

9710302 Traffic Marking Materials  
COMMENTS FROM INTERNAL/INDUSTRY REVIEW

Karen Byram  
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Comments: (12-2-11)

A 5 year test deck seems impractical. Additionally, Maintenance currently only restripes when needed. Since the overall effect is to extend the service life of the stripe, the same could be achieved by increasing the minimum value at the end of a 3 year test. To avoid confusion, the 3year test deck performance requirement can be clearly identified as different from the 'service life' to avoid confusion. A 3 year test deck is much more manageable.

Response:

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Jerry Britt  
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Comments: (12-13-11) I support the change from 1.5 lb per gallon of TiO2 in paint to 1.0 lb per gallon. This is in line with most of the traffic paint specification currently being used. In regard to the change in service life of thermoplastic from 3 years to 5 years I would ask the Department if there has been sufficient field data gathered to support this change. The longevity of thermoplastic markings is dependent on application, primarily proper application thickness. When applied at the specified thickness of 100 - 120 mils above the road surface and at traffic volumes at the QPL Test deck requirement I would think that the extension to 5 years is possible. However, for higher traffic roadways this may not be the case. I would again ask if there has been sufficient field data taken on a statistically valid sample of various road surfaces and traffic counts to determine if this change can be supported.

Response

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Paul Gentry  
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Comments: (12-14-11) What field data justifies changing from “3 to 5 years” that would support this? The white and yellow thermoplastic test deck sections were not installed correctly in accordance with the Florida Method 5-541 (3-2006) that was in place at the time of these installations. The AADT counts and length of test deck sections requirements were not met for evaluation and would not meet the current requirements for FM 5-541 (1-11) that are in place today. The collection of data for yellow at the 4 and 5 year intervals was taken for other purposes (color box coordinates for yellow, wet recovery numbers, ect.) than to justify the 5 year longevity of the yellow thermoplastic products. Data collected for the white thermoplastic at 4 and 5 years was not collected in accordance with the requirements of FM 5-541. The retro-reflectivity readings were not taken in an unbiased method due to the heavy traffic and road conditions (intersections, business entrances, turnouts, ect.) that were present. When you add in the reduced amount of skip lines we were able to take measurements on for each section, it equaled a “picking and choosing of lines” situation that was extremely biased.

Response

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Tom Wood  
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Comments: (12-15-11) Composition - Sherwin-Williams is in agreement with the proposed change in the compositional requirements of the white waterborne traffic paint to 1.0 pounds per gallon of Titanium Dioxide. 971-5.5.2 Retroreflectivity - Sherwin-Williams is not in agreement with the proposed change in the long term retro-reflectivity requirements for the following reasons; The ability of a pavement marking to retain retro-reflectivity is dependent on three major factors. The quality of the thermoplastic material. The quality of the glass beads, both initially and as the product wears on the road. If the beads are effected by wear they may loose their ability to retro-reflect over time. The quality of the application. Any problems associated with number 3 above will most likely be identified during the initial approval process (3-6 months). Over time, it becomes more likely that the quality of the beads - in terms of their roundness and clarity, will have more of an adverse effect on the retro-reflectivity values than the quality of the thermoplastic. Although the bead quality may also degrade over a three year period this issue is minimized. It is, however, just as likely that a quality issue regarding the thermoplastic material will show up within three years as it will in five years. The long term retro-reflectivity requirement is suppose to be used only for the QPL approval of the thermoplastic material sample that is applied on the test deck under a controlled set of circumstances. It is often misinterpreted by specifying agencies as the expectation for the material whenever it is applied on a project - no matter how severe the application environment. This issue will only be worsened by extending the term to five years.

Response:

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Charlie Doyle  
404-433-0633

Comments: (12-19-11) It is Potters belief that the Florida DOT specifications are proprietary, and are not like Ashto specifications. They are based on the unique conditions in the State. To change the TiO2 content in paint, let alone thermoplastic(which I have heard is being looked at as well) without any corresponding test data is not appropriate. Additionally, to keep the retroreflectivity minimums unchanged, while lowering pigment content, runs contrary to how FDOT has normally approved products in the past. This being the case, we do not support any physical spec changes without proper test data to support that change.If this proposal is driven by cost reduction, then we strongly suggest you consider wider use of Hi Build Paint/Visilok system, which is proven to be very durable and offers exceptionally good performance at a very cost competitive price. This system becomes even more attractive as the cost of thermoplastic continues to increase.

Response:

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