Bureau of Materials
Illinois Laboratory Test Procedure
Effective Date: January 1, 2007
Revised January 14, 2021

Color and Gloss Retention of Finish Coats of Waterborne Acrylic Paint

This test procedure applies to Article 1008.04(k) 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 and gloss retention of finish coats of a waterborne acrylic paint.

2.0 REFERENCED DOCUMENTS

2.1 ASTM D 1730 Type A, Method I Solvent Cleaning.

2.2 ASTM G 154.

3.0 SAMPLE PREPARATION

3.1 Prepare a 12 × 4 in. (300 × 100 mm) aluminum alloy test panel according to ASTM D 1730 Type A, Method I Solvent Cleaning.

3.2 Apply a 250 microns (10 mil) wet film of finish coat to the prepared test panel(s).

3.3 Allow to air dry for seven days.

3.4 Measure the initial 60° specular gloss and color.

4.0 TEST PROCEDURE

4.1 Subject the coated test panel for 300 hours to accelerated weathering using the light and water exposure apparatus (fluorescent UV - condensation type) as specified in ASTM G 154 (equipped with UVB-313 lamps).

4.1.1 The cycle shall consist of eight hours UV exposure at 140 °F (60 °C) followed by four hours of condensation at 104 °F (40 °C).

4.2 After exposure, rinse the test panel(s) with clean water, allow to dry at room temperature for one hour.

4.2.1 Measure the 60 degrees specular gloss and color.