

12/02/1983

VOC041202831

Category: 4 – Surface Coating of Paper Products

Donald L. Culbertson, Inc.
10 Kenilworth Road
Mountain Lakes, N.J. 07046

201-384-6617

December 2, 1983

Mr. Tom Hazen
Hazen Paper Company
Third Level Canal
Holyoke, MA 01040

Dear Tom:

Malcom requested I write, and explain the basic difference between the methods Massachusetts and New Jersey use to calculate the VOC allowed to paper companies.

I can do this best by using an example.

Given: Company XYZ applies 300 gallons coating per day. The VOC density is 7.36 pounds per gallon, and the VOC content is 5.9 pounds per gallon coating. The coating contains no water.

In New Jersey: The allowable is 2.9 pounds VOC per gallon of coating, times the 300 gallons of coating per day, or 870 pounds VOC per day.

In Massachusetts: The allowable is 287 pounds VOC per day and is calculated as follows:

$$\text{Volume \%VOC} = 5.9/7.36 \times 100 = 80\%$$

$$\text{Therefore, Volume \% Solids} = 1 - 0.8 = 20\%$$

$$\text{Therefore, Volume Solids} = 20\% \times 300 = 60 \text{ gallons per day}$$

$$\text{The allowable volume \% VOC} = 2.9/7.36 = 39.4\%$$

$$\text{Therefore, Volume \% Solids} = 1 - 0.394 = 60.6\%$$

The allowable volume of coating per day, based on solids is $60 / 0.606 = 99$

The allowable volume of VOC per day = $99 \times 39.4\% = 39$ gallon VOC per day

The allowable is $39 \times 7.36 = 287$ pounds VOC per day.

The Mass. method allows only $287/870 = 33\%$ of the New Jersey method.

The Mass. allowable changes slightly if a different density for the solvent is used. For example: At 7 pounds VOC per gallon, the Mass. allowable would be 233 pounds VOC per day.

The major difference between the States is that New Jersey applies the 2.9 pounds to the coating as it is now applied; whereas, Mass. applies the 2.9 pounds to the coating after it has been reduced in volume to meet the regulations.

The effect of this difference in calculating is shown in the example that I left with you during our last meeting.

Please call me if you have any questions.

Very truly yours,

DONALD L. CULBERTSON, INC.

Donald L. Culbertson, P.E.
President

DLC/ec

cc: Malcom Gesner