

If you should have any questions regarding this matter, please feel free to contact me at 630.455.2017 or email at george.meindl@us.nufarm.com.

Sincerely,

George Meindl

Registration Manager

Nufarm Americas, Inc.

Dynamo™ 40 WSP Herbicide

For control of annual grasses and broadleaf weeds in established lawns, ornamental turf (including golf course fairways, roughs, tee boxes), and established landscape ornamentals.

In the state of New York, this product may only be used by commercial applicators at no more than 0.625 pounds per acre (10 ounces) or 2 water-soluble pouches per acre per year (0.25 pounds active ingredient).

ACTIVE INGREDIENTS

Each 5-ounce water-soluble pouch contains 0.125 lb. of active ingredient.

KEEP OUT OF REACH OF CHILDREN CAUTION

	FIRST AID		
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. 		
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 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 by mouth to an unconscious person. 		
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. 		
HOT LINE NUMBER			

treatment. You may also contact 1-877-325-1840 for emergency medical treatment information.

See inside label booklet for additional PRECAUTIONARY STATEMENTS

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

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Wear protective eyewear. Avoid contact with eyes, skin or clothing. Harmful if inhaled. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Wear: Long-sleeved shirt and long pants, socks, shoes, and gloves. Remove contaminated clothing and wash clothing before reuse.

Manufactured for:
Nufarm Americas, Inc.
Burr Ridge, IL 60527

Dynamo™ 40 WSP Herbicide contains dithiopyr, the active ingredient used in Dimension®.

EPA Reg. No. 228-540

Net Weight:

EPÁ Est. No

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves made of any waterproof material
- Shoes plus socks

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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 Controls Statement

When handlers use closed systems, enclosed cabs or aircraft in a manner that meet 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

This product is toxic to fish and highly toxic to other aquatic organisms including oysters and shrimp. Use with care when applying to turf areas adjacent to any body of water. Drift and runoff from treated turf may adversely affect aquatic organisms in adjacent aquatic sites. 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 apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwaters.

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.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying. 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.

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
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

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

Keep unprotected persons out of treated area until sprays have dried.

GENERAL INFORMATION

This product is NOT recommended for application by homeowners.

In the state of New York, this product may be applied by commercial applicators ONLY.

This product controls crabgrass, other annual grasses and broadleaf weeds in established lawns, ornamental turf (including golf course fairways, roughs and tee boxes), and landscape ornamentals.

This product will not control emerged weeds, except for control of crabgrass up to initiation of tillering because the tillering stage of crabgrass growth generally corresponds to the time when seedlings are first visible in established turfgrasses. Applying to crabgrass after tillering starts will not provide satisfactory control, and all other applications of this product should be made prior to germination of target weeds.

To be effective, this product must be activated by at least ½ inch of rainfall or irrigation. Applications should be timed to ensure that activation occurs prior to the tillering stage of crabgrass development or prior to germination of all other weeds.

USE PRECAUTIONS

- Do NOT allow the pouches to become wet prior to adding them to the spray tank.
- Do NOT remove the water-soluble pouches from the protective over-wrap except to add them directly to the spray tank.
- Do NOT handle the pouches with wet hands or wet gloves.
- Always reseal over-wrap bag to protect remaining unused pouches.

MIXING INSTRUCTIONS

This Product Alone with Water as the Carrier:

- 1. Prior to use, be sure the sprayer is clean and not contaminated with other materials.
- 2. Fill mixing tank ½ to ¾ full with clean water and begin agitation, being certain that the agitation system is working properly and creates a rippling or rolling on the surface of the liquid.
- 3. While maintaining agitation, add the required number of water-soluble pouches to the tank and be sure that this product is completely mixed prior to adding any additional materials to the tank. The disintegration and complete mixing of the water-soluble pouches should occur within ten minutes after addition to the water depending on the water temperature and amount of agitation.
- 4. Add the remainder of the water to the spray tank. Be sure to remove the hose from the mixing tank immediately after filling to avoid siphoning back into the water source.
- 5. To ensure uniformity of spray mixture and prevent settling, be sure to maintain agitation of the spray mixture during mixing and application.

This Product Alone with Fluid Fertilizer as the Carrier:

Follow the mixing procedure listed below for tank mixtures.

Tank Mixtures

Note: This product is compatible with boron and spray oils; however, the water-soluble pouches must be completely dissolved before adding spray oils or products containing boron to spray mixtures.

1. Determine the compatibility of this product and the desired tank mixture partner product(s) in the appropriate carrier (water or fluid fertilizer) by following the "Physical Compatibility Test" section of this label.

