

228-260

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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

JAN 31 2007

Mr. Theodore Head, Registration Manager
Nufarm Americas, Inc.
150 Harvester Drive, Suite 200
Burr Ridge, IL 60527

SUBJECT: Application for Pesticide Notification (PRN 98-10)
Request Primary Brand Name "Solution Water Soluble"
EPA Reg. No. 228-260
Application Dated December 6, 2006

Dear: Mr. Head,

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated 12/6/2006 for the above product. The Registration Division (RD) has conducted a preliminary screen of this request for its applicability under PRN 98-10 and finds that the action(s) requested fall within the scope of PRN 98-10. The Confidential Statement of Formula (CSF) and/or label submitted with the application has (have) been stamped "Notification" and will be placed in our records.

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

Sincerely,

A handwritten signature in black ink, appearing to be "Linda Arrington".

Linda Arrington
Notifications & Minor Formulations Team Leader
Registration Division (7505P)
Office of Pesticide Programs

20911



Please read instructions on reverse before completing form.

Form Approved. OMB No. 2070-0060

	United States Environmental Protection Agency Washington, DC 20460	<input checked="" type="checkbox"/> Registration <input type="checkbox"/> Amendment <input type="checkbox"/> Other	OPP Identifier Number
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Application for Pesticide - Section I

1. Company/Product Number 228-260	2. EPA Product Manager J. Miller	3. Proposed Classification <input type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Solution Water Soluble	PM# PM 23	
5. Name and Address of Applicant (Include ZIP Code) Nufarm Americas Inc. 150 Harvester Drive, Suite 200 Burr Ridge, IL 60527 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Primary brand name change
 This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under Sections 12 and 14 of FIFRA.

Section - III

1. Material This Product Will Be Packaged In:			
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	2. Type of Container <input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
* Certification must be submitted		If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt No. per container
3. Location of Net Contents Information ___ Label <input checked="" type="checkbox"/> Container		4. Size(s) Retail Container 2.5,5,30,55 bulk	
5. Location of Label Directions <input type="checkbox"/>		6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph Paper glued <input type="checkbox"/> Stenciled <input type="checkbox"/> Other _____	

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Theodore Head	Title Registration Manager	Telephone No. (include Area Code)
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature 	3. Title Registration Manager	5. Date 12-6-06 SJG
4. Typed Name Theodore Head		

Solution Water Soluble[®]

A HIGH CONCENTRATE, SELECTIVE WEED KILLER (HERBICIDE)
FOR CONTROL OF MANY BROADLEAF WEEDS IN NON-CROP
AND CERTAIN CROP AREAS, LAWNS, PONDS, DITCHBANKS, PASTURES,
RANGELANDS, AND OTHER LISTED SITES.
ALSO FOR CONTROL OF TREES BY INJECTION.

ACTIVE INGREDIENT:

Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid*96.9%

OTHER INGREDIENTS:3.1%

TOTAL:100.0%

Isomer Specific by AOAC Method, Equivalent to:

*2,4-Dichlorophenoxyacetic Acid80.5%

**KEEP OUT OF REACH OF CHILDREN
DANGER - PELIGRO**

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.)

**SEE INSIDE BOOKLET FOR FIRST AID AND
ADDITIONAL PRECAUTIONARY STATEMENTS**

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300
For Medical Emergencies Only, Call (877) 325-1840

EPA REG NO. 228-260
EPA EST NO. 228-IL-1

NET CONTENTS

MANUFACTURED BY
NUFARM AMERICAS INC.
BURR RIDGE, IL 60527

PRODUCT OF AUSTRIA



**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
DANGER - PELIGRO**

CORROSIVE: Causes irreversible eye damage. May be fatal if swallowed or absorbed through skin. Do not get in eyes, on skin, or on clothing. Avoid inhaling vapor or spray mist. Remove saturated clothing as soon as possible and shower.

