114402
SHAUGHNESSEY NO.

REVIEW NO.

EEB BRANCH REVIEW

DATE: IN 1/3/83 OUT 4/6/83

FILE OR REG. NO. 359-TNI

PETITION OR EXP. PERMIT NO.

DATE OF SUBMISSION 12/17/82

DATE RECEIVED BY HED 1/3/83

RD REQUESTED COMPLETION DATE 5-1-83

EEB ESTIMATED COMPLETION DATE 4-24-83

RD ACTION CODE/TYPE OF REVIEW 165/Old Chemical

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

DATA ACCESSION NO (S).

PRODUCT MANAGER NO. R. Mountfort (23)

PRODUCT NAME(S) Tackle

COMPANY NAME Rhone-Poulenc, Inc.

SUBMISSION PURPOSE Proposed Full Registration of Soybeans

SHAUGHNESSEY NO.	CHEMICAL, & FORMULATION	% A.I.
114402	Acrifluorfen , sodium salt (Sodium 5-(2- Chloro-4-(trifluoromethyl)phenoxy-2-nitrobenzoate	21.1

100 Pesticide Use

To control a number of important weeds in soybeans.

100.1 Formulation

21.1% active ingredient

100.2 Application Methods, Directions, Rates

RECOMMENDED RATES:

The following weeds are controlled by Tackle when applied postemergence at 2.0 - 3.0 pints/acre (see weed size restrictions under TIMING).

COMMON NAME	SCIENTIFIC NAME
Carpetweed	Mollugo verticillata
Cocklebur	Xanthium pensylvanicum
Common Ragweed	Ambrosia artemisiifolia
Eastern Black Nightside	Solanum ptycanthum
Florida Pusley	Richardia scabra
Giant Ragweed	Ambrosia trifida
Hemp Sesbania	Sesbania exaltata
Jimsonweed	Datura stramonium
Ladysthumb	Polygonum persicaria
Morningglories (Annual)	Ipomoea spp.
Pennsylvania Smartweed	Polygonum pensylvanicum
Pigweed spp.	Amaranthus spp.
Smallflower Morningglory	Jacquemontia tamnifolia
Tropic Croton	Croton glandulosus
Velvetleaf	Abutilon theophrasti
Venice Mallow	Hibiscus trionum
Wild Mustard	Brassica Kaber

Tackle does not contain a surfactant. For control of certain weed species addition of a nonionic surfactant is recommended.

Addition of a nonionic surfactant to the spray mix will improve effectiveness when environmental conditions are not optimal (see MIXING and APPLICATION instructions). Add 1 quart of surfactant per 100 gallons of spray mix under these conditions.

Additon of a nonionic surfactant is recommended for control of Annual Morning glories and Hemp Sesbania in the following southern states: Al, AR, Fl, GA, LA, MS, NC, OK, SC, TN, VA.

Tackle at 3.0 pints/acre plus a nonionic surfactant is recommended for control of Velvetleaf. Tackle at 3.0 pints/acre plus a nonionic surfactant is recommended for suppression of escape Giant Foxtail (Setaria faberi) seedlings.

MIXING and APPLICATION:

Fill the spray tank about one-half full with water and add the required amount of Tackle. Maintain agitation while filling and also when spraying to insure a uniform spray mmixture.

Tackle should be applied by ground spray equipment, using flat fan or hollow cone nozzles spaced a maximum of 20 inches apart. The sprayer should be calibrated to deliver a spray volume of 20-30 gallons per acre using a spray pressure of 30-40 pounds per square inch at the nozzle tips. DO NOT use low pressure flood type nozzles that deliver coarse sprays. Tackle should be applied under favorable growing conditions such as good soil moisture, maximum daily air temperature above 70°F, and relative humidity above 40%. Weed control generally improves with increasing relative humidity and soil moisture. Tackle should not be used during periods of persistent dry weather when soybeans and weeds are under stress and not actively growing.

TIMING: To achieve the maximum control of susceptible weeds, Tackle should be applied to actively growing weeds from seedling to maximum of 4 true leaf stage (do not count cotyledonary leaves). This sound usually occur 14 to 21 days after planting.

