

INTER-OFFICE MEMO

FROM W.C. Champion

At Burlington

COPY TO J.R. Gregor  
C.B. Johnson  
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~~File~~

Reference: Memo, W.C. Champion to D.C. Hawk,  
"Flintkote Mold Test", April 16, 1975

At your request, we have evaluated the Flintkote mold test and have been running this test routinely on 314 production at Flemington. As the referenced memo indicated, we do not have the equipment on hand to exactly duplicate the Flintkote procedure. The procedures used may be summarized as follows:

|                  | <u>Flintkote</u>                       | <u>Tenneco</u>      |
|------------------|----------------------------------------|---------------------|
| test temperature | 310°F                                  | 310°F               |
| mold             | 1/2" aluminum                          | 1/8" chromed steel  |
| test time        | 3 minutes                              | 3 minutes           |
| pressure         | 2327 psi                               | 1420 psi*           |
| cooling          | between chilled<br>platens at pressure | under running water |

\*highest achievable

The most important difference in testing conditions is the lower pressure applied when we run the test. In spite of this, every 314 sample we have tested has exceeded the expected flow to such a degree that the polymer has flowed out of the mold, as the attached typical sample shows.

The Flintkote procedure calls for reporting the highest number of the concentric circular "gauge" which can be read through the pressout. The largest diameter circle is 12 cm, and their specification is 8 cm of flow minimum. Since every sample we have run has exceeded 18 cm in diameter (the shorter dimension of the mold used), we have simply reported "passes".

The results which we are obtaining from this test do not correspond to what the procedure from Flintkote would lead us to expect. If we are to continue to run this test - and especially if it is to be a grading or release procedure for 314 - we need to find out what results are being obtained by Flintkote. In the meantime, we will continue to run the test on each lot of 314 produced.

W.C. Champion

WCC/jst

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