UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

194 AA

DATE: September 30, 1981

SUBJECT: EPA File Symbol 352-EUP-RNO
DuPont Glean Weed Killer

002061

FROM: Deloris F. Graham DFG 10/1/81
FHB/TSS
E 10/1/81

TO: Robert Taylor
Product Manager (25)

Applicant: E. I. du Pont de Nemours and Company (Inc.)
Wilmington, Delaware 19898
Attention: James J. Trexel, Legal Department

Active Ingredient:
2-chloro-N-[(4-methoxy-6-methyl-1,3,5-triazin-2-yl) aminocarbonyl] benzenesulfonamide 75%
Inert Ingredients 25%

Background:

Acute Oral, Acute Dermal, Eye Irritation, Primary Dermal Irritation and Dermal Sensitization studies were submitted. Studies conducted by Haskell Laboratories. Data under accession number 245879. Method support not indicated.

Recommendation:

1. FHB/TSS finds these data acceptable to support an Experimental Use Permit for this product.

2. An Acute Inhalation Study not submitted. One must be submitted and/or cited or justification as to why this study is not necessary to support conditional registration of this product.

3. Based on the data reviewed, the appropriate signal word is CAUTION.

Label:

1. The signal word CAUTION must appear on center front panel.

2. The Precautionary statements must be revised to read:

"CAUTION. Harmful if swallowed. May irritate eyes, nose, throat and skin. Avoid breathing dust or spray mist. Avoid contact with skin, eyes and clothing."

3. A statement of practical treatment similar to following must be included:

> "If swallowed, drink 1 or 2 glasses of water and induce vomiting by placing finger in back of throat. Get medical attention. Never give anything by mouth to an unconscious person. If in eyes, flush with plenty of water and get medical attention. If on skin, wash with plenty of soap and water. Get medical attention if irritation persists."

4. The statement "Keep out of lakes, streams and ponds." must be revised to read "Do not apply directly to lakes, streams or ponds."

5. The sections headings "IMPORTANT," "Storage and Disposal," and "General Information" must appear under "Directions for Use."

Review:

1. Acute Oral Toxicity Study: Haskell Laboratories; Haskell #74-81; January 29, 1981.

   Procedure: Four groups consisting of 10 M each received one of the following doses: 3,000; 3,200; 3,500; 4,000 mg/kg and 6 groups consisting of 10 F each received one of the following doses: 1,000; 2,000; 2,500; 3,000; 4,000; 5,000 mg/kg. Observations made daily for 14 days after treatment. Necropsy performed on all animals.

   Results: At 3,000 mg/kg, 3/10 M died; at 3,200 mg/kg, 7/10 died; at 3,500 mg/kg, 9/10 M died; 4,000 mg/kg, 8/10 M died. At 1,000 mg/kg, 0/10 F died; at 2,000 mg/kg, 3/10 F died; at 2,500 mg/kg, 5/10 F died; at 3,000 mg/kg, 9/10 F; at 4,000 and 5,000 mg/kg, 10/10 F died.

   Symptoms observed included diarrhea, stained wet perineal area, stained face, salivation, weakness, prostration and slight to moderate weight loss, eye half-closed, lacrimation, chromodacryoirhea, lethargy and belly-to-cage posture.

   Necropsy revealed lungs dark bright red, slightly heavy to heavy, with colored mottling and foci, moist and the failure to collapse; pink thymus; pink brains; stomach distended with colored fluid; livers dark, slightly heavy to heavy with dark edges. G. I. tract distended with colored fluid; corneal opacity; salivary lymph nodes dull red, enlarged and mottled; pink adrenals, kidney pale brown with lobular markings.

   LD_{50} for males was 3,053 mg/kg with 95% confidence limits between 1,123 mg/kg and 3,342 mg/kg. LD_{50} for females was 2,341 mg/kg with 95% confidence limits between 1,969 mg/kg and 2,623 mg/kg.

   Study Classification: Core Guideline Data.

   Toxicity Category: III- CAUTION.

