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M A T E R I A L S

 MITSUBISHI PLASTICS COMPOSITES AMERICA, INC.

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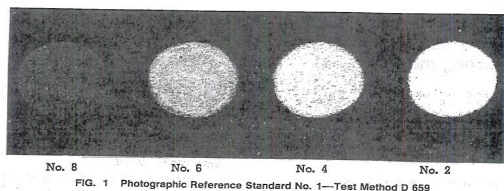
Subject: Second 2010 Newsletter

We have received several questions regarding a competitive finish that has recently been introduced. In the competitor's brochure the products' performance with regard to several tests detailed in the AAMA 2605 and AAMA 620 finish standards are documented in a table. Color fade, when tested to ASTM D2244, is reported as, "Variability up to +/- 0.5 Delta" The standard measure for color fade, as described in the noted ASTM standard is Delta E. Delta E is a measure of variability between a given measured reference point and a measured test point. The equation for Delta E is the square root of the sum of the squares of the Delta L (the difference between the samples on the L axis of the color space), the Delta a (the difference between the samples on the a axis of the color space), and Delta b (the difference between the samples on the b axis of the color space).

$$DE = \sqrt{((\Delta L)^2 + (\Delta a)^2 + (\Delta b)^2)}$$

While the Delta L, a or b can be negative, by squaring the number, or multiplying it by itself, a positive result is returned. So a reported performance of +/- 0.5 delta is inconsistent with the measurement method. AAMA 2605 requires a Delta E of less than 5 after 10 years South Florida exposure.

The table in the competitors brochure also reports a chalk performance of "Variability up to +/- 0.8 delta" when measured according to ASTM (D)4214. AAMA 2605 requires the panels to be measured as per ASTM D4214 Test Method A (Method D659). This test method requires the panel to be rubbed with a black cloth and a comparison be made to the following visual standard:



By this method there is not a plus or minus value and the results are not reported as a delta. The correct judgment would be as a performance equal to or better than one of the standards shown. AAMA 2605 requires a chalk performance of better than 8 for colors and 6 for whites after 10 years of South Florida exposure.

We hope this review has been useful in understanding the appropriate terminology and scales for reporting Color Fade and chalk performance of finishes complying with AAMA 2605.

Competitive information found on ALCOA Architectural Products brochure AAP-0471