Color Difference of Waterborne Acrylic Paint

This test procedure applies to Article 1008.04(i) of the Standard Specifications for Road and Bridge Construction (April 1, 2016).

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.