NON-WPS TURF USES: Applicators and other handlers who handle this pesticide for any use NOT covered by the Worker Protection Standard (40 CFR Part 170) -- in general, only agricultural plant uses are covered by the WPS -- must wear: face shield, goggles or safety glasses and long pants, long-sleeved shirt, socks, shoes and rubber gloves. It is recommended that safety glasses include front, brow and temple protection. In addition to the clothing and eye protection listed above, commercial mixer/loader/applicators must wear chemical-resistant in place of rubber gloves except when the product is applied to a golf course. Wash nondisposable gloves thoroughly with soap and water before removing. After using this product, remove clothing and launder separately before reuse, and promptly and thoroughly wash hands and exposed skin with soap and water. The maximum number of broadcast applications to turf per treatment site is 2 per year.

NON-WPS INDUSTRIAL/AQUATIC USES: When mixing, loading or applying this product or repairing or cleaning equipment used with this product, wear face shield, goggles or safety glasses and chemical-resistant gloves, long-sleeved shirt, long pants, socks and shoes. It is recommended that safety glasses include front, brow and temple protection. For aerial applicators in an enclosed cockpit and applicators applying this product from a tractor that has a completely enclosed cab, eye protection is not required. Wash hands, face and arms with soap and water as soon as possible after mixing, loading or applying this product. After work, remove all clothing and shower using soap and water. Do not reuse clothing worn during the previous day's mixing and loading or application of this product without cleaning first. Clothing must be kept and washed separately from other household laundry.

WPS USES: Personal Protective Equipment (PPE) - Applicators and other handlers who handle this pesticide for any use covered by the Worker Protection Standard (40 CFR Part 170) -- in general, agricultural plant uses are covered -- must wear: coveralls over short-sleeved shirt and short pants, waterproof gloves, chemical-resistant footwear plus socks, protective eyewear, chemical-resistant headgear for overhead exposure and chemical-resistant apron when cleaning equipment, mixing, or loading. 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. After each day of use, clothing or PPE must not be reused until it has been cleaned.

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

USER SAFETY RECOMMENDATIONS

Users Should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- 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.

FIRST AID

IF IN EYES

- Hold eye open and rinse slowly and gently with water for 15 to 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 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 ON SKIN
OR CLOTHING**

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 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 mouth-to-mouth if possible.
- Call a poison control center or doctor for further treatment advice.

HOT LINE 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 1-877-325-1840 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and non-target plants. For terrestrial uses, 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 washwaters. Do not apply this product through any type of irrigation system. Do not contaminate water used for irrigation or domestic purposes. Use care to avoid spray contact or drift to 2,4-D susceptible plants such as cotton, flowers, fruit trees, grapes, ornamentals, and tomatoes. Excessive amounts of this product in soil may temporarily inhibit seed germination and plant growth. Do not permit spray mist containing this product to drift onto them. Do not spray when the wind is blowing towards susceptible crops or ornamental plants. Use coarse sprays to minimize drift. Avoid spray drift by (1) keeping the spray boom as low as possible, (2) applying at 20 pounds or less nozzle pressure using nozzles that produce a coarse spray pattern, and (3) applying when conditions such as wind, air stability and temperature inversions are not a factor. Do not use the same spray equipment for applying other materials to 2,4-D susceptible crops as injury may result. It is best to use a separate sprayer for application of insecticides and fungicides.

Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

When using on Pastures and Rangeland Grasses there is a (1) 7 day pre-grazing interval for dairy cattle; (2) 30 day preharvest interval for grass cut for hay; and (3) 3 day pre-slaughter interval for meat animals.

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.

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 48 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 over short-sleeved shirt and short pants, waterproof gloves, chemical-resistant footwear plus socks, protective eyewear and chemical-resistant headgear for overhead exposure.

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.

For turf use, do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment areas until spray has dried.

GENERAL INFORMATION

READ ENTIRE LABEL BEFORE USING THIS PRODUCT. USE STRICTLY IN ACCORDANCE WITH LABEL PRECAUTIONARY STATEMENTS AND DIRECTIONS.

WEEDS CONTROLLED

This product will kill or control the following weeds in addition to many other noxious plants susceptible to 2,4-D.

