

**RESPONSE 2 COMMENTS RECEIVED FROM INDUSTRY REVIEW**  
**Section 971**

\*\*\*\*\*

**Alan L. Lafferty**

Comment:

Section 971-9.2 – What is the reason for revising the binder contents without any documentation of performance? GulfLine has a track record with these binder contents with success. The binder contents are dependent upon satisfactory results. This is also the only pavement marking section with allowed lead and heavy metals.

**Response:** There is a direct correlation between the percent binder and the types of binder to the performance of materials. You are correct, the old binder contents have been sufficient to meet the previous thermoplastic requirements, but to obtain the new performance requirements, we believe the additional binder is a vital component.

All pavement markings are allowed 3.0 ppm lead by weight (See Section 971-1.8).

Comment:

Section 971-9.3 – GulfLine uses a double drop system. This section limits inverted profile to a single drop of type I glass spheres.

**Response:** The type and rate of application of glass spheres shall be determined by the manufacturer's recommendations.

Comment:

Section 971-9.4.2 – There are no initial and end of service life requirements for wet weather requirements. The current requirement in the Florida test method has a 3 year service requirement the revision has dropped this to 1 year. Keep the service life at 3 years. Section 971-5.5.2 states “the white and yellow pavement markings shall attain an initial retroreflectance of not less than 450 mcd/lx·m<sup>2</sup> and not less than 350 mcd/lx·m<sup>2</sup>, respectively”. Add the same for initial dry to this section including 75mcd/lx·m<sup>2</sup> end of service life wet.

**Response:** You are correct, the service life should be three years. We will probably raise the retroreflectivity to 450 mcd and 350 mcd in the future. We are currently evaluating initial test deck readings for QPL products approved or under review for Section 702.

Comment:

Section 971-9.4.3 – How is durability measured?

**Response:** The durability is measured as the amount of thermoplastic material loss from the pavement. The loss is limited to 5% at the end of the service life.

Alan L. Lafferty

\*\*\*\*\*

**Charles Doyle**

File: 9710000 – Coatings and Traffic Marking Materials  
Username: Charles Doyle  
UserEmail: charlie.doyle@pottersbeads.com  
UserTel: 678-560-5706  
UserFAX: 678-560-5716  
Date: Thursday, June 23, 2005  
Time: 08:17:01 AM

Comment:

971-2.2 Adhesion coating is for large beads only. Standard AASHTO should either have a moisture proof coating or a dual coating. **If standard beads only have an MP coating then they will sink in the line. (This statement was incorrect).** If standard beads only have adhesive coating they will sink in the line.

**Response:** The specification has been revised to include bead coatings.

Comment:

971-5.3 There is no way to test the intermix to ensure that the proper mix between type 1 and type 3 is respected. Need some terminology in the spec that will allow for testing. A manufacturer could have a significant competitive advantage by not adhering to the intermix bead. I HAVE INCLUDED POTTERS INDUSTRIES INTERMIX SPEC FOR REVIEW, as well as to include in the spec.

**Response:** The gradation will be checked during the re-qualification of manufactures on QPL, and during the QC monitoring on projects.

Comment:

971-6.1 HOT SPRAY does not work. Contractors need a sprayable thermo that they can apply at either 100 or 60 mils. Otherwise they will have to keep 2 different types of thermo inventory. WE have tested a spray thermo in Tallahassee with type 3 beads.

**Response:** The use of Hot Spray (971-6) is only used by maintenance and then should only be used when a short period of restoration of the marking is needed to extend the marking to future improvements on the roadway.

Comment:

971-6.4.2 retro should be 450 mcd for white and 350 mcd for yellow. All markings should have the same minimum retro values. The goal is to upgrade the road markings and this should apply across the board.

**Response:** These values are not achievable with this material and application.

Comment:

971-6.5 Use a type 3 single drop bead with spray thermo, NOT A TYPE 1 BEAD WITH HOT SPRAY. The hot spray system does not work and sets up to quickly which does not allow for bead retention.

**Response:** The 60 mil spray thermo (971-5) will be the pavement marking material for refurbishment of existing markings in most cases.

