Monsanto Chemical Compa.

Memorandum

MONSANTO, ILLINOIS

TO Mr. A. B. Gerber
Anniston, Ala.

DATE February 15, 1940

SUBJECT AROCLOR SPECIFICATIONS AND TEST PROCEDURES

CC: Mr. D. S. Dinsmoor
Mr. W. G. Krummrich
Mr. J. L. Howerton
Mr. O'Neal - Anniston

Aroclor 2565

We are using the specifications for this product as sent up from Anniston. We use the ASTM method for determining the softening point rather than the Barrett.

Specifically we test for:

Softening Point ASTM	66 - 72°C
(Barrett	75 - 81°C)
Acid Number	1.0 mg NaOH/g max.

We do not make a blooming test nor do we run:

% Chlorine	64.75 Typical Value
% Loss on Heating 163°	0.23 " "
Sp.Gr. @ 25/25	1.733 " "
% Fe	0.11 " "

Aroclor 1465

On this material we are still using the specifications as set up by Anniston with the exception of shipments to one customer who wants material of a definite viscosity range. Material for shipment to this customer is checked for viscosity at 130°C by means of the Saybolt viscosimeter using the Universal orifice. I am attaching several copies of a curve showing the relationship of the ASTM softening points to the viscosities at 130°C for this material. The allowable limits for viscosity are 160 - 210 seconds at 130°C, approximate softening points 66.5 - 71°C.

The specifications for normal material are:

Color light yellow clear	1.5 NPA max.
Softening Point ASTM	60 - 66°C
(Barrett	71 - 76°C)
Acid No. mg NaOH/g	0.035 max.

DSW 330690

Aroclor 4465 - Continued

We follow the Anniston test method No. 14-14-35 for the acid number. However, N/2 NaOH is used instead of 0.1 N as indicated. The calculation in the Anniston write up is applicable to N/2 NaOH rather than N/10 NaOH.

Aroclor 4065

We apparently did not set up a formal specification for 4065 at B. I can locate only 1 lot analysis. This had merely a softening point determined.

The Anniston specification showed:

Softening Point Barrett		76 - 80°C
(this would be equivalent to ASTM		67 - 71°C approx.)
% Chlorine		64 - 64.8
Acid No. Mg NaOH/g		-
Contamination	Diphenyl	Negative
	Crystalline Aroclor	Negative

Aroclor 5460

Mr. Howerton suggested that I also send you specifications and change in analytical procedure for 5460.

This material is used in varnish manufacture and it was found that material of too high a soft point gave a crystalline precipitate in varnish of a certain formulation. I am attaching a copy of the method for testing for crystallinity in this product as worked out by Mr. Kirkpatrick.

The specifications now in use have not been formally issued but they are:

Softening Point A.S.T.M.	100.0 - 105.5°C
Chlorine	59.0 - 60.6%
Appearance	Clear light yellow
	2.0 NPA max.
Crystallinity	None
Acid No.	0.05 Mg NaOH/g.

We are sending you several samples which you requested and several which we believe will be of special interest.

DSW 330691

STLCOPCB4077335

The data for the samples being sent to you are:

1. Aroclor 2565 Lot M-5

Softening point standard

ASTM	74.[illegible]°C
Barrett	78.1°C

2. Aroclor 4465 (Normal Material) Lot N-4

Appearance	Light yellow, clear
Softening Point	64.6°C
Acid No.	0.036 Mg NaOH/gr.

3. Aroclor 4465 Halowax Grade Lot N-101

Special viscosity material

Appearance light yellow passes.

Viscosity @ 130°C	189 seconds
ASTM Soft Point	69.8°C
Acid No.	0.022 Mg NaOH/g.

4. Aroclor 5460 Lot M-2

Appearance clear yellow passes.

Softening Point	101.5°C
Chlorine	59.81%
Acid No.	0.004 Mg NaOH/g
Crystallinity Test	passes

5. A 2 oz. sample bottle containing crystallinity test solution concerning which see copy of Kirkpatrick memo 1-31-40 to Mr. Howerton.

"Label 5460 M-5 Crystallinity 7/22/39"

6. A 2 oz. sample bottle containing crystallinity test solution from Sample 13 sent here by Anniston and which is barely not passing.

7. A 4 oz. sample bottle containing a portion of Sample #13 out of which #6 test solution was made.

M. J. Wiegand

JD
2-15-40

DSW 330692