

7/2/96

PM 22

55947-162

PM 12/13

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  
250947

Application for Pesticide - Section I

1. Company/Product Number Sandoz Agro, Inc./55947-162	2. EPA Product Manager Cynthia Giles-Parker	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Sandoz Agro, Inc./ Tough 45WP	PM# 22	
5. Name and Address of Applicant (Include ZIP Code) Sandoz Agro, Inc. 1300 E. Touhy Avenue Des Plaines, IL 60018 <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. JUL 16 1996
<input checked="" type="checkbox"/> Notification - Explain below. Label change - reference attached letter	<input type="checkbox"/> Other - Explain below.

NOTIFICATION

Explanation: Use additional page(s) if necessary. (For section I and Section II.) "This notification is consistent with the provisions of PR Notice 95-2 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 95-2 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:				2. Type of Container	
Child-Resistant Packaging <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Unit Packaging <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Metal	<input checked="" type="checkbox"/> Plastic
* Certification must be submitted		If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt. No. per container	<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
		2 lb	10	<input type="checkbox"/> Other (Specify) _____	
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 2 lb x 10/box		5. Location of Label Directions <input checked="" 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 checked="" type="checkbox"/> Other printed on WSB outer wrapper		

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Nancy Huebl	Title Label Coordinator	Telephone No. (Include Area Code) (847) 390-3823
2. Signature <i>Nancy Huebl</i>		3. Title Label Coordinator
4. Typed Name Nancy Huebl		5. Date June 28, 1996
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 both under applicable law.		6. Date Application Received (Stamped)

2/13

**TOUGH 45 WP**

**FOR THE POST-EMERGENCE CONTROL OF ANNUAL WEEDS  
IN CABBAGE AND CORN**

**ACTIVE INGREDIENT:**

Pyridate\* ..... 45%

**INERT INGREDIENTS:** ..... 55%

Total ..... 100%

\*O-(6-chloro-3-phenyl-4-pyridazinyl)-S-octyl-carbonothioate  
Contains 0.45 lb of pyridate per pound of product

**NOTIFICATION**

JUL 16 1996

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

STATEMENT OF PRACTICAL TREATMENT
<b>IF SWALLOWED:</b> Call a physician or poison control center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.
<b>IF ON SKIN:</b> Wash with plenty of soap and water. Get medical attention if irritation persists.
<b>IF IN EYES:</b> Flush with plenty of water for 10-15 minutes. Get medical attention.

EPA Est. No.

EPA Reg. No. 55947-162

Net Contents 2 lb/0.9 kilos

Sandoz Agro, Inc.  
1300 East Touhy Avenue  
Des Plaines, IL 60018

**SEE OTHER PANELS FOR ADDITIONAL PRECAUTIONARY STATEMENTS**

7-02-96



4/13

<b>AGRICULTURAL CHEMICAL</b>
<b>DO NOT SHIP OR STORE WITH FOODS, FEEDS, DRUGS, OR CLOTHING.</b>
<b>FOR CHEMICAL SPILL, LEAK, FIRE OR</b>
<b>EXPOSURE, CALL CHEMTREC</b>
<b>1-800-424-9300</b>

**DIRECTIONS FOR USE**

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

<b>AGRICULTURAL USE REQUIREMENTS</b>
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, 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
Waterproof gloves
Shoes plus socks

7-02-96



**Mixing Instructions:** Fill the spray tank 1/2 full with water. Add the required amount of **TOUGH 45WP**, mix thoroughly and add the remaining amount of water required for application. Maintain sufficient agitation during mixing and spraying to ensure a uniform spray mixture.

For tank mix combinations, the order of addition of other products is important. Wettable powders or dry flowables should be added after the **TOUGH 45WP**, aqueous flowables next, and then any emulsifiable liquids. Agitate between each addition until solution is uniform and maintain constant agitation until solution is completely applied. Always mix one product in water thoroughly before adding another product or compatibility problems may occur.

After all products have been added, finish filling the spray tank with the remainder of the water to be used for spraying.

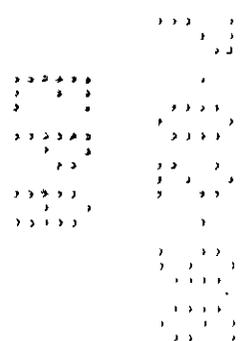
**NOTE:** Agitation must be provided during mixing and spraying to ensure a uniform spray mixture. Spray mixture should be used immediately and not stored.

