

PM 25

524-351

1 of 6

Please read instructions on reverse before completing form.

Form Approved. OMB No. 2070-0060. Approval expires 05-31-98



United States
Environmental Protection Agency
Washington, DC 20460

<input type="checkbox"/>	Registration
<input type="checkbox"/>	Amendment
<input checked="" type="checkbox"/>	Other

OPP Identifier Number
246941

Application for Pesticide - Section I

1. Company/Product Number 524-351	2. EPA Product Manager Robert J. Taylor	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Landmaster® BW Herbicide	PM# 25	
5. Name and Address of Applicant (Include ZIP Code) Monsanto Company 700 14th Street, N.W., Suite 1100 Washington, DC 20005 <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.)

Landmaster BW Herbicide - Notification: Revised Label Book1
NOTIFICATION
NOV 7 1996

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Metal <input 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 <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> 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 Dr. Russell P. Schneider	Title Agricultural Regulation Director	Telephone No. (Include Area Code) (202) 733-2460
2. Signature <i>Sheila A. Schuette</i>		6. Date Application Received (Stamped)
3. Title Manager, Regulatory Affairs		
4. Typed Name Sheila A. Schuette, Ph.D.	5. Date Oct. 31, 1996	
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.		

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LANDMASTER® BW
Herbicide
by Monsanto

For suppression of emerged field bindweed and control or suppression of other weeds in fallow and reduced tillage systems.

Complete Directions for Use

AVOID CONTACT WITH FOLIAGE OF CROP OR OTHER DESIRABLE VEGETATION SINCE SEVERE INJURY OR DESTRUCTION MAY RESULT.

EPA Reg. No. 524-351

®Landmaster is a registered trademark of Monsanto Company.

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~~886.20 000.28/53~~

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MONSANTO COMPANY
AGRICULTURAL PRODUCTS
ST. LOUIS, MISSOURI 63167, U.S.A.

NOTIFICATION

NOV 7 1996

Read the entire label before using product.

Use only according to label instructions.

Read "LIMIT OF WARRANTY AND LIABILITY" before buying or using. If terms are not acceptable, return at once unopened.

REFORMULATION IS PROHIBITED. SEE INDIVIDUAL CONTAINER LABEL FOR REPACKAGING LIMITATIONS.

LIMIT OF WARRANTY AND LIABILITY

This Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein. NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not

explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement.

PRECAUTIONARY STATEMENTS

**Hazards to
Humans and Domestic Animals**

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.)

CAUSES EYE BURNS.
HARMFUL IF SWALLOWED.
MAY CAUSE ALLERGIC SKIN REACTION.

Do not get in eyes, on skin, or on clothing.

FIRST AID: IF IN EYES, immediately flush with plenty of water for at least 15 minutes. Get medical attention.

IF ON SKIN, immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing. Sensitized persons should avoid further contact and reuse of contaminated clothing. Get medical attention.

IF SWALLOWED, induce vomiting immediately as directed by medical personnel. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

Personal Protective Equipment:

Applicators and other handlers must wear: long-sleeved shirt and long pants, waterproof gloves, shoes plus socks and protective eyewear.

CONTAINERS GREATER THAN ONE GALLON BUT LESS THAN FIVE GALLONS: Mixers and loaders who do not use a mechanical system (probe and pump) to transfer the contents of this container must wear coveralls or a chemical-resistant apron in addition to the other required PPE.

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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:

CONTAINERS FIVE GALLONS OR MORE: A mechanical system (probe and pump) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal. If the mechanical system is used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4)], the handler PPE requirements may be reduced or modified as specified in the WPS.

When handlers use 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.

In case of an emergency involving this product, Call Collect, day or night, (314) 694-4000.

Environmental Hazards

Drift or runoff may adversely affect nontarget plants.

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

Most cases of ground water 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 ground water supplies. Use of closed systems for mixing or transferring this pesticide will reduce the possibility of spills. Placement

of the mixing/loading equipment on an impervious pad to contain spills will help prevent ground water contamination.

Physical or Chemical Hazards

Spray solutions of this product should be mixed, stored and applied only in stainless steel, aluminum, fiberglass, plastic and plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

ACTIVE INGREDIENTS*:

Glyphosate, (N-(phosphonomethyl) glycine, in the form of its isopropylamine salt	12.9%
2,4-D, 2,4-dichlorophenoxyacetic acid, in the form of its isopropylamine salt	20.6%
INERT INGREDIENTS:	66.5%
	<u>100.0%</u>

*Contains 144 grams per litre or 1.2 lbs per U.S. gallon of the active ingredient glyphosate, in the form of its isopropylamine salt, and 227 grams per litre or 1.9 lbs per U.S. gallon of the active ingredient 2,4-D, in the form of its isopropylamine salt. Equivalent to 108 grams per litre or 0.9 lb per U.S. gallon of the acid, glyphosate, and 182 grams per litre or 1.5 lbs per U.S. gallon of the acid, 2,4-D.

