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INTERNAL CORRESPONDENCE

CHEMICALS AND PLASTICS • RIVER ROAD, BOUND BROOK, NEW JERSEY 08805

To (Name) Mr. W. C. Thurber
Division Metals Division - 38th Fl.
Location New York, N. Y.

Date September 15, 1975
Originating Dept. R&D
Answering letter date

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Copy to Dr. N. W. Johnston - BB
Mr. A. A. Mees - NY-33
Dr. C. N. Merriam - BB
Mr. N. H. Reinking - BB
Mr. J. J. Smith - SC
Mr. R. W. Wesson - NY-32
Mr. W. E. Whitehurst - SC

Subject Calidria Asbestos RG-244 Vs. Cab-O-Sil in Paints

PLAINTIFF'S EXHIBIT UC-391

Your letter of August 22nd to Mr. R. W. Wesson suggesting the use of RG-244 in vinyl paints has been routed through various people to me for reply.

We have evaluated thoroughly RG-244 a couple of years ago when we were looking for thixotropes for our high-build vinyl program. At that time, we confirmed its excellent thickening and thixotropic properties.

The problems appeared when we tried to apply the paints. High-build vinyls are applied by airless spray, a method based on forcing the paint at very high pressures (2000 psi +) through a very small orifice having a diameter just a few mils. Nozzle plugging is therefore a frequent and costly occurrence and devices have been engineered to minimize it; this includes multiple-nozzle gun heads, self-cleaning reversible nozzles, and, invariably, very fine mesh filters on the line.

When a paint thickened with RG-244 is sprayed in such a system, in about 5 to 10 seconds the paint flow slows down and, soon after, it stops completely. An inspection of the filter reveals that a thin but very tightly matted layer of fibers blinded the mesh. In addition, because of the high pressures involved, the filter, which is a cylindrical sleeve with outside-to-inside flow direction, is irreparably crushed and must be replaced. Let me add that after having sprayed hundreds of gallons of other high-build paints which were not especially clean, I have never seen a comparable failure. It appears that the fibrous nature of RG-244 is responsible for the problem and therefore we must rule out its use in this application.

We, and our customers, are not particularly happy with the thixotropes that we have to recommend. Cab-O-Sil is efficient and has very small particle size; however, it is extremely fluffy, thus difficult to handle. As an alternative, we suggest Thixatrol ST, a castor oil derivative. It is easy to handle and efficient, but its

thickening effect is highly dependent on the thermal and mechanical history of the paint, so that the manufacturing procedure must be rigidly controlled to obtain reproducible results. The customer decides which of the two shortcomings is less troublesome in his specific case. Of course, these problems are not limited to vinyls, but apply to similar high-build systems such as chlorinated rubber and epoxy. It can be concluded therefore that there is a very definite need in this market for an easy-to-handle, efficient, non-critical, filterable thixotrope. RG-244 meets the first three requirements but not the fourth. If this shortcoming could be resolved, RG-244 would easily dominate this market, even at a premium price. We would gladly cooperate in a product improvement program by testing candidate products.

In applications where fine filtration is not needed, we do benefit from the use of RG-244. An example is in sealants, as shown in the attached Technology Letter, presenting information developed by Mr. A. R. Bullman. We are also considering it in certain formulations which are applied by conventional air spray, where the nozzle has a much larger opening and therefore filters are more tolerant.

Finally, I would like to express my admiration at the thoroughness and zeal shown by the Calidria team, since in the last few years I have been contacted on separate occasions, on the same subject, by Gordon Dickson, Robert Byrne, Ed Kleber, John Myers, and a couple of other people whose names escape me because it was over the phone and I did not get their cards. All of them are to be credited for being extremely helpful in providing information and samples.

Tom Ginsberg

Thomas Ginsberg

TG:ld
Attachment