September 2, 1971

Mr. E. J. Romay
Director of Purchasing
Glidden-Durkee
Division of SCM Corporation
900 Union Commerce Bldg.
Cleveland, Ohio

Dear Mr. Romay:

Mr. J. D. Kelly asked that I write you regarding the position of lead driers in the Coatings Industry.

Current ecological attitudes are putting pressure on all heavy metals; and since lead is known to be toxic and to be cumulative, the Coatings Industry has been under considerable scrutiny with regard to lead in paints. The law now requires that any paint accessible to children shall have not more than one percent lead in the dried film. This allows ample margin for the use of lead as a drier, since its level rarely exceeds 0.5 percent on the vehicle solids which calculates to not more than 0.3 percent on the total solids. If a loss of dry inhibitor, such as our Nuact, is used, this brings in an additional quantity of lead, not exceeding 0.5 percent on total paint solids, so that even the combination of the two is well within the limits of the law.

The National, Paint, Varnish and Lacquer Assocation has had a number of releases during 1971 relative to lead in paints. They point out that paints over one percent of lead must carry a warning label, and that those having less than one percent lead on total solids do not require a warning label. However, they further caution that even though no lead is deliberately added to a paint in the form of driers or otherwise, the paint cannot

be labelled as "lead free," since other raw materials, particularly pigments, will carry trace quantities of lead.

It is my personal opinion that there is no need to panic and eliminate lead driers or lead feeder driers. However, I am well aware of the fact that management dictates in some major companies are to eliminate deliberate addition of lead compounds. These attitudes appear to be based upon a lack of a complete understanding of the necessity to do so, and the other problems that are created.

Soluble lead driers can be replaced in a given paint formula, but the drying properties will be different. Our experience indicates that zirconium driers, which are non-toxic, are the best candidate. The negatives are that they do not perform as quickly or positively as lead in terms of through dry of the film; and, therefore, there would be a greater tendency toward wrinkling. Also, zirconium use would result in a much higher drier cost, but this would amount to a fractional cent per gallon of paint. The attributes of zirconium are somewhat subtle, other than its non-toxicity, and relate to such properties as better gloss and gloss retention in the paint, better color, and better flexibility.

In the loss of dry category, the only reasonable alternatives to the lead feeder drier (our Nuact) would be products such as our Cobalt 254. Here there is no doubt about developing equivalent function, but cobalt has an inherent color which carries over into high whites and, therefore, requires careful evaluation as to whether or not any color change is significant.

In brief, we feel that lead driers and lead feeder driers can be eliminated, although the law does not require it. A given company has little to gain by such a move, since they cannot label the products as lead free and the substitute materials do not have identical properties. I believe that a carefully programmed study of the alternatives is an appropriate course of action, but I recommend against any peremptory judgments.

Very truly yours,

W. J. Stewart
Industry Manager - Coatings

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