Monsanto

FROM (NAME & LOCATION) Dept. of Medicine & Environmental Health – B. W. Eley (A2SC)

DATE: January 18, 1977

cc: J. T. Garrett
J. C. Weber

SUBJECT: Acute Toxicity of Aroclors
Request from Ford Motor Company

REFERENCE:

TO Keith Lee
Industrial Hygiene Section
Central Medical Services

Enclosed is a Toxicity and Handling Statement for AROCLOR 1016. Under ordinary handling procedures at room temperature, AROCLOR 1016 should not present significant health hazards. However, like many chlorinated hydrocarbons, this material has the potential for chronic toxicity as a result of its ability to be stored in fat and the liver. Exposure to these compounds should be minimized.

N. Irving Sax's statements of acute toxicity for chlorinated diphenyls are incorrect. His statements are not documented. We have tested the following chlorinated biphenyls using rats for the oral LD_{50} and rabbits for the dermal LD_{50}. On the basis of these values, these materials cannot be regarded as having a high degree of acute toxicity.

Compound	Oral LD50 (mg/kg)	Dermal LD50 (mg/kg)
Aroclor 1016	2,350	>1,580
" 1221	3,980	>2,000
" 1232	4,470	>1,260
" 1242	8,650	> 794
" 1248	2,750	>1,000
" 1254	11,900	>1,260
" 1260	10,000	>1,260
" 1262	11,300	>1,260
" 1268	10,900	>2,510
" 1272	>7,940	>7,940
" 2565	6,310	>2,000
" 4273	8,920	>2,000
" 4465	16,000	>2,000
" 5430	6,100	>1,260
" 5442	6,270	>2,000
" 5468	>12,600	>7,940
" 6037	4,920	>5,010
" 6040	3,290	>3,160
" 6050	4,130	>7,940
" 6062	8,050	>7,940
" 6070	4,020	>7,940
" 6090	>10,000	>7,940

Because of their low volatility, chlorinated diphenyls do not

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present a significant vapor inhalation hazard at room temperature. However, heating of these materials, or uses which could produce aerosols, could result in increased air concentrations of these products. The American Conference of Governmental Industrial Hygienists has recommended Threshold Limit Values of 0.5 mg/m^3 and 1.0 mg/m^3 for 54% and 42% chlorinated diphenyls, respectively.

Bruce W. Eley
Industrial Hygienist

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