

Light, high temperature, and moisture, can cause damage to coatings, plastics, and other organic materials. This damage includes gloss loss, fading, yellowing, cracking, peeling, embrittlement, loss of tensile strength, and delamination. Even indoor lighting and sunlight through window glass can degrade some materials such as pigments and dyes, causing fade and color change. For many manufacturers, it is crucial to formulate products that can withstand weathering and light exposure. Accelerated weathering test is widely used for research and development, quality control and material certification.

1. Test method (ASTM G155: Weather-Ometer)

Staton (12T) specimens are exposed under the following conditions:
The test cycle shall consist of 102 minutes of light followed by 18 minutes of light plus water spray. Black Panel Temperature shall be adjusted to 145°F +/- 6°F (63°C +/- 3°C) attained during the light only portion of the cycle. Water shall be demineralized and delivered in a fine spray, with a water temperature that shall be 77°F +/- 4°F (25°C +/- 2°C). Light source is xenon arc and the Irradiance is 0.35W/m² (340nm).



2. Test result

Staron color changes are measured in ΔE unit by ASTM D2244 method. The product which color changes less than $\Delta E=5$ unit based on projected 10 year performance are selected as below. These are recommended for exterior applications.

* Recommendation

Bright white, Pure white, Quasar white, tusk, Pearl, Sanded grey, Sanded sahara, Sanded vermillion, Sanded icicle, Sanded ginger, Sanded papyrus, Sanded heron, Sanded white pepper, Aspen glacier, Aspen snow, Aspen slate, Aspen fiesta, Pebble gold, Pebble lagoon, Pebble maize, Pebble moon, Pebble swan, Pebble chiffon, Pebble ice, Pebble kernel, Pebble frost

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