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SONALAN® DRY FLOWABLE (EPA Reg. No. 1471-152)  
SONALAN® FOR WEED CONTROL IN PEANUTS

SONALAN may be used alone or in combination with other herbicides for weed control in peanuts. SONALAN should be applied as a preplant incorporated treatment alone or in tank mix combination with Dual or Vernam.

Peanut -- SONALAN Alone

SONALAN should be applied as a preplant incorporated treatment. Follow recommended soil preparation, application and incorporation procedures for SONALAN. See the SONALAN label for weeds controlled by SONALAN alone. For broader spectrum control, SONALAN may be tank mixed with Dual or Vernam.

Broadcast Rates Per Acre

<u>Soil Texture</u>	<u>SONALAN</u> (pounds)
Coarse	1.1 - 1.5
Medium	1.5 - 1.9
Fine	1.9 - 2.2

Peanut -- SONALAN/Dual Tank Mix

SONALAN/Dual should be applied as a preplant incorporated tank mix treatment. The SONALAN/Dual combination effectively controls the weeds listed for SONALAN alone for general weed control plus yellow nutsedge.

Follow recommended soil preparation procedures for SONALAN. Apply the tank mix in at least 10 gallons of water or liquid fertilizer per acre up to 14 days prior to planting. Incorporate the tank mix within two (2) days after application in the top two (2) to three (3) inches of soil.

Broadcast Rates Per Acre

<u>Soil Texture</u>	<u>SONALAN</u> (pounds)	<u>Dual 8E</u>	
		<u>+ Less Than 3% O.M.</u> (pints)	<u>More Than 3% O.M.</u> (pints)
Coarse	0.9 - 1.5	1 1/2 - 2	2
Medium	1.3 - 1.9	2 - 2 1/2	2 - 2 1/2
Fine	1.7 - 2.2	2 - 2 1/2	2 1/2 - 3

Peanut -- SONALAN/Vernam Tank Mix

SONALAN/Vernam should be applied as a preplant incorporated tank mix treatment. The SONALAN/Vernam combination effectively controls the weeds listed for SONALAN alone for general weed control plus these additional weeds:

Annual morningglory	Sicklepod
Purple nutsedge	Yellow nutsedge

Apply SONALAN/Vernam in at least 10 gallons of water or liquid fertilizer per acre. Follow recommended soil preparation procedures for SONALAN. SONALAN/Vernam can be applied up to 10 days prior to planting. Incorporate the tank mix immediately following application and mix uniformly in the top two (2) to three (3) inches of soil.

Broadcast Rates Per Acre

<u>Soil Texture</u>	<u>SONALAN</u> (pounds)	<u>+ VERNAM 7E</u> (pints)
Coarse	0.9 - 1.5	2 1/3
Medium	1.3 - 1.9	3
Fine	1.7 - 2.2	3

Read the SONALAN, Dual and Vernam labels carefully for additional directions, precautions and limitations before applying these products.

SONALAN® (ethalfluralin, Elanco)  
Dual® (metolachlor, Ciba-Geigy)  
Vernam® (vernolate, Stauffer)

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11/26/86

SONALAN® E.C. (E.P.A. Reg. No. 1471-122)  
SONALAN® Dry Flowable (E.P.A. Reg. No. 1471-152)

SONALAN/Preview™ for Weed Control in Soybeans  
(Do Not Use In California)

Apply SONALAN/Preview as a preplant incorporated tank-mix treatment. Follow recommended soil preparation, application and incorporation procedures for SONALAN. Plant soybeans within two (2) weeks after application.

SONALAN/Preview tank-mix controls the following weeds in addition to those controlled by SONALAN alone.

Controlled

Cocklebur, common	Prickly sida
Hophornbeam copperleaf	(Teaweed)
Jimsonweed	Ragweed, common
Mustards	Smartweeds, annual
Pigweed	Spotted spurge
(Palmer amaranth)	Sunflower
(Smooth)	Velvetleaf
(Tall waterhemp)	

Partially Controlled

Burcucumber	Nutsedge species
Eastern black nightshade	Ragweed, giant
Morningglory	
(Tall)	
(Ivyleaf)	
(Pitted)	
(Entireleaf)	

Large seeded weeds, germinating deep in the soil, such as morningglory, sicklepod, cocklebur and giant ragweed or weeds with subsequent flushes may require a cultivation or an application of postemergence herbicide for season-long control.

Texture	E.C.	or	Dry Flowable	0.5 - 3% O.M.	3 - 5% O.M.
	(Pints)		(Pounds)	(Ounces)	
Coarse	1 1/4 - 2		0.9 - 1/5	6	7
Medium	1 3/4 - 2 1/2		1.3 - 1.9	7	8
Fine	2 1/4 - 3		1.7 - 2.2	8	9-10

Do not apply Preview to soil with less than 1/2% organic matter.

Use higher rates of Preview on soils with higher organic matter or heavy pressure from large deep germinating weed seeds.

Where Preview is applied, plant soybean seed 1 1/2" to 2" deep on a flat or raised seedbed only, or crop injury may occur.

Soybean injury may occur where Preview is applied if excessive rainfall occurs after application but before soybeans germinate.

### Precautions

Read the Preview label carefully for cautions and precautions relating to environmental hazards, planting of rotation crops, sprayer contamination and cleanup, soil pH, organic matter and soil texture use restrictions, soybean variety planting restrictions, restrictions where atrazine or Scepter® were used the previous year, restrictions concerning use with organophosphate pesticides, grazing restrictions and other directions, precautions and limitations before applying the SONALAN/Preview tank mix.

Read the SONALAN labels carefully for additional directions, precautions and limitations before applying these products.