- 2. Clean out the sprayer and place a 20 to 35 mesh screen or wetting basket over the filling port.
- 3. Fill the sprayer half full with the appropriate carrier. Begin agitation and maintain agitation through all mixing and spraying operations.
- 4. If needed, add a compatibility agent. Be sure to check for adequate agitation and to read and follow all of the information found on the compatibility agent label.
- 5. Add this product to the tank. Before adding other materials, allow sufficient time for all the water-soluble pouches to dissolve and contents to mix completely. NOTE: When mixing this product with fluid fertilizer, be sure to premix with water to form a slurry and then slowly add the slurry to the mixing tank.
- 6. Add any other wettable powder or dry flowable formulation products. NOTE: When mixing wettable powder or dry flowable products with fluid fertilizer, be sure to premix with water to form a slurry and then slowly add the slurry to the mixing tank.
- 7. If a flowable pesticide formulation is to be incorporated in the spray mix, premix with one part water and add to the tank slowly.
- 8. Add any emulsifiable concentrate pesticide formulations to the tank.
- 9. Add any water-soluble liquid pesticide formulations followed by surfactants, marker dyes or foams, and/or drift control additives while continuing the filling process.

To avoid siphoning back into the carrier source, remove the hose from the mixing tank immediately after filling. Be sure to maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle, agitate thoroughly to re-suspend the mixture before resuming spraying.

Physical Compatibility Test

Prior to mixing this product with fluid fertilizers and/or other pesticides, the user should test the compatibility of the desired tank mixture by mixing proportionate amounts of each component in a small glass jar as follows:

NOTE: This compatibility test is designed for a product application rate of 25 gallons of spray solution per acre.

- 1. Determine the amount of pesticide to tank-mix by referring to the pesticide label(s) and then calculate the amount of pesticide to add to the jar based on the following use rate ratios:
 - For a use rate of 1 pound per acre of dry pesticide add 1-1/2 teaspoons.
 - For a use rate of 1 quart per acre of liquid pesticide, add 1 teaspoon.
- 2. Add product based on use rate ratios for liquid pesticides listed above. For changes in spray volume or herbicide rate, make appropriate changes in the amount of the ingredients used for the test.
- 3. Shake the jar vigorously to mix and allow to sit for five minutes.
- 4. If the pesticide(s) do not form crystals, flakes, sludge, gels, oily films or layers, then the tested components are considered to be compatible. If the desired tank-mix components are found to be incompatible, using a compatibility agent is recommended. Test the effectiveness of the compatibility agent by repeating the compatibility test with a suitable compatibility agent (one-half teaspoon per pint jar is equivalent to 2 pints per 100 gallons of spray solution).

WEED CONTROL IN TURFGRASS

NOTE: Do NOT use on golf course putting greens.

Apply this product to well-established seeded, sodded, or sprigged lawn and ornamental turf. Before applying this product for the first time following seeding, sodding or sprigging, the grass must have developed a good root system and uniform stand and have received at least two mowings. Turf injury may result if applied to turf that is not well-established, or has been weakened by weathers, pest-, disease-, chemical-, mechanical or other related stress.

When applied as directed under the conditions described, the following turfgrass, species have been determined to be tolerant to applications of this product:

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Cool Season Grasses

Creeping Bentgrass¹ (*Agrostis palustris*)
Fine Fescue² (*Festuca rubra*)
Kentucky Bluegrass (*Poa pratensis*)

Perennial Ryegrass (*Lolium perenne*) Tall Fescue (*Festuca arundinacea*)

Warm Season Grasses

Bahiagrass (*Paspalum notatum*)
Bermudagrass³ (*Cynodon dactylon*)
Buffalograss⁴ (*Buchloe dactyloides*)
Carpetgrass (*Axonopus affinis*)
Centipedegrass (*Eremonchloa ophiuroides*)

Kikuyugrass (*Pennisetum clandestinum*) Seashore Paspalum (*Paspalum vaginatum*) St. Augustinegrass (*Stenotaphrum secundatum*) Zoysiagrass (*Zoysia japonica*)

- 1) Do NOT apply this product to Colonial bentgrass (*Agrostis tenuis*) varieties. Because undesirable turfgrass injury may result, using this product is not recommended on certain varieties of creeping bentgrass such as 'Cohansey', 'Carmen', 'Seaside', and 'Washington'. Not all varieties of creeping bentgrass have been tested.
- 2) Because undesirable turfgrass injury may result, application is not recommended on the following fine fescue varieties that have been found to be sensitive to this product: 'Atlanta', 'Banner', 'Beauty', 'Bilgart', 'CF-2', 'Enjoy', 'HF-93', 'Highlight', 'Ivalo', 'Jamestown', 'Koket', 'Majenta', 'Mary', 'Pennlawn', 'Tamara', 'Tatjana', 'Waldorf', and 'Waldina'. Not all varieties of fine fescue have been tested.
- 3) Because undesirable turfgrass injury may result, applying this product on 'Tifgreen' (328) hybrid bermudagrass greens is not recommended.
- 4) Do NOT use this product on seedling buffalograss in the spring of the first year of establishment until the turfgrass is fully green and has established new roots.

