

INTER-OFFICE MEMO

TENNECO CHEMICALS, INC.

TO H. B. Carr AT Burlington DATE September 25, 1969
FROM E. L. Kanyok AT Burlington COPY TO *P. W. Johnston*
SUBJECT Plastisol Contamination Testing J. C. Fisher
E. J. Hourihan
W. D. Wesely
M. W. Williams
Reference: Note: M. W. Williams to
H. B. Carr, dated 9/5/69 File ✓

As part of our continuing review to upgrade sampling frequency and testing procedures and to provide an answer to the referenced note, the present contamination test frequency for Plastisol was reviewed.

Two statistical Quality Control sources were consulted (Statistical Quality Control, E. L. Grant, McGraw-Hill, 1952 and Total Quality Control, Feigenbaum, McGraw-Hill, 1961) to determine whether a published sampling plan would serve as a model for our specific needs. No sampling plans were found which would directly fit our "continuous" Plastisol process. However, since Plastisol is bagged we may speak in terms of sample units, each unit being a 50 pound bag. This would then allow application of several plans.

Our problem then is to select the appropriate sample unit. At present, 40 bags representing a pallet or 2,000 pounds is our sample unit. This, of course, is a low frequency for completely characterizing a lot representing 36 pallets or 72,000 pounds. Our problem in selecting a sampling plan is complicated by the fact that in the Union job descriptions Production personnel performs this sampling.

A further complication in selecting a practical sampling plan is our limited knowledge of Plastisol contamination. As we discussed, we require answers to the following questions:

1. What is the source(s) of contamination?
2. Is the contamination random or is it isolated?

In addition, of course, we should have better definition from C.S.L. as to what type(s) of contamination will cause problems in the field so that we do not expend too much time on a problem which may not be a problem.

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September 25, 1969

Therefore, the program that is recommended, at this time, should include the following:

1. Better definition from C.S.L. of contamination types and their importance.
2. Assistance of Process Engineering and Production is determining contamination sources and whether these are random or isolated.
3. Re-evaluation of an Alpine Air Jet Screener recommended by E. J. Hourihan for more rapid contamination testing should an increased sampling frequency be necessary.
4. When a "contaminated" pallet is next encountered, Q. C. should request and supervise exhaustive sampling (layer to layer, row to row, bag to bag) to assist in answering 2.
5. Eventually, set-up a p chart or other statistical control chart to plot performance on contamination.

Until some answers from this recommended program are on hand, we cannot answer the question as to whether we are doing too much pallet to pallet testing. Nor can we confidently state whether contamination found in two, three or any number of consecutive pallets by present testing methods and frequency is not present in the next consecutive pallet because test results were negative. However, in the meantime, we should adopt the following system.

1. Until a firm decision can be made, I agree with the referenced note that under our present testing procedures two consecutive pallets immediately preceding and following a contaminated pallet should be considered contaminated.
2. Pallets indicated above would be E grade.

E. L. Kanyok
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ELK/rjl