Monsanto

FROM (NAME—LOCATION—PHONE) J. H. Orem - Galt Lab - 1730

DATE : October 27, 1978 cc: N. W. Touchette

SUBJECT : POLYSULFIDES INSULATED GLASS SEALANTS - MANGANESE DIOXIDE

REFERENCE :

TO : A. W. Morgan

The manganese dioxide that Bob Meyers, Norton Company, sent to us is the "D" grade. This grade has been withdrawn from the market and is no longer available. Bob Meyers and Randy Ponticiello(of Thiokol) stated our results would be meaningful as long as we told people that we were using the "D" grade of managnese dioxide.

Thiokol is using Shepard Chemicals MnO_2 "active grade" as the basis for their catalyst system. This MnO_2 is not as active as the "D" grade. Therefore, sealant producers are adding something either to the catalyst or into the base formulation to improve activity. If one obtained a 45 minute stick life with "D" grade MnO_2, the Shepard Chemical material would provide a stick life of 1 to 3 hours.

To beef up the Shepard Chemical MnO_2, Randy suggested the use of a little bit of lead dioxide. His suggestion for a paste was:

MnO_2	10 parts
PbO_2	1 part
Santicizer 278	9-10 parts

The level of Santicizer 278 should be adjusted to get the paste consistency that is desired.

At this point, Randy said the biggest difference they have seen between the "D" grade and Shepard Chemicals material is the rate of cure. They do not know if there will be any long-term effects on MVT or adhesion.

J. H. Orem

JHO/gls

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