Monsanto

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SUBJECT : PLASTICIZER EVALUATION IN VINREZ 202A, POLYCO 571 AND UNION CHEMICAL'S 3001-P

REFERENCE :

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Santicizer 160 vs. competitive plasticizers have been evaluated in three commonly used homopolymer resins - Vinrez 202A (Celanese), Polyco 571 (Borden) and 3001-P (Union Chemical). Two of the resin evaluations (Vinrez 202A and Polyco 571) have been put in presentation form with appropriate comments included. For the sake of expediency, those presentations are attached for you to put into bar chart form for the salesmen. The 3001-P data follow:

VISCOSITY STABILITY EVALUATION

Blue = 2 min. 14/0.5 29/0.5

Plasticizer, 10%	0.5 Hr.	1 day	7 days	14 days	21 days	28 days
Santicizer 160	7050	7950 12.8	8000	7700 9.2	7800	7800 10.6
Benzoflex 9-88	7200	8200 13.9	8400	8050 11.8	8000	8050 11.8
Benzoflex 50	6900	8050 16.7	7950	7550 9.4	7700	7650 10.9
DBP	7000	8100 15.7	8100	7750 10.7	7700	7700 10.0

Viscosity is measured in centipoise units.
Initial viscosity of 3001-P = 5900 cps

VISCOSITY DRIFT FROM 0.5 Hr. to 1 day

Plasticizer, 10%	Viscosity Drift
Santicizer 160	+ 900
Benzoflex 9-88	+1000
Benzoflex 50	+1150
DBP	+1100

The viscosity data indicate that Santicizer 160 achieved an initial viscosity (0.5 Hr.) somewhat lower than Benzoflex 9-88, while the degree of viscosity change for Santicizer 160 from 0.5 Hr. to 1 day was less than was seen for the competitive plasticizers. So, once again it appears that Santicizer 160 is an equivalent performer compared to the Benzoflexes and DBP in viscosity build and stability.

Following are the wet tack and open time data:

DSW 587099

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	Wet Tack (sec)				Open Time (sec)			
	1	2	3	Average	1	2	3	Average
Santicizer 160	16	16	16	16	45	45	45	45
Benzoflex 9-88	16	17	17	17	45	30	45	40
Benzoflex 50	15	17	16	16	60	60	60	60
DBP	17	16	17	17	60	60	60	60

The wet tack data indicates green strength is built equally rapidly by all four plasticizers with a slight advantage going to Santicizer 160 and Benzoflex 50, if a one second difference can be called significant. The open time data show that Santicizer 160 and Benzoflex 9-88 set up faster than Benzoflex 50 and DBP, which could be an advantage where a quick set time is required or a disadvantage where processing requires longer open times.

The evaluation of 3001-P reveals that Santicizer 160 performs as well as the competition. Once again equivalent performance is the selling point where Santicicizer 160 is compared to competitive plasticizers in Union Chemical's 3001-P resin.

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CNK/gls

DSW 587100

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