

PM 25

JUL 29 1997

Barbara Brown
Registration Division
DREXEL CHEMICAL COMPANY
1700 Channel Avenue
Memphis, TN 3811300327

SUBJECT: Drexel Defol 5 Amendment
EPA Reg. No. 19713-388

The above mentioned amendment submitted in connection with registration under FIFRA is acceptable provide you make the following provisions:

1. Change "Precautionary Statements" to the following:

Precautionary Statements
Hazards to Humans and Domestic Animals
DANGER

Corrosive. Causes eye damage and skin irritation.
Harmful or fatal if swallowed, absorbed through the
skin or inhaled. Do not get in eyes or on clothing.

2. Change the "Environmental Hazards" statement to the following:

For terrestrial uses, do not apply directly to water,
or to areas where surface water is present, or to
intertridal areas below the mean high water mark. Do
not contaminate water when disposing of equipment
washwater.

A stamped copy is enclosed for your records. Please submit one (1) final printed copy for the above mentioned label before releasing the product for shipment.

Sincerely,

Jim Tompkins
Product Manager, (25)
Herbicide Branch
Registration Division (7505C)

Enclosure

CONCURRENCES

SYMBOL ▶	7505C							
SURNAME ▶	MINOR, E.							
DATE ▶	Jul 29, 1997							

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**DREXEL
DEFOL 5**

Defoliant/Desiccant with Fire Retardant

ACTIVE INGREDIENT:

Sodium Chlorate.....	42.3%
INERT INGREDIENTS:	57.7%
TOTAL:	100.0%

Product contains 5.0 pounds of Sodium Chlorate per gallon.

**KEEP OUT 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 the label, find someone to explain it to you in detail.)

**Read Entire Label Before Using This Product
SHAKE WELL BEFORE USING**

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Drink promptly a large quantity of milk, egg whites, gelatin solution or if these are not available, drink large quantities of water. Avoid Alcohol. Get Medical Attention.

IF IN EYES: Flush with plenty of water. Get Medical Attention.

IF ON SKIN: Wash with plenty of soap and water. Get Medical Attention if irritation persists.

EPA REG. NO. 19713-
EPA EST. NO. 19713-MS-1
NET CONTENTS:

MANUFACTURED BY:
DREXEL CHEMICAL COMPANY
P.O. BOX 13327
MEMPHIS, TN 38109-0306

APRIL 27, 1995
June 7, 1995 - Correcting ingredient statements
05/20/96 - Adding cucurbits and potatoes
12/4/96 - Revision in response to Agency letter

**ACCEPTED
with COMMENTS
In EPA Letter Dated**

JUL 29 1997

**Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.**

19713-388

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER: Corrosive. Causes eye damage and skin irritation. Harmful or fatal if swallowed, absorbed through the skin or inhaled. Do not get in eyes or on clothing.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear: Coveralls over long-sleeved shirt and long pants, Waterproof gloves, Chemical-resistant footwear plus socks, Protective eyewear, Chemical-resistant headgear for overhead exposure, and Chemical-resistant apron when cleaning equipment, mixing, or loading. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

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

For terrestrial uses, do not apply to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater.

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.

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.

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 12 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 over long-sleeved shirt and long pants, Waterproof gloves, Chemical-resistant footwear plus socks, Protective eyewear, and Chemical-resistant headgear for overhead exposure

APPLICATION

DEFOL 5 may be applied by aircraft or ground equipment. It is essential that the foliage be thoroughly covered. The specified dilution rates should be carefully observed. A nonionic surfactant or an emulsifiable crop oil may enhance the results. DEFOL 5 should not be mixed with insecticides or other organic materials, unless specifically recommended, because a fire or explosion may result.

Precautions should be taken to avoid having spray or spray drift contact adjacent crops or desirable vegetation, or they may be defoliated. Equipment should be washed before and after use and care should be taken so that product does not dry in tank or on spray nozzles. Wash water should not be allowed to contact desirable vegetation.

When using DEFOL 5 under dryland conditions, injury may occur to rotational crops.

DEFOLIATION

Ideally, defoliation is favored on clear, calm, sunny days with high temperatures and high humidity. If rain is anticipated within 24 hours, application should be delayed whenever possible. Defoliation may be slowed when daytime temperatures are below about 60 F., and with some crops, especially with vigorous varieties, regrowth can occur.



In order to obtain acceptable defoliation results, the crop must be fully mature. In most cases, the signs of maturity include:

1. A slight discoloration of the foliage is apparent, often with a yellowish or reddish tinge.
2. Vegetative growth has slowed or ceased with little or no secondary growth.
3. A slight downward pull on a leaf gives a clean break from the stalk.