The glyphosate component of Landmaster® BW herbicide is protected by U.S. Patent No. 4,405,531. Other patents are pending. No license granted under any non-U.S. patent(s).

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any 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

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assistance. It also contains specific instructions and exceptions pertaining to the statement 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, are: coveralls, waterproof gloves, and shoes plus socks and protective eyewear.

For more product information, call toll-free 1-800-332-3111.

Storage and Disposal

Do not contaminate water, food, or feed by storage or disposal. Do not store near fertilizers, seeds, insecticides or fungicides.

~~STORAGE: STORE ABOVE 40°F to keep product in solution. If crystals form, place in a warm room (72°F), allow the product to reach room temperature and roll or shake periodically until crystals have dissolved. Keep container closed to prevent spills and contamination.~~

~~For bulk containers, see the container label for alternate storage information.~~

~~DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law and may contaminate ground water. If these wastes cannot be disposed of according to label use instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.~~

~~Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.~~

~~(See the individual container label for disposal information.)~~

See container label for STORAGE AND DISPOSAL instructions.

GENERAL INFORMATION

Landmaster® BW is a postemergence herbicide for control or suppression of emerged weeds in fallow and reduced tillage systems, prior to planting or emergence of wheat, barley, corn, oats, rye or sorghum (grain or forage), and as a spot treatment in corn, sorghum, forage grasses or forage legumes.

Do not harvest or feed treated vegetation for 8 weeks after application. Following spot treatment in forage grasses or legumes, allow 30 days before harvesting or grazing domestic livestock.

This product enters the plant through the foliage and moves throughout the plant. Visual effects of control are a gradual wilting or yellowing of the plant, which advances to complete browning of above-ground growth and deterioration of affected underground plant parts. Visible symptoms will usually develop within 2 to 4 days after application, but may not occur for 7 or more days. Extremely cool or cloudy weather following treatment may slow activity of this product and delay the visual effects of control.

**APPLICATION PRECAUTIONS
AND WARNINGS**

- Do not plant any crop other than wheat, barley, corn, oats, rye or sorghum (grain or forage) for 3 months after treatment or until this product has disappeared from the soil.
- Applications of this product after planting and prior to crop emergence may cause crop injury if rainfall or environmental conditions delaying crop emergence are experienced.
- This product is recommended for control of emerged weeds prior to establishment of labeled crops. Large amounts of green or decaying vegetation left standing or incorporated into the seedbed may enhance the development of disease in newly planted crops. This may result in poor emergence and/or stands, especially under cool and/or wet conditions.
- Spraying early to control young weeds before dense stands develop or light cultivation to assist weed decay will favor preparation of suitable seedbeds.
- In reduced tillage and no-till systems, ensure good seed to soil contact and proper seeding depth.
- Do not feed or forage vegetation from treated areas for 8 weeks following application.
- DO NOT APPLY IN THE VICINITY OF 2,4-D SENSITIVE CROPS SUCH AS COTTON, GRAPES, TOMATOES AND OTHER DESIRABLE VEGETATION.
- Applications should be made only when there is no hazard from spray drift, since very small quantities of spray, which may not be visible, may severely injure susceptible crops or desirable vegetation.
- The likelihood of injury occurring to adjacent crops from the use of this product is greatest when winds are gusty or in excess of 5 miles per hour, or when other conditions including lesser wind velocities will favor spray drift.

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- Movement of this product on soil particles during windstorms may cause damage to susceptible plants that are contacted. This hazard is reduced if rainfall occurs shortly after application.
- Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this herbicide or other materials that are not expressly recommended in this labeling. Mixing this product with herbicides or other materials not recommended on this label may result in reduced performance. Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences.

Landmaster BW is subject to all state and county regulations for 2,4-D amine.

TIMING OF APPLICATION

This product should be applied postemergence to vigorously growing weeds when they have reached the recommended size given in the "RECOMMENDED RATES AND WEEDS CONTROLLED" section of this label. Application should be delayed until maximum emergence of the target weeds, but before weeds exceed the maximum size recommended. For annual weeds, allow 1 day after treatment before tillage. For field bindweed, allow at least 7 days after treatment before tillage.

