

NOT REVIEWED  
Received per P.R. Notice 88-6

# ASSURE®

## HERBICIDE

EMULSIFIABLE CONCENTRATE

**ACTIVE INGREDIENT**

2-[4-(6-chloro-2-quinazolinyl)oxy]phenoxypropionic acid, ethyl ester

**BY WEIGHT**

9.5%\*

**INERT INGREDIENTS**

90.5%\*

TOTAL 100%

352-441  
PM25  
10FS

THIS PRODUCT CONTAINS THE TOXIC INERT INGREDIENT PHENOL.

Contains petroleum distillates.

\*Equivalent to 0.8 pounds ai per gallon.

EPA Reg. No. 352-441

U.S. Pat. 4,829,493

### KEEP OUT OF REACH OF CHILDREN

## CAUTION

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION! MAY IRRITATE EYES, NOSE, THROAT AND SKIN

Avoid breathing vapors or spray mist. Avoid contact with skin, eyes and clothing. In case of contact, immediately flush eyes or skin with plenty of water. Get medical attention if skin irritation persists. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before reuse.

For medical emergencies involving this product, call toll free 1-800-441-3637.

#### ENVIRONMENTAL HAZARDS

Do not apply directly to water or wetlands. Do not contaminate water by cleaning of equipment or disposal of waste.

#### PHYSICAL AND CHEMICAL HAZARDS

Combustible. Keep away from heat, sparks, and open flames. Keep container closed.

### IMPORTANT

Injury to or loss of desirable trees or vegetation may result from failure to observe the following: Do not apply or drain or flush equipment on or near desirable trees or plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. Do not use on lawns, walks, driveways, tennis courts, or similar areas. Prevent drift of spray to desirable plants. Do not contaminate any body of water. Keep from contact with fertilizers, insecticides, fungicides, and seeds during storage.

Use caution when handling "Assure" Herbicide as accidental spills or splashes may harm the finish on painted equipment.

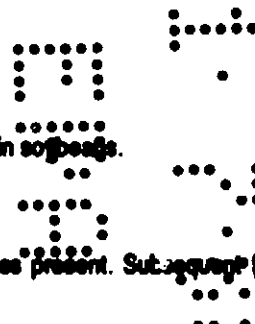
Thoroughly clean all traces of "Assure" from application equipment immediately after use. Flush tank, pump, hoses and boom with several changes of water after removing nozzle tips and screens (clean these parts separately). Failure to thoroughly clean the equipment may result in injury to subsequently sprayed grass crops.

### GENERAL INFORMATION

"Assure" is a selective postemergence herbicide recommended for the control of annual and perennial grasses in soybeans.

"Assure" does not control sedges or broadleaf weeds.

Recommended rates and timing for "Assure" Herbicide application will provide control of the emerged grasses present. Subsequent flushes of grass weeds require a separate treatment.



ASSURE 1

Most grass crops, including wheat, barley, rye, oats, sorghum, rice and corn are highly sensitive to "Assure" Herbicide and all direct or indirect contact should be avoided.

When not in use, keep container closed to prevent evaporation or loss through spillage.

Under certain environmental conditions, minor leaf spotting may occur on soybeans. New growth and crop yields are unaffected.

### BIOLOGICAL ACTIVITY

"Assure" is a systemic herbicide which is rapidly absorbed and readily translocated from the treated foliage to the root system and growing points of the plant.

Control Symptoms -- Treated plants show a reduction in growth and a loss of competitiveness. An early chlorosis/necrosis of the younger plant tissues is followed by a progressive collapse of the remaining foliage. These symptoms will generally be observed in one to three weeks depending on the grass species treated and the environmental conditions.

### 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 through any type of irrigation system.

### TIMING OF APPLICATION

Apply "Assure" Herbicide postemergence to actively growing grasses according to the accompanying rate table recommendations. Provide thorough and uniform spray coverage.

Applications made to grass plants stressed due to insufficient moisture or cold temperatures, or to grass plants exceeding the stage of growth recommended in the rate table, may result in unsatisfactory control.

In arid regions where irrigation is used to supplement limited rainfall, "Assure" Herbicide should be applied as soon as possible after an irrigation.

Under no-till crop production, increase spray pressure and volume to ensure thorough coverage.

### APPLICATION INFORMATION

#### SPRAY ADJUVANTS

Always include a spray adjuvant with postemergence applications of "Assure". Petroleum oil concentrates should be of good quality and contain a minimum of 15% emulsifier/surfactant. Nonionic surfactants should contain at least 80% active ingredient. DO NOT use vegetable (crop origin) oils as spray adjuvants with "Assure" herbicide. (USE ONLY EPA APPROVED OIL CONCENTRATES AND SURFACTANTS).