Soybeans that exceed the third trifoliate stage of growth may interfere with the spray pattern. This will prevent adequate coverage of the weeds, reducing the effectiveness of Tackle. In fields where soybeans are drilled in narrow rows or broadcast seeded, Tackle should be applied when the soybeans reach the 1 to 2 trifoliate leaf stage to insure thorough spray coverage of the weeds.

USE RESTRICTION

Do not use treated plants for feed or forage.
Do not apply more than 3 pints per acre, or make more than one application to soybeans per growing season.

Do not apply within 100 days of harvest.
Do not apply if rainfall is expected within 4 to 6 hours because weed control may be decreased.

Do not use during periods of dry weather when crop and weeds are under drought stress and are not actively growing.

CROP ROTATION RESTRICTIONS

Only soybeans can be planted the year Tackle is applied.

100.3 Target Organism

A number of important weeds in soybean

100.4 Precautionary Labeling

DANGER Corrosive, causes eye damage. Wear goggles or face shield when handling. Harmful if swallowed, inhaled or absorbed through skin. Avoid breathing vapors or spray mist. Avoid contact with skin or clothing. Remove contaminated clothing and launder before reuse.

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

101 Physical and Chemical Properties

101.1 Chemical Name

Acifluorfen: sodium salt (Sodium 5-(2-Chloro-4-(trifluoromethyl) phenoxy-2-nitrobenzoate)

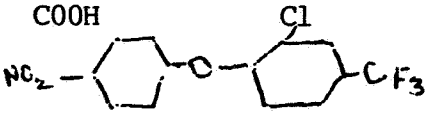
101.2 Common Name

Tackle

101.3 Physical State

Melting Point	143-158°C
Solid	
Color	tan

101.4 Structural Formula



101.5 Solubility (conc. temp)

Distilled water	120 ppm
Acetone	50-60% (ca 21°)

102 Behavior in the Environment

As per the Environmental Fate Branch, the available data are insufficient for use in a hazard assessment at this time.

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03.0 Toxicological Properties

Organism	Study No.	Test Results (95% C.L.) 1/	Reported Test Material 2/	Validation Status
Mallard Duck	2031-80	LD50: 2510 mg/kg a.i.	Tackle 2S	Invalid
Bobwhite Quail	2021-80	LD50: 332.7 (266.5-423.8) mg/kg a.i.	Tackle 2S	Supplemental
Mallard Duck	2011-80	LC50: >5620 ppm a.i.	Tackle 2S	Supplemental
Bobwhite Quail	2001-80	LC50: >5620 ppm a.i.,	Tackle 2S	Supplemental
Bluegill Sunfish	BW-81-1-811	LC50: 62.2 (48.9-80.0) ppm a.i.	Tackle	Supplemental
Rainbow Trout	BW-81-2-815	LC50: 17.9 ppm a.i.	Tackle	Supplemental
Sheepshead Minnow	BP-81-6-111	LC50: 39.1 (31.9-48.5) ppmm a.i. 3/	Tackle	Supplemental
Daphnia Magna	BW-81-1-807	LC50: 70.3 ppm a.i.	Tackle	Supplemental
Mysid Shrimp	BP-81-6-97	LC50: 3.7 (2.4-5.7) ppm a.i. 3/	Tackle	Supplemental
Rat	- A.O.	LD50: 2025 mg/kg	-	-
Rabbit	Dermal	LD50: >2000 mg/kg	-	-

1/ All results are apparently presented as active ingredient. Clarification of this in the sheepshead minnow and mysid shrimp study is required, however.

2/ The formulation apparently tested was Tackle 2S or Tackle, but clarification of the per cent active and inerts is required.

3/ Clarification of the dosing (whether it was done based on active ingredient) is required.

104.0 Hazard Assessment

104.2 Residues

The proposed use provides for the following maxium expected residues, developed as per the articles of Hoerger and Kenage (1972) and Kenaga (1973). Assuming acriflourfen weight is 8.0-lbs/gal. for technical material. 3 points would=3-lbs X0.25%=0.75-lb a.i./A.