Alder	Blessed thistle	Carpetweed	Curly indigo
American lotus	Blue lettuce	Catnip	Dandelion
Arrowhead	Box elder	Chickweed	Dock
Artichoke	Broomweed	Chicory	Dogbane
Aster	Buckhorn	Cockle	Duckweed
Austrian fieldcress	Bull thistle	Cocklebur	Elderberry
Beggartick	Bulrush	Coffebean	Flea bane (daisy)
Biden	Burdock	Coffeeweed	Flixweed
Bindweed	Bur ragweed	Common sowthistle	Florida pusley
Bitterweed	Buttercup	Creeping jenny	Frenchweed
Bitter wintercress	Canada thistle	Croton	Galinsoga

Goatsbeard	Morningglory	Ragweed	Vervain
Goldenrod	Musk thistle	Rush	Vetch
Ground ivy	Mustard	Russian thistle	Virginia creeper
Gumweed	Nettle	Sagebrush	Water hyacinth
Healall	Nutgrass	St. Johnswort	Water lily
Hemp	Orange hawkweed	Shepherdspurse	Water plantain
Henbit	Parrotfeather	Sicklepod	Water primrose
Hoary cress	Parsnip	Smartweed	Watershield
Honeysuckle	Pennycress	Sneezeweed	Wild carrot
Horsetail	Pennywort	Southern wild rose	Wild garlic
Indigo	Peppergrass	Sowthistle	Wild lettuce
Indiana mallow	Pepperweed	Spanishneedle	Wild onion
Ironweed	Pigweed	Spatterdock	Wild radish
Jewelweed	Plantain	Stinging nettle	Wild rape
Jimsonweed	Poison hemlock	Stinkweed	Wild strawberry
Knotweed	Poison ivy	Sumac	Wild sweet potato
Kochia	Pokeweed	Sunflower	Willow
Lambsquarter	Poorjoe	Sweet clover	Witchweed
Locoweed	Povertyweed	Tarweed	Wormseed
Lupine	Prickly lettuce	Thistle	Yellow rocket
Mallow	Primrose	Toadflax	
Marshelder	Puncture vine	Tumbleweed	
Mexican weed	Purslane	Velvetleaf	

Generally the lower dosages given will be satisfactory for young, succulent growth of sensitive weed species. For less sensitive species and under conditions where control is more difficult, the higher dosages will be needed. Apply this product during warm weather when weeds are young and growing actively. Use enough spray volume for uniform coverage by ground or air application. Unless otherwise recommended, suggested application rates may be up to 10 gallons of total spray by air or 5 to 25 gallons by ground application equipment. If only bands or rows are treated, leaving middles untreated, the dosage per crop per acre is reduced proportionately. Do not apply when temperature exceeds 90°F.

TO PREPARE THE SPRAY: Mix this product only with water. Just add the recommended water to your spray tank, then add the appropriate amount of product into the spray tank and agitate for three to five minutes. This product will make a stable water mixture. It is non-flammable.

NOTES: (1) Adding oil, wetting agent, or other surfactant to the spray may be used to increase effectiveness on weeds, but doing so may reduce selectivity to crops resulting in crop damage. (2) Every 2.8 pounds of this product is equal to 5 pints of 2,4-D "4 lb." Amine. (3) Using 2.8 pounds for a 5 acre coverage is equivalent to applying 2,4-D "4 lb." Amine at a rate of 1 pint per acre.

SELECTIVE WEEDING IN CROPS

WITH LIQUID NITROGEN SOLUTIONS: For late season control of young Smartweed, Cocklebur, Annual Morningglory and other annual broadleaf weeds less than 1 inch high. Field should be as clean as possible and corn 20 to 30 inches tall. The spray must be prepared by first adding the required amount of liquid nitrogen to spray tank (80 to 120 lbs. nitrogen per acre). Next dilute 2.8 pounds of this product in 5 gallons of clean water. Start the agitator and (slowly) add the diluted Solution and water mixture. This combination of nitrogen and Solution will cover 5 acres. Spray immediately, maintaining continuous agitation until spray tank is empty. Direct the spray to lower 3 to 4 inches of corn stalk. Use spray equipment designed to handle corrosive liquid nitrogen solutions. After spraying, remove any remaining solution and rinse rig thoroughly with water. Mix only one tank at a time. Do not spray during or immediately following cold weather.

CORN (Field, Sweet and Popcorn): Pre-emergence (For annual grasses and broadleaf weeds) - Apply to soil any time after planting but before corn emerges. Do not use on light sandy soil, or where soil moisture is low. Dissolve 2.8 pounds in 4 to 30 gallons of water and apply over 1-1/8 to 2-1/4 acres. The amount of water is dependent on whether application is made with air or ground equipment.