- SONALAN® (ethalfluralin, Elanco)
- Preview™ (chlorimuron ethyl plus metribuzin, DuPont)
- Scepter® (imazaquin, American Cyanamid)

Elanco Products Company  
A Division of Eli Lilly and Company  
Indianapolis, Indiana 46285

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SONALAN® E.C. (E.P.A. Reg. No. 1471-122)  
SONALAN® Dry Flowable (E.P.A. Reg. No. 1471-152)

SONALAN Followed by Overlay Treatments for Weed Control in Soybeans  
(Do Not Use in California)

Apply SONALAN as a preplant incorporated treatment. Additional weeds tolerant to SONALAN may be controlled by using overlay preemergence applications of Amiben®, Canopy®, Dual®, Gemini™, Lasso®, Lexone®, Lorox®, Lorox® Plus, Preview™, Scepter® or Sencor®. Consult these product labels for additional weeds controlled, application directions and precautions before use.

Read the SONALAN labels for additional direction, precautions and limitations before use.

SONALAN® (ethalfluralin, Elanco)  
Amiben® (chloramben, Union Carbide)  
Canopy® (chlorimuron ethyl plus metribuzin, DuPont)  
Dual® (metolachlor, Ciba-Geigy)  
Gemini™ (chlorimuron ethyl plus linuron, DuPont)  
Lasso® (alachlor, Monsanto)  
Lasso® Micro-Tech™ (alachlor, Monsanto)  
Lexone® (metribuzin, DuPont)  
Lorox® (linuron, DuPont)  
Lorox® Plus (chlorimuron ethyl plus linuron, DuPont)  
Preview™ (chlorimuron ethyl plus metribuzin, DuPont)  
Scepter® (imazaquin, American Cyanamid)  
Sencor® (metribuzin, Bayer, GmbH)

Elanco Products Company  
A Division of Eli Lilly and Company  
Indianapolis, Indiana 46285

SONALAN® DRY FLOWABLE (E.P.A. REG. NO. 1471-152)

SONALAN/Scepter® for Weed Control in Soybeans

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SONALAN/Scepter may be applied as a preplant incorporated tank-mix treatment. Scepter may also be applied as a preemergence overlay treatment or as an early postemergence treatment following a preplant incorporated application of SONALAN.

#### SONALAN/Scepter Tank-Mix Directions

SONALAN/Scepter tank-mix should be applied as a preplant incorporated treatment. Follow soil preparation, mixing and application procedures described on the SONALAN label. Apply SONALAN/Scepter and shallowly incorporate. Incorporate into the soil within 2 days after application and plant soybeans within 21 days after application. Use equipment that provides uniform 2 inch incorporation. See the Scepter label for additional incorporation directions.

If soybeans are planted on beds, apply and incorporate after bed formation.

#### SONALAN/Scepter Overlay Directions

SONALAN should be applied as a preplant incorporated treatment. Follow soil preparation, application and soil mixing procedures described on the SONALAN label. Apply Scepter after planting but before the crop emerges. Where Scepter is applied as a surface applied overlay treatment rainfall or overhead irrigation is necessary to move Scepter into the weed germination zone. The amount of rainfall or irrigation required depends on existing soil moisture, soil texture and organic matter content. Sufficient water to moisten the soil to a depth of 2 inches is normally adequate. If

SONALAN/Scepter tank mix or overlay combinations control the weeds listed on the SONALAN label for general weed control plus these additional weeds:

Cocklebur, common	Poinsettia, wild
Jimsonweed	Prickly sida
Mallow, Venice	(Teaweed)
Morningglory	Ragweed
(Pitted)	(Common)
(Smallflower)	(Giant) <sup>1</sup>
Mustard species	Smartweed
Nightshade, eastern black <sup>1</sup>	(Ladysthumb)
Pigweed	(Pennsylvania)
(Palmer)	Sunflower, common
(Tall waterhemp)	Velvetleaf <sup>1</sup>

<sup>1</sup> Eastern black nightshade, giant ragweed, and velvetleaf are controlled by preplant incorporated treatments only.

SONALAN/Scepter tank-mix or Scepter overlay treatments will aid in the control and reduce competition from these additional weeds:

Morningglory<sup>1</sup>  
(Entireleaf)  
(Ivyleaf)  
(Tall)  
Nutsedge, Yellow<sup>2</sup>

Control of these weeds may be erratic, ranging from poor to excellent depending upon soil temperature, time of weed germination, depth of weed seed in the soil and the amount and timing of soil moisture. Control may be improved with timely cultivation.

<sup>1</sup> For best activity on morningglory species use tank-mix preplant incorporated treatments.

<sup>2</sup> Use tank-mix preplant incorporated treatments only to aid in control of yellow nutsedge.

SONALAN/Scepter Early Postemergence Directions

SONALAN should be applied as a preplant incorporated treatment. Follow soil preparation, application and soil mixing procedures described on the SONALAN label. Apply Scepter as a postemergence treatment after crop emergence but before weeds exceed a height of 12 inches. Apply when weeds are actively growing.

Do not apply Scepter postemergence when soybeans and weeds have been subjected to stress conditions such as temperature and moisture extremes.

Scepter herbicide does not contain a surfactant in the formulation. For postemergence applications, the addition of 2 pints of nonionic surfactant approved for use on growing crops per 100 gallons of spray mixture is required.

SONALAN/Scepter early postemergence combination controls the weeds listed on the SONALAN label for general weed control plus these additional weeds:

Cocklebur, common  
Pigweed  
(Palmer)  
(Tall waterhemp)  
Poinsettia, wild

SONALAN/Scepter tank-mixes or SONALAN/Scepter overlay treatments may also be followed by sequential postemergence treatments of Scepter to control Florida beggarweed, mexicanweed and sicklepod. See the sequential program section of the Scepter label for application directions. Use sequential treatments in states recommended on the Scepter label only.