Adequate fertility, ample soil moisture, good insect control and good weed control also favor defoliation. Plants which have been under stress as from drought or insect pressure give less reliable results because tough, wilted or damaged leaves do not permit the proper uptake of the chemical and tend to inhibit the formation of an abscission layer. Typically, under such circumstances, the leaves are desiccated but do not drop, which, in turn, often causes problems with excessive trash during harvesting.

For crops where there is a heavy canopy of foliage, obtaining thorough coverage is sometimes difficult. Whenever practical, the use of ground equipment should be considered. The higher dilution rates should be used and any other available methods employed which will assure that the plants are completely covered all the way to the bottom leaves. If coverage is incomplete, a second application may be necessary in order to defoliate the lower leaves and to prevent secondary growth.

DESICCATION

When the objective is to reduce moisture of the crop or to desiccate weeds prior to harvest, most of the points discussed under Defoliation are applicable. Incomplete coverage will give erratic results, especially with vines such as morning glory where the slender stems may be sheltered from the spray by the crop canopy, leaving the vines succulent and tough so they will become entangled in the harvesting machinery. Once again, larger spray volume will encourage more complete coverage and more reliable desiccation.

CROPS

CHILI PEPPERS - Apply 0.6 to 1.5 gallons per acre in 5-15 gallons of water by air or 20-40 gallons of water by ground equipment, 10 days before harvest. To be used on peppers for processing only. Consult a processor before applying.

CORN - As a harvest aid to desiccate trashy weeds in early maturing corn, use 1.2 gallon DEFOL 5 in 5 to 7 gallons of water per acre by air at least 14 days before anticipated harvest date. Use the low (5 gallon) dilution rates when weeds are small and the crop canopy is fairly open. Desiccation of morning-glory and other vines may be erratic.

DO NOT graze treated fields or feed fodder, forage or residual grain within 14 days of application.

COTTON - Air Application: Apply 0.6 to 0.9 gallons in sufficient water to make 4 to 10 gallons total solution per acre. Use the lower rate when plants and weather conditions are ideal for defoliation. Swath width should not exceed wing spread. Altitude and speed of aircraft should be regulated to give sufficient spray coverage. Do not apply during periods of excessive winds as spray may drift and cause defoliation of adjoining cotton or injury to other crops. Do not apply during very high temperatures found in some areas at mid-day.

Ground Application: Apply 0.6 to 0.9 gallons per acre in sufficient water to make 15 to 30 gallons total solution per acre. Cotton defoliants should be applied when 70% of the bolls are open. Poor defoliation often occurs under unfavorable weather, soil moisture, fertility and plant conditions. Uniform defoliation within a field may sometimes be difficult to obtain because of irregular plant maturity. Satisfactory defoliation within a field may not be obtained when cotton plants are suffering from lack of moisture or when plant growth is retarded by cold weather. DO NOT graze treated areas or feed gin waste to livestock. Flush out equipment with water after each day's work.

CUCURBITS - (grown for seed): To facilitate harvest by drying out the vines, apply at a rate of 1.2 gallons per acre in 5 - 10 gallons of water by air, or apply 1.2 gallons per acre in 20 - 30 gallons of water by ground equipment. DO NOT graze treated fields.

DRY BEANS - Apply at a rate of 1.2 gallon per acre in 5-10 gallons of water by air or 10-20 gallons by ground equipment. Thorough coverage is essential. Make application 7-10 days before anticipated harvest, longer if temperatures are cool. DO NOT graze treated fields or feed treated fodder or forage to livestock.

FLAX - As a harvest aid to desiccate trashy weeds and to reduce moisture in the mature crop, apply 1.2 gallon per acre in enough water to give thorough coverage, 7-10 days before anticipated harvest date. For air application, use a minimum of 5 gallons of water and for ground equipment a minimum of 10 gallons of water.

Activity of the spray will be enhanced by the addition of good nonionic surfactant at the rate of 1 quart per 100 gallons of spray.
DO NOT graze treated fields or feed treated flax foliage and fodder for 14 days after application.

GRAIN SORGHUM - To reduce the moisture content of the grain while the crop is standing apply 0.9 to 1.2 gallon per acre in sufficient water to give thorough coverage, 7-10 days before harvest. Apply a total of 4 to 10 gallons of spray per acre by air and 10-20 gallons per acre by ground equipment. Use the lower rates when grain moisture is low and the weather is clear and dry. Use the higher rate when conditions for desiccation are poor.

GUAR BEANS - Apply at a rate of 1.2 gallon per acre in 5-10 gallons of water by air or 10-20 gallons of water by ground equipment. Make application 7-10 days before anticipated harvest date.
DO NOT graze treated fields or feed treated fodder or forage to livestock.