Emergence - Dissolve 2.8 pounds in 10 to 100 gallons of water per 5 acres. Apply just as corn plants are breaking ground.

Post-emergence (For broadleaf weeds) - Dissolve 2.8 pounds in 10 to 100 gallons of water. This mixture will treat 5 to 10 acres. Apply when most weeds have germinated. Spray after corn emerges and until 8 inches tall. Use low rates on inbreds. Corn is susceptible to injury shortly after emergence and after unfolding of leaves. Do not spray during this period nor after first tassels appear. When corn is over 8 inches tall, use drop nozzle to keep spray off corn foliage. Spray must strike tops of weeds but should not drench corn plants. Do not apply from tasseling to dough stage. Injury to corn is most likely to occur if this product is applied when corn is growing rapidly under high temperatures and high soil moisture conditions. In such conditions, use the low rate. For resistant weeds, use 2.8 pounds to cover 2.5 acres though corn injury may result. Do not use higher rates unless possible crop injury will be accepted. After application, delay cultivation for 8 to 10 days to allow the corn to overcome any temporary brittleness.

Preharvest - After the hard dough or denting stage, apply by air or ground equipment to suppress perennial weeds, decrease weed seed production, and control tall weeds such as Bindweed, Cocklebur, Dogbane, Jimsonweed, Ragweed, Sunflower, Velvetleaf and vines that interfere with harvesting. Dissolve 2.8 pounds in 5 to 100 gallons of water to treat from 2.5 to 5 acres.

SORGHUM (Milo): Post-emergence - Dissolve 2.8 pounds in 10 to 100 gallons of water. This will cover from 5 to 7.5 acres. Apply when sorghum is 6 to 15 inches tall. Treat only after the sorghum is 5 inches high and preferably before it is 15 inches high. Spraying before the 5-inch stage may inhibit root development. Do not treat during the boot, tasseling, or early dough stages. Reduce spray drift by keeping the boom and spray nozzle as low as possible. If crop is taller than 8 inches, use drop nozzle to keep the spray off the leaves. Temporary spray injury can be expected under conditions of high soil moisture and high air temperatures. If it is necessary to apply this product under these conditions, do not treat less than 7.5 acres per 2.8 pounds.

NOTE: Corn & Sorghum Hybrids vary in tolerance to 2,4-D. Some are easily injured. Spray only varieties known to be tolerant to 2,4-D. Consult the seed company or your Agricultural Experiment Station or Extension Service Weed specialist for this information.

BARLEY, WHEAT, OATS AND RYE: Spring Post-emergence - In spring grown grains, spray grain between full tillering and before the boot stage (usually 4 to 8 inches tall) when weeds are small. Dissolve 2.8 pounds of this product in 5 to 100 gallons of water. For spring grown barley, wheat and rye, apply this spray mixture on 3.5 to 10 acres. Oats are more sensitive to 2,4-D than other grains and should be sprayed in the spring when well established and tillered and before jointing after crop has reached the dough stage. For oats, spray over 5 to 10 acres. In winter grains, dissolve 2.8 pounds in 5 to 100 gallons of water. Apply mixture over 2.5 to 5 acres to control large weeds that will interfere with harvest or to suppress perennial weeds. Preharvest treatment can be applied when the grain is in the dough stage. Best results will be obtained when soil moisture is adequate for plant growth and weeds are growing well.

SUGARCANE: Pre-emergence - Dissolve 2.8 pounds in 10 to 50 gallons of water. Apply mixture over 1-1/8 acres as a blanket spray through lay-by, to aid in control of Johnsongrass seedlings and susceptible broadleaf weeds. **Post-emergence** - Dissolve 2.8 pounds in 10 to 60 gallons of water. Apply over 1-2/3 to 2-1/2 acres when cane is 1 to 2 feet tall.

RICE: Use 1 pound to 2.5 pounds of this product in 5 to 10 gallons of water. Apply over 1-1/4 to 1-1/2 acres to control Curly indigo and other broadleaf weeds. Apply in the late tillering stage of rice development, at the time of first joint development (first to second green ring), usually 6 to 9 weeks after emergence. Do not apply after panicle initiation, after rice internodes exceed 1/2 inch at early seeding, early panicle, boot, flowering or early heading growth stages.