Wait at least ten (10) days before cultivating after a postemergence treatment of Scepter.

There must be an interval of at least 90 days between the last Scepter application and soybean harvest.

Broadcast Rates Per Acre: (All Scepter methods of application)

<u>Soil Texture</u>	<u>SONALAN Dry Flowable</u> (Pounds)	<u>Scepter</u> (Pints)
Coarse	0.9 - 1.5	2/3
Medium	1.3 - 1.9	2/3
Fine	1.7 - 2.2	2/3



Precautions

1. Do not plant small grains or rice within 4 months following an application of Scepter.
2. Do not plant corn, cotton, edible beans, grain sorghum, peanuts or tobacco within 11 months following an application of Scepter.
3. Do not plant other crops within 18 months following an application of Scepter.
4. Following an application of Scepter, only those rotational crops harvested at maturity may be used for feed or food.
5. Do not use Scepter on crops other than soybeans.
6. Do not allow livestock to graze on fields treated with Scepter and do not feed treated forage, hay or straw to livestock.
7. Crops other than soybeans may be injured by spray drift or other indirect contact with Scepter.

Read the SONALAN and Scepter labels carefully for additional directions, precautions and limitations before applying these products. The use of Scepter is limited to those states listed on the Scepter label.

SONALAN® Dry Flowable (ethalfluralin, Elanco)  
Scepter® (imazaquin, American Cyanamid)

Elanco Products Company  
A Division of Eli Lilly and Company  
Indianapolis, Indiana 46285

SONALAN® E.C. (E.P.A. REG. NO. 1471-122)  
SONALAN® Dry Flowable (E.P.A. REG. NO. 1471-152)

SONALAN Followed by Overlay Treatments for  
Weed Control in Soybeans  
(Do Not Use In California)

Apply SONALAN as a preplant incorporated treatment. Additional weeds tolerant to SONALAN may be controlled by using overlay pre-emergence applications of Amiben®, Canopy®, Dual®, Gemini™, Lasso®, Lexone®, Lorox®, Scepter® or Sencor®. Consult these product labels for additional weeds controlled, application directions and precautions before use.

Read the SONALAN labels for additional direction, precautions and limitations before use.

SONALAN® (ethalfluralin, Elanco)  
Amiben® (chloramben, Union Carbide)  
Canopy® (chlorimuron ethyl plus metribuzin, DuPont)  
Dual® (metolachlor, Ciba-Geigy)  
Gemini™ (chlorimuron ethyl plus linuron, DuPont)  
Lasso® (alachlor, Monsanto)  
Lasso® Micro-Tech™ (alachlor, Monsanto)  
Lexone® (metribuzin, DuPont)  
Lorox® (linuron, DuPont)  
Scepter® (imazaquin, American Cyanamid)  
Sencor® (metribuzin, Bayer)

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SONALAN® E.C. (E.P.A. REG. NO. 1471-122)  
SONALAN® Dry Flowable (E.P.A. REG. NO. 1471-152)

SONALAN/Canopy® for Weed Control in Soybeans  
(Do Not Use In California)

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Federal Register  
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Apply SONALAN/Canopy as a preplant incorporated tank-mix treatment. Follow recommended soil preparation, application and incorporation procedures for SONALAN. Plant soybeans within two (2) weeks after application.

SONALAN/Canopy tank-mix controls the following weeds in addition to those controlled by SONALAN alone.

Controlled

Cocklebur, common  
Florida beggarweed  
Hemp sesbania  
Hophornbeam copper leaf  
Jimsonweed  
Morningglory  
(Entireleaf)  
(Ivyleaf)  
(Pitted)  
(Smallflower)  
(Tall)

Prickly sida  
(Teaweed)  
Ragweed  
(Common)  
(Giant)  
Sicklepod  
Smartweed  
Spotted spurge  
Sunflower  
Velvetleaf

Partially Controlled

Purple nutsedge  
Yellow nutsedge

Large seeded weeds, germinating deep in the soil, such as morningglory, sicklepod, cocklebur and giant ragweed or weeds with subsequent flushes may require a cultivation or an application of a postemergence herbicide for season-long control.

Coarse	1 1/4 - 2	0.9 - 1.5	6 - 8	8 - 10
Medium	1 3/4 - 2 1/2	1.3 - 1.9	8 - 10	10 - 12
Fine	2 1/4 - 3	1.7 - 2.2	10 - 12	12 - 14

Do not apply Canopy to soil with less than 1/2% organic matter.

Use higher rates of Canopy on soils with higher organic matter or heavy pressure from large deep germinating weed seeds.

Where Canopy is applied, plant soybean seed 1 1/2" to 2" deep on a flat or raised seedbed only, or crop injury may occur.

Soybean injury may occur where Canopy is applied if excessive rainfall occurs after application but before soybeans germinate.

#### Precautions

Read the Canopy label carefully for cautions and precautions relating to environmental hazards, planting of rotation crops, sprayer contamination and cleanup, soil pH, organic matter and soil texture use restrictions, soybean variety planting restrictions, restrictions where Atrazine or Scepter were used the previous year, restrictions concerning use with organic phosphate pesticides, grazing restrictions and other directions, precautions and limitations before applying the SONALAN/Canopy tank-mix.

Read the SONALAN labels carefully for additional directions, precautions and limitations before applying these products.