POTATOES - To defoliate plants and facilitate harvest, apply 1.2 gallons of DEFOL 5 in enough water to provide thorough coverage either by aircraft or ground equipment. Apply 10 days before harvest. Do not apply under conditions of extreme heat during the middle of the day.
Air Application: Use 5 - 10 gallons of water per acre.
Ground Application: Use 10 - 20 gallons of water per acre.

RICE - To facilitate harvest and reduce moisture in the fully mature seed heads, and to desiccate immature red rice in mature white rice, apply by air 3.6 to 4.8 quarts per acre in 5 or more gallons of water. Use the lower rate when crop conditions and weather are right to enhance rapid drying. Apply 7-10 days before anticipated harvest. To avoid drift do not apply during windy weather. Thorough coverage of the crop is essential to achieve good results.
DO NOT graze treated fields or feed treated straw or crop residues within 14 days of application.

SAFFLOWERS - To facilitate harvest and reduce moisture in the fully mature seed heads apply 1.2 gallon in 5-10 gallons of water by air or 20-30 gallons of water by ground equipment, 7 or more days before normal harvest. When safflower heads are fully mature. DO NOT graze treated areas or feed treated forage.

SOUTHERN PEAS - Apply at a rate of 1.2 gallon per acre in 5-10 gallons of water by air or 10-20 gallons by ground equipment. Thorough coverage is essential. Make application 7-10 days before anticipated harvest, longer if temperatures are cool. **DO NOT** graze treated fields or feed treated fodder or forage to livestock.

SOYBEANS - As a soybean harvest aid to dry weeds in early maturing soybeans and to facilitate the harvest, apply 1.2 gallon per acre. Make application 7-10 days before anticipated harvest date when beans are mature and ready for harvest. For air application use a minimum of 5 gallons of water per acre; for ground equipment apply a minimum of 20 gallons of water per acre. **DO NOT** graze treated fields or feed treated soybean foliage.

SUNFLOWER - To facilitate harvest and reduce moisture in the fully mature seed heads apply 1.2 gallon in sufficient water to give good coverage, 7 or more days before normal harvest when sunflower heads are fully mature. Apply in 5-10 gallons of water per acre by air or in 20-30 gallons of water per acre by ground with a high clearance sprayer. Do not apply later than 7 days before harvest.
DO NOT graze treated fields or feed treated forage within 14 days of application.

STORAGE AND DISPOSAL

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

STORAGE INSTRUCTIONS: Storage should be under lock and key and secure from access by unauthorized persons and children. Storage should be in a cool dry area away from any heat or ignition source. Do not stack plastic containers over 2 pallets high. Move containers by handles or cases. Do not move containers from one area to another unless they are securely sealed. Keep container tightly sealed when not in use. Keep away from any puncture source. Avoid storage near water supplies, food, feed and fertilizer to avoid contamination. Store in original containers only. Unloading storage and work areas must be as clean as possible to prevent contamination if spilled. If concentrate or spray solution is allowed to dry on flammable objects, the chlorate component can act as an oxidizer. If the contents are leaking or material is spilled follow these steps:

1. Contain spill, absorb with a material such as saw dust, clay granules or dirt.
2. Collect and place in suitable containers for disposal.
3. Wash area with water and soap to remove remaining pesticide.
4. Follow washing with clean water rinse.
5. Clothing contaminated with chlorate solution must be removed at once before solution dries. Dried contaminated clothes can be ignited easily. Wash contaminated clothing immediately.
6. Do not allow run off to enter sewer or contaminate water supplies.
7. Dispose of waste as indicated below:

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Plastic containers - Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary land-fill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY - CONDITION OF SALE

OUR RECOMMENDATIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the seller. Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith. In no case shall Drexel or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by Drexel Chemical Company and is accepted as such by the Buyer.

Supplemental Labeling For Use On Potatoes

All Applicable Directions, Restrictions and Precautions On The EPA Registered Label Are To Be Followed.

DREXEL
DEFOL 5

Defoliant/Desiccant with Fire Retardant

DIRECTIONS FOR USE

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APPLICATION

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When using DEFOL 5 under dryland conditions, injury may occur to rotational crops.

POTATOES - To defoliate plants and facilitate harvest, apply 1.2 gallons of DEFOL 5 in enough water to provide thorough coverage either by aircraft or ground equipment. Apply 10 days before harvest. Do not apply under conditions of extreme heat during the middle of the day.

Air Application: Use 5 - 10 gallons of water per acre.

Ground Application: Use 10 - 20 gallons of water per acre.

EPA REG. NO. 19713-388
EPA EST. NO. 19713-MS-1

MANUFACTURED BY:
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MEMPHIS, TN 38113-0327