NOTE: Some rice varieties under certain conditions can be injured by 2,4-D. Therefore before spraying, consult local Extension Service or University specialist for appropriate rates and timing of 2,4-D sprays.

ON FALLOW LAND: Dissolve 2.8 pounds of this product in 5 to 100 gallons of water. This mixture will cover 1-1/4 to 1-1/2 acres for control of annual broadleaf weeds. Use this mixture on 1 acre to control established perennial species, such as Canada thistle and Field bindweed. Apply to weeds actively growing. Do not plant any crop for 3 months after treatment or until chemical has disappeared from soil.

GRASSES: The rates of application are per application per site. In established pastures and rangelands, dissolve 2.8 pounds in 5 to 100 gallons of water. This mixture will treat from 1-1/8 to 2-1/4 acres. Use the light rate on more easily injured grasses. Apply preferably when weeds are small and growing actively before bud stage. Fall or spring is the best time to treat. Repeated treatments may be needed for less susceptible weeds. Treatments will kill or injure alfalfa, sweet clover and other legumes. White clover (including Ladino) may be injured by light application but recovers; repeated treatments will kill it. In some areas dichondra, bentgrasses, carpet, buffalo, and St. Augustine grasses may be injured. Usually colonial bents are more tolerant than creeping types; velvets are more easily injured. Where bentgrass predominates, dissolve 2.8 pounds in 10 to 100 gallons of water and spray this mixture over 10 acres. Repeat application after 3 weeks.

GRASS SEED CROPS: Dissolve 2.8 pounds in 25 to 200 gallons of water. Spray mixture will treat 1-1/8 to 4-1/2 acres. Apply in spring or fall to control broadleaf weeds in grass being grown for seed. Do not apply from early boot to milk stage. Spray seeding grass only after the five-leaf stage, using 4-1/2 acre rate to control small seeding weeds. After the grass is well established higher rates of up to 2.8 pounds per 1-1/8 acres can be used to control hard-to-kill annual or perennial weeds. For best results, do not use on bentgrass unless grass injury can be tolerated.

APPLE AND PEAR ORCHARDS - Broadleaf Weeds: NON-BEARING TREES (well established - one year or older), **and BEARING TREES** before and after bloom - Use 27 ounces in 10 to 100 gallons of water per acre of ground to be sprayed. For band or spot treatment, calculate rates according to the actual portion of an acre treated. Apply as a directed spray onto the weeds to point of runoff when weeds are young and actively growing (pre-bud to early bud stage). Only a maximum of two applications per season are allowed. The minimum retreatment interval period is 75 days. The pre-harvest interval is 14 days.

GRAPE VINEYARDS: Established at least 3 years - Field Bindweed (Morning Glory), Canada Thistle and other 2,4-D susceptible broadleaf weeds. Dilute 18 to 27 ounces in 10 to 100 gallons of water to treat one acre of ground to be sprayed. For band or spot treatment, calculate rates according to the actual portion of an acre treated. Apply when weeds are in the bud to early bloom stage and growing vigorously. Apply after shatter following bloom and before grape shoots reach the ground or during dormant season. Use a hooded boom and low pressure flooding nozzles to deliver coarse droplets.

USE PRECAUTIONS: Grapes are extremely sensitive to 2,4-D. Use a direct application so no 2,4-D contacts grape leaves and young shoots or stems.

STONE FRUIT, PISTACHIOS, AND NUT ORCHARDS: Broadleaf Weeds. Use 27 ounces in 10 to 100 gallons of water per acre of ground to be sprayed. For band or spot treatment, calculate rates according to the actual portion of an acre treated.

Apply as a directed spray onto the weeds to point of runoff when weeds are young and actively growing (pre-bud to early bud stage). Make up to two applications through the dormant or growing seasons as needed. Do not harvest stone fruits within 40 days of application. Do not harvest nuts within 60 days of application. Do not graze or feed cover crops from treated orchards to livestock.

