Monsanto

FROM (NAME & LOCATION): A. W. Morgan - Galt Labs - 1730 and J. H. Brown - Galt Labs - 1730

DATE: August 28, 1980

SUBJECT: SANTICIZER 160 URETHANE ADHESIVES

REFERENCE:

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As part of the Santicizer 160 new use program, a scouting program has been completed to determine the possibility of Santicizer 160 use as a tackifier carrier in urethane solvent based or two part pressure sensitive adhesives.

CONCLUSIONS:

1.) Santicizer 160 can solvate solid tackifiers for use in solvent cast (Estane type) pressure sensitive adhesives. Santicizer 160 shows no exudation, gives slight "tack" per se (probably plasticization) and seems compatible with most common tackifiers (Table 1).

2.) Two part systems evaluated were basically inefficient but compatibility with and without sulfonamides was found (Table 2). A better screening formula is needed.

RECOMMENDATION:

Technically, Santicizer 160 has some functionality in solvent based urethane adhesive systems but no more work should be done until a market is defined. Santicizer 160 solvent based rubber adhesive data is also nearing completion and should be included in evaluations of possible uses. (NOTE: the use of a plasticizer as a tackifier carrier was discussed with 3M Co. in 1979. In our August 1980 visit, interest in plasticizers for solvent based adhesives was mentioned and urethanes were specifically mentioned. This area could be coordinated with the XA-2020 program which also hits at the solvent based market.)

AWM
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AWM/JHB/gls
attach

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TABLE I

	1	2	3	4	5	6	7	8	9	10
Estane 5702	10-->									
MEK	40-->									
Santicizer 160	-	5-->								
Wingtack 95	-	5	-	-	-	-	-	-	-	-
Nirez 1100	-	-	5	-	-	-	-	-	-	-
Piccolite 10	-	-	-	5	-	-	-	-	-	-
Zonester 100	-	-	-	-	5	-	-	-	-	-
Super Sta Tack 100*	-	-	-	-	-	5	-	-	-	-
Super Sta Tack 80	-	-	-	-	-	-	5	-	-	-
(Disproportionated Tall Oil Rosin)	-	-	-	-	-	-	-	5	-	-
									-	-
Wingtack 10	-	-	-	-	-	-	-	-	5	-
Tack Level (Qualitative, Thumb Appeal)	Nil	Slt.	Slt.	<----------TACKY---------->						Slt.

* Turbid

	11	12	13
Estane 5702	10---------->		
MEK	40---------->		
Santicizer 160	7.5---------->		
Zonester 100	7.5---------->		
Tack Level (Qualitative, Thumb Appeal)	TACKY----------		

(Number eleven shows ball in rolling ball test but does not stop it in time for a reading.)

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TABLE 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Polyol 7100	20---------->															
Papi 901	20---------->															
T-9	.1---------->															
Santicizer 160	-	5	-	5	5	-	5	5	-	5	-	5	-	5	-	5
Santicizer 8	-	-	-	-	5	5	5	-	-	-	-	-	5	5	-	-
Santicizer 9	-	-	-	-	-	-	-	4	4	4	-	-	-	-	4	4
Wingtack 10	-	-	5	5	-	5	5	-	5	5	-	-	-	-	-	-
Piccolyte S-10	-	-	-	-	-	-	-	-	-	-	5	5	5	5	5	5
TACK			Slt.	PUNK	-	Slt.	Slt.	-	-	-	Slt.	-	-	-	Slt.	Slt.

* Change in index to 25 Polyol 7100/20 Papi 901 made no noticeable change. Replacement of Papi 901 with hexamethylene diisoeyanate made poorer coatings.

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