**Application - Procedures - TOUGH 45WP** is noncorrosive to spray equipment. Before preparing spray mixture, be sure all equipment is clean to prevent uneven application, clogging of spray nozzles, or crop injury. Apply **TOUGH 45WP** with a boom sprayer calibrated to a constant speed and constant, uniform delivery. **TOUGH 45WP** should be applied in sufficient water (20-30 gallons per acre is recommended), at a pressure of 30-40 psi to ensure proper coverage. Thorough coverage of target weeds is required for optimum results. Use the higher spray volumes when treating dense or tall vegetation. Large crop and weed canopies can shelter smaller weeds. Directed applications below large crop canopies are recommended for optimum coverage of target weeds.

**Timing:** **TOUGH 45WP** is most effective on actively growing broadleaf weeds in the 2-4 true leaf stage.

A delay in spraying which permits weeds to grow beyond the proper application time may result in poor control. If weeds are under stress and not actively growing, they are harder to kill. Scout your fields 14-16 days after planting to determine exact timing for application. In corn, a cultivation may be necessary if all weeds are not controlled or if weeds regrow.

Do not apply when conditions favor drift which can carry spray to adjacent sensitive non-target areas.



### USE DIRECTIONS

Do not use this product in any type of irrigation system.

### USE ON CABBAGE

Cabbage is more tolerant to **TOUGH 45WP** at certain stages of development. For optimum weed control and minimal competition to the crop, timing of application should be based on the stage of weed growth. However, for early application to the crop, the recommended growth stage of the crop must be carefully observed. Failure to follow label directions may result in severe crop damage. This is especially true for cabbage grown in the southern states. Cabbage grown in the northern states are less susceptible to damage from **TOUGH 45WP** in the early stages of development.

**CAUTION:** **TOUGH 45WP** may cause temporary discoloring or yellowing of leaves that were sprayed. Only leaves that come in contact with spray will be affected. The discoloring of leaves does not affect yields.

Do not apply if rain has occurred within the last two days.

### DO NOT USE SURFACTANTS OR OTHER ADJUVANTS.

In seeded cabbage, **TOUGH 45WP** should be applied only when the crop has at least 4 leaves fully developed and before head formation.

In transplanted cabbage, **TOUGH 45WP** should be applied only after plants have become well established (about 3 weeks after transplanting) and before head formation.

For optimum broad spectrum weed control, **TOUGH 45WP** may be used as part of a sequential treatment to control broadleaf weeds following a preplant incorporated or preemergence herbicide.

For control of annual broadleaf weeds including triazine resistant types and annual grasses, use the following treatment:

Apply trifluralin at recommended rates (see trifluralin label) preplanting and incorporate, then follow with a postemergence application of **TOUGH 45 WP** at 2 lb/acre to actively growing weeds. Apply **TOUGH 45WP** to broadleaf weeds in 2-4 leaf stage and annual grasses in 1-2 leaf stage in 20-30 gallons of water per acre. Thorough coverage of targeted weeds is essential.

TOUGH 45WP  
2 lb/acre  
20-30 gal water/acre  
Apply to actively growing weeds  
in 2-4 leaf stage  
of broadleaf weeds  
and 1-2 leaf stage  
of annual grasses.

2 lb TOUGH 45WP following a preplant & incorporate grass herbicide:

CONTROLLED

Amaranth, Palmer  
Amaranth, Spiny  
Bedstraw, Catchweed  
Carpetweed  
Chickweed, Common  
Cocklebur, Common  
Chamomile, Corn  
Chamomile, Mayweed  
Deadnettle, Purple  
Deadnettle, Spotted  
Galinsoga, Hairy  
Galinsoga, Small Flower  
Henbit  
Jimsonweed  
Kochia  
Lambsquarter, Common  
Morningglory, Smallflower  
Mustard, White  
Mustard, Wild  
Nightshade, American Black  
Nightshade, Black  
Nightshade, Eastern Black  
Nightshade, Purple  
Nightshade, Silverleaf  
Pigweed Fringed  
Pigweed Prostrate  
Pigweed Redroot  
Pigweed Smooth  
Pigweed Tumble  
Shepherdspurse  
Spurry, Corn  
Velvetleaf  
Rocket, Yellow

SUPPRESSION UP TO THE 2 LEAF STAGE

Barnyard Grass  
Crabgrass, Large  
Foxtail, Green  
Foxtail, Yellow

Do not apply TOUGH 45 WP to cabbage within 45 days of harvest.