SONALAN® (ethalfluralin, Elanco)

Canopy® (chlorimuron ethyl plus metribuzin, DuPont)

Scepter® (imazaquin, American Cyanamid)

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A Division of Eli Lilly and Company  
Indianapolis, Indiana 46285

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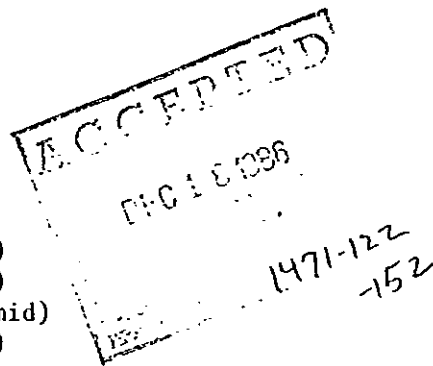
SONALAN® E.C. (E.P.A. REG. NO. 1471-122)  
SONALAN® Dry Flowable (E.P.A. REG. NO. 1471-152)

SONALAN Followed by Post-Emergence Treatments for  
Weed Control in Soybeans  
(Do Not Use In California)

Apply SONALAN as a preplant incorporated treatment. Additional weeds tolerant to SONALAN may be controlled by using post-emergence applications of Basagran®, Blazer®, Classic®, Scepter® or Tackle®. Consult these product labels for additional weeds controlled, application directions and precautions before use.

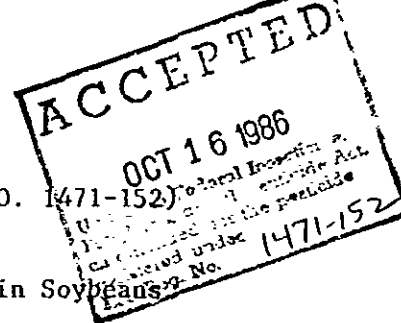
Read the SONALAN labels for additional direction, precautions and limitations before use.

SONALAN® (ethalfluralin, Elanco)  
Basagran® (bentazon, BASF)  
Blazer® (acifluorfen, Rohm and Haas)  
Classic® (chlorimuron ethyl, DuPont)  
Scepter® (imazaquin, American Cyanamid)  
Tackle® (acifluorfen, Rhone-Poulenc)



Elanco Products Company  
A Division of Eli Lilly and Company  
Indianapolis, Indiana 46285

SONALAN® DRY FLOWABLE (E.P.A. REG. NO. 1471-152)



SONALAN/Scepter® for Weed Control in Soybeans

- ✓ SONALAN/Scepter may be applied as a preplant incorporated tank-mix treatment. Scepter may also be applied as a preemergence overlay treatment or as an early postemergence treatment following a preplant incorporated application of SONALAN.

#### SONALAN/Scepter Tank-Mix Directions

SONALAN/Scepter tank-mix should be applied as a preplant incorporated treatment. Follow soil preparation, mixing and application procedures described on the SONALAN label. ✓ Apply SONALAN/Scepter and shallowly incorporate. Incorporate into the soil within 2 days after application and plant soybeans within 30 days after application. Use equipment that provides uniform 2-inch incorporation. See the Scepter label for additional incorporation directions.

- ✓ If soybeans are planted on beds, apply and incorporate after bed formation.

#### SONALAN/Scepter Overlay Directions

SONALAN should be applied as a preplant incorporated treatment. Follow soil preparation, application and soil mixing procedures described on the SONALAN label. Apply Scepter after planting but before the crop emerges. Where Scepter is applied as a surface applied overlay treatment rainfall or overhead irrigation is necessary to move Scepter into the weed germination zone. The amount of rainfall or irrigation required depends on existing soil

escaped weeds.

- ✓ SONALAN/Scepter tank-mix or overlay combinations control the weeds listed on the SONALAN label for general weed control plus these additional weeds:

Cocklebur, common  
Jimsonweed  
Mallow, Venice  
Morningglory  
(Pitted)  
(Smallflower)  
Mustard species  
Nightshade, eastern black<sup>1</sup>  
Pigweed  
(Palmer)  
(Tall waterhemp)

Poinsettia, wild  
Prickly sida  
(Teaweed)  
Ragweed  
(Common)  
(Giant)<sup>1</sup>  
Smartweed  
(Ladysthumb)  
(Pennsylvania)  
Sunflower, common  
Velvetleaf<sup>1</sup>

- ✓ <sup>1</sup> Eastern black nightshade, giant ragweed, and velvetleaf are controlled by preplant incorporated treatments only.

- ✓ SONALAN/Scepter tank-mix or Scepter overlay treatments will aid in the control and reduce competition from these additional weeds:

✓ Morningglory<sup>1</sup>  
(Entireleaf)  
(Ivyleaf)  
(Tall)  
Nutsedge, Yellow<sup>2</sup>

- ✓ Control of these weeds may be erratic, ranging from poor to excellent depending upon soil temperature, time of weed germination, depth of weed seed in the soil and the amount and timing of soil moisture. Control may be improved with timely cultivation.

- ✓ <sup>1</sup> For best activity on morningglory species use tank-mix preplant incorporated treatments.
- ✓ <sup>2</sup> Use tank-mix preplant incorporated treatments only to aid in control of yellow nutsedge.

SONALAN/Scepter Early Postemergence Directions

SONALAN should be applied as a preplant incorporated treatment. Follow soil preparation, application and soil mixing procedures described on the SONALAN label. Apply Scepter as a postemergence treatment after crop emergence but before weeds exceed a height of 12 inches. Apply when weeds are actively growing.

✓ ~~Do not~~ apply Scepter postemergence when soybeans and weeds have been subjected to stress conditions such as temperature and moisture extremes.

Scepter herbicide does not contain a surfactant in the formulation. ✓  
For postemergence applications, the addition of 2 pints of nonionic surfactant per 100 gallons of spray mixture is required.

✓ SONALAN/Scepter early postemergence combination controls the weeds listed on the SONALAN label for general weed control plus these additional weeds:

- ✓ Cocklebur, common
- Pigweed
- (Palmer)
- (Tall waterhemp)
- Poinsettia, wild

✓ SONALAN/Scepter tank-mixes or SONALAN/Scepter overlay treatments may also be followed by sequential postemergence treatments of Scepter to control Florida beggarweed, mexicanweed and sicklepod. See the sequential program section of the Scepter label for application directions. Use sequential treatments in states recommended on the Scepter label only.