PRECAUTIONS IN APPLYING 2,4-D IN ORCHARDS AND VINEYARDS: Apply only after irrigation and allow maximum time before the next irrigation. Do not apply around fruit trees or vines with hand gun. Use only on flat, fan-type nozzles and low pressures - 20 to 25 pounds. Use a lined boom applicator which can be calibrated and which will deposit the spray uniformly. Avoid contact with fruit, foliage, stems or lower limbs of trees or vines. Apply precisely and uniformly to prevent damage to the trees or vines and to obtain satisfactory weed control. Do not apply during windy periods or extremely high temperatures. Do not spray bare ground. To avoid leaching, do not apply to dry soils. Apply when soil is moist and do not irrigate for 5 to 7 days after application.

FOR USE IN CROP RESIDUE MANAGEMENT SYSTEMS IN SOYBEANS (Preplant only)

General Information: This product is a herbicide that provides control of many emerged susceptible annual and perennial broadleaf weeds. This product may be applied prior to planting soybeans to provide foliar burndown control of susceptible annual and perennial broadleaf weeds and certain broadleaf cover crops such as those listed on this label. This product should only be applied preplant to soybeans in situations such as reduced tillage production systems, where emerged weeds are present. Apply only according to the application instructions given below. Do not use any tillage operations between application of this product and planting soybeans.

Mixing Instructions: Compatible crop oil concentrates, agricultural surfactants and fluid fertilizers approved for use on growing crops may increase the herbicidal effectiveness of 2,4-D on certain weeds and may be added to the spray tank. Read and follow all directions and precautions on this label and on all labels of adjuvants or fertilizers mixed with this product.

Applications Procedures: Apply using air or ground equipment in sufficient gallonage to obtain adequate coverage of weeds. Use 2 or more gallons of water per acre in aerial equipment and 10 or more gallons of water per acre in ground equipment.

90811

APPLICATION TIMING AND USE RATES

2,4-D Formulation Used	Maximum Rate (per acre)		When to Apply (Days prior to planting soybeans)
Solution Water Soluble	At a rate of 0.5 lb. a.e./acre		
	Amount	Acreage	NOT LESS THAN 15 DAYS
	2.8 pounds	4.5	
	At a rate of 1.0 lb. a.e./acre		
Amount	Acreage	NOT LESS THAN 30 DAYS	
2.8 pounds	2.25		

WEEDS CONTROLLED

Alfafa*	Garlic-wild*	Ragweed-common
Bindweed*	Horseweed or marestail	Ragweed-giant
Bullnettle	Ironweed	Shepherdspurse
Bittercress-smallflowered	Lambsquarters-common	Smartweed-Pennsylvania*
Buttercup-smallflowered	Lettuce-prickly	Sowthistle-annual
Carolina geranium	Morningglory-annual	Speedwell
Cinquefoil-common and rough	Moustaill	Thistle-Canada*
Clover-red*	Mustard-wild*	Thistle-bull
Cocklebur-common	Pennycress-field	Velvetleaf
Dandelion*	Peppergrass*	Vetch-hairy*
Evening primrose-cutleaf	Purslane-common	Virginia copperleaf

*These species are only partially controlled.

For best weed control at time of treatment, weeds should be small, actively growing and free of stress caused by extremes in climatic conditions, diseases, or insect damage. The response of individual weed species to this product is variable. Consult your local county or State Agricultural Extension Service or crop consultant for advice.

APPLICATION RESTRICTIONS AND PRECAUTIONS: Important Notice - Unacceptable injury to soybeans planted in fields treated with this product may occur. Whether or not soybean injury occurs and the extent of the injury will depend on weather (temperature and rainfall) from herbicide applications until soybean emergence and agronomic factors such as the amount of weed vegetation and previous crop residue present. Injury is more likely under cool rainy conditions and where there is less weed vegetation and crop residue present.

Do not use on low organic sandy soils (<1.0%).

Apply a maximum of one application per growing season regardless of the treatment rate.

Do not apply this product when weather conditions such as temperature air inversions or wind favor drift from treated areas to susceptible plants.

Livestock Grazing Restriction: Do not feed hay, forage or fodder. Restrict livestock from grazing treated fields. Livestock should be restricted from feeding/grazing of treated cover crops.

In fields treated with this product, plant soybean seed as deep as practical or at least 1.0 inch deep. Adjust the planter, if necessary, to ensure that planted seed is completely covered.

