

~~Monsanto~~

FROM
(NAME-LOCATION-PHONE)

C. Paton - General Offices - B3NA

CP

DATE : January 30, 1978

cc. D. Wood

SUBJECT : Benzyl Neo-Caprate

REFERENCE :

TO : J. N. Haggart - 5040

David Wood has informed me that Prodelec has introduced benzyl neo-caprate as a replacement for PCB. We believe they would make it from capric acid and benzyl chloride. Last year when it became apparent that our hydrocarbon + sulfone technology was not cost/competitive with DOP, SCD approached Plasticizers Division regarding their interest in the dielectrics market. Their primary interest was S-711 or 160/261 rather than DOP. S-711 was not attractive because its D_K is below DOP yet in plasticizer markets, we sell at a premium over DOP. S-160/261 had very good D_K compared to DOP, but dissipation factors were high and failures occurred in life-testing. The reason for this failure is said to be clean-up difficulties. No effort has been made by SCD or Plasticizers to determine what causes DF problems in S-160/261 or whether there are methods for clean-up. If Prodelec is promoting a benzyl ester, however, it would be of real interest to Plasticizers.

Before you come to St. Louis, do you think you could find out:

- (a) How benzyl caprate is being accepted by major European capacitor accounts.
- (b) Whether special clean-up methods or additives are required.
- (c) What price is being mentioned and when commercial production could begin.
- (d) Patent applications.

If you could get literature, specs, and a sample this would be useful. If they can offer a satisfactory benzyl ester, maybe we could too. Given our position in benzyl chloride, there may be an opportunity we've overlooked.

Thank you.



C. Paton

CP:lgr

DSW 587333

STLCOPCB4092669

J. N. Haggart
P.S.
January 30, 1978

1. Since S-261 has a D_K almost as good as Aroclor 1016 and significantly better than DOP, it is possible that "electrical grade" S-261 could be worth quite a premium. S-160 has a D_K .10% higher than Aroclor 1016.
2. The philosophy in SCD is that if a Plasticizer Division ester can be used in dielectrics, then this market should be taken over by Plasticizers. Given our surplus capacity in benzyl phthalates trying to clean up S-160/261 may be worth some further study, particularly if Prodelec is promoting a benzyl ester.
3. SCD has sampled G.E. and B.I.C.C. with MCS samples which are in fact Santosol 100 and/or MCS 1918. They are earmarked only for PF capacitors because of their lower D_K . SCD will probably also sample Westinghouse since they are using MIPB. We hear rumors that DOP is not cutting it in G.E. PF capacitors. There are two reasons why Plasticizers should be interested in benzyl aromatics for PF capacitors. Firstly, they use 75 lb. benzyl chloride per 1 lb. of product compared to ~ 50 lbs. in S-160. Secondly, the PF capacitor volume in U.S. is only 30% of the total capacitor fluid market which means a U.S. benzyl aromatic potential of 5M lbs. At this volume level, SCD may not wish to allocate resources to service this market at a specialty MAT level. Also they would contend with transfer pricing on benzyl chloride. As a result, even this application might be transferred to Plasticizers. In any event, because of our stake in benzyl chloride, Plasticizers has a real interest in seeing this opportunity explored.
4. As far as Plasticizers is concerned, they are still at the idea stage in CD. I would like to discuss with you when you are here and would appreciate an update on the European capacitor fluid situation.

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