

ZORIAL RAPID 80™

A DRY FLOWABLE HERBICIDE

FOR CONTROL OF GRASS AND BROADLEAF WEEDS IN COTTON AND SOYBEANS

ACTIVE INGREDIENT:

norflurazon [4-chloro-5-(methylamino)-2-(alpha, alpha, alpha-trifluoro-m-toyl)-3(2H)-pyridazinone]..... 80%
INERT INGREDIENTS:..... 20%

100%

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUTIONARY STATEMENTS

Environmental Hazards: Do not apply directly to any water. Do not apply when weather conditions favor runoff or drift from treated areas. Do not contaminate water by cleaning of equipment or disposal of wastes.

LOCATION OF USE

For use in cotton and soybeans in the states of Alabama, Arkansas, North Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia.

NOTICE: Neither Zoecon nor the seller make any warranty, express or implied, including the warranties of merchantability and/or fitness for any particular purpose concerning this material, except those which are contained on this label.

EPA Reg. No. 11273-47
EPA Est. No.

U.S. PAT. No. 3,644,355 and 3,834,889
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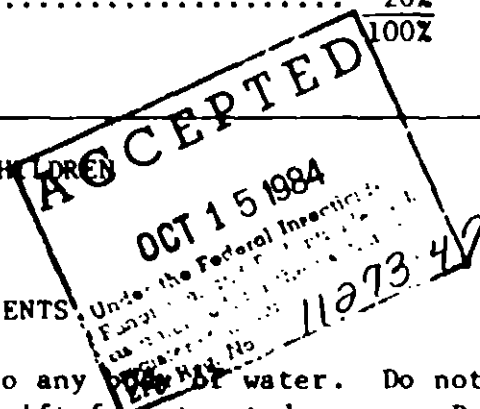
NET 15 POUNDS

ZOECON CORPORATION
CROP PROTECTION DIVISION

A S A N D O Z C O M P A N Y

Palo Alto, California 94304

(1652E)



WEEDS CONTROLLED

ZORIAL RAPID 80 Herbicide at recommended rates is effective for:

A. Controlling the following weeds in cotton or soybeans:

Barnyardgrass	Carpetweed	Spotted Spurge ²
Crabgrass	Florida Pusley	Spurred Anoda
Foxtail	Pennsylvania Smartweed	(cottonweed)
Goosegrass ¹	Pigweeds	Tropic Croton ³
Signalgrass	Prickly Sida	Velvetleaf
Panicum spp.	Purslane	
Johnsongrass (seedling)		

B. Suppressing the following weeds in cotton or soybeans:

Bermudagrass	Cocklebur	Morningglory
Johnsongrass (rhizome)	Common Ragweed	Russian Thistle
Nutsedge (yellow and purple)	Hemp Sesbania	Other Smartweeds
Lanceleaf Sage (mintweed)	Kochia	Venice Mallow
	Sicklepod	

¹Include DNA resistant goosegrass.

²Use the ZORIAL SPLIT™ or preemergence for increased control.

³Use higher rates on Coastal Plains soils only for improved control.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

GENERAL INFORMATION

ZORIAL RAPID 80 is a herbicide for control of certain grasses and broadleaf weeds in cotton and soybeans. Apply ZORIAL RAPID 80 before weeds emerge. ZORIAL RAPID 80 can be applied preplant incorporated, preemergence surface, or as a split application in areas with 40 inches or more annual rainfall. In areas with less than 40 inches rainfall, apply as a preplant incorporated or split application only.

The soil surface should be free of clods and existing weeds prior to application.

If replanting of cotton or soybeans is necessary, a light reworking of the topsoil will retain the herbicidal activity of ZORIAL RAPID 80.

Peanuts can be planted as a replacement crop 30 days after ZORIAL RAPID 80 application. Prior to planting, a light reworking of the topsoil is recommended to remove existing plant material and to retain herbicidal activity.

Do not graze treated cotton fields with livestock or feed treated cotton forage to livestock. Cover crops planted after harvest should be plowed under and not grazed or harvested. To minimize injury to small grain cover crops, they should be broadcast planted rather than drilled.

Quantity of ZORIAL RAPID 80 applied in any one year must not exceed the broadcast rate in pounds per acre for a given soil type.

For one year following ZORIAL RAPID 80 application, treated acreage may only be rotated to cotton, soybeans, and peanuts.