✓ Wait at least ten (10) days before cultivating after a postemergence treatment of Scepter.

There must be an interval of at least 90 days between the last Scepter application and soybean harvest.

# 241-289  
accepted 10/6/86

Broadcast Rates Per Acre: (All Scepter methods of application)

<u>Soil Texture</u>	<u>SONALAN Dry Flowable</u> (Pounds)	<u>Scepter</u> (Pints)
Coarse	0.9 - 1.5	2/3
Medium	1.3 - 1.9	2/3
Fine	1.7 - 2.2 ✓	2/3 ✓



17/33

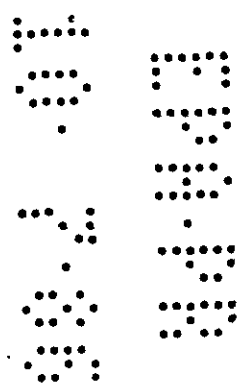
Precautions

1. Do not plant small grains or rice within 4 months following an application of Scepter.
2. Do not plant corn, cotton, edible beans, grain sorghum, peanuts or tobacco within 11 months following an application of Scepter.
3. Do not plant other crops within 18 months following an application of Scepter.
- ~~4. Following an application of Scepter, only those rotational crops harvested at maturity may be used for feed or food.~~
5. Do not use Scepter on crops other than soybeans.
6. Do not allow livestock to graze on fields treated with Scepter and do not feed treated forage, hay or straw to livestock.
7. Crops other than soybeans may be injured by spray drift or other indirect contact with Scepter.

Read the SONALAN and Scepter labels carefully for additional directions, precautions and limitations before applying these products. The use of Scepter is limited to those states listed on the Scepter label.

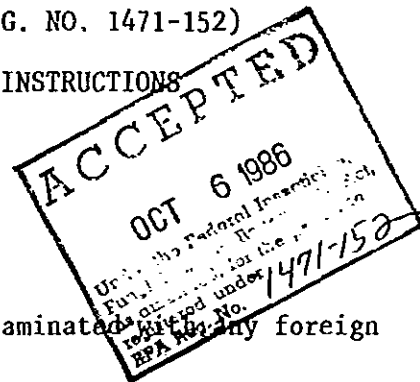
SONALAN® Dry Flowable - ethalfluralin - Elanco Products Company  
Scepter® - imazaquin - American Cyanamid Company

Elanco Products Company  
A Division of Eli Lilly and Company  
Indianapolis, Indiana 46285



SONALAN® DRY FLOWABLE (E.P.A. REG. NO. 1471-152)

SONALAN DRY FLOWABLE MIXING INSTRUCTIONS



Mixing Instructions In Water Alone

1. Be sure sprayer is clean and not contaminated with foreign material.
2. Fill tank one-fourth (1/4) full with clean water and start agitation.
3. Be certain that agitation system is working properly. Vigorous, continuous agitation throughout the spray tank is required with dry flowable formulations. Agitation should be sufficient to create a rippling or rolling action on the liquid surface. Sparger pipe agitation generally provides the best agitation in spray tanks.
4. To prevent foaming, avoid stirring or splashing air into the mixture by placing the end of the fill pipe below the surface of the water in the spray tank during the filling process.
5. Pour product directly from container into tank. Controlled addition of the product is important to assure adequate wetting and mixing to prevent clogging of screens and outlet ports.
6. Continue filling tank with water until full.

Tank-Mix Instructions

1. Add SONALAN Dry Flowable to the spray tank following the instructions outlined above for SONALAN alone.
2. Fill the spray tank to 90% full with water.
3. Add other formulations in this order, other dry flowables, wettable powders (WP), aqueous suspensions (A.S.), flowables

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4. Continue filling tank with water until full.

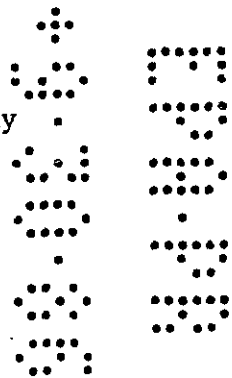
#### General Instructions and Precautions

1. For either SONALAN Dry Flowable alone or in tank-mix combination maintain agitation from filling through application. If spraying and agitation is stopped before the tank is empty, the materials may settle to the bottom. In this case, it is important to resuspend again all the material in the bottom of the tank before continuing the spray application. Sometimes it is more difficult to resuspend settled material than it is to suspend it originally. A sparger agitator is particularly useful for this purpose.
2. In-line screens in the tank should be no finer than 16 mesh (16 mesh has bigger openings than 50 mesh).
3. If a buildup of material is seen on the walls of the spray tank, wash the tank with soapy water between fillings. Rinse and continue the spraying operation. Clean tank, lines and screens thoroughly after use.
4. Read and carefully follow all label instructions for each material added to the tank.

Read the SONALAN Dry Flowable label for additional directions, precautions and limitations before use.

SONALAN® Dry Flowable - ethalfluralin - Elanco Products Company

Elanco Products Company  
A Division of Eli Lilly and Company  
Indianapolis, Indiana 46285



ACCEPTED

APR 2 1986  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under  
EPA Reg. No. 1471-152

SONALAN® DRY FLOWABLE (E.P.A. REG. NO. 1471-152)

### Chemigation Application Directions

SONALAN Dry Flowable may be applied through center pivot or lateral-move overhead sprinkler irrigation systems equipped for chemigation for general weed control (except groundcherry and nightshade) in soybeans and drybeans. See Specific Crop Recommendations in the SONALAN label to determine appropriate rates to use for each crop. SONALAN must be applied before weed emergence or to weed-free soil. SONALAN does not control established weeds. Apply SONALAN in one-half (1/2) to one (1) inch of irrigation water per acre at rates recommended for each crop. Soil incorporation is not required when SONALAN is applied through irrigation systems.