#### Ground Application

Nozzles: Use standard fan or hollow cone nozzles to apply "Assure" herbicide. Do not use flood nozzles.

Spray Volume: Use a minimum of 10 gallons of water per acre in Area I (adequate rainfall). Use a minimum of 15 gallons of water per acre in Area II (arid conditions). Do not exceed 40 gallons of water per acre in Area I or Area II.

Spray Adjuvant: Always include a nonphytotoxic petroleum oil concentrate at 1% v/v (4 Qts/100 Gal) or a nonionic surfactant at 0.25% v/v (1 Qt/100 Gal).

#### Aerial Application

Spray Volume: Use a minimum of 3 gallons of water per acre in Area I (adequate rainfall). Use a minimum of 5 gallons of water in Area II (arid conditions).

Spray Adjuvant: Always include a nonphytotoxic petroleum oil concentrate at 0.5% v/v or (2 Qts/100 Gal) a nonionic surfactant at 0.25% v/v (1 Qt/100 Gal).

A description of the area boundaries is included.

### Areas I & II

Area I -- encompasses most of the eastern half of the United States. It is characterized as having adequate rainfall to support crop production and generally does not require irrigation during the growing season. States included in area I are; Alabama, Arkansas, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas (broadly defined as east of Interstate 135), Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska (broadly defined as east of State Highway 183), New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma (broadly defined as east of Interstate 35), Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas (broadly defined as east of Interstate 35), Vermont, Virginia, West Virginia, and Wisconsin.

Area II -- encompasses the western portion of four states west of the Mississippi river. It is characterized as having arid conditions and in many locations requires irrigation during the growing season. States included in area II are; Kansas (broadly defined as west of Interstate 135), Nebraska (broadly defined as west of State Highway 183), Oklahoma (broadly defined as west of Interstate 35) and Texas (broadly defined as west of Interstate 35).

Note: Applications of "Assure" herbicide should be made to actively growing grasses. If a field is to receive an irrigation, wait until after the irrigation to apply "Assure" herbicide.

### RESTRICTIONS

Do not graze treated fields or harvest for forage or hay.

Do not use vegetable (crop origin) oils as spray adjuvant or carrier.

Do not apply "Assure" Herbicide to plants stressed due to insufficient moisture. Grass weeds under this condition frequently become less sensitive to herbicide activity.

Do not cultivate within 7 days before or 7 days after an application of "Assure" as control may be unsatisfactory.

Do not apply if rain is expected within 1 hour of application as control may be unsatisfactory.

Do not apply "Assure" Herbicide when environmental conditions are such that drift to other crops and non-target areas is possible. Grass crops such as corn, sorghum, wheat, rice, etc. are highly sensitive to "Assure" Herbicide.

Do not tank mix "Assure" Herbicide with any pesticide, fertilizer, or additive except as directed in this label. Application of a broadleaf herbicide within one day following an application of "Assure" or within seven days preceding an application of "Assure" may result in reduced grass control.

Do not apply more than 40 ounces of product per acre per season.

Do not rotate to crops other than soybeans within 120 days after application.

Do not apply "Assure" within 60 days of harvest.

Users in Texas must confer with personnel of regional U.S. Fish and Wildlife Service offices to insure that federally-protected plants are not exposed to this product.

Do not apply after pod set.

### RECOMMENDATIONS FOR GRASS CONTROL IN SOYBEANS

#### Area I -- (Areas with Adequate Rainfall)

- Apply only to actively growing grasses at the recommended weed stages.
- Always add a nonphytotoxic petroleum oil concentrate or a nonionic surfactant according to label recommendations.
- Follow spray volume recommendations and field calibrate equipment to assure uniform plant coverage.

