

19713-12

10-4-2001

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

1/4

OCT 4 2001

Ms. Luz G. Piwonka  
Registration Manager  
DREXEL CHEMICAL COMPANY  
P. O. Box 13327  
Memphis, TN 38113-0327

SUBJECT: Drexel Defol, EPA Reg. No. 19713-12  
Your Application Dated July 6, 2001

Dear Ms. Piwonka:

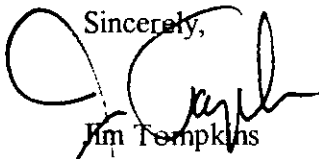
The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended is acceptable provided you make the labeling changes listed below before you release the product for shipment bearing the amended labeling:

- Under the "Environmental Hazards" section revise to read as follows:

"Note: All container sizes of 50 pounds or higher: Do not discharge effluent containing.....Water Board or Regional Office of the EPA."

Submit one (1) copy of your final printed labeling before you release the product for shipment. The amended labeling supersede all previously accepted ones. A stamped copy of the labeling is enclosed for your records.

Sincerely,



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

Enclosure

CONCURRENCES

SYMBOL ▶	7505C							
SURNAME ▶	MINOR, E.							
DATE ▶	Oct 4, 2001							

2/4

ACCEPTED  
with COMMENTS  
In EPA Letter Dated

OCT 4 2001

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

19713-12



# Defol

Defoliant/Desiccant with Fire Retardant

**ACTIVE INGREDIENT:**

Sodium chlorate ..... 28.0%

**OTHER INGREDIENTS:** ..... 72.0%

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

This product contains 3 pounds of Sodium chlorate per gallon.

**KEEP OUT OF REACH OF CHILDREN**

## WARNING / AVISO

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.)

See **FIRST AID** Below  
**SHAKE WELL BEFORE USING**

EPA Reg. No. 19713-12

EPA Est. No. 19713-MS-1

Net Contents: \_\_\_\_\_

### FIRST AID

**IF SWALLOWED:**

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious or convulsing person.

**IF IN EYES:**

- Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.

**IF ON SKIN OR CLOTHING:**

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.

Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

### PRECAUTIONARY STATEMENTS

**Hazards to Humans and Domestic Animals**

**WARNING:** Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Harmful if swallowed.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

**Applicators and other handlers must wear:** Coveralls over short-sleeved shirt and short pants, chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride, chemical-resistant footwear plus socks, protective eyewear, chemical-resistant headgear for overhead exposure, a chemical-resistant apron when cleaning equipment, mixing or loading and a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any R, P or HE filter.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

(Continued)

### PRECAUTIONARY STATEMENTS (Cont.)

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. 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:** 1) Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. 2) Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 3) 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 drift from target areas. Do not contaminate water when disposing of equipment washwaters.

**Note:** Add this statement to all container sizes of 5 gallons and higher. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

### 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 (WPS), 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, 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 (REI). The requirements in this box only apply to uses of this product that are covered by the WPS. Do not enter or allow worker entry into treated areas during the REI of 12 hours.

PPE required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soil or water is: Coveralls over short-sleeved shirt and short pants, chemical-resistant gloves made of any waterproof material, chemical-resistant footwear plus socks, protective eyewear and chemical-resistant headgear for overhead exposure.

Manufactured By: Drexel

**Drexel Chemical Company**

P.O. BOX 13327, MEMPHIS, TN 38113-0327

**SINCE 1972**

3/4

**APPLICATION**

DEFOL 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 non-ionic surfactant such as Surf-Ac® 820 or an emulsifiable crop oil such as Peptol® may enhance the results. This product 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. Washwater should not be allowed to contact desirable vegetation. When using this product under dry land 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 crop moisture 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 Morningglory 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.

Crop	Rate per Acre	Water
Chili peppers	1 to 2½ gals.	Air: 5 to 15 gals. Ground: 20 to 40 gals.
SPECIFIC DIRECTIONS: Apply 10 days before harvest. To be used on Peppers for processing only. Consult a processor before applying.		
Com	2 gals.	Air: 5 to 7 gals.
SPECIFIC DIRECTIONS: As a harvest aid to desiccate trashy weeds in early maturing Com, apply at least 14 days before anticipated harvest date. Use the low (5 gal.) dilution rates when weeds are small and the crop canopy is fairly open. Desiccation of Morningglory and other vines may be erratic. DO NOT graze treated fields or feed fodder, forage or residual grain within 14 days of application.		
Cotton	1 to 1½ gals.	Air: 5 to 10 gals. Ground: 10 to 20 gals.
SPECIFIC DIRECTIONS: Apply no later than 7 days before harvest. The Cotton plants should be mature with the youngest bolls expected to make Cotton being at least 30 days old. Thorough coverage is essential. DO NOT graze treated fields or feed gin waste to livestock.		

