Monsanto

FROM (NAME & LOCATION) A. W. M. Coaker - St. Louis Organic Research

DATE January 7, 1970

SUBJECT AROCLOR 5460

REFERENCE 1. Work Request 69-127, "A", 11/26/69
2. GWM/AWMC, 12/4/69

~~TO~~ XXX :

TO: C. Paton
CPATO

cc: M. W. Farrar Res. 1
J. R. Darby Res. 1
W. F. Waychoff WWAYC
J. K. Lilly JLILL
C. P. Farley/P. R. Graham/
L. O. Raether CFARL
J. A. Cannon Res. 3
R. H. Mills Res. 3
N. W. Touchette Res. 3
M. W. Dietrich Res. 2
E. M. Emery Res. 2
J. C. Landwehr Anniston
G. W. Miller Anniston
H. L. Williams Anniston
W. A. Kuhn WKUHN

This is to confirm results already reported to you by telephone.

SUMMARY

Lot AK-350 of Aroclor 5460 was used as the control both for application testing in hot melt adhesives formulas and in mass spec analyses.

Lots AL-282, AL-285, AL-308 and AL-325 were selected by Gerry Miller to exemplify varying degrees of insolubility in acetone. They were tested for chlorinated biphenyl content by Ed Emery's Group and analyzed by IR, GC and GC/MS by Marty Dietrich's Group in addition to undergoing application tests in my group.

The four test lots did not differ significantly from the control, lot AK-350, in their behavior, in EVA/Aroclor 5460/wax formulas within the range of our testing. Specific hot melt manufacturers using Aroclor 5460, however, might be using more sensitive formulas and therefore pick up a difference.

Chlorinated biphenyl ran high to excessive on the four test lots.

The solid precipitate from an acetone solution of lot 325 consisted mostly of highly chlorinated terphenyls.

It was also shown by spiking experiments that Aroclor 1260 is soluble in acetone whereas 1268 is only slightly soluble.

0561557

TOWOLDMON0059200

CONCLUSIONS

At least some lots of Aroclor 5460 are higher in polychlorinated biphenyl (PCB) content and in highly chlorinated terphenyl (HCT) than was previously suspected.

Physical properties of hot melt adhesives are not very sensitive to PCB and HCT content in the Aroclor 5460 used.

However, the levels of PCB found could be an important factor in the toxicity status of Aroclor 5460.

FUTURE WORK

After discussing these results by telephone with Gerry Miller, we decided to do more testing. Gerry sent a set of samples representing a sequence of different chlorination levels as well as the Santowax R raw material and the undistilled product. A sample of supposedly good Aroclor 5460 had also been sent a little earlier from Anniston, but was not identified by lot number. Also, a complaint sample of Aroclor 5460 was sent and a small amount of polymerized Santowax R.

These samples will be analyzed to try to determine when the PCB shows up and how the HCT is generated during the manufacture of Aroclor 5460.

DETAILS

1. Xerox copy of report by G. M. Gasser, 12/22/69.
2. Xerox copy of report by J. P. Mieure, 12/22/69.
3. Application testing.

A. W. M. Coaker

jp

Attachments

0561558

TOWOLDMON0059201