

Bureau of Materials and Physical Research
Illinois Laboratory Test Procedure
Effective Date: January 1, 2007

Color Difference of Waterborne Acrylic Paint

This test procedure applies to Article 1008.04(i) of the Standard Specifications for Road and Bridge Construction (January 1, 2007).

1.0 GENERAL

- 1.1 This procedure covers the test required to measure the color difference of a waterborne acrylic paint sample to a Munsell standard.

2.0 REFERENCED DOCUMENTS

- 2.1 ASTM D 823, Practice E
- 2.2 Munsell Matte or Glossy Color 5Y 8/4 Yellow.
- 2.3 Munsell Glossy Color 7.5G 4/8 Interstate Green.
- 2.4 Munsell Glossy Color 2.5YR 3/4 Reddish Brown.
- 2.5 Munsell Glossy Color 10B 3/6 Blue.
- 2.6 Munsell Glossy Color 5B 7/1 Gray.

3.0 TEST EQUIPMENT

- 3.1 Spectrophotometer with 45 degrees circumferential/0 degrees geometry, illuminant C, and 2 degrees observer angle. The spectrophotometer shall measure the visible spectrum for 380 – 720 nm with a wavelength interval and spectral bandpass of 10 nm.

4.0 SAMPLE PREPARATION

- 4.1 Apply a minimum dry film thickness of 75 microns (3 mils) of the sample coating on a test panel according to ASTM D 823, Practice E, Hand-Held, Blade Film Application.

5.0 TEST PROCEDURE

- 5.1 Measure and calculate the Hunter Delta E color difference by instrumental comparison of the designated Munsell standard to the prepared sample.