

US EPA ARCHIVE DOCUMENT

118601  
SHAUGHNESSEY NO.

2  
REVIEW NO.

EEB BRANCH REVIEW

DATE: IN 11/24/81 OUT 3/5/82

FILE OR REG. NO. 352-UNU

PETITION OR EXP. \_\_\_\_\_

DATE OF SUBMISSION November 12, 1981

DATE RECEIVED BY HED November 24, 1981

RD REQUESTED COMPLETION DATE March 24, 1982

EEB ESTIMATED COMPLETION DATE \_\_\_\_\_

RD ACTION CODE/TYPE OF REVIEW 110/New Chemical - Food or Feed Use

TYPE PRODUCT(S): I, D, H, F, N, R, S Herbicide

DATA ACCESSION NO(S). 070534, 070470

PRODUCT MANAGER NO. R. Taylor (25)

PRODUCT NAME(S) DU PONT Glean Weed Killer

COMPANY NAME DU PONT

SUBMISSION PURPOSE Proposed Full Registration of Small-Grain Cereals and  
Reduced - Tillage Fallow

SHAUGHNESSEY NO.	CHEMICAL, & FORMULATION	% A.I.
<u>118601</u>	<u>2-chloro-N-[(4-methoxy-6-methyl-1,3,</u>	
	<u>5-triazin-2-yl)aminocarbonyl]benzene-</u>	
	<u>sulfonamide</u>	<u>75%</u>

118601  
SHAUGHNESSEY NO.

REVIEW NO.

EEB BRANCH REVIEW

DATE: IN 1/5/82 OUT 3/5/82

FILE OR REG. NO. 352-UNU

PETITION OR EXP. \_\_\_\_\_

DATE OF SUBMISSION December 28, 1981

DATE RECEIVED BY HED January 5, 1982

RD REQUESTED COMPLETION DATE April 24, 1982

EEB ESTIMATED COMPLETION DATE \_\_\_\_\_

RD ACTION CODE/TYPE OF REVIEW 111/Resubmission - New Chemical - Food or  
Feed Use

TYPE PRODUCT(S): I, D, H, F, N, R, S Herbicide

DATA ACCESSION NO(S). 070534, 070470

PRODUCT MANAGER NO. R. Taylor (25)

PRODUCT NAME(S) Glean

COMPANY NAME DU PONT

SUBMISSION PURPOSE Submission of Further Data in Support of Registration

SHAUGHNESSEY NO.	CHEMICAL & FORMULATION	% A.I.
<u>118601</u>	<u>2-Chloro-N-[(4-methoxy-6-methyl-1,3, 5-triazin-2-yl)aminocarbonyl]benzene-</u>	
	<u>sulfonamide</u>	<u>75%</u>

100.0 Pesticide Use

Glean is a herbicide produced by DuPont and designed to be used on small grains and reduced tillage follow for the same grains.

100.1 Application Method/Directions

DuPont's Glean weed killer is a dry flowable granule to be mixed in water and applied as a spray for selective control of annual broadleaf weeds and some grasses in wheat, barley, oats and reduced tillage follow. Glean can either be used as postemergent or preemergent to crop and weeds, however, it is recommended to be an early postemergent. Glean is to be applied in at least 1 gallon or 3 gallon (final spray) per acre for aerial and ground application respectively.

100.2 Application Rates

Depending on the weeds to be controlled and the timing of applications, the application rates range from 1/6 oz to 2/3 oz of product/acre or .12-.50 oz a.i./A.

100.3 Precautionary Labeling

Precautionary labeling include the following statements:

CAUTION

Keep out of reach of children  
May irritate eyes, nose, throat and skin.  
Keep out of lakes, streams or ponds. Do  
not contaminate water by cleaning of  
equipment or disposal of wastes.

101.0 Chemical and Physical Properties

The reader is referred to Chapter IV, p. 40 of the draft standard for specific information.

102.0 Behavior in the Environment

The reader is referred to Chapter V, p. 42 of the draft standard for information.

103.0 Toxicological Properties

For an in-depth discussion of TOX properties, the reader is directed to Chapters VI and VIII, pages 45 and 49 of the draft standard. The table provided in this review is a summary of relevant data.

