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(LOCATION—PHONE) J. H. Orem - Galt Labs - 1730

DATE : June 22, 1978 CC:

SUBJECT : POLYSULFIDE SEALANTS FOR INSULATED WINDOWS

REFERENCE : My visit reports:
6-13-78 Norton Co.
6-14-78 PRC
6-14-78 Thiokol Chem. Corp.

TO : R. U. DeSchutter - B3NA
M. W. Farrar - R2E
T. G. Iversen - B3NC
A. W. Morgan
N. W. Touchette
W. T. Vreeland - B3NC

CP Qualified @ PRC
Cerulea S-52
Norville HL 60LC
Diamond 500C
Keil C-10

Our position in the U.S. market has been erroding since 1975. In that year, chlorinated paraffins were first used, and they are finding increased acceptance in this country. They are under serious study in Europe. Santicizer 278 is our major plasticizer (3.2$\overline{M}$ pounds in 1977 and 1.5$\overline{M}$ pounds through May 1978). In the U.S., some Santicizer 261 is used and in Europe Santicizer 160 is used along with Santicizer 278.

A laboratory program has been implemented to aid in stopping the decline in M/I and ultimately to regain the offensive. This is not a fast pay-out, simple project. We have a technology gap of 8-10 years to fill. The chlorinated paraffins for these sealants are available from at least four manufacturers, and they are priced 26-28¢ per pound. Their performance, as measured by wet UV testing and MVT, is superior to that of Santicizer 278. The present price differential is almost 40¢ per pound; the announced July 1 increase may exacerbate this as it drives the differential above 40¢. Many of these sealant producers, including the largest - PRC, are buying in drums.

From my recent series of calls, I surmise:

1. chlorinated paraffins have made significant inroads - over 1$\overline{M}$ pounds will be used in 1978.

2. in at least two performance parameters, CP's are technically superior to Santicizer 278; these are Moisture Vapor Transmission and wet UV.

3. in another area, compatibility, Santicizer 278 may be inferior.

4. cooperation by the manufacturers of CP's has led to low fogging products.

5. we will maintain a presence with a benzyl phthalate because:
   a. chlorinated paraffins cannot be used to make the catalyst paste,
   b. S-278 will remain in existing formulations.

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6. technical contact is being re-established by Monsanto, and it is welcomed by the sealant manufacturers,

7. we must make regular direct calls on all producers of these sealants; we can no longer rely solely on inputs from our distributors, and

8. there is understanding from a few sealant producers that gives us several months to catch up.

There is a SIGMA, Society of Insulated Glass Manufacturers Association, meeting in St. Louis August 13-16. Arrangements are underway to establish meetings with technical representatives from Norton, PRC and Thiokol. Additional contacts need to be made for meetings with Inmont and any additional major Central Solvents and Union Chemical customers that will attend this meeting. Following the SIGMA meeting, the next general round of technical contacts is scheduled for late September.

Inmont will be visited by mid-July for the purpose of a technical up-date.

If there are any questions pertaining to our laboratory program or suggestions regarding directions we should be taking, please contact me.

J. H. Orem

JHO/gls