\*\*\*\*\*

**Matthew G. Schindler**

Comment:

971-10.3: Suggest changing skid resistance values for markings in bike lanes and crosswalks to 50 BPN.

**Response:** A BPN of 55 has been standardized for all skid resistant marking.

Matthew G. Schindler

\*\*\*\*\*

**Mayur Patel**

File: 9710000 – Coatings and Traffic Marking Materials  
Username: Mayur Patel  
UserEmail: mayur.patel@dot.state.fl.us  
UserTel: 352 955 6626  
Date: Friday, June 24, 2005  
Time: 05:05:09 PM

Comment:

971-2.2 The sieve charts should not be included in the specification. Just a reference to the AASHTO and FP standards with the acceptable bead types. We are not taking exception to the standards.

**Response:** Will correct.

Comment:

971-2.3.1 & 971-2.3.2: (1) Convert the spec to active voice. (2) It is not clear who samples the glass spheres. (3) To whom samples should be furnished after Engineer splits it? Make it clear.

**Response:** This is discussing material issues, please give me your suggestions for rewording.

Comment:

971-8.4.2 raised rib shoulder warning devices should have a service life of three years not one year.

**Response:** You are correct, the service life has been revised to three years.

Comment:

971-9.4.2 wet weather markings should have a life of at least three years and not one year.

**Response:** You are correct, the service life has been revised to three years.

\*\*\*\*\*

### **FLINT TRADING, INC. COMMENTS ON 971000**

Comment:

**Add** the following sentence at the end of the paragraph of Section 971-1.1 Packaging and Labeling: “Preformed thermoplastic marking packages shall be marked with content, color (if not white), date of manufacture, and lot number.”

**Response:** Added information to specification.

Comment:

**Add** the following phrase at the end of the last sentence in Section 971-1.4 Qualified Products List: ... for the vehicle component, “if applicable.”

**Response:** It will be applicable for all products.

Comment:

**Delete** the following from Section 971-1.7 Retroreflectivity: “The in-service daytime chromaticity for yellow materials shall fall within the box created by the following coordinates: In Service Daytime Chromaticity Coordinates (Corner Points).” AND delete the table.

**Response:** The color requirements will remain as stated. This has been our specification for all existing products currently approved.

Comment:

Section 971-7.1 General: **replace** the following text “The manufacturer shall utilize alkyd based materials only and shall have the option of formulating the material according to his own specifications” with “The material shall be oil impervious and the manufacturer shall have the option of formulating the material according to his own specifications.”

**Response:** Revised information in the specification.

Comment:

**Delete** the entire contents of Section 971-7.2 Composition and **replace** it with the following sentence: “The preformed thermoplastic shall consist of high quality materials, pigments, and glass spheres uniformly distributed throughout the material.”

**Response:** The modification will be made to the specification.

Comment:

**Delete** the entire contents of Section 971-7.3 Glass Spheres and **replace** it with the following sentence: “The glass spheres shall be a mix of Type 1 and Type 3 and meet the requirements of 971-2. The material shall contain no less than 30% glass spheres by weight.”

**Response:** Revised information in the specification.

Comment:

**Delete** Section 971-7.4 Sharp Silica Sand in its entirety.

**Response:** Section 971-7.4 will be removed.

Comment:

**Change** Section 971-7.5 Physical Requirements to be Section 971-7.4 Physical Requirements. AND **delete** the contents of the section and **replace** it with the following sentence: “The applied materials shall produce a marking which meets the specifications in 971-7.4.1 through 971-7.5. Additionally, the markings shall be oil impervious and resistant to gasoline and antifreeze. The markings shall at normal high and low pavement temperatures be capable of resisting deformation, chipping, and flaking by traffic.”

**Response:** The physical requirements will remain as stated.

Comment:

**Add** the following sentence at the end of Section 971-7.5.1 Retroreflectivity: “Bike lane symbols, bike lane messages and pedestrian crosswalks shall attain an initial retroreflectance of not less than 275 mcd/lx.m<sup>2</sup>.”

**Response:** The sentence will be added to the specification.

\*\*\*\*\*