Do not apply this product prior to planting soybeans, if you are not prepared to accept the results of soybean injury, including possible loss of stand and yield.

Do not replant fields treated with this product in the same growing season with crops other than those labeled for 2,4-D use.

SELECTIVE WEEDING IN NON-CROPS

BROADLEAF WEED CONTROL IN NON-CROPLAND GRASS AREAS SUCH AS AIRFIELDS, CEMETERIES AND PARKS, DRAINAGE DITCH-BANKS, FENCEROWS, GOLF COURSES, LAWNS, RIGHTS-OF-WAY, ROADSIDES, VACANT LOTS, AND SIMILAR PLACES: Use 2.8 pounds of this product per acre in 15 to 50 gallons of water. On turf, apply a maximum of 40 ounces of this product per acre per application per site. The maximum number of broadcast applications to turf per treatment site is 2 per year. Treat when weeds are young and growing well. Do not use on dichondra or other herbaceous ground covers. Do not use on creeping grasses such as bent except for spot treatment nor on freshly seeded turf until grass is well established. Reseeding of lawns should be delayed following treatment. With spring application, reseed in the fall. With fall application, reseed in spring. Legumes are usually damaged or killed. Thoroughly wet weeds when applying this mixture. Bindweed, Whitetop, Perennial sowthistle, Blue lettuce, Fur ragweed, Canada thistle and other noxious perennials somewhat resistant to 2,4-D will require repeated treatments to kill. To control small areas of woody plants, such as Willows, Honeysuckle, Virginia creeper, Alders and others susceptible to 2,4-D, use 4.2 pounds per acre in adequate water (100 gallons); spray to thoroughly wet plants when in full leaf. Re-treat as necessary for control of regrowth and seedlings. In general, it is better to cut tall woody growth and spray suckers when 2 to 4 feet high.

SPOT TREATMENT IN NON-CROP AREAS: To control broadleaf weeds in small areas with a hand sprayer, use 2.1 pounds of this product in 50 gallons of water, fill sprayer and apply to thoroughly wet all foliage.

CONTROL OF SOUTHERN WILD ROSE: On roadsides and fencerows use 4.2 pounds of this product plus 4 to 8 ounces of an agricultural surfactant

per 100 gallons of water and spray thoroughly as soon as foliage is well developed. Two or more treatments may be required. On rangeland apply a maximum of 2 lbs.13 ounces of this product per 1.13 acres per application per site.

TREE INJECTIONS (Pine Release): To control hardwoods, such as Oaks, Hickory, Maple, Pecan Elm, Sumac, Sweetgum and Hawthorn in forest and other non-crop areas, dissolve 2 lbs.13 ounces of this product in 1-1/2 gallons of water and apply in a concentrate tree injector calibrated to apply 0.75 ml. per injection. Space injections 2 inches apart, edge to edge, completely around the tree and close to the base. The injector bit must penetrate the inner bark. On hard-to-kill species such as Hickory, Dogwood, Red maple, Blue beech and Ash, make injections 1 to 1-1/2 inches apart, edge to edge. Treatment may be made at any time of the year. For best results, injections should be made during growing season, May 15 to October 15.

FOR AQUATIC WEEDS SUCH AS WATER HYACINTH IN WATERS THAT ARE QUIESCENT OR SLOW MOVING (LAKES, PONDS, RESERVOIRS, CANALS, RIVERS, BAYOUS, STREAMS, DRAINAGE DITCHES, MARSHES, ETC.)

Aerial Application - Use 2.8 pounds of this product in 5 to 15 gallons of water to cover 1.2 surface acres. Use drift control spray equipment or thickening agents mixed into the spray solution. Apply through standard boom systems with a minimum of 5 gallons of spray mix per acre.