Crop Safety: If the cotton or soybean plant is stressed during early development, application of ZORIAL RAPID 80 at the label rate may result in temporary bleaching or chlorosis of the leaves from which the plant will recover.

MIXING INSTRUCTIONS

Clean and calibrate the sprayer. Add ZORIAL RAPID 80 to the spray tank already filled with 1/4 of the required volume of the water. Maintain agitation while filling and spraying. If a by-pass line is used, discharge at the bottom of the tank to minimize foaming.

Do not allow Zorial RAPID 80 spray mixture to remain in the spray tank overnight because settling could occur and resuspension would be difficult.

Tank Mixes: ZORIAL RAPID 80 is approved as a tank mix with Prowl[®], Treflan[®], Sencor[®], Lexone[®], Cotoran[®], Dual[®], Lasso[®], Lorox[®] and Bladex[®]. Always predetermine the compatibility of labeled tank mixes by mixing small proportional quantities in advance.

Products should be added to the spray tank in the following order:

1. Wettable powders and water dispersable granules. Wettable powders should be premixed in a small amount of water. Water dispersable granulars should be added during filling. Allow both to disperse before other products are added. The order of addition is not important.
2. Flowable liquids.
3. Emulsifiable concentrates.
4. Surfactants.

Begin adding wettable powders, flowable liquids, emulsifiable concentrates, and surfactants after the spray tank is 3/4 full. Continue agitation during the addition of all the materials and while filling and spraying.

APPLICATION DIRECTIONS

Ground Application: Apply the recommended rate of ZORIAL RAPID 80 in 10-20 gallons of water per acre. Apply accurately with a fixed boom sprayer. Equip sprayer with 8002 to 8006 fan-jet nozzle tips or equivalent for broadcast application. Use 8002E to 8006E nozzle tips or equivalent for band applications. Use screen size 50 mesh or larger.

Aerial Application: Apply the recommended rate of ZORIAL RAPID 80 in 5 or more gallons of water per acre. To minimize drift, use ZORIAL RAPID 80 with a drift control agent such as Nalco-Trol[®] and Ortho-Trol[®]. Do not apply during periods of gusty winds or winds in excess of 5 mph. Aerial spray equipment, flying speed and flying height should be carefully adjusted to provide a uniform application to the soil surface. Use markers to avoid overlapping and possible crop injury.

Preplant Incorporated Application (PPI): Apply ZORIAL RAPID 80 at the recommended rate from 30 days to just prior to planting. In West Texas and Southwest Oklahoma, ZORIAL RAPID 80 may be applied up to 60 days prior to planting. Incorporate not deeper than 2-3 inches with commonly used equipment. Incorporation should occur within one week after application.

Preemergence Surface Application (PRE): Apply ZORIAL RAPID 80 at the recommended rate at the time of planting and preemergence to weeds.

Split Application - THE ZORIAL SPLIT[™]: Apply ZORIAL RAPID 80 preplant incorporated, as indicated above, at one half the recommended rate. Apply the other half preemergence surface as recommended above.

SOYBEAN INFORMATION

Do not use in soybeans in West Texas or Southwest Oklahoma. Do not use when the soil type is sand, loamy sand, or sandy loam, except the coastal Plains soils of the Southeast. Do not use the PPI treatment in soybeans unless as part of the split application treatment. Do not use PPI treatments in Coastal Plains soils of the Southeast. Soybeans should be planted to a depth of 1-2 inches and soil firmly packed above and around the seed bed.

BROADCAST RATES IN POUNDS OF ZORIAL RAPID 80 PER ACRE:

SOIL TYPE	PRE	Split	
		ppi	pre
Coastal Plains soils (SE)	1.25		
loam, silty loam, silt sandy clay loam, sandy clay	1.9	.95	.95
clay loam, silty clay loam, silty clay, clay	2.5	1.25	1.25

ZORIAL RAPID 80 COMBINATIONS IN SOYBEANS

ZORIAL RAPID 80 plus Sencor® or Lexone® Tank Mix

This combination is recommended for improved control of cocklebur, morningglory, hemp sesbania, common ragweed and Venice mallow.

Apply a tank mix of ZORIAL RAPID 80 plus Sencor or Lexone preemergence surface at the rates per acre (broadcast) recommended in the following table. These rates represent 1/2 the normal ZORIAL RAPID 80 rate and 1/2 to 3/4 the normal metribuzin rate. Apply using 10-20 gallons of water per acre.