Reduced control may result if treatments are made during poor growing conditions such as drought stress, disease or insect damage or if weeds have been mowed, grazed or cut. Heavy dust on foliage or an overstory canopy covering targeted weeds may also reduce control.

Rainfall or irrigation occurring within 6 hours after application may reduce effectiveness. Heavy rainfall or irrigation within 2 hours after application will wash this product off the foliage and a repeat treatment will be required.

RECOMMENDED RATES AND WEEDS CONTROLLED

For best results, apply this product after most weed seeds have germinated but before seedhead formation in grasses or flower bud formation in broadleaves.

When applied as directed, this product will provide control or suppression of the grass and broadleaf weed species listed below. Rates recommended are for maximum weed height at treatment time.

PERENNIAL/PERENIAL WEED SPECIES	RATE (FLUID OUNCES)	PER ACRE	LANDMASTER® BW	TREATMENT
			LENGTH OF VINETS/; HEIGHT	
Bindweed, field**	54 oz		6" to 18"	

Convolvulus arvensis (suppression only)

Spurge, leafy 54 oz post bloom
(suppression only)

ANNUAL WEED SPECIES RATE PER ACRE MAXIMUM HEIGHT

Foxtail, green 27 oz 12"
Setaria viridis

Barley 40 oz 6"
Hordeum vulgare

Brome, downy*
Bromus tectorum

Cheat*
Bromus secalinus

Foxtail
Setaria spp.

Kochia*
Kochia scoparia

Lettuce, prickly*
Lactuca serriola

Oats, wild
Avena fatua

Puncturevine
Tribulus terrestris

Purslane, common
Portulaca oleracea

Cocklebur 40 oz 12"
Xanthium strumarium

Lambsquarters
Chenopodium album

Mustard, tansy
Descurainia pinnata

Mustard, tumble
Sisymbrium altissimum

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Pigweed, redroot
Amaranthus retroflexus

Pigweed, smooth
Amaranthus hybridus

Rye
Secale cereale

Stinkgrass
Eragrostis cilianensis

Thistle, Russian
Salsola kali

Wheat
Triticum aestivum

Barnyardgrass 54 oz 6"
Echinochloa crus-galli

Buffalobur
Solanum rostratum

Goatgrass
Aegilops cylindrica

Mustard, blue
Chorispora tenella

Panicum, fall
*Panicum
dichotomiflorum*

Witchgrass
Panicum capillare

Oats, wild 54 oz 12"
Avena fatua

*For improved control in no-till systems or heavy infestations or overwintered stands, use 54 fluid ounces. For best results on light Kochia infestations, treat after the plant has passed through the woolly stage of growth and is 3 to 6 inches in height. When treating medium to heavy infestations or plants that are in the woolly stage (1 to 3 inches in height), add 2 fluid ounces of Banvel™ to the recommended rate of Landmaster BW. Refer to the Banvel label for planting, cropping, and other restrictions. Follow all precautions on the Banvel label.

**Landmaster BW may also be used as a 1 percent solution on a spray-to-wet basis for annual weed control and field bindweed suppression. Spray

coverage should be uniform and complete. Do not spray to the point of runoff.

Prepare the desired volume of spray by mixing the amount of Landmaster BW in clean water as shown in the following table:

SPRAY SOLUTIONS

DESIRED VOLUME	AMOUNT OF LANDMASTER® BW
1 gallon	1-1/3 fluid ounces
25 gallons	1 quart
100 gallons	1 gallon

2 tablespoons = 1 fluid ounce

™Banvel is a trademark of Sandoz, Inc.

SPOT TREATMENT

Applications in growing crops must be made prior to heading of small grains and grain sorghum (milo) and silking of corn.

For applications in forage grasses and legumes, apply in areas where the movement of domestic livestock can be controlled. No more than one-tenth of any acre should be treated at one time. Further applications may be made in the same area at 30 day intervals. Remove domestic livestock before application and wait 30 days after application before grazing livestock or harvesting.

ECOFARMING SYSTEMS

The Ecofarming System consists of the following rotation: winter wheat, corn/sorghum, ecofallow.

Use the following tank mixtures for control of emerged annual weeds before planting corn or sorghum in the Ecofarming System.

- LANDMASTER® BW at 54 to 64 fluid ounces per acre
- plus
- ATRAZINE at 0.75 to 1 pound active ingredient per acre
- plus
- LASSO® at 2.5 to 3 quarts per acre

The above tank mixtures should be applied in 28-0-0 or 32-0-0 liquid fertilizer carrier at 20 to 30 gallons per acre. The liquid fertilizer may be diluted with water to achieve the desired carrier volume.

