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VOC010723781

Category: 1 – Surface Coating of Cans

W. R. GRACE & CO.

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July 23, 1978

R. Michael Clowers
United States Environmental Protection Agency
Office of Air and Waste Management
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27211

Dear Mr. Clowers:

This letter is in response to your request for information on the present solvent levels in end sealing compounds manufactured by the Dewey and Almy Chemical Division of W. R. Grace & Co. and our comments regarding the timing of technological advances that will allow attainment of the EPA guideline of 3.7 pounds of solvent per gallon of compound.

The data below show the present solvent levels in solvent based and sealing compounds supplied by Dewey and Almy throughout the United States. We have segregated those data according to three broadly defined categories of usage: beer/beverage, sanitary foods, and other. Numerous end sealant formulations are marketed within each category. The solvent levels shown below represent a weighted average based on the pounds of each compound sold in 1977.

Sealant Designation	Average Solvent Level	
	Pounds/Gal.	Grams/Liter
Beer/beverage	4.12	494
Sanitary	4.23	507
Other	4.03	483

These numbers differ slightly from the numbers given to you verbally by Mr. M. Dalton on July 18, 1978.

In our professional opinion, present-day can sealants represent a balance between the optimization of rheological properties necessary for consistent

application of the sealants and the optimization of sealing performance relative to can construction and the products to be packaged. Currently available technology which satisfies both of these requirements results in compound solvent levels which are higher than the 3.7 pounds VOC per gallon proposal. To the best of our knowledge there are no oven free can end sealants commercially approved for use anywhere in the world that meet the proposed standard.

While this difference in VOC levels is on the average only 11% higher than the proposed limit, it should be recognized that the development of new end sealing compounds to meet the proposed VOC level requires new technology and a concentrated long-range research effort. Four years ago, Dewey and Almy embarked on two parallel research programs to introduce products to the beverage and sanitary food can makers which would comply with anticipated emission standards.

One program is aimed at increasing the percent total solids of our solvent based systems. Our limitation here was, and continues to be, the attainment of rheological properties necessary for high speed application.

The other program involves total elimination of solvents by using water as the diluent. One concern here centers around the sealing latitude needed for the more demanding three-piece cans used primarily for sanitary food packs. Another problem is an adequate means of consistently drying the film under all climatic conditions without the use of ovens.

While there are still obstacles to overcome in both programs, we have realized considerable progress. Assuming reasonable success in our research effort, our present goal is to introduce compliance products to meet the somewhat different needs of the beverage and sanitary markets by 1981. Assuming the can makers follow their normal in-house and customer qualification procedures, however, we would not expect to see large scale commercial conversions in the two-piece beverage market until 1983 and in the three-piece sanitary market until 1985.

We fully intend to do our part to successfully overcome the solvent emission problem. But in order to assure our customers and the general public that they can rely on compliance sealants to perform adequately, we need to be able to display consistent ability to apply sealants that meet the vigorous application and sealing demands of the beverage and sanitary food industries. No one in the sealant business is able to do this today.

Sincerely Yours,

Charles H. Ehlers