Use Precautions

- Early postemergence applications will control crabgrass only if applied prior to the fifth leaf (first tiller) stage of growth of crabgrass.
- For best results, cultural practices that disturb the soil (such as core-, spike-, or hydro-aerification, and verti-cutting) should be done prior to application of this product. Do NOT apply this product until the grass has recovered from these cultural practices.
- Do NOT use clippings from treated turf for mulch around vegetables or fruit trees.
- Do NOT graze livestock or feed foliage cut from areas treated with this product.
- Do NOT apply this product through any type of irrigation system.

Reseeding, Overseeding, or Sprigging

Establishment of desirable turfgrasses may be inhibited if a single application of this product is applied within 10 weeks prior to reseeding, overseeding, or sprigging of treated areas or 4 months after a split application program totaling more than 0.46 oz./1000 sq. ft. (1.25 lbs./acre). If slight injury to perennial ryegrass can be tolerated, perennial ryegrass may be overseeded on bermudagrass within 6 to 8 weeks after an application.

When reseeding or overseeding, proper cultural practices such as soil cultivation, irrigation and fertilization should be followed. For best results, use mechanical or power seeding equipment (slit seeders) designed to give good seed to soil contact.

APPLICATION DIRECTIONS

Apply this product using conventional liquid application equipment (including hand-held spray guns) and a sufficient volume of carrier solution to provide a uniform spray distribution. Due to variability in application use rates and spray patterns, do not apply this product using liquid application equipment that uses cluster spray nozzles or other boomless spray equipment. Prior to use, be sure jo calibrate the application equipment. To avoid streaking, skips, or excess overlaps, use marker dyes or foams to assist in making accurate applications.

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Crabgrass Control

Preemergence and Early Postemergence Control

When applied prior to the emergence of crabgrass from the ground, this product provides preemergence control of crabgrass (including the large, smooth and southern species) in established lawns and ornamental turf. During the early stages of crabgrass growth (after the crabgrass has emerged from the ground), this product also provides early postemergence control of crabgrass.

Early postemergence crabgrass control occurs only when this product is applied prior to crabgrass tillering, or approximately when you can first easily see the crabgrass plants in the lawn or turf. This provides the practical benefit of extending the application period by 2 to 8 weeks (depending on crabgrass growth rates and climatic conditions) when compared to strictly preemergence crabgrass control products.

Application Frequency and Timing.

For crabgrass control in the spring, summer, or fall, apply this product as a single application, a split application, or as a sequential application.

Spring / Early Summer Applications

Applied at the rate recommended by the appropriate control programs for your area and conditions. The total rate applied directly impacts the duration of residual weed control, but will also vary somewhat depending upon the weather, severity of weed pressure, turfgrass competitiveness, and the user's location.

Use Program 1: This program provides 3 to 5 months of preemergence control and early postemergence control of crabgrass up to the 3-leaf stage in sites when turfgrass is cut relatively high (such as homeowner lawns).

Use Program 2: This program provides 4 to 6 months of preemergence crabgrass control in sites where the turfgrass is cut relatively low (such as golf fairways) and turfgrass maintenance or weed control was conducted during the previous year. This program may also be used for early postemergence control up to crabgrass tillering in sites where turfgrass is cut relatively high (such as residential lawns).

Use Program 3: This program provides 4 to 6 months of preemergence crabgrass control in sites where turfgrass is cut relatively low (such as golf fairways) and turf maintenance or weed control was NOT conducted during the previous year. This program may also be used for early postemergence control up to crabgrass tillering at sites where turfgrass is cut relatively low (such as golf fairways). If longer periods of control are desired, follow the initial application with sequential pre- and/or postemergence applications. In some cases, improved weed control may result if the rates recommended in the table below are split across two applications 5 to 10 weeks apart.



Region	Program	# of sq. ft. per Pouch per Treatment	# of Pouches per Acre	Pounds of Product per Acre	Pounds of Al per Acre
	1	29,040	1.5⁵	0.470	0.188
All states and parts of states not listed below under Transition, South, Coastal South, or West	2	21,780	2	0.625	0.250
Transition, Godan, Godatai Godan, Gravest	3	14,520	3ª	0.950	0.380
Transition - DE, KS, KY, MD, MO, NJ, VA	1	21,780	2	0.625	0.250
southeastern PA, southern areas of IL, IN, OH and	2	14,520	3	0.950	0.380
coastal areas of CT, and RI	3	10,900	4	1.250	0.500
South - AL, AR, GA, LA, MS, NC, NM, OK, SC, TN, and TX	1	14,520	3	0.950	0.380
	2	21,780	2+2°	0.625+0.625	0.25+0.25
TH, and TX	3	17,424	2.5+2.5 ^{b,c}	0.78+0.78	0.31+0.31
	1	21,780	2+2°	0.625+0.625	0.25+0.25
Coastal South - HI, FL and southern coastal areas of AL, GA, LA, MS, NC, SC, and TX	2	17,424	2.5+2.5 ^{b,c}	0.78+0.78	0.31+0.31
517, 57, E7, MO, 110, 50, and 17	3	14,520	3+3°	0.95+0.95	0.38+0.38
	1	29,040-21,780	1.5-2 ^b	0.47-0.625	0.18-0.25
West - AZ, CA, NV ^d	2	21,780-14,520	2-3	0.625-0.95	0.25-0.36
	3	21,780	2+2°	0.625+0.625	0.25+0.25