Vegetation Type/ Insect/Soil Surface	Maximum Expected Residues Soybeans (0.75-lb.a.i./A)
Sparse foliage (short grasses)	180 ppm
Long grasses	82 ppm
Leafty situation	94 ppm
Forage-alfalfa, clover/small insects	43 ppm
Pod/Seeds/Large insects	9 ppm
Fruits	5 ppm
Soil (0.1 inch)	16.5 ppm
Water (0.5 ft/5% runoff or drift	0.0275 ppm
Water (0.5 ft)	0.551 ppm

104.3 Likelihood of Adverse Effects To Non-Target Organisms

The proposed use provides for maximum exposure to nontarget avian, aquatic and mammalian species. Beyond this, however, EEB is unable to make comment on the acute hazards until clarification of the submitted data is received. Further, until the environmental fate data are finalized, submitted, and reviewed by EFB, EEB is unable to make comment on potential chronic hazards and the need for chronic ecological effects data.

104.4 Endangered Species Considerations

EEB can make no comment until the data are clarified or finalized as indicated in 104.3.

104.5 Additional Data Required

See 107.0 below.

107.0 Conclusions

As per instruction from R. Mountfort and J. Akerman of RD, as well as in consideration of the registrant's letter of 12-17-82, EEB has reviewed this formulation of acifluorfen as if it were a totally new compound and has not considered any of Rohm and Haas's data on acifluorfen. With this in mind, EEB is unable to complete a hazard assessment for the proposed use on soybeans. This decision is based on the following:

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1. It is unclear from the data/information submitted what formulation of Tackle was tested in the ecological effects data submitted. In some studies Tackle 2S is indicated as the test substance; in others Tackle is indicated. Further, the percent active is presented as 21.1% on the label, as 25.0% in some of the studies, as 25.6% in other studies, and as 26.2% and 25.0% active, with an average of 25.6%, in a related memo. Also, the total variation in per cent active, as shown in the confidential formula, should not be as great as indicated above. Moreover, two other pieces of submitted information show discrepancies in the technical material used to make the formulation. One document shows the per cent

[redacted]

Considering this variation in values, EEB needs to know exactly what formulation was used in the studies submitted. EEB requires a complete written description or breakdown of the actives and inerts, including percentages, of the formulation(s) used. EEB requires this information in order to determine if the formulation(s) used can support registration.

(2) Relative to (1) above, it should be noted that if the formulation used in the submitted studies differs significantly from the formulation proposed for registration, then EEB will require new studies to be performed using technical grade material. Further, it should also be noted that even if the formulation were deemed acceptable to support registration, two other factors must be considered:

a. The formulation data, if accepted, would only support the registration of this formulation. Any change in formulation (to include different inerts or to increase the percent active) would require that additional basic data be developed using technical grade material.

b. Once the environmental fate data are finalized and reviewed, and if EEB determines that chronic effects data are needed, then additional basic data using technical material may be required. Such data might be required because, normally, all chronic effects data are developed using technical material, and in order to provide a meaningful comparison of acute effects data with chronic effects data, acute effects data using technical material normally are required.

(3) As indicated above, EEB is unable to make a determination of potential chronic hazards and/or the need for chronic effects data until the environmental fate data are developed and reviewed, and accepted, by EFB.

(4) A review of the proposed use pattern indicates that a honeybee acute contact LD50 study, using technical material, is required to support this use.

(5) Relative to the submitted data, two other comments are appropriate:

a. In the sheephead minnow and mysid shrimp studies was dosing done based on active ingredient? It appears that it was, but clarification of this is required.

b. It is indicated in all of the submitted studies that samples were taken for residue analyses. However, residue analyses data were not submitted for the rainbow trout, sheepshead minnow, and mysid shrimp studies. These data should be submitted for review.

With submission of the above data/information, EEB can determine the acceptability of the submitted data, determine what data are required, and further finalize the hazard assessment.

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