Surface Application - Use 2.8 to 5.6 pounds of this product in 50 to 100 gallons of water per 1.2 acres. Uniform coverage is essential. Avoid submerging plants after treatment. Application should be made when leaves are fully developed above water line and plants are actively growing. Use power sprayers operated with a boom or spray gun mounted on a boat, tractor or truck. Thorough wetting of foliage is essential for maximum control. Special precautions such as the use of low pressure, large nozzles and thickening agents should be taken to avoid spray drift in areas of sensitive crops. For DIRECTA-SPRAY™ operation, use this product with 1 pint of drift control agent in 50 to 100 gallons of water. For other applications, follow the drift control agent label for mixing directions. Consult your State Game and Fish Department or Water Control Agency prior to application of this product for aquatic weed control. Treatment of aquatic weeds can result in oxygen loss from decomposition of dead weeds. This loss can cause fish suffocation. Therefore, to minimize this hazard, treat 1/3 to 1/2 of the water area in a single operation and wait at least 10 to 14 days between treatments. Begin treatments along the shore and proceed outward in bands to allow fish to move into untreated areas. For large bodies of weed infested waters, leave buffer strips of at least 100 feet wide and delay treatment of these strips for 4 to 5 weeks or until the dead vegetation has decomposed. Repeat as necessary to kill regrowth and plants missed in previous application.

IRRIGATION: Delay the use of treated waters for irrigation for three weeks after treatment unless an approved assay shows that the water does not contain more than 0.1 ppm 2,4-D acid. Do not treat irrigation ditches in areas where water will be used to overhead sprinkler irrigate susceptible crops, especially grapes, tomatoes, and cotton.

POTABLE WATER: Delay the use of treated water for domestic purposes for a period of three weeks or until such time as an approved assay shows that the water contains no more than 0.1 ppm 2,4-D acid.

BRUSH CONTROL

The maximum seasonal application rate for forestry and non-crop site preparation is 4 pounds 2,4-D acid equivalent per acre per application site.

WEEDS AND BRUSH ON IRRIGATION CANAL DITCHBANKS - SEVENTEEN WESTERN STATES: Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, New Mexico, Nevada, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington and Wyoming.

For control of annual and perennial broadleaf weeds, dissolve 2.1 pounds per acre in enough water to wet all parts of the brush foliage, stem and bark. This may require 30 to 200 gallons of water per acre. Treat when weeds are young and actively growing before the bud or early bloom stage. For woody brush and patches of perennial broadleaf weeds, mix 4.2 pounds of this product in 150 gallons of water. Wet foliage thoroughly using about 1 gallon of solution per square rod.

SPRAYING INSTRUCTION: Apply with low pressure (10 to 40 psi) power spray equipment mounted on truck, tractor or boat. Apply while traveling upstream to avoid accidental concentration of chemical into water. Spray when the air is fairly calm; 5 mph or less. Do not use on small canals (less than 10 cfs) where water will be used for drinking purposes.

Boom spraying onto water surfaces must be held to a minimum and no cross-stream spraying to opposite banks should be permitted. When spraying shoreline weeds, allow no more than two-foot over-spray onto water with an average of less than one-foot over-spray to prevent introduction of greater than negligible amounts of chemical into the water.

Do not allow dairy animals to graze on treated areas for at least 7 days after spraying. Water within banks should not be fished.

Local conditions may affect the uses of this chemical as shown on this label. Consult State Experiment Station or Extension Service weed specialist for specific recommendations for local weed problems and for information on possible lower dosages.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Always use original container to store pesticides in a secure warehouse or storage building. This product should be stored in a cool, dry location. Do not store near seeds, fertilizers, insecticides, or fungicides. Container should be opened in a well-ventilated area. All containers should be kept tightly sealed when not in use. Do not store near open containers of fertilizer, seed or other pesticides.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law and may contaminate groundwater. If container is damaged or if pesticide has spilled, contain all spillage. Clean up all spilled material with broom. Place in a closed, labeled container for proper disposal. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Dispose of empty container in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Conditions of Sale and Limitation of Warranty and Liability:

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

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Desirable plant injury, ineffectiveness, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions beyond the control of Nufarm or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Nufarm and Seller harmless for any claims relating to such factors.

Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the directions under normal conditions of use. NUFARM MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE OR USE OF THIS PRODUCT. Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) Seller or Nufarm, and Buyer assumes the risk of any such use.

To the extent allowed by law, Nufarm or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF NUFARM 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 NUFARM OR SELLER, THE REPLACEMENT OF PRODUCT.

This Conditions of Sale and Limitation of Warranty and Liability may not be amended by any oral or written agreement.

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