

File

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Shaughnessey No.

EEB REVIEW

DATE: IN September 12, 1988 OUT February 6, 1989

FILE OR REG. NO. 707-EUP-RRO
PETITION OR EXP. NO. 8G3680
DATE OF SUBMISSION September 7, 1988
DATE RECEIVED BY EFED September 12, 1988
RD REQUESTED COMPLETION DATA December 5, 1988
EEB ESTIMATED COMPLETION DATE December 5, 1988
RD ACTION CODE/TYPE OF REVIEW 700
TYPE PRODUCTS(S): I, D, H, F, N, R, S Fungicide
DATA ACCESSION NO(S). _____
PRODUCT MANAGER NO. Lois Rossi/Larry Schnaubelt (PMT #21)
PRODUCT NAME(S) Nova 40W (RH-3866/Myclobutanil/Rally)
COMPANY NAME Rohm and Hass Company
SUBMISSION PURPOSE Experimental Use Permit for stone fruit

SHAUGHNESSEY NO. CHEMICAL AND FORMULATION % A.I.

_____	_____	_____
_____	_____	_____
_____	_____	_____

100.5 Precautionary Labeling:

ENVIRONMENTAL HAZARDS

Do not apply directly to water. Do not contaminate water by cleaning of equipment or disposal of water. Do not apply when weather conditions favor drift or runoff from areas treated.

101. HAZARD ASSESSMENT:

101.1 Discussion:

General- It is not stated if the spraying will be done with ground or aerial equipment (see "Conclusions").

Site Description- The sites will be orchards where stone fruit is grown. The sites be will 2½ acre plots in the following states: California (250 acres), Idaho (25), Montana (10), Oregon (40), Utah (20), Washington (40), Alabama (5), Arkansas (10), Colorado (10), Illinois (5), Louisiana (10), Michigan (40), Missouri (5), Ohio (5), Texas (20), Wisconsin (20), Georgia (40), Maryland (20), New Jersey (25), New York (10), North Carolina (20), Pennsylvania (20), South Carolina (40), Virginia (20) and West Virginia (10).

101.2 Likelihood of Adverse Effects:

Terrestrial Organisms- Myclobutanil is characterized as slightly toxic to practically nontoxic to birds (acute LD₅₀ of 510 mg/kg for bobwhite quail and a dietary LC₅₀ of >5,000 ppm for bobwhite and for mallard ducks). The LD₅₀'s for male and female white rats are 1600 and 2290 mg/kg (slightly toxic). In a two-generation reproduction test, the systemic and reproductive NOEL was 50 and 200 ppm. No adverse reproductive effects were found at 60 ppm in bobwhite quail and mallard ducks.

Aquatic Organisms- Myclobutanil is characterized as moderately toxic to fish; the LC₅₀ for rainbow trout was 4.2 ppm and it was 2.4 ppm for bluegill sunfish. The fish development and survival MATC was >0.98 <2.2 ppm.

Invertebrates- The LC₅₀ of *Daphnia* was 11 ppm., which is characterized as slightly toxic.

Beneficial Insects- Not required.

Terrestrial Residue- At the maximum application rate of .15 pounds per acre.

Residues on Terrestrial Food Items (ppm)

	Short Grass	Long Grass	Leafy Plants	Forage Insects	Seed Pods	Fruit
Maximum	36	18	20	9	<2	>1
Typical	19	15	6	5	<1	<1

EEB's "Fate" computer program was used to determine the accumulation of myclobutanil residues assuming a typical residue of short grass (19 ppb) and nine applications before harvest (see attached sheet). The highest level, 30.2 ppb, occurred immediately after the last application. Since this residue is below all critical levels for terrestrial vertebrates, it is unlikely that they would experience undue hazard from myclobutanil.

Aquatic Residue- If myclobutanil is applied at the rate of .15 pounds ai to a ten-acre orchard that drains into a 1-acre pond that is six feet deep, the concentration of toxicant in the pond

EXPERIMENTAL USE PERMIT

Myclobutanil

Nova 40W

100. SUBMISSION PURPOSE AND LABEL INFORMATION:

100.1 Submission Purpose and Pesticide Use:

EUP Applicant- Rohm and Haas Company
Independence Mall West
Philadelphia, PA 19105

Purpose- To conduct approximately 288 stone fruit grower trials

Study Objectives- To evaluate the product performance of Nova 40W against diseases of stone fruit, define optimum use rates, application timings, number of applications and to generate field residue data.

100.2 Formulation Information:

41.5 % α -butyl- α (4-chlorophenyl)-1H-1,2-triazole-1-propanenitrile
58.5 Inert ingredients
100 % w/w

100.3 Application Methods, Rates and Directions for Use:

Methods- Sprayed on as a foliar treatments a preventive treatment for fungal diseases.

Rate of Application and Controls- Dosage levels will range from 0.06 to 0.15 pounds ai per acre. Application can be made from before the trees bloom until within 14 days of harvest on a 10 to 14 day schedules if needed up to a total of 0.5 to 1.4 pounds ai per acre per season.

Directions for Use- Sprayed as a tank mix, alone or in combination. Never to be applied through an irrigation system.

100.4 Target Organisms:

Blossom blight	<i>Monilinia</i> spp.
Powdery mildew	<i>Podosphaera</i> spp.
Shothole	<i>Stigmia</i> spp.
Leaf spot	<i>Coccomyces</i> spp.
Rusty spot	<i>Sphaerotheca</i> spp.
Rust	<i>Tranzschelia</i> spp.

the will result if there is a runoff of 1% can be calculated (using 61 ppb the concentration that would result from the direct application of one pound ai) as:

$$\frac{.15 \text{ lbs}}{A} \times 0.01 \times 10 A \times \frac{61 \text{ ppb}}{\text{lb}} = 0.9 \text{ ppb}$$

If the runoff was 5%, the concentration would be 4.6 ppb. Direct application of the myclobutanil to a 6 inch deep pond would produce a concentration of 109.8 ppb. This is below the level of concern for aquatic organisms and it is unlikely that they would experience undue hazard from myclobutanil.

101.3 Endangered Species:

The levels of residues that trigger concern for endangered species are 1/10 of the lowest mammal LC_{50} and 1/20 of the fish and aquatic invertebrate LC_{50} . These levels for myclobutanil are (Rieder, 1987): Birds- 60 ppm, Mammals- 145 ppm, Fish- 120 ppb, and Aquatic Invertebrate- 550 ppb. Since none of these "Trigger Levels" are expected to be reached in this experimental use, endangered species are not believed to be in jeopardy.

101.4 Adequacy of Toxicity Data:

The data required for an EUP have been accepted.

101.5 Adequacy of the labeling:

The statement in the "Environmental Hazards" warning label should be changed to "Do not apply directly to water or wetlands (swamp, bogs, marshes, and potholes). Do not contaminate water when disposing of equipment washwaters."

102. CLASSIFICATION- Myclobutanil is not a restricted pesticide.

103. CONCLUSIONS:

EEB has reviewed the proposed EUP for myclobutanil for use on stone fruits. There are sufficient data for this EUP application, but additional studies may be required for future 3c2 registration (see Clark, 1987). Based on the available information a minimal adverse to the environment is expected. This analysis was done on the assumption that all application will be done by ground spray equipment.

104. REVIEWED BY:

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105. APPROVED BY:

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