RESTRICTIONS

Do not feed treated cabbage to livestock within 45 days of application of TOUGH 45 WP.

9/13

### USE ON FIELD CORN

Field corn is tolerant to **TOUGH 45WP** at all stages of development. **TOUGH 45WP** may be applied postemergence up to 68 days prior to harvest. Timing of application must be based on the stage of weed growth for optimum weed control and minimal competition to the crop.

Do not graze or otherwise feed treated corn grain, forage, or fodder to livestock within 68 days of application of **TOUGH 45 WP**.

### GENERAL WEED LIST

This is a general list of weed species which may be treated with **TOUGH 45WP** in corn as recommended under the Rates and Timing sections in this label. **TOUGH 45WP**, when applied as directed in this label, will control or suppress many annual broadleaf weeds including but not limited to:

#### Annuals

Amaranth, Palmer (Carelessweed)  
Amaranth, Spiny (Spiny Pigweed)  
Bedstraw, Catchweed  
Carpetweed  
Chickweed, Common  
Cocklebur, Common  
Chamomile, Corn  
Chamomile, Mayweed  
Deadnettle, Purple  
Deadnettle, Spotted  
Galinsoga, Hairy  
Galinsoga, Small Flower  
Henbit  
Jimsonweed  
Kochia  
Kochia, triazine resistant  
Kochia, ALS resistant\*  
Lambsquarter, Common  
Lambsquarter, Common, triazine resistant  
Nightshade, American Black  
Nightshade, Black  
Nightshade, Eastern Black  
Nightshade, Purple  
Nightshade, Silverleaf  
Pigweed Fringed  
Pigweed Prostrate  
Pigweed Redroot

10/13

Pigweed Smooth  
Pigweed Tumble  
Pigweed, triazine resistant  
Pigweed, ALS resistant\*  
Purslane, Common  
Rocket, Yellow  
Shepherdspurse  
Spurry, Corn  
Thistle, Russian  
Waterhemp, Tall  
Waterhemp, Common

\* ALS (acetolactate synthase) resistant weeds include those weeds resistant to the sulfonylurea (e.g., Classic® and Glean®) and/or imidazolinone (e.g., Scepter® and Pursuit®) family of herbicides.

For best performance apply **TOUGH 45WP** when weeds are small (by the 4 leaf stage) and actively growing.

**Sedges**

Nutsedge, Yellow  
Nutsedge, Purple

**SPECIAL USE DIRECTIONS** for yellow and purple nutsedge suppression:

Apply 2 lb of **TOUGH 45WP** with 2 pt of atrazine (4L or the equivalent 90DF) per treated acre when sedges are 6 to 8 inches high for significant yellow and purple nutsedge suppression. The addition of a crop oil concentrate is recommended for improved activity. **TOUGH 45WP** will burn back the top growth of the sedges. Regrowth may occur. Sedges must be actively growing without stress for optimum results.

**Rates and Timings**

**TOUGH 45WP** may be applied postemergence up to 68 days before harvest.

TOUGH 45WP  
ATD45WPA.96B  
June 1996

11713

**TOUGH 45WP** at 1 to 2 lb per treated acre may be applied to actively growing broadleaf weeds at any stage of corn growth after emergence in all tillage systems (conventional, no tillage, or reduced tillage). Split applications of **TOUGH 45WP** may be made, but do not exceed applying a total of 2 lb per treated acre per year. Consult the Application section of this label for best application timing for achieving optimum weed control.

### TANK MIX TREATMENTS IN CORN

**TOUGH 45WP** may be tank mixed with one or more of, but not limited to, the following herbicides for control of additional broadleaf weeds and/or grasses. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

Adjuvants (non-ionic surfactants, crop oil or liquid fertilizer) may be used with **TOUGH 45WP** tank mixes where required by tank mix partners specified in this label. Read and carefully follow all restrictions and recommendations of tank mix partners. Use of tank mix partners is only allowed where permitted in each state.

