

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDES PROGRAMS
REGISTRATION DIVISION (72-767)
WASHINGTON, DC 20460

NOTICE OF PESTICIDE:

☐ REGISTRATION
☐ REREGISTRATION

(Under the Federal Insecticide, Fungicide,
and Rodenticide Act, as amended)

EPA REGISTRATION NO.

352-541
TERM OF ISSUANCE

DATE OF ISSUANCE
DEC 11 1990

CONDITIONS
NAME OF PESTICIDE PRODUCT

Assure II

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

Marie H. Chubb
E. I. du Pont de Nemours & Company, Inc.
Agricultural Products Department
Barley Mill Plaza, Walker's Mill Bldg.
P. O. Box 80038
Wilmington, DE 19880-0038

PM 23
352-541
Pg 2 of 7

NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

Registration is in no way to be construed as an indorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) or 4(a) when the Agency requires all registrants of similar products to submit such data.

2. Make the labeling changes listed below before you release the product for shipment:

- Add the phrase, "EPA Registration No. 352-541".
- Add the net contents statement to your label.

3. Submit the following product chemistry data by March 1992.

62-12 Stability - the stability to light must be determined (environmental fate data may be translatable)

62-17 Storage Stability - stability of the TCAT stored under expected conditions for 1 year in the commercial container must be determined (this must include any effects of the TCAT on the container).

BEST AVAILABLE COPY

☒ ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL

DATE

12/11/90

pg. 2087

4. Submit the following toxicology data by December 1992.

Responses to the deficiencies in the mutagenicity studies for the D+ isomer.

Upgrade the primary dermal irritation and dermal sensitization studies on the D+ isomer.

5. Submit five (5) copies of your final printed labeling before you release the product for shipment. Refer to the A-79 Enclosure for a further description of final printed labeling.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely,

Robert J. Taylor
Product Manager (25)
Fungicide-Herbicide Branch
Registration Division (H7505C)

Enclosures

BEST AVAILABLE COPY

pg. 307

REGISTRATION CODE 0688-000
PACKAGE SIZE
6 - 1 GALLON JUGS/CARTON



ASSURE® II

HERBICIDE
EMULSIFIABLE CONCENTRATE

ACTIVE INGREDIENT	BY WEIGHT
Quizalofop P-Ethyl: Ethyl(R)-2-[4-[(6-chloro-2-quinoxalin-2-yl)oxy]phenoxy]propionate	9.4%*
INERT INGREDIENTS	90.6%*
	TOTAL 100.0%

act content

Contains petroleum distillates.
*Equivalent to 0.8 pounds ai per gallon.

EPA Reg. No. 352-XXX

U.S. Pat. 4,629,493

KEEP OUT OF REACH OF CHILDREN

DANGER

STATEMENT OF PRACTICAL TREATMENT

If in eyes: Immediately flush with a steady gentle stream of water for at least 15 minutes. Call a physician.
If on skin: Wash with plenty of soap and water. Get medical attention if irritation persists.
If swallowed: Do not induce vomiting. Give large quantities of water. Never give anything by mouth to an unconscious person. Call a physician.
If large amounts are inhaled: Remove to fresh air. If not breathing, give artificial respiration, preferably by mouth. If breathing is difficult, give oxygen and call a physician.

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

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER! Causes severe eye irritation. May irritate skin, nose, and throat. May be harmful if absorbed through the skin, swallowed, or inhaled. Avoid contact with skin, eyes, or clothing. Avoid breathing vapors or spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

ENVIRONMENTAL HAZARDS

Do not apply directly to water or wetlands (swamps, bogs, marshes and potholes). Do not contaminate water by disposal of equipment washwaters or wastes.

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 II" Herbicide as accidental spills or splashes may harm the finish on painted equipment.

Thoroughly clean all traces of "Assure II" 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 II" is a selective postemergence herbicide recommended for the control of annual and perennial grasses in soybeans.

"Assure II" does not control sedges or broadleaf weeds.

