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INTER-OFFICE MEMO **TENNECO CHEMICALS, INC.**

TO F.W. Kanzler AT Burlington DATE September 16, 1975

FROM E. Young AT Burlington COPY TO W.C. Champion
P. Gawason
P.R. Scarito
W.E. Stewart
✓File

SUBJECT Contamination in Vydel Compounds

The Analytical Laboratory was asked to identify contamination occurring in Vydel compound. This contamination always occurred on approximately the mid-point of a cut edge. The contamination was also just on the surface. It could easily be removed with a knife. Microscopic examination of the contaminated pellets showed the contamination to be streaked on the surface, though one piece of compound showed a spot which looked like partially-degraded resin. These facts lead to the conclusion that the compound was being contaminated in the dicer.

An examination of the dicer showed a dark substance resembling degraded resin, on the barrel and in the gaps between the blades. The substance was examined microscopically and by infrared. The microscopic examination shows this material to have the appearance of partially-degraded polymer. The infrared showed activities attributable to PVC and Supercryl and other bands which most likely come from other constituents of the compound. The substance from the dicer is identified as partially-degraded compound.

We felt that this contamination comes from the belt itself. Since the process time of these compounds is shorter than most, the ingredients don't completely fuse. These unfused particles break loose on the dicer and plate out in the spaces between the blades. This compound then degrades. When the build-up is great enough, the degraded compound breaks loose and is smeared on the pellets by the dicer.

E. Young

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