- a) In New York State, do not apply more than 2 water-soluble pouches per acre or 0.23 oz./1000 sq. ft. (0.625 lb./acre) per year.
- b) The water-soluble bag is NOT designed to be re-measured or subdivided and should not be opened. Treat an appropriate number of acres to use a whole number of bags.
- c) Preemergence applications totaling more than 0.5 lb. ai/acre (greater than 1.25 lbs./acre of product) must be applied as a split application. The recommended interval for split applications is 5 to 10 weeks apart. Early postemergence applications are limited to 0.5 lb. ai/acre (1.25 lbs. of product) per application.
- d) For this climatically diverse region, use the higher rates in local areas with longer crabgrass seasons.

Maximum Use Rates

- Do NOT apply more than 0.5 lb. ai per acre per application or more than 1.5 lb. ai per acre per year using split or sequential applications. This is equivalent to 4 water-soluble pouches per acre or 0.46 oz./1000 sq. ft. (1.25 lb./acre of product) per application and 12 water-soluble pouches per acre or 1.38 oz./1000 sq. ft. (3.75 lbs./acre of product) per year.
- In New York State, do not apply more than 0.25 lb. ai per year. This is equivalent to 2 water-soluble pouches (0.625 lb./acre) per acre or 0.23 oz./1000 sq. ft. of this product.

Fall Applications

To control crabgrass through the early part of the following spring, apply this product in late summer or early fall (late August through November) at the "Program 3" use rates listed in the table above. For season-long weed control, follow the fall application with an appropriately timed spring application being sure to not exceed maximum use rates listed above.

Note: Because this product will not control emerged broadleaf weeds or grasses (with the exception of crabgrass up to tillering stage of development), the area to be treated should be free of weeds prior to application.

Tank Mixtures for Postemergence Control of Crabgrass

When used alone, this product provides early postemergence control of crabgrass when applied prior to the tillering stage of growth. For postemergence control of tillered crabgrass (up to 3 tillers) tank mix this product with either MSMA or Acclaim.

If preemergence herbicides were applied prior to a postemergence application, use the appropriate Program 1 or Program 2 use rate of this product for your area; other wise, apply the Program 3 use rate.

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Using a nonionic surfactant may improve control. Be sure to read and follow the surfactant manufacturer's label recommendations.

Before tank mixing this product with fluid fertilizers and / or either MSMA or Acclaim[®] herbicides, a compatibility test is recommended. Refer to the "Physical Compatibility Test" in the "Mixing Instructions" section for more information.

For information on the tolerance of specific turfgrass species when tank mixing with MSMA or Acclaim[®], refer to the respective labels and be sure to observe all limitations, precautionary statements, and use restrictions in the labels.

Control of Other Grass and Broadleaf Weeds

Weeds Controlled

When applied prior to emergence, this product will control or suppress the following annual grass and broadleaf weeds:

Grasses

Barley (Hordeum spp.)
Barnyardgrass (Echinchloa crus-galli)
Bluegrass, annual[†] (Poa annua)
Brome (Bromus spp.)
Crabgrass, large (Digitaria sanguinalis)
Crabgrass, smooth (Digitaria Ischaemum)
Crabgrass, Southern (Digitaria ciliaris)
Crowfootgrass (Dactyloctenium aegyptium)
Dallisgrass (seedling) (Paspalum dilatatum)
Goosegrass (Eleusine indica)

Foxtail, giant (Setaria faberi)
Foxtail, green (Setaria Verdi)
Foxtail, yellow (Setaria faberi)
Kikuyugrass (Pennisetum clandestinum)
Mary's grass (Microstegium vimineum)
Oats, wild (Avena fatua)
Ryegrass (Lolium spp.)
Sandbur (Cenchrus spp.)
Smutgrass (Sporobolus indicus)

[†] For extended control of Annual Poa (*Poa annua*) in south and coastal south regions: An initial application at 1.25 lbs./acre (0.5 lb. ai) is recommended 6 weeks before overseeding followed by a second application of 0.625 to 1.25 lbs./acre (0.25 to 0.5 lb./ai) 120 days after overseeding. Some injury to overseeded perennial ryegrass may occur (see "Reseeding, Overseeding, or Sprigging" precautions under "Use Precautions for Turf Use")