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

Most grass crops, including wheat, barley, rye, oats, sorghum, rice and corn are highly sensitive to "Assure II" 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 II" 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 II" 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 II" 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 II". 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 II" herbicide. (USE ONLY EPA APPROVED OIL CONCENTRATES AND SURFACTANTS).

Ground Application

Nozzles: Use standard fan or hollow cone nozzles to apply "Assure II" 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 II" herbicide should be made to actively growing grasses. If a field is to receive an irrigation, wait until after the irrigation to apply "Assure II" 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 II" 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 II" 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 II" 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 II" Herbicide.

Do not apply more than 20 ounces of product per acre per season.

Do not apply "Assure II" within 80 days of harvest.

Do not apply after p.c.d. set.

Do not tank mix "Assure II" 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 II" or within seven days preceding an application of "Assure II" may result in reduced grass control.

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

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 II" OZ PRODUCT/A	- SPRAY ADJUVANT (% CONCENTRATION) -			NONIONIC SURFACTANT GROUND/AIR
				OIL CONCENTRATE	AIR	OR	
Corn (volunteer)	Zea mays	6-18	5	1.0% w/v	0.5% w/v	or	0.25% w/v
Shattercane	Sorghum bicolor	6-12	5	(4 Oz/100 Gal)	(2 Oz/100 Gal)		(1 Oz/100 Gal)
Johnsongrass (seedling)	Sorghum halepense	2-8	5				
Wild Proso Millet	Panicum miliaceum	2-8	5				
Crowfootgrass	Dactyloctenium aegyptium	2-6	7	1.0% w/v	0.5% w/v	or	0.25% w/v
Fall Panicum	Panicum dichotomiflorum	2-6	7	(4 Oz/100 Gal)	(2 Oz/100 Gal)		(1 Oz/100 Gal)
Foxtails							
Green	Setaria faberii	2-8	7				
Yellow	Setaria viridis	2-4	7				
Bristly	Setaria leucocoma	2-4	7				
Bristly	Setaria verticillata	2-4	7				
Goosegrass	Elymus indica	2-6	7				
Ichgrass	Rottboellia exaltata	2-8	7				
Sandbur (field)	Cenchrus incertus	2-6	7				
Sprangletop	Lappula filiformis	2-6	7				
Volunteer Cereals							
Wheat	Triticum aestivum	2-6	7				
Barley	Hordeum vulgare	2-6	7				
Oats	Avena sativa	2-6	7				
Rye	Secale cereale	2-6	7				
Wild Oat	Avena fatua	2-6	7				
Witchgrass	Panicum capillare	2-6	7				
Woollycupgrass	Eriochloa villosa	2-4	7				
Barryardgrass	Echinochloa crus-galli	2-6	7	1.0% w/v	0.5% w/v	or	0.25% w/v
Broadleaf signalgrass	Bracharia platyphylla	2-6	7	(4 Oz/100 Gal)	(2 Oz/100 Gal)		(1 Oz/100 Gal)
Crabgrass							
Large	Digitaria sanguinalis	2-6	8				
Smooth	Digitaria ischaemum	2-6	8				
Jungle rice	Echinochloa colozum	2-6	8				
Red Rice	Oryza sativa	1-4	8				
Texas Panicum	Panicum texanum	2-4	8				

* Length of lateral growth

PERENNIAL GRASSES	SPECIES	SIZE AT APPLICATION (INCHES)	"Assure II" OZ PRODUCT/A	- SPRAY ADJUVANT (% CONCENTRATION) -			NONIONIC SURFACTANT GROUND/AIR
				OIL CONCENTRATE	AIR	OR	
Bermudagrass	Cynodon dactylon						
First Application		3" tall (or up to 6" runners)	10	1.0% w/v	0.5% w/v	or	0.25% w/v
				(4 Oz/100 Gal)	(2 Oz/100 Gal)		(1 Oz/100 Gal)
Rhizome Johnsongrass	Sorghum halepense						
First Application		10-24	10				
Quackgrass	Agropyron repens						
First Application		6-10	10				
Western Muhly	Muhlenbergia frondosa						
First Application		4-8	8				

If regrowth of perennial grasses occurs, make a second application of "Assure II" using 7 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"-8"), Western Muhly (4"-8").

