A. W. M. Coaker - St. Louis Organic Research

July 14, 1967

J. R. Darby, Res. 2
M. W. Farrar, Res. 1
C. D. Bias, Res. 3

ADHESIVES OPEN TIME

1. GW/CDB, 3/22/67
2. ATTACHED CALL REPORT, RNB, UNITED RESINS, 6/9/67

E. C. Wilde, EWILD

There is a great deal of art, some of it black, in testing adhesives. Ref. 2 shows that experts sometimes have difficulty reproducing themselves and we also have this difficulty.

Taking a few properties I want to have a statistical study of our test reproducibility run. Would you nominate the properties you consider most important for such an investigation?

Regarding the semantics of Ref. 1, I find a multiplicity of terms in textbooks such as "speed of tack", "rate of set", "quick tack" and "aggressive tack" for one property which is often discussed. This means that one adhesive develops appreciable tack faster than another as shown by testing films as time passes.

Another property is variously called "tack range", "tack period", "working time", "open time" or "open assembly time." This is the maximum time lapse, between applying the adhesive and bringing the substrates together, within which a satisfactory bond can be obtained. One textbook calls it "the period of time in which an adhesive will remain in the dry tack condition." Since evaporation, wicking, inter-particle consolidation and inter-film consolidation are all involved, this is a complicated phenomenon.

Lest we kid ourselves and others and let our competitors get away with some gentle chicanery, I believe we need to generate statistically defensible numbers showing how poor the reproducibility of some of these empirical tests is. We need statistics to show what is and what is not a significant difference.

A. W. M. Coaker

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2 attach.

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