



# Arizona Department of Transportation

## INTERMODAL TRANSPORTATION DIVISION Construction Group

### CONSTRUCTION BULLETIN 11-03

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**Date:** July 13, 2011**From:** Julio Alvarado, Assistant State Engineer, Construction**Subject:** Thermoplastic  
Pavement Markings

## Thermoplastic Pavement Markings Sampling and Testing

**Purpose**

The intent of this bulletin is to ensure that field sampling and testing of thermoplastic pavement marking material is sufficient to ensure compliance with the specification and is representative of the final product.

**Background**

The Thermoplastic Pavement Markings (704) specification was modified in order to increase product longevity and minimize discoloration. As of the effective date of the change (November 19, 2010) the new formulation was required on all ADOT projects bid after that date. Industry has been informed that substitution of the previous formulation will not be allowed.

The Contractor's inability to obtain the new material will not be accepted as an excuse not to comply with the new specification. As soon as the contract is awarded the material should be ordered. (If necessary a Change Order should be initiated to authorize a stockpile payment to allow some cash flow back to the contractor.)

## Process

### Prior to Placement

The issues brought out in this Construction Bulletin must be addressed prior to striping. One option would be to cover the topic at the Pavement Striping Pre-Activity meeting that is required 2 weeks in advance dealing with survey control for striping (Std. Spec. 925-3.01).

### Sampling and Testing

#### **Thickness**

- The Sr./Resident Engineer is responsible for verifying pavement markings meet the minimum thickness as specified in Standard Specification Section 704-3.02(G).
- A minimum of four spot checks are required per day. The first sample should be taken at 2,500 feet from the start.
- Spot checks should be taken by placing a flat sheet of metal ahead of the striping apparatus. "Dried" spot check procedures are noted in 704-3.02(G).
- Thickness will be measured with a digital caliper. The Orgs will be responsible to purchase this piece of equipment. For reference, an *example* of an acceptable caliper is attached. If you have any questions regarding this equipment contact the Structural Materials Testing Engineer (602-712-8205).
- Contact the Traffic Operations Engineer (602-712-6913) for samples not meeting the minimum thickness. Traffic Operations will determine whether the thermoplastic will be accepted at a reduced price or whether reapplication is required.
- Don't discard the four plate spot checks, as these will require further Central Lab testing for material property compliance. Bag each sample separately (include all thermoplastic from the plate) and label accordingly.

#### **Material Properties**

- Central Lab determines content (binders and resins) compliance. It is estimated to take up to 5 days from lab receipt to complete all of the required tests. The goal is to provide results to the contractor as soon as possible. Therefore, samples must be sent no later than 7 calendar days after obtaining.

#### **Reflectivity**

- In addition to sampling and testing glass beads [see Materials Group Policy and Procedure Directive (PP&D) 21] Traffic Group, within 30 days, will test for retro-reflectance. Contact the Traffic Operations Engineer (602-712-6913) immediately after Thermoplastic striping is completed.
- Traffic Operations will determine whether the reflectivity will be accepted at a reduced price or whether reapplication is required.

## Attachment



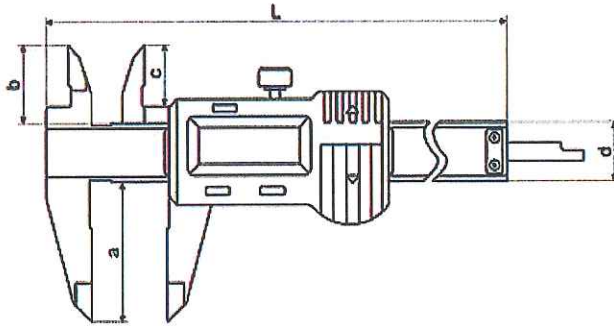
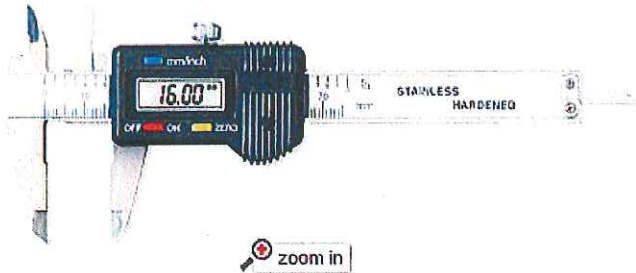
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