Tank mixing **TOUGH 45WP** with other corn herbicides offers many benefits including greater weed control spectrum, adding products with different modes of action to reduce or delay the development of herbicide resistance by weeds, and optimizing performance of tank mix partners thus allowing a lower use rate of each as directed in the label. Optimization of performance is particularly beneficial when tank mixing a residual herbicide such as atrazine thus decreasing carryover and other concerns associated with residual herbicides. Suggested tank mixes include but are not limited to:

**TOUGH 45WP plus atrazine:** For additional broadleaf weed control (see Weed List) apply 1 to 2 lb of **TOUGH 45WP** with 1 to 2 pt of atrazine (4L or the equivalent 90DF) per treated acre. The addition of a crop oil concentrate is recommended for optimum control.

Use the lower rates of **TOUGH 45WP** and atrazine when weeds have less than 4 leaves. For broadleaf weeds above 4 leaf stage, heavy infestation or use under adverse conditions such as drought stress, use the higher rates of **TOUGH 45WP** and atrazine.

TOUGH 45WP  
Atrazine  
Crop Oil Concentrate  
Liquid Fertilizer  
Surfactant

To control moderate infestations of escaped grasses following application of a preplant incorporated or preemergence grass herbicide, apply 1 to 2 lb of **TOUGH 45WP** plus 2 to 3 pt of atrazine (4L or the equivalent 90DF) per treated acre. Applications should be made before escaped grasses reach the 3 leaf stage (1.5 inches tall). The addition of a crop oil concentrate is recommended for optimum control of escaped grasses.

Follow all label restrictions as well as state and local restrictions on atrazine use.

Additional broadleaf weeds controlled with **TOUGH 45WP**/atrazine tank mix:

Anoda, Spurred  
Buckwheat, Wild  
Knotweed, Prostrate  
Lady's Thumb  
Morningglory, Entireleaf  
Morningglory, Ivyleaf  
Morningglory, Pitted  
Morningglory, Red  
Morningglory, Small Flower  
Morningglory, Tall  
Mustard, White  
Mustard, Wild  
Ragweed, Common  
Ragweed, Giant  
Sicklepod  
Sida, Prickly (Teaweed)  
Smartweed, Pennsylvania  
Velvetleaf

**TOUGH 45WP** plus Bladex® (cyanazine): For additional broadleaf weed control (see Weed List under **TOUGH 45WP** plus atrazine tank mix) apply 1 lb of **TOUGH 45WP** with 1 to 1.75 lb of Bladex® 90DF per treated acre. **TOUGH 45WP** at a rate of 1 to 2 lb with 1 to 1.75 lb of Bladex 90DF per treated acre will control susceptible grasses, such as barnyardgrass, crabgrass, most foxtail species, fall panicum, Texas panicum, witchgrass, etc. Up to the 3 leaf stage (1.5 inches tall).

NOTE: Do not tank mix with Bladex® 4L (flowable) as crop injury may result. Do not apply if the fifth leaf of corn is visible. Do not apply during cool, wet conditions or when corn is under stress. Do not use on sandy soils with less than 1% organic matter. Do not use crop oil concentrates with this tank mix combination as crop injury may result.

Read Bladex label for further cautions and recommendations on proper use to prevent crop injury.

**NOTE:** Some products available for tank mixing with **TOUGH 45WP** may cause injury to corn when applied. Consult labels of all products used for restrictions, injury descriptions, and recovery intervals.

### LIMITATION OF WARRANTY AND LIMITATION OF LIABILITY

**NOTICE:** Read this Limitation of Warranty and Limitation of 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. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Sandoz or seller. All such risks shall be assumed by buyer or user. Sandoz warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, under normal use conditions, subject to the risks described above. Sandoz makes no other express or implied warranty of fitness or of merchantability or any other express or implied warranty. In no event shall Sandoz or seller 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 Sandoz or 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 Sandoz or seller, the replacement of the product. Sandoz and seller offer this product, and buyer and user accept it, subject to the foregoing limitations of warranty and limitation of liability, which may not be modified by any oral or written agreement.

### REGISTERED TRADEMARKS

Bladex®, Bladex® 4L, Bladex® 90DF, Classic, and Glean® are registered trademarks of E.I. du Pont de Nemours and Company.. Pursuit® and Scepter® are registered trademarks of American Cyanamid Company. **TOUGH® 45WP** is a registered trademark of Sandoz Ltd.

