

Monsanto

FROM (NAME & LOCATION)

H. W. Luebke - St. Louis Research

DATE

February 6, 1967

cc:

E. M. Emery - Res. 2

L. C. Fuhrmeister - Anniston

SUBJECT

THERMAL STABILITY OF AROCLOR 5060
(CHLORINATED SANTOWAX R)

H. L. Hubbard - Res. 1

J. F. Quinn - Res. 1

REFERENCE

TO

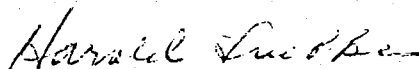
Gerald Miller
Anniston



The following thermal stability experiments have been conducted with Aroclor 5060 feeds to the old and new still systems at Anniston. The question of thermal stability arose after burning out a heating coil and experiencing increased still residues in the newly modified system:

- 1) Pressure DTA experiments were run up to 362°C. with no significant reactions observed. Cell pressure records showed only minor gas evolution in the 250° to 325°C. temperature range (<10 psi in a 1:1 sample to freeboard ratio). A low level exothermic drift, observed in both temperature differential records above 325°C., may be the onset of decomposition.
- 2) Regular DTA experiments were run up to 409°C., still with no significant reaction observed. The start of a slow exothermic reaction above 325°C. looks probable, but the rate of decomposition would be very low. Both samples gave identical results.
- 3) Du Pont 900 DTA was used to look at one sample for comparison with our DTA results. A series of exothermic peaks were observed from about 300° to 450°C. This experiment was not run in a closed system as were the others. A copy of the thermogram is attached.

In these experiments, we saw no evidence of gross instability below about 400°C. There were indications of slow decomposition above 325°C. The higher levels of residue produced in the new still system probably result from longer exposure to high temperatures in the heating coil rather than from poorer stability of the Aroclor 5060 with the higher quater-phenyl content (new system).



H. W. Luebke

jb

Reference: DTA #67-11, 12, 14 and 15

Attachment (1)

DSW 551643

V. R. Haupt

DSW 551644