WEEDS CONTROLLED - The following weeds, up to a maximum height of 4 inches, will be controlled:

Brome, downy

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Bromus tectorum

Cheat

Bromus secalinus

Foxtail, green

Setaria viridis

Foxtail, yellow

Setaria lutescens

Kochia*

Kochia scoparia

Lettuce, prickly

Lactuca serriola

Pigweed, redroot

Amaranthus retroflexus

Thistle, Russian

Salsola kali

Wheat, volunteer

Triticum aestivum

*For improved control of kochia, add 4 fluid ounces per acre (0.125 pound a.i. per acre) of Banvel to the above tank mixture.

Risk of crop injury from 2,4-D or Banvel can be reduced by applying this treatment 7 to 14 days before planting.

Refer to the label booklet for Lasso herbicide for preemergence weed control achieved by this tank mixture.

Refer to the specific product labels for crop rotation restrictions and cautionary statements for all products in these mixtures.

®Lasso is a registered trademark of Monsanto Company.

PREHARVEST APPLICATIONS TO WHEAT

This product provides weed control when applied prior to harvest of wheat. Apply after the hard-dough stage of grain (30% or less grain moisture) and at least 7 days prior to harvest.

This product may be applied using either aerial or ground spray equipment. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section for instructions for ground and aerial applications.

DO NOT APPLY MORE THAN 84 FLUID OUNCES PER ACRE OF THIS PRODUCT FOR PREHARVEST APPLICATIONS IN WHEAT.

Do not feed treated straw to livestock.

Do not permit dairy animals or meat animals being finished for slaughter to forage treated grain fields within 2 weeks after treatment.

NOTE: It is not recommended that wheat grown for seed be treated because a reduction in germination or vigor may occur.

POSTHARVEST APPLICATIONS

This product will provide control of weeds following grain harvest. Weeds should be allowed to regrow after damage incurred during harvest operations and to recover from environmental stress before application of this product. Weeds should be treated prior to the heading stage of annual grasses and before broadleaf weeds exceed 24 inches in height. Ammonium sulfate will improve performance on annual weeds under stress conditions.

Weeds controlled with 40 fluid ounces per acre include downy brome, green foxtail, stinkgrass and volunteer wheat.

Weeds controlled with 54 fluid ounces per acre include field bindweed, kochia, lambsquarters, mustard, pigweed and Russian thistle.

Weeds controlled with 64 fluid ounces per acre include barnyardgrass, sandbur, witchgrass, yellow foxtail and prickly lettuce.

FARMSTEADS, DITCHES AND FENCEROWS

When applied as directed, this product will control downy brome, bulbous bluegrass, kochia, tumble mustard, tansy mustard and prickly lettuce, and provide suppression of crested wheatgrass, smooth brome grass and field bindweed.

Use a 1 percent solution of this product for spray-to-wet, spot-spraying applications. Spray coverage should be uniform and complete. Do not spray to the point of runoff. Treat when weeds are small, actively growing and free of dust. Use 108 fluid ounces of this product in 5 to 10 gallons of water per acre for broadcast boom applications.

AID TO TILLAGE

This product, used in conjunction with preplant and conventional fallow tillage practices will provide control of downy brome, cheat, volunteer wheat, tansy mustard and foxtail. Apply 27 fluid ounces of this product in 3 to 10 gallons of water per acre to weeds that are actively growing. Treat when weeds are less than 6 inches in height. Application must be followed by conventional tillage practices before regrowth of the treated plant occurs. Allow at least 1 day after application before tillage.

AMMONIUM SULFATE

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The addition of 1 to 2 percent dry ammonium sulfate by weight (or liquid equivalent) or 8.5 to 17 pounds per 100 gallons of water may increase the performance of Landmaster BW and Landmaster BW herbicide tank mixtures on annual weeds. The improvement in performance may be apparent where environmental stress is a concern. Low-quality ammonium sulfate may contain material that will not readily dissolve which could result in nozzle tip plugging. To determine quality, perform a jar test by adding 1/3 cup of ammonium sulfate to 1 gallon of water and agitate for 1 minute. If undissolved sediment is observed, predissolve the ammonium sulfate in water and filter prior to addition to the spray tank. If ammonium sulfate is added directly to the spray tank, add slowly with agitation. Adding too quickly may clog outlet line. ENSURE THAT AMMONIUM SULFATE IS COMPLETELY DISSOLVED IN THE SPRAY TANK BEFORE ADDING HERBICIDES. THOROUGHLY RINSE THE SPRAY SYSTEM WITH CLEAN WATER AFTER USE TO REDUCE CORROSION.

