

241-354

2/2/2001

Leaflet Label

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**AVENGE® SG**  
wild oat herbicide

**FOR USE IN BARLEY AND WHEAT**

**ACTIVE INGREDIENT:**

Difenzoquat methyl sulfate: 1,2-dimethyl-3,5-diphenyl-1H-pyrazolium methyl sulfate ..92.5%

**INERT INGREDIENTS** ..... 7.5%

**TOTAL**..... 100.0%

(1 pound contains 0.64 lb. of difenzoquat cation)

EPA Reg. No. 241-354

EPA Est. No.241-NJ-3

**KEEP OUT OF REACH OF CHILDREN**

**DANGER/PELIGRO!**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand this label, find someone to explain it to you in detail.)

**STATEMENT OF PRACTICAL TREATMENT**

**IF IN EYES:** Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

**IF SWALLOWED:** Call a doctor or get medical attention. Do not induce vomiting or give anything by mouth to an unconscious person.

Drink promptly a large quantity of milk, eggwhites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol.

**IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

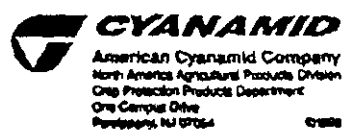
**IF ON SKIN:** Wash with plenty of soap and water. Get medical attention.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage.

See Inside For Additional Precautionary Statements.  
See Directions For Use Inside

In case of an emergency endangering life or property involving this product,  
call collect, day or night, Area Code 973-683-3100.

Net Contents: 5.5 Pounds



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**ACCEPTED**  
FEB - 2 2001  
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 241-354

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## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### DANGER!

**CORROSIVE: CAUSES IRREVERSIBLE EYE DAMAGE  
MAY BE FATAL IF SWALLOWED**

**DO NOT** get in eyes or on clothing. Harmful if absorbed through skin or inhaled. Avoid contact with skin. Avoid breathing dust. Remove contaminated clothing and wash clothing before reuse.

#### **Personal Protective Equipment (PPE):**

##### **Applicators and other handlers must wear:**

- long-sleeved shirt and long pants
- waterproof gloves
- shoes plus socks
- protective eyewear (goggles or face shield)

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

#### **User Safety Recommendations:**

##### **Users should:**

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## ENVIRONMENTAL HAZARDS

DO NOT apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. DO NOT apply when weather conditions favor run-off and/or drift from target area. DO NOT contaminate water when disposing of equipment washwaters.

## 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 in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

DO NOT apply this product through any type of irrigation system.

This label must be in the possession of the user at the time of pesticide application.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

DO NOT enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- coveralls
- waterproof gloves
- shoes plus socks
- protective eyewear.

## STORAGE AND DISPOSAL

Stability of AVENGE SG is not affected by exposure to cold temperature.

DO NOT contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. DO NOT reuse empty container.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental

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Control Agency, or the hazardous waste representative at the nearest EPA Regional Office for guidance.

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**CONTAINER DISPOSAL FOR A BAG ATTACHED IN A BOX:** Completely empty contents of bag into application equipment. Then dispose of container in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**CONTAINER DISPOSAL FOR REMOVABLE BAG IN A BOX:** Completely empty contents of bag into application equipment. Then dispose of bag in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. Cardboard boxes may be offered for recycling if allowed by state and local authorities.

**CONTAINER DISPOSAL FOR PLASTIC:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or 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.

**CONTAINER DISPOSAL FOR BULK:** Return empty container for reuse.

### GENERAL INFORMATION

AVENGE SG is a selective herbicide for the postemergence control of wild oats in barley and wheat. See the section DIRECTIONS FOR USE for varietal restrictions.

If broadleaf weeds must also be controlled in these crops, AVENGE SG may be tank mixed with certain broadleaf herbicides which are listed under the HOW TO USE AVENGE SG PLUS BROADLEAF HERBICIDES section. AVENGE SG alone or in combination can be applied postemergence by ground equipment or aircraft.

Maximum control of wild oats in barley and wheat with AVENGE SG alone, or in combination, is obtained when temperature, moisture, fertility and cultural practices provide favorable conditions for plant growth. When applied under poor conditions for plant growth such as cold/wet or hot/dry weather or low soil fertility, AVENGE SG can produce yellowing or slight tip burn of barley or wheat. However, recovery is rapid when good growth conditions return. A slight reduction of yield may result under conditions described above.

