

UV TESTING FOR REDUX™ 650

In accordance with ASTM D4587 Cycle 4¹

BACKGROUND:

The purpose of this test is to determine what effect UV exposure will have on the color and gloss level of the Redux 650 system.

METHODOLOGY:

Redux 650 (White) was applied via draw down onto three aluminum Q-Panels and allowed to fully cure under ambient conditions.

Prior to testing, the color and gloss of each coating was measured. Gloss was measured using a gloss meter at a 60° angle, color was measured using a spectrophotometer and the Delta E (dE) formula.

The panels were tested per ASTM D4587 Cycle 4, in 12-hour cycles using a QUV-340A cabinet, 340 nm irradiance.

The first eight hours, the sample panels were tested at UV 0.77W/(m²*nm) at 60°C. The next four hours, the sample panels were in the dark with condensation at 50°C.

The 12-hour cycles were repeated for 3,000 consecutive hours (equivalent to approximately four years exterior exposure), with periodic breaks to measure color and gloss levels.

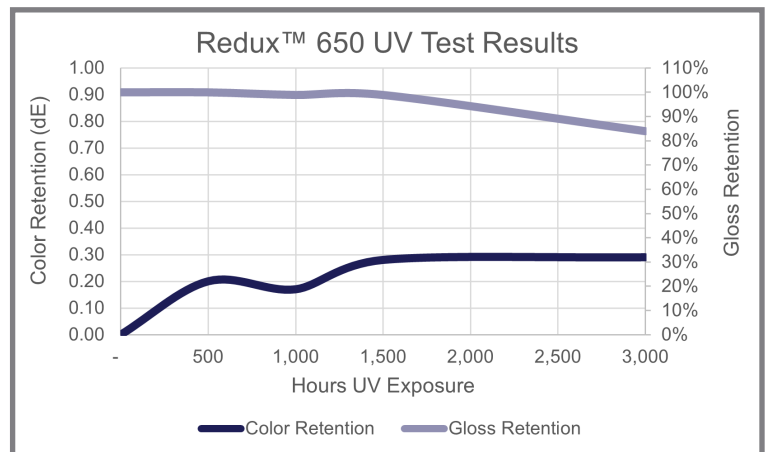
RESULTS:

Gloss changes are reported as a percentage of the original gloss value. **The Redux 650 system performed excellently, retaining 99% of its gloss through 1,500 hours of exposure, or the equivalent of approximately two years exterior exposure.**

Color shifts are represented as Delta E values. The lower the dE value is, the closer the tested sample is to the original color. Conversely, the higher the value, the more the color has shifted. A dE value of 0.00 means the color of the test sample is identical to the color of the original sample. **The Redux 650 system had an excellent dE value of less than 0.30 after 3,000 hours of exposure.**



HOURS UV EXPOSURE	REDUX 650 dE VALUE	60° GLOSS VALUE @ 3,000 Hours
0	0.00	93
500	0.20	93
1,000	0.17	92
1,500	0.28	92
3,000	0.29	78



¹ ASTM D4587—Standard Practice for Fluorescent UV-Condensation exposures of Paint and Related Coatings, with testing completed by an independent testing laboratory.