Broadleaf Weeds

Bittercress (Cardamine spp.)
Carpetweed (Mollugo verticillata)
Chickweed (Stellaria spp.)
Coneflower, purple (Rudbekia purpurea)
Geranium, Carolina (Geranium carolinianum)
Henbit (Lamium spp.)
Knotweed, prostrate (Polygonum aviculare)
Lespedeza, common (Lespedeza striata)
Marestail (Conyza Canadensis)
Medic, black (Medicago lupulina)
Mustard (Brassica spp.)
Oxalis, buttercup (Oxalis pes-caprae)

Pineappleweed (Matricaria matrioides)
Pigweed, redroot (Amaranthus retroflexus)
Parsley-piert (Alchemilla arvensis)
Purslane, common (Portulaca oleracea)
Rocket, London (Sisymbrum irio)
Shepherdspurse (Capsella bursa-pastoris)
Speedwell, corn (Veronica arvensis)
Spurge, garden (Euphorbia hirta)
Spurge, prostrate (Euphorbia humistrata)
Spurge, spotted (Euphorbia muculata)
Woodsorrel, creeping (Oxalis corniculata)
Woodsorrel, yellow (Oxalis stricta)

Use Directions for Ornamentals

This product provides preemergence control of listed annual grass and broadleaf weeds in areas planted with tolerant ornamental plants being grown for aesthetic purposes in landscaped areas listed in the table below.

Note Regarding Application to Turf or Ornamental Species Not Listed on this Label

This label lists a large number of ornamental species that have been found to be compatible with this product, however, it is not possible to test all of the ornamental plants that may be encountered in nursery or landscape settings. Prior to using this product on a plant species not listed in the label may determine the suitability for such use by treating a small area or small number of plants at a recommended rate prior to treatment of larger areas. The treated area/plants should be observed for any sign of herbicidal injury

during the 30 to 60 days of typical growing conditions. The user assumes the responsibility for any plant damage or other liability resulting from use of this product on species not recommended in this label.

Use Precautions

- Apply this product only to established ornamentals (after transplanting when soil around roots has been thoroughly settled by rainfall or irrigation).
- Do NOT apply this product on grasses grown for seed.
- Do NOT graze livestock or feed forage cut from areas treated with this product.
- Do NOT apply this product in enclosed structures and greenhouses.
- Do NOT apply this product through any type of irrigation system.
- Do NOT apply this product to the bare roots of ornamental plants.
- Do NOT incorporate this product into soil or dilution of the active ingredient and possible injury to plant roots may occur.
- Do NOT apply around ornamental plants that have been weakened or are under stress due to flooding, drought, wind injury, hail, frost damage, winter injury, excessive fertilizer or soil salts, injury due to insects, nematodes or diseases or injury from previously applied pesticides.
- Because drift or direct sprays of this product can injure the foliage of non-target plants, do NOT make applications when weather conditions favor drift to non-target areas.

Application Instructions

Apply this product with a calibrated sprayer as a single or split application post-directed spray in the spring, summer or fall prior to germination of target weed species. Direct the spray to the soil at the base of the ornamentals in order to avoid spray contact or drift to foliage. To maintain weed control, sequential applications may be made at 3 to 4 month intervals as long as maximum annual use rates are not exceeded.

Mix this product with clean water at a rate of 4 water-soluble pouches per acre (0.46 oz. of product per 1000 square feet or 1.25 lbs. per acre) per application and apply at 20 to 40 psi in a minimum of one gallon of water per 1000 sq. ft. NOTE: One 5-ounce water-soluble pouch treats 10,890 square feet.

Application Rates for Ornamentals		
Rate per acre Rate per 1000 sq. ft. Sq. ft. per pouch		
20 oz.	0.46 oz.	10,890

Maximum Use Rates

- Do NOT apply more than 0.5 lb. of product AI per acre (i.e., 4 water-soluble pouches per acre or 0.46 oz. per 1000 sq. ft.) per application, or more than 1.5 lbs. AI per acre per year (i.e., 12 water-soluble pouches per acre or 1.375 oz. per 1000 sq. ft.).
- In New York State, do NOT apply more than 0.25 lb. product AI per year (i.e., 2 water soluble pouches per acre or 0.23 oz. per 1000 sq. ft.).

Application Timing and Recommendations

Because the best weed control is obtained when applications are made to soil that is free of clods, weeds and debris such as leaves, prior to applying existing vegetation should be controlled by cultivation, hand weeding or with a postemergence herbicide.

Once this product is applied, do not disturb the soil surface as the herbicide barrier will be broken.