2. Acute Dermal Toxicity Study: Haskell Laboratories; Haskell #505-80; June 5, 1980.

Procedure: Five M and 5 F rabbits received a 2,000 mg/kg dose of the test material at abraded skin sites under occlusive wrap for 24-hour exposure. Observations made daily for 14 days after treatment. Necropsy performed on all animals.

Results: No mortalities. Sporadic weight loss and mild skin irritation 1-5 days after dosing. No compound related abnormalities seen at necropsy. LD_{50} greater than 2,000 mg/kg.

Study Classification: Core Guideline Data.

Toxicity Category: III - CAUTION.

3. Eye Irritation Study: Haskell Laboratories; Haskell #1034-80; November 21, 1980.

Procedure: Nine M New Zealand white rabbits received a 0.1 ml (73 mg) dose of test material in one eye each. The treated eyes of 6 animals remained unwashed, while the treated eyes of the 3 remaining animals were washed. Observations made 1, 2, 3, 4, 7, 14, and 18 days after treatment.

Results: In the unwashed group at day 1, 5/6 animals had corneal opacity (1/6 = 10, 2/6 = 15, 2/6 = 20); 1/6 had iris irritation (1/6 = 5); 4/6 conjunctive redness (4/6 = 1), 5/6 swelling (5/6 = 1), and 4/6 discharge (4/6 = 1). Corneal opacity and all other irritation clear by day 3.

In the washed group at day 1, 1/3 animals had corneal opacity (1/3 = 5); 1/3 conjunctive redness swelling (1/3 = 1), discharge (1/3 = 1). Corneal opacity and all other irritation clear by day 4 except for redness in 1/3 animals (1/3 = 1), which persisted through day 8.

Study Classification: Core Guideline Data.

Toxicity Category: III - CAUTION

4. Primary Dermal Irritation Study: Haskell Laboratories, Haskell #355-80; April 22, 1980.

Procedure: Six M rabbits received a 0.5 gm dose at 2 abraded and 2 intact skin sites per animal under occlusive wrap for 24-hour exposure. Observations made at end of 24-hour exposure period and at 72 hours after treatment.

Results: Slight erythema at 24 and 72 hours. No edema present.

Study Classification: Core Guideline Data.

Toxicity Category: IV - CAUTION.

5. Dermal Sensitization Study: Haskell Laboratories; Haskell #1073-80, December 5, 1980.

Procedure: The primary irritation test was conducted on 10 unexposed guinea pigs by applying and lightly rubbing 0.05 ml of a 60% and 6% suspension of the test material in DMP on shaved, intact shoulder skin.

The induction phase for sensitization was a series of 4 sacral intradermal injections of 0.1 ml of a 1.0% suspension in DMP, 1 each week beginning 2 days after treatment for primary irritation.

After a 13-day rest period, the guinea pigs were challenged for sensitization by applying and lightly rubbing in 0.05 ml of a 60% and a 6% same time 10 unexposed guinea pigs (controls) of the same age received identical topical applications.

Results: Primary irritation negative at 24 and 48 hours at 60% and 6% suspension. Challenge test at 24 hours at 60%. 3/10 animals positive and 7/10 animals negative. At 6%, all negative. Controls at 24 hours, 2/10 animals positive and 8/10 negative at 60% and all negative at 6%. At 48 hours, all animals negative at 60 and 6% for test and control animals.

Study Classification: Minimum Data.

Toxicity Category: Non-sensitizing.

FOR EXPERIMENTAL USE ONLY
EPA EXPERIMENTAL USE PERMIT NO. 352-EUP-XXX
NOT FOR SALE TO ANY PERSON OTHER THAN A PARTICIPANT
OR COOPERATOR OF THE EPA-APPROVED EXPERIMENTAL USE PROGRAM

DUPONT **Glean** TRADEMARK

WEED KILLER
DRY FLOWABLE

ACTIVE INGREDIENT:
2-Chloro-N-[(4-methoxy-6-methyl-1,3,5-triazin-2-yl) aminocarbonyl] benzenesulfonamide..... 75%
INERT INGREDIENTS 25%
U.S. Pat. 4,127,405 EPA Est. 352-DE-1

KEEP OUT OF REACH OF CHILDREN
PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS

CAUTION! MAY IRRITATE EYES, NOSE, THROAT, AND SKIN.
Avoid breathing dust or spray mist. Avoid contact with skin, eyes, and clothing.