MAMMALS

<u>SPECIES</u>	<u>TEST</u>	<u>MATERIAL</u>	<u>RESULTS</u>
Rat, male	Acute oral LD <sub>50</sub>	Technical	5545 mg/kg
Rat, female	Acute oral LD <sub>50</sub>	Technical	6293 mg/kg
Rat, male & female	Acute dermal LD <sub>50</sub>	Technical	>3400 mg/kg
Rat	3-generations repro. study NOEL	Technical	> 500 ppm

BIRDS

Mallard duck	Acute oral LD <sub>50</sub>	Technical	>5000 mg/kg
Bobwhite quail	Acute oral LD <sub>50</sub>	Technical	>5000 mg/kg
Bobwhite quail	8-day dietary LC <sub>50</sub>	Technical	>5000 ppm
Mallard duck	8-day dietary LC <sub>50</sub>	Technical	>5000 ppm

AQUATIC ORGANISMS

Bluegill sunfish	96-hour LC <sub>50</sub>	Technical	>300 ppm
Fathead minnow	96-hour LC <sub>50</sub>	Technical	>300 ppm
Rainbow trout	96-hour LC <sub>50</sub>	Technical	>250 ppm
Channel catfish	96-hour LC <sub>50</sub>	Technical	> 50 ppm
<u>Daphnia magna</u>	48-hour EC 50	Technical	370 ppm

104.0

Hazard Assessment

Glean is to be applied at the rate of 3.5 - 14.2 g a.i./A to control weeds in wheat, barley, oats and reduced-tillage follow fields.

Residues

Residue chemistry's review (attached) summarized a field study which applied 100 g/ha or 247 g/A (17 X the normal rate) on plants 12" high. The resultant measured residues ranged from 10.8 to 0.38 ppm (dry weight). A similar green hours study treated flats of wheat at the rate of 70 g/ha (172 g/h). The resultant residues were 1.5 ppm at day 1 to 0.045 ppm at maturity (c.a. 2 months later). The grain contained only 0.0072 ppm of radioactivity. Very little translocation was observed.

#### 104.1 Likelihood of Exposure

The residue studies above which were conducted at 17X and 14X the maximum application rate indicate relatively low levels of residues available for wildlife. With acute oral and dietary study results both greater than 5000, and residue level less than 1 ppm in the field, few if any toxic effects are expected in treated areas.

The only effect expected is the reduction of broadleaf cover in the treated follow fields and along a narrow portion of the down wind portion of the fields.

##### Aerial Draft Concerns

An aerial spray-drift study validated by R. Holst, EFB (Review attached) indicates that spray drift is not a major concern with this product, and even less of a concern when used with Nalco-trol (an anti-drift agent). In the worst case measurement taken during the study were observed at 14 meters down wind. This area received an amount equal to 1.57% of the application rate. At 21 m .69% was received. In only one study (of 4) were significant amounts found up wind. In no case were quantities greater than .2% of the application rate found farther than 42 m from the field. The caution statement minimizing spray drift should be sufficient to minimize any possible hazard from spray drift.

#### 104.1.2 Endangered Species

Due to the toxicity of Glean to wildlife, there is little concern regarding endangered wildlife. Glean controls annual broadleaf weeds and certain grasses therefore as a potential hazard exists for endangered plants.

In that regard, an October 18, 1981 OES opinion for Lontrel 205 (Dowco 290) a broadleaf herbicide whose use pattern is wheat, barley and oats read, "...after reviewing the distribution of the above species, there seems to be little chance of overlap between the usage of this herbicide and the range of those listed plants." Considering that opinion and the fact that spray drift is not a problem, endangered plants are not expected to be adversely effected.

#### 104.1.3 Adequacy of Toxicity Data

In that this product is intended to be used under conditions where birds may be subjected to repeated or continuous exposure to the pesticide or any major metabolite or degradation product, especially preceding or during the breeding season (§163.71-4(a)(3)) and avian reproduction study is called for. However, due to the small quantities being applied to fields, the small residue levels discussed above, and the fact that the product is practically non-toxic to birds, there is little reason to request the study. The registrant should be advised that this study may be requested if the use pattern or application rate is changed.

The basic fish and wildlife requirements have been satisfied as discussed in the "standard".

105.0 Classification

Fish and Wildlife exposures/toxicities are such that a classification more restrictive than "General" is not necessary.

107.0 Conclusions:

EEB has completed a full risk assessment of the proposed registration of Glean for use on small grains and reduced tillage follow. Based upon the available data and use information, EEB concluded that the proposed use poses minimal hazards to nontarget organisms.

NOTE: The label statements on the proposed label are adequate for the product. It seems more appropriate to start using the newly developed label statements. I suggest RD discuss these with Du Pont.

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