Soil Type	ZORIAL RAPID 80	Less than 2% Organic Matter	2-4% Organic Matter
		Sencor or Lexone 50WP*	Sencor or Lexone 50 WP*
Medium	0.95 lb.	0.375-0.56 lb.	0.50-0.75 lb.
Fine	1.25 lb.	0.50 -0.75 lb.	0.50-0.75 lb.
Mississippi Delta Only	1.25 lb.	0.75 -1.125 lb.	0.75-1.125 lb.

*When using Sencor 4 or Lexone 4F substitute pints for pounds (1 pint equals 1 pound). When using Sencor DF or Lexone DF, multiply pounds 50WP by 0.67.

Refer to the ZORIAL RAPID 80 and Sencor or Lexone labels for further directions and precautions.

ZORIAL RAPID 80 plus Lasso® Tank Mix

Use 1/2 rate of ZORIAL RAPID 80 recommended on its label and 1/2 to 3/4 the rate of Lasso recommended on its label. Apply preemergence surface in the minimum amount of water specified on the label of the combination partner.

Before applying this tank mix, read and carefully observe the cautionary statements and all other information appearing on the product labels.

ZORIAL RAPID 80 plus Dyanap® overlay

This combination is recommended for improved control of cocklebur, morningglory and spurge.

Apply half the recommended rate of ZORIAL RAPID 80 ppi as directed for the ZORIAL RAPID 80 split. Apply 6 qts. of Dyanap per acre as a preemergence overlay as recommended on its label. Carefully observe precautions on both labels.

ZORIAL RAPID 80 plus DNA herbicides (Treflan®, Prowl®)

The combination of ZORIAL RAPID 80 with a dinitroaniline (DNA) herbicide will control a broader spectrum of weeds than either product used alone. Apply and incorporate from 1/2 to the full rate of the DNA herbicide as directed on its label. Follow this by applying the recommended rate of ZORIAL RAPID 80 preemergence surface as directed on its label. Or apply and incorporate the half rate of ZORIAL RAPID 80 and 1/2 to the full rate of the DNA herbicide as a tank mix, and apply the remaining half rate of ZORIAL RAPID 80 preemergence surface as directed for the ZORIAL SPLIT. Carefully observe the precautions on the product labels.

NOTE: ZORIAL RAPID 80 is not compatible with Treflan M.T.F. In addition, ZORIAL RAPID 80 may not always be compatible with other formulations of DNA herbicides. Always predetermine tank mix compatibility by mixing small proportional quantities in a quart jar or other small container. If after vigorous shaking there are large flakes, gel, or sludge, or other signs of incompatibility, do not spray the combination. Always follow the order of addition given in the mixing instructions section of this label.

ZORIAL RAPID 80 Tank Mixes with Dual®, Amiben®, Lorox®, Surflan® or Premerge® 3

Use 1/2 the rate of ZORIAL RAPID 80 recommended on its label and 1/2 to 3/4 the rate of Dual, Amiben, Lorox, Surflan or Premerge 3 recommended on those labels. Apply preemergence surface in at least the minimum amount of water specified on the label of the combination partner.

Before applying any of these tank mixes, read and carefully observe the cautionary statements and all other information appearing on the product labels.

COTTON INFORMATION

BROADCAST RATES IN POUNDS OF ZORIAL RAPID 80 PER ACRE:

SOIL TYPE	PPI	PRE	Split	
			ppi	pre
sand, loamy sand, sandy loam	1.25	1.25	.625	.625
Coastal Plains Soils (SE)*	**	1.9	.95	.95
loam, silty loam, silt, sandy clay loam, sandy clay	1.9	1.9	.95	.95
clay loam, silty clay loam, silty clay, clay	2.5	2.5	1.25	1.25

* For improved control of hard to control weeds like pigweed, cocklebur and tropic croton.

**Do not use 1.9 lbs. PPI on COASTAL PLAINS SOILS.

***West Texas and Southwest Oklahoma Only:** Do not use on sandy soils (soils with greater than 70% sand content). Prior to application of ZORIAL RAPID 80, completely destroy the seed beds of the previous year by "cross-discing." Apply ZORIAL RAPID 80 PPI or pre-emergence surface. For best results, incorporate ZORIAL RAPID 80 on flat disced soil at labeled rates for control of spurred anoda, annual grasses and suppression of yellow and purple nutsedge. To prevent removal of the herbicide application by wind, immediate incorporation is recommended. A single, one inch rain or its equivalent in center pivot or sprinkler irrigation is necessary to activate ZORIAL when applied preemergence. Soybeans can be planted as a replacement crop 45 days after the first planting of cotton. Do not plant peanuts as a replacement crop. Do not use ZORIAL RAPID 80 on furrow planted cotton or on glandless cotton varieties.