Observe all cautions and limitations on this label and the labels of products used in tank mixtures with AVENGE SG. The use of AVENGE SG not consistent with this label can result in injury to crops, animals or persons. Keep containers closed to avoid spills and contamination.

WHERE TO USE AVENGE SG: AVENGE SG alone or in combination can be applied to:

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**BARLEY:** All Varieties

**WHEAT:** SEE TABLE BELOW

<b>WHEAT TYPE</b>	<b>YES</b>	<b>NO</b>
Fall and Winter Seeded	All	<b>EXCEPT</b> Borah, WS 1809, WS 1877, WS 1859, Klasic, Probrand 771, Tadinia, and Mexican durums
Soft-White Spring Seeded	All	
Spring Seeded durums	All	<b>EXCEPT</b> Edmore, Fjord, Kyle, Laker, Lakota, Lloyd, Regal, Renville Vic, Wakooma, Wascona, Westbred 803, and Westbred 881
Hard Red Spring Seeded	Amidon, Apex, Baart, Benito, Bronze Chief, Buckshot, Butte, Butte 86, Canuck, Centa, Chester, Columbus, Copper, Coteau, Courtney, Era, Erik, Federation, Fjeld, Fortuna, Germain 444, Glenlea, Glennman, HY320, Katepwa, Kitt, Kodiak, Leader, Leif, McKay, Marberg, Marshall, Minnpro, Newana, Neepawa, NK(PB) 751, Norak, Norana, Olaf, Oslo, Pioneer 2369, Pioneer 2385, Pondera, Probrand 711, Probrand 715, Prodax, Rambo, Selkirk, Solar, Stoa, Success, Telemark, Vance, Victory, W 2502, Walera, Wheaton and Yecoro rojo	<b>DO NOT</b> apply to varieties of hard red spring wheat not listed

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WHEN TO USE AVENGE SG: AVENGE SG or AVENGE SG/broadleaf tank mix combinations are to be applied when the majority of wild oat plants are in the 3- to 5-true leaf stage of growth (tillering). The timing of AVENGE SG application to wild oats frequently coincides with barley in the 2- to 7-leaf stage, spring-seeded wheat in the 5- to 6-leaf stage, and fall-seeded wheat in the 4-leaf to tillered stage of growth. To achieve maximum control, the growth stage of wild oats in each field to be treated should be examined frequently to determine the 3- to 5-true leaf stage (tillering) for proper timing of AVENGE SG application. Density of wild oats per square foot should also be determined to select the correct AVENGE SG application rate.

### WILD OAT STAGES

(artwork)	(artwork)	(artwork)
3-true leaf stage	4-true leaf stage	5-true leaf stage

### EQUIPMENT APPLICATION INSTRUCTIONS

The spray equipment must be clean and properly calibrated before treatments are applied. For best results, use flat fan nozzles, at pressures of 20 to 40 psi to achieve uniform spray distribution and minimize drift. **DO NOT** use flood jet nozzles. Keep the by-pass line on or near the bottom of the tank to minimize foaming. In ground applications, check nozzles for even distribution of spray droplets. In aerial applications, it is recommended that a flagman be located at each end of the field, or an automatic mechanical flagging unit be attached to the aircraft to ensure uniform aerial application and to avoid overlapping and possible crop injury.

### AVENGE SG APPLICATION

**DO NOT** apply AVENGE SG when the flagleaf is exposed or crop injury may occur. **DO NOT** apply AVENGE SG if rain is predicted within 6 hours. **DO NOT** spray AVENGE SG when freezing temperatures are forecast or when plants are wet with dew or rain. **DO NOT** apply AVENGE SG or AVENGE SG tank mix combinations under severe conditions for plant growth such as drought, extreme temperature fluctuation, low soil fertility and plant disease.

Apply AVENGE SG alone and AVENGE SG plus broadleaf herbicide combinations in 5 to 20 gallons of water per acre by ground equipment or 3 to 10 gallons of water per acre by aircraft. **DO NOT** let spray drift onto adjacent crops.

