

# **Recommendations to Asphalt Committee of Greenbook for comparison of Binder Application Rate Test ASTM 2995 and AIA testing method October 15, 2006**

SUMMARY: The two methodologies are identical in concept; however, minor differences exist that are worth discussion.

- ASTM uses geotextile test pads while AIA uses a rigid material such as hard board or plywood (1/8<sup>th</sup> or ¼ inch). Accomplishing the test with rigid samples would seem to be a real advantage. Potential bleed through and consequent loss of binder on a geotextile test unit is eliminated. Loss of binder would invalidate the test.
- ASTM uses scales accurate to 0.1g. AIA suggests accuracy within 2 grams. Cost for a scale of 0.1 gram accuracy could be upwards of \$750 or approaching 2-3 times a 2 gram accuracy scale. The 0.1 gram scale would be very difficult to use in open air (tail gate ) environment
  - Relevance: AIA specifications allow the onsite engineer to require actual application rate of binder within a range of +/- .03 gal per sq yard or a total variance of .06 gallons per square yard. The conversion calculation from mass to volume is approximately 4grams per hundredth. That equates to a total of 24 grams allowance. Therefore, the ASTM recommended 0.1 gram scale is technically over 200 times the accuracy needed.
- ASTM suggests using a minimum 8 oz/sy geotextile. I am concerned about the availability of these samples for the agency. An 8 oz/sy product would typically only be available from a geotextile distributor. The distributors proximity to the agency or project are of concern to me as well as the fact they typically stock 500 sy rolls and some distributors may not cut rolls. The AIA method suggests a hardboard or plywood which is available at any Home Depot type facility and will be cut to size at minimal cost. Handling of a rigid sample after spray over is very easy. The rigid units lend themselves to easy reuse by simply determining a new tare weight. I question if the geotextile could be used for multiple tests. That would require new test units for each retest. [One AIA member typically uses the same test units for the entire season]
- ASTM suggests the samples be placed full width across the spray pattern and even though that would provide a more comprehensive calibration of the spray truck I believe that to be unnecessary. However, the AIA method could be expanded to that degree if consensus dictates that is necessary.
- 6.1.2 (Adhering of the test unit to the pavement) is not needed with rigid test units
- The calculation formula produces the same results as the AIA chart
- I believe the Transverse testing method to be more relevant than the Longitudinal testing method

Respectfully,  
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