



TO Randy Hall
FROM Ron Olinger ^{R.O.}

DATE June 24, 1986

SUBJECT AIBN Solubility in CPC

Originally, we were asked to investigate the solubility of the initiator AIBN in pivaloyl chloride at the necessary catalyst pot charge of 2%. We checked the solubility of both PC and CPC up to 5% and found the catalyst to be soluble. There appears to be a problem with solubility when the target was to be 2.0% charge of the catalyst pot. In a recent test run at Barberton, the catalyst feed point was set at the column instead of the reactor pot. The new feed point produced an increased need for AIBN which lead to solubility problems with AIBN in the catalyst pot charge. Thus, we examined CPC's ability to dissolve AIBN. The results are as follows:

<u>AIBN, wt%</u>	<u>Pure CPC</u>	<u>50:50 PC-CPC Mix</u>
5	Soluble	Soluble
7.5	Soluble	Insoluble
10.0	Insoluble	Insoluble

Another set of samples was repeated for the 50:50 mixture of PC and CPC, so that we could zero in on the maximum AIBN charge. The results were:

<u>AIBN, wt%</u>	<u>50:50 CPC</u>
6.0	Soluble
6.5	Soluble (near borderline)
7.0	Insoluble

As predicted, AIBN appears slightly more soluble in CPC. A 50:50 mixture of PC and CPC should be able to handle the three-fold increase in AIBN charge. If any laboratory assistance is needed in this area or any aspect of the CPC project, please feel free to call me at 491-4628.

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cc: Don Reich
Gene Laukonen, Barberton
Jeff Yost, Barberton

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