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8EHQ-1293-12801

OFFICE OF
PREVENTION

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UNION CARBIDE CORPORATION 39 OLD RIDGEBURY ROAD, DANBURY, CT 06817-0001

December 22, 1993

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Office of Pollution Prevention & Toxics
U.S. Environmental Protection Agency
401 M Street., SW
Washington, DC 20460



8EHQ-93-12801
INIT 12/29/93

Attn: 8(e) Coordinator



88940000086

Dear Sir or Madam:

Union Carbide Corporation herewith submits the following information concerning (thiodi-1,4-phenylene) bis [diphenyl sulfonium] bishexafluoro phosphate; CASRN 74227-35-3; thio PF6 salt) and diphenyl [4-(phenylthio) phenyl] sulfonium hexafluorophosphate; CASRN 68156-13-8; bis PF6 salt) which the Agency may regard as being reportable under its current TSCA § 8(e) guidelines. This information concerns preliminary information from Ames tests.

Data was obtained from two hexafluorophosphate salts, thio PF6 salt and bis PF6 salt, suggesting mutagenic activity in a single strain of the bacteria, *Salmonella typhinurum*, strain TA98. These salts are catalysts used as a mixture in solution with propylene carbonate. In these studies the salts were tested in five strains of the bacteria, both in the absence and presence of a metabolic activation system obtained from the livers of Arochlor pretreated rats (S9 fraction). Two independent studies were conducted with each salt. Tests were conducted at doses ranging between 0.1 and 5.0 mg/plate.

In tester strain TA98, dose related increases in revert colonies ranging in magnitude from 8 to 15 above control values were obtained with the thio PF6 salt. These increases were seen in both the absence and presence of the metabolic activation system. Similarly, dose related increases in TA98 revert colonies, ranging in magnitude from 5 to 11 times that of control values were observed with the bis PF6 salt, again both in the absence and presence of the metabolic activation system. No dose related increases in revert colonies were noted with the other four tester strains; TA100, TA1535, TA1537 or TA1538, either in the absence or presence of S9.

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Although clear dose related mutagenic activity was noted with both salts in one tester strain of *Salmonella*, TA98, the relevance of this finding to human health is unclear, particularly in light of no finding of mutagenic activity in four other tester strains, either with or without a metabolic activation system.

A copy of the final report related to these observations will be sent to the Agency promptly after it issues.

Please contact the undersigned with questions, if any, at 203/794-5230.

Very truly yours,

A handwritten signature in black ink, appearing to read 'W. Kuryla', written in a cursive style.

William C. Kuryla, Ph.D.
Associate Director
Product Safety

WCK/jfh