Care must be taken that soil or planting mixes have settled firmly following transplanting and that there are not cracks in the soil that would allow direct transmission of this product and plant roots.

Tolerant Ornamentals

When applied as directed under the conditions described on this label, ornamentals listed below have shown tolerance in field trials. However, this product has not been tested on all cultivars of each species or under all possible growing conditions. Under your growing conditions, it is strongly recommended that

a limited number of plants be treated for tolerance evaluation, prior to initiating large-scale applications. Follow directions given above to determine plant tolerance under your growing conditions prior to large scale use.

Common Name	Botanical Name	Tolerant Cultivars
Abelia, Dwarf	Abelia X grandiflora	Nana
Abyssinian red	Ensete ventricosium	Maurelii
banana		
Ajuga	Ajuga reptans	Bronze
	Ajuga genevensis	Bronze Beauty
Almond, Flowering	Prunus gladulosa	
Apple†	Malus pumila	
Arborvitae	Thuja occidentalis	Nigra
		Pyramidalis
		Smaragh
·		Techny
Arbayitaa Caldan	Thuis orientalia	Woodwardii
Arbovitae, Golden	Thuja orientalis	Aurea nana
Aster, Chinese	Callistephus chinensis	Dwarf Queen
Ach Groom	Fraxinus	
Ash, Green	pennsylvanica	
Ash, Mountain	Sorbus aucuparia	
Ash, Purple	Fraxinus Americana	
Azalea	Rhododendron spp.	Brilliant
Azaica	Triododendron spp.	Buccaneer
		Carror
		Chimes (Belgian)
		Elsie Lee
		Exbury
		Fashion
		Hardijzer Beauty
		Hershey Red
		Higasa
		Hinocrimson
		Holland (Hybrid)
		Marion Lee
		Northern Lights
		Orange Cup
		Orchid Lights
		Snow
		Southern Charm
Azalea, Flame	Rhododendron	
<u> </u>	calendulaceum	
Azalea, Kirishima		
Bamboo, Heavenly	Dankania Harris ''	A
Barberry	Barberis thunbergii	Aurea
		Dwarf Pigmy
		Green
		Kobold
		Pygmy Red
Porhorny Durala		Rose Glow
Barberry, Purple	Gaillardia	Atropurpurea
Basket flower		
	grandiflora	

Beach grass	Ammophila	
Joach grass	breviligulata	
Bearberry (common)	Arctostaphylos uva- ursti	Massachusetts
Bee Balm	Monarda didyma	
Begonia	Begonia spp.	
Birch, River	Betula nigra	
Blackeyed Susan	Rudbeckia hirta	Goldstrum
Blanket Flower		Goldstrum
	Gaillardia spp	Divosas
Blueberry†	Vaccinium spp	Bluecrop Blue Jay Jersey North Blue Northland
Blue Fescue	Festuca ovina	
Bottlebrush	Callistemon citrinus	
Boxwood, Japanese		Japonica
Boxwood, Weller	Buxus sempervirens	Winter gem
Broom	Cytisus spp.	Moonlight
	Genista pilosa	Vancouver Gold
Bugle Carpet		
Camellia	Camellia japonica Camellia sasanqua	Debutante Mathotiana Supreme Chansonette
Condy Tuft	Iborio ann	setsukgekka Snow White
Candy Tuft Carex, Variegated	Iberis spp Carex	Show white
Cedar, red		
Celosia	Juniperus virginiana Celosia spp.	
Centaura	Centaurea Montana	
Cockscomb, Plumosa	Celosia cristata	Soorlet plumose
Coleus	Coleus blumei	Scarlet plumose
	 	Red kewpie
Columbine	Aguilegia spp.	
Coneflower, purple	Echinacea purpurea	
Copper leaf	Acalypha wilkesiana	Manakaan
Coreopsis	Coreopsis spp	Moonbeam
Corn Flower	Centaurea spp.	
Cotoneaster	Cotoneaster apiculatus	
Coyotebrush	Baccharis pilularis	
Cycads	Cycas Revoluta	
Cypress, Bald	Taxodium distichum	
Cypress, Italian	Cupressus	Glauca
	sempervirens	
Cypress, Japanese	Chamaecyparis	Gracilis
False	obtuse	
	r	
Cypress, Leyland	Cupressocyparis leylandii	