### HOW TO USE AVENGE SG ALONE

If wild oats are growing vigorously, select the proper application rate from the AVENGE SG Rate Recommendation Table (below) that corresponds to the population of wild oat plants per square foot in the field to be treated.

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**ASSERT®/AVENGE SG TANK MIX OR  
ASSERT® SG/AVENGE SG TANK MIX FOR WILD OAT CONTROL**

AVENGE SG may be tank mixed\* with ASSERT or ASSERT SG herbicides for the control of wild oats only. Consult the ASSERT and ASSERT SG labels for use directions, application rates and timing, state restrictions, precautions, and ASSERT or ASSERT SG recropping/rotation limitations.

\* **DO NOT** tank mix AVENGE SG with any product not registered in specific states of intended use.

**HOW TO USE AVENGE SG PLUS BROADLEAF HERBICIDES**

AVENGE SG may be tank mixed\* with the following broadleaf herbicides:

2,4-D amine or ester  
Allyl<sup>1</sup>  
bromoxynil  
bromoxynil plus MCPA  
Curtail<sup>2</sup>  
Curtail M<sup>2</sup>

Express<sup>1</sup>  
Glean<sup>1</sup>  
Harmony<sup>1</sup>  
Harmony Extra<sup>1</sup>  
MCPA amine or ester

Select the proper AVENGE SG application rate as described in the AVENGE SG Rate Recommendation Table (below). In order to assure optimum broadleaf weed control follow label recommendations of your broadleaf herbicide. Be sure that application timings coincide with application timings for AVENGE SG. **DO NOT** apply AVENGE SG tank mix combinations when the crop flagleaf is exposed or crop injury may occur. **DO NOT** apply AVENGE SG tank mix combinations under stress conditions.

Follow the most restrictive precautions, directions, and recropping/rotation limitations that appear on combination partner product labels.

\* **DO NOT** tank mix AVENGE SG with any product not registered in specific states of intended use.

**AVENGE SG Rate Recommendation Table**

Wild Oat Population	Wild Oat Density Plants Per Square Foot	AVENGE SG Rate Per Acre (ounces)
Low	1-10	15 5/8 (15.625)
Moderate	11-25	18 3/4 (18.75)
High	More than 25	25

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## GENERAL MIXING INSTRUCTIONS

A **NON-IONIC SURFACTANT CONTAINING AT LEAST 80% NON-IONIC SURFACTANT MUST BE USED WITH AVENGE SG HERBICIDE.** Use a surfactant registered for application to growing crops. Add 4 pints non-ionic surfactant per 100 gallons (0.5% vol./vol.) of final spray tank volume. Use of crop oil concentrates is not recommended, except as may be described in separately published recommendations from American Cyanamid Company. **DO NOT** use liquid fertilizer as a substitute for surfactant.

**VIGOROUS AGITATION OF THE ENTIRE TANK INCLUDING THE TANK BOTTOM IS REQUIRED TO RAPIDLY DISSOLVE THE WATER SOLUBLE GRANULES OF AVENGE SG HERBICIDE.** Poor agitation and dead spots in the tank will retard rapid and thorough dissolving of AVENGE SG herbicide.

### PREMIXING INSTRUCTIONS (if tank agitation is inadequate)

Premix the desired amount of AVENGE SG in clean water in a clean polyethylene plastic bucket. Use polyethylene plastic or stainless steel stirring rod or water pressure to mix until the granules of AVENGE SG dissolve. **DO NOT** allow premix solution to contact skin or clothing. Add premix solution into the spray tank as described in Mixing Instructions. Thoroughly rinse all of the AVENGE SG into the spray tank.

## MIXING INSTRUCTIONS

### HOW TO MIX AVENGE SG ALONE

1. Fill tank three-quarters full with clean, filtered water. Start vigorous agitation that thoroughly mixes the entire tank, including the tank bottom.
2. Add AVENGE SG to the partially filled tank while agitating.
3. Continue filling the tank with clean water while **maintaining agitation.**
4. After the AVENGE SG is dissolved and the tank is full, add the **non-ionic surfactant** to the tank at a rate of 4 pints surfactant per 100 gallons (0.5% vol./vol.) of final spray solution (See section above for brands requiring greater percentage surfactant).
5. Allow mixture to agitate and recycle for at least five minutes before spraying.
6. Agitation must be continued until spraying is complete.