ANNUAL GRASSES	SPECIES	SIZE AT APPLICATION (INCHES)	"ASSURE" OZ PRODUCT/A	- SPRAY ADJUVANT (% CONCENTRATION) -		
				OIL CONCENTRATE GROUND	AIR	NONIONIC SURFACTANT GROUND/AIR
Corn (volunteer)	Zea mays	6-18	10	1.0% wv	0.9% wv	or 0.25% wv
Shattercane	Sorghum bicolor	6-12	10	(4 Qt/100 Gal)	(2 Qt/100 Gal)	(1 Qt/100 Gal)
Johnsongrass (seedling)	Sorghum halepense	2-6	10			
Wild Proso Millet	Panicum miliaceum	2-6	10			
Crowfootgrass	Dactyloctenium aegyptium	2-6	14	1.0% wv	0.9% wv	or 0.25% wv
Fall Panicum	Panicum dichotomiflorum	2-6	14	(4 Qt/100 Gal)	(2 Qt/100 Gal)	(1 Qt/100 Gal)
Foxtails						
Giant	Setaria faberii	2-6	14			
Green	Setaria viridis	2-4	14			
Yellow	Setaria latifolia	2-4	14			
Bristly	Setaria verticillata	2-4	14			
Goosegrass	Elymus indica	2-6*	14			
Ischgrass	Rottboellia exaltata	2-6	14			
Sandbar (field)	Conchus inortus	2-6	14			
Spangletop	L. Kochia illinoensis	2-6	14			
Volunteer Cereals						
Wheat	Triticum aestivum	2-6	14			
Barley	Hordeum vulgare	2-6	14			
Oats	Avena sativa	2-6	14			
Rye	Secale cereale	2-6	14			
Wild Oat	Avena fatua	2-6	14			
Witchgrass	Panicum capillare	2-6	14			
Woollycupgrass	Eriochloa villosa	2-4	14			
Barryardgrass	Echinochloa crus-galli	2-6	16	1.0% wv	0.9% wv	or 0.25% wv
Broadleaf signalgrass	Bachiaria platyphylla	2-6	16	(4 Qt/100 Gal)	(2 Qt/100 Gal)	(1 Qt/100 Gal)
Cabgrass						
Large	Digitaria sanguinalis	2-6*	16			
Smooth	Digitaria lachnanum	2-6*	16			
Jungle rice	Echinochloa colozum	2-6	16			
Red Rice	Oryza sativa	1-4	16			
Texas Panicum	Panicum texanum	2-4	16			

\* Length of lateral growth

PERENNIAL GRASSES	SPECIES	SIZE AT APPLICATION (INCHES)	"ASSURE" OZ PRODUCT/A	- SPRAY ADJUVANT (% CONCENTRATION) -		
				OIL CONCENTRATE GROUND	AIR	NONIONIC SURFACTANT GROUND/AIR
Bermudagrass	Cynodon dactylon					
First Application		3 tall (or up to 6" runners)	20	1.0% wv	0.9% wv	or 0.25% wv
				(4 Qt/100 Gal)	(2 Qt/100 Gal)	(1 Qt/100 Gal)
Rhizome Johnsongrass	Sorghum halepense					
First Application		16-24	20			
Quackgrass	Agropyron repens					
First Application		6-10	20			
Western Mully	Muhlenbergia torreyana					
First Application		4-6	16			

If regrowth of perennial grasses occurs, make a second application of "Assure" using 14 ounces of product/A timed to grass weed sizes as follows: Bermudagrass (3" tall or up to 6" runners), Rhizome Johnsongrass (6"-10"), Quackgrass (4"-6"), Western Mully (4"-6").



### RECOMMENDATIONS FOR GRASS CONTROL IN SOYBEANS (continued)

**Area II - (Add conditions)**

- Apply only to actively growing grasses at the recommended weed stages.
- Always add a nonphytotoxic petroleum oil concentrate or a nonionic surfactant according to label recommendations.
- Make applications as soon as possible after a rainfall or irrigation.
- Follow spray volume recommendations and field calibrate equipment to assure uniform plant coverage.

ANNUAL GRASSES	SPECIES	SIZE AT APPLICATION (INCHES)	"ASSURE" OZ PRODUCT/A	- SPRAY ADJUVANT (% CONCENTRATION) -		
				OIL CONCENTRATE GROUND	AIR	OR NONIONIC SURFACTANT GROUND/AIR
Corn (volunteer)	Zea mays	6-10	14	1.0% w/v (4 Qt/100 Gal)	0.5% w/v (2 Qt/100 Gal)	or 0.25% w/v (1 Qt/100 Gal)
Stachyrene	Stachys blaser	6-10	14			
Johnsongrass (seedling)	Stachys latipes	2-6	14			
Sandbar (seed)	Cenchrus incertus	2-6	14			
Barnyardgrass	Echinochloa crus-galli	2-4	16	1.0% w/v (4 Qt/100 Gal)	0.5% w/v (2 Qt/100 Gal)	or 0.25% w/v (1 Qt/100 Gal)
Broadleaf						
Signalgrass	Brachiaria platyphylla	2-4	16			
Crabgrass (large)	Digitaria sanguinalis	2-4	16			
Forb						
Green	Stachys viridis	2-4	16			
Yellow	Stachys hirsuta	2-4	16			
Jungle rice	Echinochloa colubrum	2-4	16			
Texas Panicum	Panicum texanum	2-4	20			
Volunteer cereals						
Wheat	Triticum aestivum	2-4	16			
Barley	Hordeum vulgare	2-4	16			
Oats	Avena sativa	2-4	16			
Rye	Secale cereale	2-4	16			