Daylilly	Hemerocallis spp.	Spring glory Aztec gold Bright yellow (hybrid) Single gold (evergreen) Wilson's yellow
Dianthus (Sweet William)	Dianthus barbatus	
Delphinium	Delphinium elatum	Magic fountain
Dogwood	Cornus Florida	
Dogwood, American	Cornus sericea	Flavarimaea
Douglas Fir	Psedotsuga menziesii	
Dusty Miller	Senecio Cineraria	
Elm, Drake	Ulmus parvifolia	
Euryops	Europs pectinatus	Viridis
Euonymus	Euonymus fortunei	Argenteo-variegata Auereo-marginata Colorata Emerald Gaiety Emerald 'N Gold Gold Edge Gold Princess Silver King Tricolor Vegetus
Fan Palm, European	Chamaerops humilis	
Fan Palm, Mexican	Washingtonia robusta	
Fern (various)	Asparagus spp.	
Fescue	Festuca glauca	
Fetterbush	Leucothoe fontanesiana	Rainbow
Ficus	Ficus retusa	Nitidia
Fir Fraser	Abies Fraseri	
Forsythia	Forsythia X intermedia	Arnold Dwarf Bronxensis Dwarf Lynwood Gold Meadowlark Weeping
	Spring glory	
Fountain grass	Pennisetum setaceum	Rubrum
Fuchsia	Fuchsia spp.	
Galium	Galium ordoratum	
Gardenia	Gardenia jasminoides	White gem Mystery Radicans
Geranium	Pelargonium X hortorum	
Gum	Eucaluptus citriodora	

Hawthorn	Crataegus spp	Cockspur White Crimson Cloud Enchantress Jack Evans Washington White
Heather, Twisted	Erica cinerea	Mediterranean Pink
Hemlock, Canada	Tsuga Canadensis	
Hibiscus	Hibiscus spp	Blue bird Brilliant Hula girl
Holly	Ilex spp. Ilex X meserveae Ilex X attenuate	Blue Boy Blue Girl Burfodil China Girl Compacta Forsteri Hellerie Japanese northern beauty Needlepoint Nellie R. Stevens Savanah
Holly, Chinese	llex cornuta	
Holly, Japanese	llex crenata	
Holly, Yaupon	Ilex vomitoria	
Honeysuckle	Lonicera japonica	Clavey's dwarf Halliana Tatarian Canadian White Zebelli Red Hosta
Hosta	Hosta spp. Hosta lancifolia	Albo Marginata
Ice Plant Ice plant, white trailing	Carpobrotus edulis Delosperma alba CT	
Impatiens	Impatients spp	
Iris	Iris spp	Dwarf blue Wedgewood
Ivy, English	Hedera helix	Bulgaria Thorndale
Jasmine, Asian	Trachelopermum Asiaticum	
Juniper	Juniperus spp	Arcadia Armstrong Bar Harbor
	Juniperus horizontalis	Blue Chip Blue Pacific Blue Rug

	luninorus	Plus Stor
	Juniperus	Blue Star
	horizontalis	Broadmoor
		Buffalo
		Calgary Carpet
		Emerald Sea
		Emerald Spreader
		Endora Compacta
		Fruitlandi
1		Green
		Gold Tip
		Hetzi
		Hughes
		Manhattan blue
		Parsoni
		Pfitzeriana
		Plumosa
		Prince of Wales
		Procumbens Dwarf
		San Jose
		Sargent Blue
		Sargent Green
		Scandia
		Scopulorum
		Moonglow
		Scopulorum
		Skyrocket
		Spartan
	luninarus chinanaia	Tamariscifolia
	Juniperus Chinensis	
	Juniperus Sabina	Weberi
		Youngstown
10: 0 1	A t t t	Yukon belle
King Palm	Archontophoenix	
	Cunninghamiana	
Laurel, Australian	Pittosporum tobira	
Laurel, Mountain	Kalmia latifolia	
Leucothoe	Leucothoe	
	fontanesiana	
Ligustrum, Japanese	Ligustrum	
	Japonicum	
Lily, African	Agapanthus	Albus
	Africanus	Peter Pan
		Streamline
Lily, African Blue		
Lily of the valley	Pieris japonica	Mt. Fire
Lilyturf	Liriope muscari	Evergreen Giant
,		Lilac Beauty
		Majestic
		Monroe White
		Variegata
Liriope, Green	Liriope spicata	variogata
		Emerald elf
Maple, amur	Acer ginnala	Lineralu eli
Maple, Japanese	Acer Japonicum	
Maple, Norway	Acer Platanoides	1
1 3 4 4	4 5 /	5
Maple, Red† Maple, Silver	Acer Rubrum Acer saccharinum	Red sunset

Maple Sugar†	Acer saccharum	
Marigold	Tagetes patula	Honeycomb
Wangola	ragetes parara	Variegata
		Wheeler's Dwarf
Mask Oranget	Dhiladalahua san	Golden
Mock Orange†	Philadelphus spp	1
		Snowflake Double
		White
Mondo Grass	Ophiopogon	
	japonicus	
Moss Rose	Portulaca	Sunnyside
	grandiflora	
Myrtle, Crape	Lagerstroemia	Faurei
	indica	Langer
		Muskogee
		Standard Pink
Myrtle, Wax	Myrica cerifer	
Nandina	Nandina domestica	Compacta
		Nana
Narcissus	Narcissus spp.	
Oak, Laurel	Quercus laurifolia	
Oak, Pin	Quercus palustris	
Oak, Red	Quercus rubra	
	 	
