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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MEMORANDUM

DATE: NOV 27 1981

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

SUBJECT: Dowicil 75; New Use Pattern, Reg. No. 464-403. (Accession No. 245115, Caswell No. 181)

FROM: George Z. Ghali, Ph.D.
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Registrant: The Dow Chemical Company
Midland, Michigan 48640

Action Requested:

Evaluation of the safety of Dowicil 75 use in petroleum industry to prevent bacterial growth in the secondary oil recovery water.

Recommendations:

1. Toxicology Branch has no objection as for the proposed new use of Dowicil 75 in the secondary oil recovery water and defers to the Environmental Fate Branch the question of whether this new use would have any impact on the ground water.
2. Dowicil 75 is not cleared under 40 CFR 180.1001. However, clearance is not required for this particular use since it does not involve use on food or feed.
3. The precautionary statements on the proposed label should indicate that this product may be a skin sensitizer.
4. The skin sensitization test submitted with this petition is acceptable as Core-minimum data. The testing procedure conform to current standard testing procedures.

Background Information:

Dowicil 75 is a mixture of two separate and distinct isomers; the cis and the trans of 1-(3-chlorallyl)-3,5,7,-triaz-1-azoniaadamantan chloride. Therefore, any toxicity testing must be conducted using both isomers.

Dowicil has not been cleared under 40 CFR 180.1001 (d). At different times, but apparently for the same reason, both R. Engler and K. Bailey have rejected this request. At least one reason for concern about this compound relates to the fact that it contains a vinyl chloride moiety within its structure. While this vinyl chloride moiety raises questions about Dowicil, this does not mean that there is any convincing reason to believe that the two compounds, Dowacil and vinyl chloride, will behave similarly in man.

Toxicology Data:

The toxicology data are summerized in K. Bailey memos of 3/10/78 and 10/27/77; D. Ritter memo of 5/2/81; Gary Burin memo of 6/10/80.

Data Submitted with the Current Petition:

Skin Sensitization Potential:

Testing Chemical:

Dowicil 75 sample identified as WP062580 460 A

Testing Laboratory:

Toxicology Research Laboratory, Dow Chemical, Midland, Michigan, USA

Procedure:

The guinea pig sensitization test used is a modification of the method of Maguire (1973). The test material was applied as a 10% weight/volume solution in Dowanol DPM/Tween 80 (9:1). The epoxy resin is known to be a skin sensitizer and served as a positive control.

The testing procedure conform with current standard methods and cited in the Final Draft of FIFRA-TOSCA-OECD Guidelines April 8, 1981.

Results

A positive sensitization response consisting of slight to moderate redness was observed on 6 of 10 guinea pigs receiving DER 331. The test material sensitized 2 of 10 guinea pigs. Therefore, as a 10% solution in DOWANOL/Tween 80 (9:1), this material may be considered a skin sensitizer. At the site of insult very slight redness was observed in many guinea pigs on both the test and control groups.

Conclusion:

The test material may be considered a skin sensitizer. The authors stated that at the site of insult, very slight redness was observed in many guinea pigs on both test and control groups. This is interpreted as an indication of chemical irritation.

Core Classification:

This study is acceptable as Core-minimum data.

Reference:

Maguire, H. C. (1973). The Bioassay of Contact Allergens in the Guinea
Pig. J. Soc. Cosmetic Chem. 24, 151-162.

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