Crop	Rate per Acre	Water
Dry beans	2 gals.	Air: 5 to 10 gals. Ground: 10 to 20 gals.
SPECIFIC DIRECTIONS: Make application 7 to 10 days before anticipated harvest, longer if temperature are cool. Thorough coverage is essential. DO NOT graze treated fields or feed treated fodder or forage to livestock.		
Flax	2 gals.	Air: 5 gals. (minimum) Ground: 10 gals. (minimum)
SPECIFIC DIRECTIONS: As a harvest aid to desiccate trashy weeds and to reduce moisture in the mature crop, apply in sufficient water to give thorough coverage, 7 to 10 days before anticipated harvest date. Activity of the spray will be enhanced by the addition of a good, non-ionic surfactant at the rate of 1 qt. per 100 gals. of spray. DO NOT graze treated fields or feed treated Flax foliage and fodder for 14 days after application.		
Grain sorghum	1½ to 2 gals.	Air: 5 to 10 gals. Ground: 10 to 20 gals.
SPECIFIC DIRECTIONS: To reduce the moisture content of the grain while the crop is standing, apply in sufficient water to give thorough coverage, 7 to 10 days before harvest. 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	2 gals.	Air: 5 to 10 gals. Ground: 10 to 20 gals.
SPECIFIC DIRECTIONS: Make application 7 to 10 days before anticipated harvest date. DO NOT graze treated fields or feed treated fodder or forage to livestock.		
Potatoes	2 gals.	Air: 5 to 10 gals. Ground: 10 to 20 gals.
SPECIFIC DIRECTIONS: To defoliate plants and facilitate harvest, apply in sufficient water to provide thorough coverage. Apply 10 days before harvest. Do not apply under conditions of extreme heat during the middle of the day. DO NOT graze treated fields or feed treated fodder or forage to livestock.		
Rice	1¼ to 2 gals.	Air: 5 or more gals.
SPECIFIC DIRECTIONS: Use to facilitate harvest and reduce moisture in the fully mature seed heads and to desiccate immature Red rice in mature White rice. Use the lower rate when crop conditions and weather are right to enhance rapid drying. Apply 7 to 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	2 gals.	Air: 5 to 10 gals. Ground: 20 to 30 gals.
SPECIFIC DIRECTIONS: Make application 7 or more days before normal harvest when Safflower heads are fully mature. DO NOT graze treated fields or feed treated forage.		
Southernpeas	2 gals.	Air: 5 to 10 gals. Ground: 10 to 20 gals.
SPECIFIC DIRECTIONS: Thorough coverage is essential. Make application 7 to 10 days before anticipated harvest, longer if temperatures are cool. DO NOT graze treated fields or feed treated fodder or forage to livestock.		
Soybeans	2 gals.	Air: 5 gals. (minimum) Ground: 20 gals. (minimum)
SPECIFIC DIRECTIONS: As a Soybean harvest aid to dry weeds in early maturing Soybeans and to facilitate the harvest, make application 7 to 10 days before anticipated harvest date when Beans are mature and ready for harvest. DO NOT graze treated fields or feed treated Soybean foliage.		
Sunflowers	2 gals.	Air: 5 to 10 gals. Ground: 20 to 30 gals.*
SPECIFIC DIRECTIONS: To facilitate harvest and reduce moisture in fully mature seed heads, apply in sufficient water to give good coverage. Make application 7 or more days before normal harvest when Sunflower heads are fully mature. Do not apply later than 7 days before harvest. DO NOT graze treated fields or feed treated forage within 14 days of application.		
*Apply with a high clearance sprayer.		

## STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal. **PESTICIDE STORAGE:** 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 containers 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 sawdust, clay granules or dirt.
2. Collect and place in suitable containers for disposal.
3. Wash area with soap and water 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 runoff 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:** Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill 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 the Manufacturer 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 the Seller and is accepted as such by the Buyer.