RECOMMENDATIONS FOR GRASS CONTROL IN SOYBEANS (continued)

Area II - (Arid 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 II" OZ PRODUCT/A	- SPRAY ADJUVANT (% CONCENTRATION) -		
				OIL CONCENTRATE GROUND	AIR	NONIONIC SURFACTANT GROUND/AIR
Corn (volunteer)	Zea mays	6-10	7	1.0% w/v (4 Oz/100 Gal)	0.5% w/v (2 Oz/100 Gal)	or 0.25% w/v (1 Oz/100 Gal)
Shattercane	Sorghum bicolor	6-10	7			
Johnsongrass (seedling)	Sorghum halepense	2-6	7			
Sandbur (field)	Cenchrus incertus	2-6	7			
Barnyardgrass	Echinochloa crus-galli	2-4	8	1.0% w/v (4 Oz/100 Gal)	0.5% w/v (2 Oz/100 Gal)	or 0.25% w/v (1 Oz/100 Gal)
Broadleaf						
Signalgrass	Brachiaria platyphylla	2-4	8			
Crabgrass (large)	Digitaria sanguinalis	2-4	8			
Feathertop						
Green	Setaria viridis	2-4	8			
Yellow	Setaria lunata	2-4	8			
Jungle rice	Echinochloa colozum	2-4	8			
Texas Panicum	Panicum texanum	2-4	10			
Volunteer cereals						
Wheat	Triticum aestivum	2-4	8			
Barley	Hordeum vulgare	2-4	8			
Oats	Avena sativa	2-4	8			
Rye	Secale cereale	2-4	8			

PERENNIAL GRASSES	SPECIES	SIZE AT APPLICATION (INCHES)	"Assure II" OZ PRODUCT/A	- SPRAY ADJUVANT (% CONCENTRATION) -		
				OIL CONCENTRATE GROUND	AIR	NONIONIC SURFACTANT GROUND/AIR
Bermudagrass	Cynodon dactylon	3 tall (or up to 6" runners)	12	1.0% w/v (4 Oz/100 Gal)	0.5% w/v (2 Oz/100 Gal)	or 0.25% w/v (1 Oz/100 Gal)
Rhizome Johnsongrass	Sorghum halepense	10-16	12			

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

RECOMMENDATIONS FOR GRASS CONTROL IN SOYBEANS (continued)

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

Make a 3/8 percent solution of "Assure II" 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% v/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 II"	Petroleum Oil Concentrate	Nonionic Surfactant
1 gallon	0.5 fl. oz. (1 tsp)	1.25 fl. oz. (2.5 tsp)	0.3 fl. oz. (2 tsp)
25 gallons	12.0 fl. oz.	1.0 quart	8.0 fl. oz. (1 cup)
50 gallons	1.5 pints	2.0 quarts	0.5 qt.
100 gallons	3.0 pints	4.0 quarts	1.0 qt.

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

- Tank mixes of "Assure II" herbicide with post broadleaf herbicides have typically shown some reduction in grass control over applications of "Assure II" alone. If "Assure II" is to be tank-mixed with "Basagran"1, or "Classic"2, the label rate of "Assure II" should be increased by 2 ounces product/A.
- Do not use "Assure II"/"Basagran" or "Assure II"/"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 wirestem muhly.
- Do not use "Assure II"/"Basagran" or "Assure II"/"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 II" is applied immediately prior to or sequentially after an application of a post broadleaf herbicide.
- After an application of "Assure II", wait a minimum of 24 hours before applying a post broadleaf herbicide.
- In fields treated with a post broadleaf herbicide, do not apply "Assure II" until grass plants are again developing new leaves (generally 7 days after the post broadleaf herbicide application).

STORAGE AND DISPOSAL

STORAGE: Do not subject to temperatures below 20 degrees F. Do not contaminate water, food or feed by storage or disposal. Keep from contact with fertilizers, insecticides, fungicides, and seeds during storage.

PRODUCT 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.

1 Basagran™ Trademark of BASF Corporation

2 Classic®- Trademark of E. I. du Pont De Nemours & Co. (Inc.).

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