

File Adhesive
VISIT REPORT

R. J. REYNOLDS
WINSTON SALEM, NORTH CAROLINA

cc: J. A. Cannon
J. M. D'Angelo
T. G. Iversen - B3NC
~~N. W. Touchette~~
J. S. Williams - 1940

DATE OF CALL: February 10, 1977

FOR R. J. REYNOLDS: R. L. "Ron" Willard, Buyer
Larry W. Sides, Development
Chemist

FOR MONSANTO: J. M. D'Angelo
J. H. Orem

SUMMARY

Annually use 800-1000M pounds of Benzoflex 9-88 for PVAc adhesives. Also use 50-100M pounds of DBP purchased in drums. All adhesive production is consumed internally.

R. J. Reynolds definitely wants a second source of supply.

Santicizer 218, which they used for several years until it was discontinued, is the only plasticizer Larry Sides knows to be comparable in performance to Benzoflex 9-88. With S-218 vis-a-vis B9-88 they got increased mileage; RJR could make more cigarettes per pound of adhesive than with B9-88. If we could again offer S-218 @ ca 34¢/lb., they would begin using it almost immediately.

Santicizer 160 problems in RJR's PVAc adhesive:

1. Solvation of the resin particle is too slow and initial viscosity it, therefore, too low.
2. RJR wants to do all mixing and adjusting in the mixer before dumping. Since S-160 wasn't finished solvating the resin at the completion of mixing and testing, they could not ship it and be certain the adhesive would remain in spec on viscosity.

Laboratory work needs to be done to develop a plasticizer system cost/performance competitive with B9-88.

DETAILS

Two PVAc emulsion resins cover their major uses. These are Stein Hall 202A (900-1200 cps) and 202AH (3500-4000 cps). Sides does not like the Brookfield viscometer for measuring viscosities in the 600-5000 cps range. He believes it is too erratic. RJR uses a Stormer Viscosimeter. They aim for initial viscosities of 180 Stormergrams (approximately 900-1100 cps on the Brookfield).

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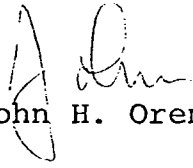
Formulation for testing should be:

PVAc Resin (wet)	90
Plasticizer	10

With the Stein Hall 202AH (Gelva S-55XH) type resin, the initial viscosity after 30 minutes stirring will be 6000-7000 cps (Brookfield); this is cut with water to 900-1100 cps Brookfield (180 Stormergrams).

They measure tack, quick grab, and cleanliness. Have found DBP is not fast enough on quick grab.

PVAc adhesives are used for many cigarette manufacturing and packaging applications. This includes filters, The cigarette lap seam uses starch as the adhesive.


John H. Orem

JHO/cc

2/11/77

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