ENVIRONMENTAL HAZARDS
Keep out of lakes, streams, or ponds. Do not contaminate water by cleaning of equipment or disposal of wastes.

IMPORTANT

Injury to or loss of desirable trees or vegetation may result from failure to observe the following: Do not apply or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. Do not use on lawns, walks, driveways, tennis courts, or similar areas. Prevent drift of spray to desirable plants. Do not contaminate any body of water. Keep from contact with fertilizers, insecticides, fungicides, and seeds.

Thoroughly clean all traces of "Glean" from application equipment immediately after use. Flush tank, pump, hoses, and boom with several changes of water after removing nozzle tips and screens (clean these parts separately).

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Do not re-use container. Bury empty container, or product that cannot be used, in a safe place away from water supplies, or dispose of by alternative procedures recommended by federal, state, or local authorities. Open dumping is prohibited.

NET 1 LB.

E. I. du Pont de Nemours and Co. (Inc.), Biochemicals Department, Wilmington, Delaware

GENERAL INFORMATION

Du Pont Glean™ Weed Killer is recommended for trial use for the control of many annual and perennial herbaceous weeds on noncropland areas where the maintenance and/or preservation of grasses is desired. It is a dry flowable product to be mixed in water and applied as a spray.

Glean™ may be applied preemergence or postemergence to weeds at any time of the year except when ground is frozen, provided adequate moisture is supplied by rainfall to activate the herbicide. The degree of control and duration of effect will vary with the amount of chemical applied, soil texture, soil pH, soil organic matter, rainfall, and other conditions.

Preemergence and Postemergence Applications Are To Be Tested For:

- The control of noxious weeds:

Bullthistle	Scotch thistle
Dalmatian toadflax	Skeletonweed
Poison hemlock	Tansy ragwort
Purple starthistle	Yellow starthistle

- The tolerance levels of industrial/highway turfgrasses:

Bermudagrass	Perennial ryegrass
Bluegrass	Red fescue
Orchardgrass	Tall fescue
Perennial fescue	Wheatgrass

- The control of other weeds:

Annual ryegrass	Milk thistle
Bracken fern	Oxeye daisy
Burclover	Pepperweed
Common mallow	Prickly lettuce
Fiddleneck	Sweet anise
Gumweed	Tumble mustard
Hoary cress	Wild carrot
Horsetail	Wild parsnip

002061

DIRECTIONS FOR TRIAL USE

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

Spray Preparation: Mix the proper amount of Glean™ into the water in the spray tank with the agitator running. Continuous agitation is required to keep the product in suspension. For postemergence applications, a surfactant such as Du Pont Surfactant WK or Ortho X-77®* may be added at the rate of 1 pint per 100 gallons of spray to improve wetting and/or contact activity.

Equipment - Spray Volumes: Use a properly calibrated power sprayer. Apply uniformly using a minimum of 10 gallons spray per acre using ground equipment.

Use Rates: Use the highest rate of the recommended rate range in heavy weed growth or on soils with greater than 2 1/2% organic matter.

WEED CONTROL - NONCROPLAND AREAS:

Railroad (crossings), highway right-of-ways, drainage ditch and canal banks, petroleum tank farms, storage areas, industrial plant sites, pumping installations, and other similar areas.

Preemergence and Early Postemergence - Use 1 to 2 1/2 ounces per acre.

Postemergence - Apply by spot treatment application using 1 to 4 ounces per 100 gallons spray. Best results are obtained when weeds are small (less than 2" tall or across) and are actively growing.

* Registered trademark of Chevron Chemical Company.