Prepare an injection mixture using a minimum of one (1) part water to one (1) part product in a slurry tank. Meter the mixture into irrigation system during entire period. The following precautions and recommendations must be followed to chemigate SONALAN.

1. Apply only through properly maintained irrigation systems having continuously moving laterals and providing uniform distribution of water. Where a system does not provide uniform water distribution such as at the extreme ends of the lateral, around supports, where treated discharge water is released from water-powered motors, or where extreme changes in elevation occur, unacceptable weed control or crop injury may occur.
2. Apply the product only through irrigation systems containing anti-siphon and check valves, to prevent water source contamination and overflow and siphoning of the slurry tank, and interlocking controls between the metering device and the water pump, to insure simultaneous shut-off.
3. Inject the product with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing.

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connections or fittings leak, when nozzles do not provide uniform distribution, or when lines containing the product should be dismantled and drained. Use of low trajectory angle sprinkler or drop nozzles will decrease the likelihood of drift.

6. Greater accuracy in pesticide calibration and distribution will be achieved by injecting a larger volume of more dilute slurry per hour.
7. Constant agitation should be maintained in the slurry tank during the entire period of pesticide application.
8. Sample Calculation: one hundred thirty-five (135) acres to be covered by irrigation system.

Recommended rate of 1.5 pounds per acre times 135 acres equals 202.5 pounds of product.

Prepare slurry mixes using one (1) part water to one (1) part product and add to water in a 500 gallon nurse tank using the entire 202.5 pounds of product. Apply the entire 500 gallons to 135 acres. ✓

Irrigation system requires 20 hours to apply one (1) inch of water to 135 acres.

Injection rate equals  $500 \text{ gallons} \div 20 \text{ hours} = 25 \text{ gallons per hour}$  or 53.33 fluid ounces to be injected per minute.

Calibrate injection pump to deliver the herbicide mix into the irrigation system at the rate of 53.33 fluid ounces per minute.

9. Posting Requirements: Areas being treated with pesticides applied through irrigation systems must be posted at the usual entrances to the area, at bulletin boards where workers assemble and where the treated area lies adjacent to roads, residential areas, or any other areas such as schools, parks or other public facilities. Posted signs must be legible from 25 feet away and be printed in English and any other appropriate language such as Spanish. Signs must be posted prior to application, during application and for at least one week after application, but may remain in place indefinitely. The sign must indicate the following:

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NOTICE

Pesticides are applied in irrigation water in this field. Do not enter this field when the irrigation system is operating. Do not drink, bathe in or play in water or in furrows, puddles, ponds, canals or ditches associated with this irrigation system.

Read the SONALAN Dry Flowable label for additional directions, precautions and limitations before use.

SONALAN® DRY FLOWABLE - ethalfluralin - Elanco Products Company

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Revised 03/05/86 - to agree with EPA required changes in the SONALAN E.C. Chemigation Application Directions. Added statements to indicate specific crops that may be treated and a statement to see specific crop recommendations for appropriate use rates for general weed control (except groundcherry and nightshade).

Elanco Products Company  
A Division of Eli Lilly and Company  
Indianapolis, Indiana 46285

SONALAN® DRY FLOWABLE (E.P.A. REG. NO. 1471-152)

SONALAN/Scepter® for Weed Control in Soybeans

SONALAN/Scepter may be applied as a preplant incorporated tank-mix treatment. Scepter may also be applied as a preemergence overlay treatment or as an early postemergence treatment following a pre-plant incorporated application of SONALAN.

SONALAN/Scepter Tank-Mix Directions

SONALAN/Scepter tank-mix should be applied as a preplant incorporated treatment. Follow soil preparation, mixing and application procedures described on the SONALAN label. Apply SONALAN/Scepter and shallowly incorporate. Incorporate into the soil within 2 days after application and plant soybeans within 14 days after application. Use equipment that provides uniform 2 inch incorporation. See the Scepter label for additional incorporation directions.

If soybeans are planted on beds, apply and incorporate after bed formation.

SONALAN/Scepter Overlay Directions

SONALAN should be applied as a preplant incorporated treatment. Follow soil preparation, application and soil mixing procedures described on the SONALAN label. Apply Scepter after planting but before the crop emerges. Where Scepter is applied as a surface applied overlay treatment rainfall or overhead irrigation is necessary to move Scepter into the weed germination zone. The amount of rainfall or irrigation required depends on existing soil moisture, soil texture and organic matter content. Sufficient water to moisten the soil to a depth of 2 inches is normally adequate. If adequate moisture is not received within 7 days after a surface applied treatment then a cultivation is recommended to control escaped weeds.

SONALAN/Scepter tank-mix or overlay combinations control the weeds listed on the SONALAN label for general weed control plus these additional weeds:

161\*\*\*\*/DF\*\*50/LABELS/US/F3065/41

Nightshade, eastern black<sup>1</sup>  
Pigweed  
(Palmer)  
(Tall waterhemp)

(Ladysthumb)  
(Pennsylvania)  
Sunflower, common  
Velvetleaf<sup>1</sup>

<sup>1</sup> Eastern black nightshade, giant ragweed, and velvetleaf are controlled by preplant incorporated treatments only.

SONALAN/Scepter tank-mix or Scepter overlay treatments will aid in the control and reduce competition from these additional weeds:

Morningglory<sup>1</sup>  
(Entireleaf)  
(Ivyleaf)  
(Tall)  
Nutsedge, Yellow<sup>2</sup>

Control of these weeds may be erratic, ranging from poor to excellent depending upon soil temperature, time of weed germination, depth of weed seed in the soil and the amount and timing of soil moisture. Control may be improved with timely cultivation.