Oak, Southern L	Quercus virginiana	
Oak, Willow	Quercus phellos	
Oleander	Nerium oleander	Hardy red
		Petite pink
		Sister Agnes
Osteospermum	Osteospermum	Wirligig
	fruticosum	
Pachysandra	Pachysandra	
	terminalis	
Palm, Bangalow		
Pampas Grass	Cortanderia	
	selloana	
Pansy	Viola x wittrockiana	
Paper Flower	Bougainvillea glabra	Barbara Karst
, apo, i iono.		James Walker
Peach1	Prunus Persica	Camos Walks
Periwinkle, Dwarf	Vinca minor	
Petunia		Picoti
	Petunia x hybrida	FICULI
Photinia, Red Tip	Phontinia x fraseri	
Pieris	Pieris japonica	
Pine, Afghan	Pinus eldarica	
Pine, Australian	Pinus nigra	
	Pieris taiwanensis	
Pine, Japanese Black	Pinus Thunbergiana	
Pine, Loblolly	Pinus taeda	
Pine, Longleaf	Pinus palustris	
Pine, Mugo	Pinus mugho	
Pine, Scotch	Pinus sylvestris	
Pine, Stash	Pinus elliottii	
Pine, Siasii Pine, Swiss Mt.	Pinus mugo	
Pine, Virginia	Pinus virginiana	
Pine, White	Pinus strobes	

Pineapple, Guava†	Feijoa sellowiana	
Plumbago, cape	Plumbago auriculata	Royal cape
Pittosporum, Japan		
Potentilla	Potentilla nepalensis Potentilla fruticosa	Abbotswood
Privet	Ligustrum japonicum	Golden Vicary Regal Texanum Wax Yellow Tipped
Privet, Glossy	Ligustrum lucidum	
Pyracantha	Pyracantha koidzumii	Gnome Lalandei Victory
Queen Palm	Arecastrum Rammanzoffianum	
Quince, Japanese†		
Rhododendron	Rhododendron spp	Album Cunningham White Fashion Hardy PJM Purple Gem Silvery Pink
Rhododendron,	Rhododendron	
Carolina	Carolinianum	
Rhododendron,	Rhododendron	
Catawba	catawbiense	
Ribbon grass	Phalaris arundinacea	
Rockcress	Arabis spp	Snowcap
Rhodie Max	Rhododendron	
(Rosebay)	maximum	
Rose†	Rose banksiae	Luta
Rose, knockout Rosemary†	Rosa spp. hyrbrid Rosmarinus officinalis	Knockout
Rosemary, Bog	Andromeda polifolia	Nana
Salvia	Salvia farinacea	Rhea
Smoketree, royal purple	Cotinus coggyria	Royal purple
Sedum	Sedum sepurium	Dragon Blood Red Red Carpet Yellow
Snapdragon	Antirrhinum spp	
Sourwood	Oxydendrum arboretum	
Spiraea	Astilbe x arendsii	Fanall
Spiraea	Spiraea spp	Anthony waterer red Dolchica Froebeli Pink Goldenflame Red Snowmound White Van Houtte White
Spiraea, Garland	Spiraea spp	<u> </u>

Spruce, Black Hills	Picea glauca	
Spruce, Colorado Blue	Picea pungens	Glauca
Spruce, Norway	Picea abies	
Spruce, White	Picea glauca	Conica
Sweetflag, Grassyy- Le		
Sweetgum	Liquidambar styraciflua	
Sycamore	Platanus occidentalis	
Tree Fern (Tiki Fern)	Asparagus virgatus	
Trumpet Flower,	Gelsemium	
Evening	sempervirens	
Tulip	Tulip, spp	Apeldoorn
Tufted hairgrass	Deschampsia caespitosa	
Verbena, Shrub	Lantana sellowiana	
Vervain	Verbena spp	St. Paul
Viburnum	Viburnum spp	opulus 'sterile' American cranberry bush Arrowood Common Snowball European cranberry bush Linden Mohican Wright
Vinca (Periwinkle)	Vinca Minor	
Windmill Palm	Trachycarpus fortunei	
Yarrow	Achillea spp	
Xylosma	Xylosma congestum	
Yaupon	Ilex Vomitoria	Dwarf
Yew	Taxus cuspidate Taxus X media	capitata denisiformis

[†] Ornamental species only. DO NOT USE ON FOOD-PRODUCING TREES AND PLANTS.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store this product only in its original container in a dry, cool, secured storage area. Store this product above 32°F.

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

CONTAINER DISPOSAL:

If Empty: Completely empty bags into application equipment. Then dispose of empty bag in a sanitary_landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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