### HOW TO MIX AVENGE SG PLUS BROADLEAF HERBICIDES

1. Fill tank three-quarters full with clean, filtered water. Start vigorous agitation that thoroughly mixes the entire tank, including the tank bottom.
2. Add the broadleaf herbicide first to the partially filled tank while agitating. Add the broadleaf herbicide(s) before adding AVENGE SG when using the ASSERT/AVENGE SG or ASSERT SG/AVENGE SG tank mix. **NOTE: TO PREVENT MIXING PROBLEMS, TANK MIX PARTNERS MUST BE THOROUGHLY MIXED BEFORE ADDING AVENGE SG.**
3. When the broadleaf herbicide is thoroughly mixed, add the AVENGE SG to the partially filled tank while continuing agitation.
4. Continue filling the tank with clean water while **maintaining agitation.**
5. After the AVENGE SG is dissolved and thoroughly mixed with the tank mix partners, and the tank is full, add the **non-ionic surfactant** at a rate of 4 pints per 100 gallons (0.5% vol./vol.) final spray solution (See section above for brands requiring greater percentage surfactant).
6. Allow mixture to agitate and recycle for at least five minutes before spraying.



7. Agitation must be continued until spraying is completed.

## HOW TO TANK MIX AVENGE SG PLUS ASSERT OR ASSERT SG HERBICIDES

Follow mixing instructions on the ASSERT or ASSERT SG labels.

**NOTE: DO NOT MAKE MORE THAN ONE APPLICATION OF AVENGE SG PER GROWING SEASON. DO NOT GRAZE TREATED FIELDS OR CUT TREATED FORAGE FOR SILAGE OR HAY. BARLEY OR WHEAT CAN BE REPLANTED IF LOSS OF CROP OCCURS. AFTER HARVEST, BARLEY AND WHEAT GRAIN AND STRAW FROM TREATED FIELDS CAN BE FED TO LIVESTOCK. ROTATION TO OTHER CROPS CAN BE MADE THE FOLLOWING YEAR, EXCEPT WHERE LIMITED BY TANK MIX PARTNER LABEL RESTRICTION.**

### DISCLAIMER

The label instructions for the use of this product reflect the opinion of experts based on research and field use. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, herbicide resistant weed populations, or the use of, or application of the product contrary to label instructions, all of which are beyond the control of American Cyanamid Company. All such risks shall be assumed by the user.

American Cyanamid Company shall not be responsible for losses or damages resulting from use of this product in any manner not set forth on this label. User assumes all risks associated with the use of this product in any manner not specifically set forth on this label.

American Cyanamid Company warrants only that the material contained herein conforms to the chemical description on the label and is reasonably fit for the use therein described when used in accordance with the directions for use, subject to the risks referred to above. **CYANAMID DOES NOT MAKE OR AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED AND EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

**BUYER'S EXCLUSIVE REMEDY AND AMERICAN CYANAMID'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF AVENGE SG.** In no case shall Cyanamid or the seller be liable for consequential, special or indirect damages resulting from the use or handling of this product.

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USES WITH OTHER PRODUCTS (TANK MIXES)

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If this product is used in combination with any other product except as specifically recommended in writing by American Cyanamid Company, then American Cyanamid Company shall have no liability for any loss, damage, or injury arising out of its use in any such combination not so specifically recommended. If used in a combination recommended by American Cyanamid Company, the liability of American Cyanamid Company shall in no manner extend to any damage, loss or injury not directly caused by the inclusion of the American Cyanamid Company product in such combination use, and in any event shall be limited to return of the amount of the purchase price of the product.

For additional information regarding the use of AVENGE SG wild oat herbicide, call telephone number (800) 942-0500.

1 Ally, Express, Glean, Harmony, and Harmony Extra are trademarks of E.I. duPont de Nemours and Company, Inc.

2 Curtail and Curtail M are trademarks of Dow AgroSciences LLC.

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