ZORIAL RAPID 80 COMBINATIONS IN COTTON

ZORIAL RAPID 80 PLUS COTORAN® 80W OVERLAY OR TANK MIX

This combination is recommended for improved control of cocklebur and morningglory.

Overlay: Apply 1/2 to the full rate of ZORIAL RAPID 80 ppi as recommended on its label. Apply 1/2 to the full rate of COTORAN 80WP as a preemergence overlay as recommended on its label.

*Same as tank mix
Zorialsowp*

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Tank Mix: Apply 1/2 the recommended rate of ZORIAL RAPID 80 ppi as directed for the ZORIAL SPLIT, and apply a tank mix of the remaining 1/2 rate of ZORIAL RAPID 80 plus 1/2 to the full recommended rate of COTORAN 80W as a preemergence overlay in 20 gallons of water per acre. Or apply a tank mix of 1/2 to the full recommended rate of ZORIAL DF plus 1/2 to the full recommended rate of COTORAN 80W as a preemergence treatment in 20 gallons of water per acre.

SOUTHEASTERN COASTAL PLAINS SOILS (Alabama and Georgia only): Apply ZORIAL RAPID 80 at .625 lbs. ppi followed by .625 lbs. plus 1/2 the full rate of COTORAN 80WP as a preemergence overlay as recommended on its label.

Refer to the ZORIAL and COTORAN labels for further directions and precautions.

Band Treatment: When applying a band treatment of ZORIAL RAPID 80 the following formula may be used to calculate the amount per acre:

$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Rate in lbs. per acre broadcast treatment} = \text{Pounds per acre for band treatment}$
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ZORIAL RAPID 80 plus Bladex Overlay or Tank Mix ✓

This combination is recommended for improved control of cocklebur and morningglory.

Overlay: Apply 1/2 to the full rate of ZORIAL RAPID 80WP ppi as recommended on its label. Apply 3/4 to the full rate of Bladex 80W or Bladex 4L as a preemergence overlay as recommended on those labels.

Tank Mix: Apply a tank mix of 3/4 the rate of ZORIAL RAPID 80 recommended on its label and 3/4 the rate of Bladex 80W or Bladex 4L recommended on those labels as a preemergence treatment. Apply 15-20 gallons of water per acre.

ZORIAL RAPID 80 plus DNA Herbicide Treflan[®], Prowl[®], or Basalin[®]

ZORIAL RAPID 80 may be tank mixed with dinitroaniline (DNA) herbicides and incorporated for control of a broader spectrum of weeds than either product alone.

Apply a tank mix of ZORIAL RAPID 80 and a DNA herbicide as a ppi treatment. Use the full rate of ZORIAL RAPID 80 as recommended on its label and from 1/2 to full rate of the DNA herbicide as recommended on its label.

Or apply and incorporate the half rate of ZORIAL RAPID 80 and the full rate of the DNA herbicide as a tank mix, and apply the remaining half rate of ZORIAL RAPID 80 preemergence surface as directed for the ZORIAL SPLIT. Refer to the label of the DNA herbicide for specific directions for timing and application of the ppi treatment.

NOTE: ZORIAL 80WP is not compatible with Treflan M.T.F. In addition, ZORIAL RAPID 80 may not always be compatible with other formulations of DNA herbicides. Always predetermine tank mix compatibility by mixing small proportional quantities in a quart jar or other small container. If after vigorous shaking there are large flakes, gel, or sludge, or other signs of incompatibility, do not spray the combination. Always follow the order of addition given in the mixing instructions section of this label.

ZORIAL RAPID 80 plus Karmex[®] Tank Mix

This combination will control a broader spectrum of weeds than either product used alone.

Apply a tank mix of ZORIAL RAPID 80 and Karmex as a preemergence treatment. Use 1/2 to 3/4 the rate of ZORIAL RAPID 80 recommended on its label and 1/2 to 3/4 the rate of Karmex recommended on its label. Apply 25 gallons of water per acre.

Refer to the ZORIAL RAPID 80 and Karmex labels for further directions and precautions.

STORAGE AND DISPOSAL

Storage: Do not contaminate water, food or feed by storage or disposal.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at any approved waste disposal facility.

Container Disposal: Triple rinse (or equivalent). Then puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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