UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

001150

DATE: February 5, 1979

SUBJECT: Registration No: 3125-GEL to support registration of a new product on potatoes and soybeans. Caswell No. 33D

FROM: John Doherty
Toxicology Branch

TO: Robert Taylor
Product Manager #25

Product: SENCOR 75 Wettable Granular Herbicide

Active Ingredient 4-amino-6(1,1-dimethylethyl)-3-(methylthio)-1,2,4-triazin-5 (4H)-one	75%
Inerts*	25%
	100%

40 CFR 180.332 has set tolerances for the active ingredient on potatoes, (0.6 ppm) and soybeans (0.1 ppm).

* The inerts are cleared for pre and postemergence under 180.1001 (c or d).

1.) As per conversation with R. Mountfort (Acting Product Manager #25, Jan. 24, 1979) Sencor has been released from Rogoff's memo of 10/6/76 concerning nitrosamines.

Recommendation:

1.) Toxicology Branch objects to the registration of this product because the inhalation hazard is not defined. The inhalation LC 50 test for the product was judged SUPPLEMENTARY or unacceptable for proper assessment of the hazard. Additional data defining how the atmosphere was maintained in the chamber, and data on periodic sampling and particle size are also necessary.

In addition, the inhalation hazard for the product when used as a spray mist or as otherwise directed is not clear. It must be established if when used as directed if this product will result in a respirable spray mist, and if so an inhalation LC 50 determination must be determined with the product as used.

2.) The label, although the signal word is correct may not meet EPA criteria for type size etc.

EPA FORM 1320-6 (REV. 3-76)

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Remarks:

1.) Five acute tests were submitted for review and revealed the following information concerning this product as formulated.

STUDY	RESULTS	TOXICITY CATEGORY	DATA EVALUATION
acute oral LD 50 rats	2379 mg/kg	III	Guidelines
acute dermal LD 50 rabbits	> 5000 mg/kg	III	Guidelines
eye irritation rabbits	corneal opacity	II	Minimum
dermal irritation rabbits	index = .17	IV	Guidelines
inhalation LC 50- rats	20 mg/Li	(IV ?)	Supplementary

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Review of Tests Submitted

Acute Oral Toxicity of Sencor 75% Wettable Granular to Rats

Mobay Chemical Corporation, Kansas City, Mo. 78-R-020, Sept 25, 1978

The test material (SENCOR 75% Wettable Granular) was dissolved in water and administered to rats at 1000, 1470, 2160, 3180, 4670 and 6860 mg/kg. The rats were fasted for 18 hours prior to dosing. 10 male and 10 female Sprague-Dawley rats were tested at each dose level.

LD 50's of 2379 (1914 to 2958) mg/kg for males and:

2794 (2009 to 3885) mg/kg for females were determined.

All of the test levels showed some signs of intoxication. These included tremors, convulsions, lacrimation and salivation. The three lowest levels of the test animals did not show lesions following necropsy. The higher levels exhibited congested lungs, hemorrhagic gastritis and enteritis.

This test is CORE GUIDELINES. Category III Toxicity

Acute Dermal Toxicity of SENCOR 75% Wettable Granular to Rabbits

Mobay Chemical Corporation, 78-R-020, Sept. 19, 1978

4 male and 4 female rabbits were used. These were shaved free of hair with electric clippers with an angra blade and then abraded with a bristle brush. The test material (SENCOR 75% Wettable Granular) was applied undiluted at a rate of 5000 mg/kg. The test sites were covered with plastic and secured. After 24 hours the test material was removed.

Results:

The rabbits appeared normal throughout the study. Necropsy did not reveal any gross lesions. This test is CORE GUIDELINES. Category III toxicity.

Eye and Dermal Irritancy of SENCOR 75 Wettable Granular

MOBAY CHEMICAL CORPORATION, 78-R-020, Sept. 25, 1978

Part A. Eye Irritation

9 New Zealand white rabbits eyes were examined for good health. 50 mg of test material (SENCOR 75 wettable granular) was instilled into the left eye. Three of these rabbits had their treated eyes washed with 200 ml of luke warm water 45 seconds after the test material was administered. The other six did not have their treated eyes washed.

NOTE: It was stated that it was not feasible to instill 100 mg of test material.

Results:

Corneal opacity developed in 5/6 unwashed rabbits and in 1/3 of the washed rabbits. This opacity was reported as being reversed within 7 days. There was still irritation presistant at 7 days for the iris and conjunctivae.

This test is CORE MINIMUM. Inspite of the fact that 50 mg and not 100 mg of test material were instilled, it can be concluded that SENCOR causes corneal opacity that is reversible. It is unlikely that 100 mg will be instilled or put into ones eyes in practice. This product is a category II toxicant.

Part B.

The backs of six rabbits were closely shaved with a clipper and two test sites were prepared on each animal. One site was abraded by crosshatching through the stratum corneum. The test material was applied in 0.5 gm amounts under a gauze patch and allowed to irritate the skin for 24 hours.

Only slight erythema developed in the abraded area of one rabbit. The primary irritation index is 0.17.

This test is CORE GUIDELINES. The product is not irritating to the skin.

Acute Inhalation Toxicity of SENCOR 75% Wettable Granular to Rats.

MOBAY CHEMICAL CORPORATION, 68-22, Sept. 25, 1978

Ten male and ten female rats were exposed for one hour to SENCOR 75% Wettable Granular. The concentration was stated as being 20 mg/liter of compound.

No signs of toxicity or mortality developed. Some gross lesions were noted that included chronic pneumonia and pulmonary congestion.

This test is tentatively CORE SUPPLEMENTARY. It is not stated how the atmospheric concentration was maintained. The atmosphere should have been periodically sampled for concentration and particle size.

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