

June 10, 1944

AMUITION

MR. H. F. WEAVER

ANACONDA WIRE AND CABLE CO.

Mr. Weatherly's memo of June 7, 1944 has been referred to me.

In the work concerning the original complaint last November, we made up the naphtha solution as described in the above memo and observed results. The results were an immediate precipitation of crystals in two days from the solution containing Aroclor 4465 having a softening point over 64°C. Aroclor 4465 having a softening point between 62-64 threw down a sediment in four to eight days. The solutions made with Aroclor 4465 of softening point 60-62°C. remained clear for a week and often three to four weeks before a slight cloudiness could be seen.

The above observations led to our recommendation that the softening point be lowered on Aroclor 4465 to include the temperatures 56-62°C.

A sample of the special Lot 540 of Aroclor 4465 with a softening point of 56.2°C. has been standing in the solvent solution for three months without a trace of sediment.

For your information the precipitation of a sediment when Aroclor 4465 is dissolved in most aliphatic solvents is by no means something new. A report of June 1930 by R. N. Foster entitled "Solubility of Aroclor 4465 in Various Solvents" clearly states that subsequent precipitation should be expected.

Before establishing these tests, it would be wise to ascertain the exact mix Anaconda is using at this time. Their original mix was as follows:

39% by weight Naphtha Solvent #4
57% by weight Aroclor 4465
4% by weight Aroclor 1254

However, when a change in specifications for Aroclor 4465 was recommended, a change in the composition of the mix was also advocated. The suggested mix was as follows:

39% by weight Naphtha Solvent No. 4
60% by weight Aroclor 4465
1% by weight Aroclor 1254

In setting up the test, the new suggested mix will be used. The materials needed are the solvent from Standard Oil Co. of New Jersey, Monsanto Aroclor 4465 and Monsanto Aroclor 1254. See attached sheet for specifications on the solvent.

Method of Test:

DSW 330549

STLCOPCB4077193

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Add 24.5 cc. of Solvent Naphtha No. 4 to a 2 oz. screw cap bottle. Now add 30.25 gms. of the Aroclor 4465 to be tested and 0.25 gms. of Aroclor 1254 (two drops from the end of a heated stirring rod). Screw on lid and warm slightly. Shake occasionally until the Aroclor is in solution. Set aside and observe at regular intervals.

The length of the test is not yet apparent. Probably Anaconda should give the length of time for a satisfactory test or maybe they are wanting the tests in order to get information for deciding the time for a passing test. This information will come out of the tests, no doubt.

At present I would say the samples should be inspected daily and the time recorded for a sediment to show up in the solvent mix. This may take two or three months or longer in many of the lots made by the new specifications.

The solvent has been ordered and tests on the material now in inventory are to be started soon. I presume only the stock likely to be shipped to Anaconda will be included in these tests.

A. M. E.
A. M. Ellenburg

JB

DSW 330550

STLCOPCB4077194

STANDARD OIL OF NEW JERSEY

Naphtha Solvent #4

A.P.I. Gravity

55.2

Doctor

passes

Color

plus 30

Odor

Sweet

Corrosion

passes

Flash

57°F.

Distillation:

Initial

240°F - 115.6°C.

10%

258°F

50%

280°F

90%

305°F

Final

320°F - 160°C

DSW 330551

STLCOPCB4077195