PERENNIAL GRASSES	SPECIES	SIZE AT APPLICATION (INCHES)	"ASSURE" OZ PRODUCT/A	- SPRAY ADJUVANT (% CONCENTRATION) -		
				OIL CONCENTRATE GROUND	AIR	OR NONIONIC SURFACTANT GROUND/AIR
Bermudagrass First Application	Cynodon dactylon	3 tall (or up to 6" runners)	24	1.0% w/v (4 Qt/100 Gal)	0.5% w/v (2 Qt/100 Gal)	or 0.25% w/v (1 Qt/100 Gal)
Rhizome Johnsongrass First application	Stachys latipes	10-16	24			

If reports of perennial grasses occur, make a second application of "Assure" using 16 ounces of product/A timed to grass weed class as follows: Bermudagrass (3" tall or up to 6" runners), Rhizome Johnsongrass (8"-10").

### RECOMMENDATIONS FOR GRASS CONTROL IN SOYBEANS (continued)

**Spot/Small Area Spray Recommendations (Areas I and II)**

Make a 3/4 percent solution of "Assure" in water for spot treating annual species such as volunteer corn or perennial species such as rhizome johnsongrass. The spray solution should include a nonphytotoxic oil concentrate at 1% w/v or a nonionic surfactant at 0.25% v/v. Treat plants on a spray-to-wet basis insuring a good coverage.

Desired Spray Volume	"Assure"	Petroleum Oil Concentrate	or	Nonionic Surfactant
1 gallon	1.0 fl. oz. (2 tsp)	1.25 fl. oz. (2.5 tbsp)		0.3 fl. oz. (2 tsp)
25 gallons	24.0 fl. oz.	1.0 quart		0.8 fl. oz. (1 cup)
50 gallons	1.5 quarts	2.0 quarts		0.5 qt.
100 gallons	3.0 quarts	4.0 quarts		1.0 qt.

**Tank-mix Applications of "Assure" with "Basagran"1 or "Classic"2**

- Tank mixes of "Assure" herbicide with post broadleaf herbicides have typically shown some reduction in grass control over applications of "Assure" alone. If "Assure" is to be tank-mixed with "Basagran"1, or "Classic"2, the label rate of "Assure" should be increased by 4 ounces product/A.
- Do not use "Assure"/"Basagran" or "Assure"/"Classic" tank-mixes for infestations of annual grasses including; barnyardgrass, broadleaf signalgrass, crabgrass, red rice, texas panicum, or for infestations of perennial grasses including; bermudagrass, quackgrass, or wheat stem mully.
- Do not use "Assure"/"Basagran" or "Assure"/"Classic" tank-mixes in Area II (as defined in this label).

**Sequential Applications with Post Broadleaf Herbicides**

- Some reduction in grass control is possible when "Assure" is applied immediately prior to or sequentially after an application of a post broadleaf herbicide.
- After an application of "Assure", wait a minimum of 24 hours before applying a post broadleaf herbicide.
- In fields treated with a post broadleaf herbicide, do not apply "Assure" until grass plants are again developing new leaves (generally 7 days after the post broadleaf herbicide application).

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## STORAGE AND DISPOSAL

**STORAGE:** Subject to temperatures below 32 degrees F. Do not contaminate or lead by storage or disposal. Keep from contact with fertilizers, insecticides, fungicides, and seeds during storage.

**PESTICIDE DISPOSAL:** Pesticides, spray mixture, or rinseate that cannot be used according to label instructions must be disposed of according to applicable Federal, State or local procedures.

**CONTAINER DISPOSAL:** Triple rinse (or equivalent) and dispose of in a sanitary landfill or by incineration if allowed by State and local authorities.

**NOTICE TO BUYER:** Purchase of this material does not confer any rights under patents of countries outside of the United States.

## NOTICE OF WARRANTY

Du Pont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purposes stated on such label only when used in accordance with the directions under normal use conditions. 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 Du Pont. In no case shall Du Pont be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks are assumed by the buyer. DU PONT MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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