<sup>1</sup> For best activity on morningglory species use tank-mix preplant incorporated treatments. ✓

<sup>2</sup> Use tank-mix preplant incorporated treatments only to aid in control of yellow nutsedge.

#### SONALAN/Scepter Early Postemergence Directions

SONALAN should be applied as a preplant incorporated treatment. Follow soil preparation, application and soil mixing procedures described on the SONALAN label. Apply Scepter as an early post-emergence treatment when weeds are actively growing and before volunteer corn exceeds a height of 1 inch and broadleaf weed species exceed a height of 2 inches. Timing of application should be based on the size of the weeds and not on the growth stage of soybeans.



Do not apply Scepter postemergence when soybeans and weeds are stressed by conditions such as drought or cold, wet weather.

Scepter herbicide contains a surfactant in the formulation. No additional surfactant should be added to the spray solution.

SONALAN/Scepter early postemergence combination controls the weeds listed on the SONALAN label for general weed control plus these additional weeds:

Grasses

Volunteer corn<sup>1</sup>

Broadleaf Weeds

Cocklebur, common<sup>1</sup>

Morningglory

(Pitted)

(Smallflower)

Mustard species

Nightshade, eastern black

Pigweed<sup>1</sup>

(Palmer)

(Tall waterhemp)

Ragweed, common

Smartweed

(Ladysthumb)

(Pennsylvania)

<sup>1</sup> These weeds are very sensitive to Scepter and can be controlled up to a maximum height of 12 inches.

SONALAN/Scepter tank-mixes or SONALAN/Scepter overlay treatments may also be followed by sequential postemergence treatments of Scepter to control Florida beggerweed, mexicanweed and sicklepod. See the sequential program section of the Scepter label for application directions. Use sequential treatments in states recommended on the Scepter label only.

Wait at least ten (10) days before cultivating after a postemergence treatment of Scepter.

Broadcast Rates Per Acre: (All Scepter methods of application)

<u>Soil Texture</u>	<u>SONALAN Dry Flowable</u> (Pounds)	<u>Scepter</u> (Pints)
Coarse	0.9 - 1.5	2/3
Medium	1.3 - 1.9	2/3
Fine	1.7 - 2.2	2/3

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Precautions

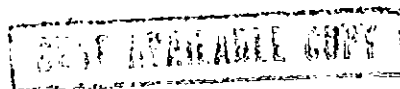
1. Do not plant small grains or rice within 4 months following an application of Scepter.
2. Do not plant corn, cotton, edible beans, grain sorghum, peanuts or tobacco within 11 months following an application of Scepter.
3. Do not plant other crops within 18 months following an application of Scepter.
4. Following an application of Scepter, only those rotational crops harvested at maturity may be used for feed or food.
5. Do not use Scepter on crops other than soybeans.
6. Do not allow livestock to graze on fields treated with Scepter and do not feed treated forage, hay or straw to livestock.
7. Crops other than soybeans may be injured by spray drift or other indirect contact with Scepter.

Read the SONALAN and Scepter labels carefully for additional directions, precautions and limitations before applying these products. The use of Scepter is limited to those states listed on the Scepter label. ✓

SONALAN® Dry Flowable - ethalfluralin - Elanco Products Company  
Scepter® - imazaquin - American Cyanamid Company

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Indianapolis, Indiana 46285

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(Revised 03/18/86)



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(Revised 02/27/86)

SONALAN® Dry Flowable (E.P.A. REG. NO. 1471-152)

SONALAN/Command® and SONALAN/Command/Lexone® or  
Sencor® Combinations for Weed Control in Soybeans

SONALAN may be tank-mixed with Command or Command plus Lexone or  
Sencor for weed control in soybeans.

SONALAN/Command Tank-Mix

SONALAN/Command will control the following weeds:

Grasses:

Annual bluegrass  
Barnyardgrass  
Crabgrass  
    (Large crabgrass)  
    (Smooth crabgrass)  
Foxtail  
    (Giant foxtail)  
    (Green foxtail)  
    (Foxtail millet)  
    (Pigeongrass)  
    (Yellow foxtail)

Goosegrass  
Johnsongrass  
    (from seed)  
Junglerice  
Oat, wild<sup>1</sup>  
Panicum, fall  
Panicum, Texas  
    (Buffalograss)  
    (Coloradograss)  
Ryegrass, Italian  
    (Annual ryegrass)  
Shattercane  
    (Wild cane)  
Signalgrass, broadleaf  
    (Brachiaria)  
Witchgrass

Broadleaf Weeds:

Buckwheat, wild  
Carpetweed  
Catchfly, conical  
Chickweed, common  
Fiddleneck tarweed  
Henbit  
Kochia  
Lambsquarters, common  
Pigweed  
    (Prostrate pigweed)  
    (Redroot pigweed)  
    (Smooth pigweed)  
    (Tumble pigweed)  
Purslane, common

Pusley, Florida  
Rockpurslane, redmaids  
Thistle, Russian  
Velvetleaf  
    (Buttonweed)

<sup>1</sup> SONALAN/Command will provide wild oat control except those  
germinating below the SONALAN/Command treated zone. ✓

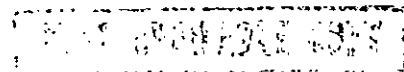
SONALAN/Command will provide partial control or suppression of the  
following weeds:

Jimsonweed  
Morningglory, annual  
Nightshade, eastern black  
Prickly sida  
    (Teaweed)

Ragweed, common  
Smartweed, Pennsylvania  
Venice mallow

Control of these weeds may be erratic, ranging from poor to excellent depending upon soil temperature, time of weed germination, depth of weed seed in the soil and the amount and timing of soil moisture. Control may be improved with timely cultivation.