NOTE: Compatibility problems may occur at carrier volumes below 5 GPA.

APPLICATION EQUIPMENT

Do not apply this product through any type of irrigation system.

This product may be applied using either ground, aerial spray or hand-held equipment. Use extreme care to avoid misting or drifting of herbicide solution onto foliage, green stems or fruit of desirable crops, trees, or plants during both growing and dormant periods since even very small quantities of spray can cause severe plant injury.

GROUND APPLICATION: Apply recommended rates of this product in 3 to 10 gallons of water per acre as a broadcast spray. For optimum spray distribution and coverage, use flat fan or low volume flood nozzles. When using flood nozzles, space them no more than 40 inches apart and ensure double overlap of spray pattern. Refer to the manufacturer's recommendations for correct pressure and nozzle height above the target canopy. Avoid pressure and nozzles which produce fine droplets or mist.

Use appropriate marking devices to ensure uniform spray coverage and best results from Landmaster BW herbicide.

HAND-HELD and HIGH-VOLUME EQUIPMENT (use coarse sprays only): Mix this product in clean water and apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, spray coverage should be uniform and complete. Do not spray to the point of runoff. Use a 1 percent solution for annual weed control and field bindweed suppression.

AERIAL APPLICATION: Apply the recommended rates of this product in 3 to 5 gallons of water per acre as a broadcast spray. DO NOT APPLY DURING INVERSION CONDITIONS, WHEN WINDS ARE GUSTY, OR WHEN OTHER CONDITIONS WILL CAUSE DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT WAS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations which dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure.

**MIXING INSTRUCTIONS
LANDMASTER® BW ALONE**

Fill the spray tank to about 3/4 of the desired volume with clean water. Add the recommended amount of Landmaster BW herbicide, then complete the filling process while maintaining agitation. Remove the hose from the mix tank immediately after filling to avoid siphoning back into the carrier source. During mixing and application, foaming of the spray solution may occur. To prevent or minimize foam, terminate by-pass and return lines at the tank bottom and/or use an agriculturally approved anti-foam or defoaming agent.

Additional surfactant is not necessary for this formulation.

NOTE: Reduced control may occur if water containing soil is used, such as water from ponds and unlined ditches.

TANK MIXTURES

Always predetermine the compatibility of labeled tank mixtures of this herbicide with water carrier by mixing small proportional quantities in advance.

Mix labeled tank mixtures of Landmaster BW herbicide with water as follows:

1. Place a 20 to 35 mesh screen or wetting basket over filling port.
2. Through the screen, fill the sprayer tank one-half full with water and start agitation.
3. If a wettable powder is used, make a slurry with the water carrier, and add it SLOWLY through the screen into the tank. Continue agitation.
4. If a flowable formulation is used, premix one part flowable with one part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
5. If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
6. Continue filling the sprayer tank with water and add the required amount of Landmaster BW herbicide near the end of the filling process.
7. Add individual formulations to the spray tank as follows: wettable powder, flowable, emulsifiable concentrate, drift control additive, water soluble liquid.

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Maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed. Keep by-pass line on or near bottom of tank to minimize foaming. Screen size in nozzle should be no finer than 100 mesh and in-line strainers should be no finer than 50 mesh. Carefully select proper nozzle to avoid spraying a fine mist. For best results with conventional ground application equipment, use flat fan nozzles.

Check label of all products used in tank mix for cleaning instructions. Clean as per the hardest material to remove.

SPRAYER CLEANUP

CLEAN THE ENTIRE SPRAYER AFTER APPLICATION OF THIS PRODUCT. Failure to clean the sprayer thoroughly may result in injury to desirable crops which are subsequently sprayed.

First, add clean water to the tank and thoroughly rinse the entire sprayer system. Secondly, fill the tank with water and ammonia. Add 1 quart of household ammonia per 25 gallons of water. Pump enough solution through the hoses, boom and nozzles to fill these parts completely. Then fill the tank, close and leave for 24 hours before draining and rinsing thoroughly with water.

Application or use of other agricultural chemicals with the equipment used for this product may result in injury to desirable vegetation.

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR ARE MOST SUSCEPTIBLE. The maintenance of an organic coating (paint) which meets aerospace specification MIL-C-38413 may prevent corrosion.

In case of an emergency involving this product,
Call Collect, day or night, (314) 694-4000.

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