SONALAN/Command should be applied as a preplant incorporated tank-mix treatment. Follow soil preparation, application and incorporation procedures described on the SONALAN label.



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Broadcast Rates Per Acre:

<u>Soil Texture</u>	<u>SONALAN Dry Flowable (Pounds)</u>	<u>Command 6 E.C. (Pints)</u>
Coarse	0.9 - 1.5	1/2
Medium	1.3 - 1.9	3/4
Fine	1.7 - 2.2	1

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SONALAN/Command/Lexone or Sencor Tank-Mix:

SONALAN/Command/Lexone or Sencor controls those weeds listed for SONALAN/Command plus these additional weeds:

Jimsonweed	Sesbania, hemp
Prickly sida	Smartweed, Pennsylvania
(Teaweed)	Spotted spurge
Ragweed, common	Venice mallow <sup>1</sup>
	Wild mustard <sup>1</sup>

SONALAN/Command/Lexone or Sencor also provides partial control or suppression of common cocklebur, annual morningglory and giant ragweed. Control of these weeds may be erratic, ranging from poor to excellent depending upon soil temperature, time of weed-germination, depth of weed seed in the soil and the amount and timing of soil moisture. Control may be improved with timely cultivation.

SONALAN/Command/Lexone or Sencor should be applied as a preplant incorporated tank-mix treatment. Follow soil preparation, application and incorporation procedures described on the SONALAN label.

Broadcast Rates Per Acre:

<u>Soil Texture</u>	<u>SONALAN Dry Flowable (Pounds)</u>	<u>Command 6 E.C. (Pints)</u>	<u>Lexone 4L or Sencor 4F (Pints)</u>	<u>Lexone Dry Flowable or Sencor Dry Flowable (Pounds)</u>
Coarse	0.9 - 1.5	1/2	1/3-1/2 <sup>1</sup>	1/4 - 1/3 <sup>1</sup>
Medium	1.3 - 1.9	3/4	1/2-3/4	1/3 - 1/2
Fine	1.7 - 2.2	1	3/4-1	1/2 - 2/3

277-3054

- <sup>1</sup> Use the higher rate in the rate range in areas where weed populations are dense, for control of Venice mallow and wild mustard and for best control of common cocklebur, annual morningglory and giant ragweed.

Precautions:

Following application of Command do not plant wheat, oats, barley, rye or alfalfa in the fall of the year of application or in the spring of the year following application, as crop injury may occur. Other rotational crops may be planted 10 months after application. Do not allow livestock to graze on treated soybean vines and do not feed treated vines or vine trash to livestock. Do not use Lexone or Sencor on coarse soils with less than 1% organic matter.

Read the SONALAN, Command, Lexone, or Sencor labels carefully for additional directions, precautions and limitations before applying these products.

SONALAN® - ethalfluralin - Elanco Products Company  
Command® - dimethazone - FMC Corporation  
Lexone® - metribuzin - E.I. DuPont de Nemours and Company  
Sencor® - metribuzin - Bayer GmbH

Elanco Products Company  
A Division of Eli Lilly and Company  
Indianapolis, Indiana 46285

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(Revised 02/27/86)

~~SONALAN~~ E.C. (E.P.A. REG. NO. 1471-122)  
SONALAN® DRY FLOWABLE (E.P.A. REG. NO. 1471-152)

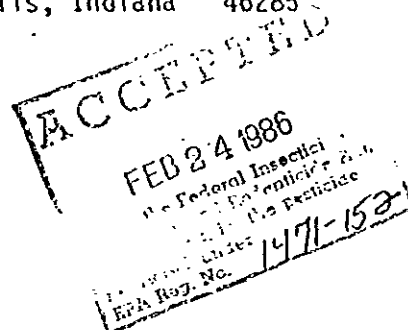
PARTIALLY CONTROLLED OR SUPPRESSED WEEDS

Sonalan provides partial control or suppression of:

Morningglory, Annual  
Pennsylvania smartweed

SONALAN® - ethalfluralin, Elanco Products Company

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Rockpurslane, redmaids

(Calandrinia caulescens)

Thistle, Russian

(Salsola kali)

<sup>1</sup> (SONALAN will provide wild oat control except those germinating below the SONALAN treated zone.)

<sup>2</sup> (See page \_\_\_\_ for special instructions for control in dry bean.)

<sup>3</sup> (See page \_\_\_\_ for special instructions for partial control in soybean.)

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ment 1

#### SOIL PREPARATION -- GENERAL DIRECTIONS

Factors that influence uniform application and incorporation of SONALAN are:

**Crop Residues or Existing Weeds:** Ground cover, such as crop residues or existing weeds, can interfere with the incorporation of SONALAN into the soil. A manageable level of such ground cover will allow the SONALAN to be uniformly mixed into the top two (2) to three (3) inches of soil. If the level of the ground cover is such that this cannot be done, the soil must be tilled prior to the application of SONALAN.

**Roughness:** The soil surface should be smooth enough so that you can operate a sprayer and incorporation equipment efficiently and at speeds which ensure a uniform application and incorporation of SONALAN.

**General Soil Conditions:** To assure uniform incorporation of SONALAN, soil moisture conditions should be such that large clods can be broken up during the incorporation process.

#### SOIL MIXING DIRECTIONS

Use incorporation equipment that thoroughly and uniformly mixes SONALAN into the top two (2) to three (3) inches of the seedbed, or erratic weed control and/or crop injury may result.

#### Incorporation Before Planting

Apply SONALAN up to three (3) weeks prior to planting. SONALAN should be thoroughly and uniformly mixed into the top two (2) to three (3) inches of the seedbed within two (2) days after application.

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22/3

Attachment 1

SONALAN DRY FLOWABLE

SONALAN provides partial control or suppression of:

Morningglory, Annual  
Smartweed, Pennsylvania