

## Laboratory Report: UV-Resistance Testing (ISO 11341)

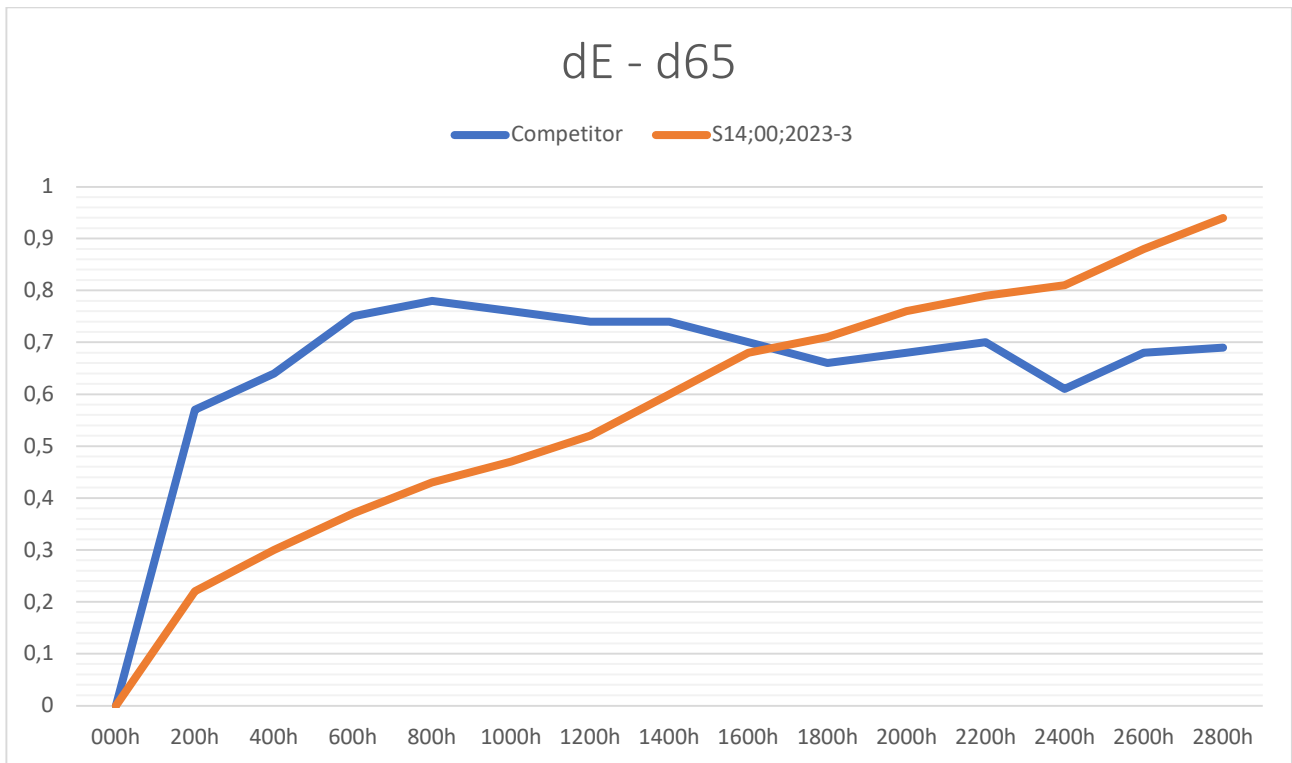
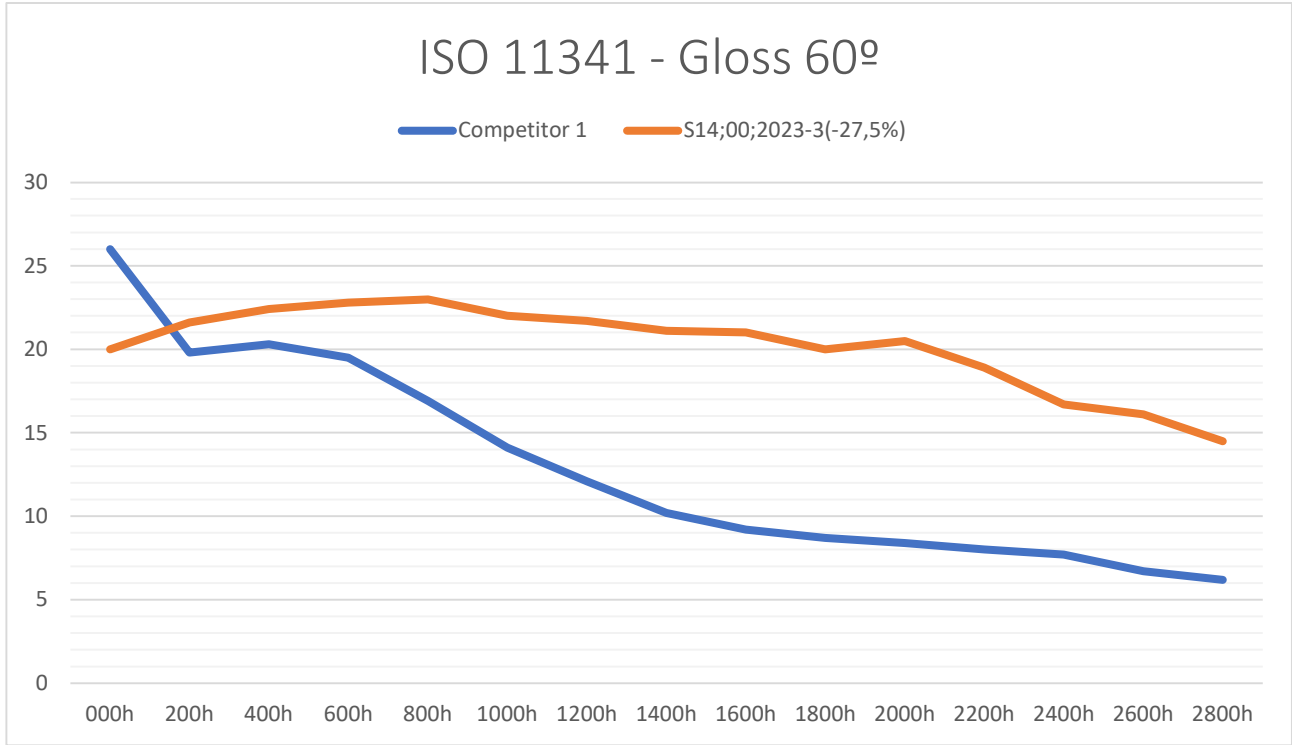
### Laboratory test description

The product **W-Guard Cover 30** with recipe number **S14;00;2023-3** was tested for UV-resistance in our laboratory. This test is conducted in accordance with ISO 11341, which specifies methods for assessing the resistance of paints and varnishes to artificial weathering using fluorescent UV lamps and water.

In this test, samples are placed in an Atlas Ci3000 weathering machine, where they are exposed to cycles of UV light and water to simulate the effects of outdoor weathering. The test runs continuously for **3000 hours**. Every 200 hours, the machine is paused, and the samples are removed to measure gloss and color. These measurements are key indicators of the product's ability to withstand UV degradation over time. After each measurement, the samples are returned to the machine, and the test resumes.



**Test Result**



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**Quality**  
Production EN ISO 9001  
Environmental EN ISO 14001  
Finance AAA

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### Test Results - Comments

The UV-resistance results for **W-Guard Cover 30 (S14;00;2023-3)** are outstanding, particularly in terms of gloss retention. After 3000 hours of exposure in the Atlas Ci3000—a duration equivalent to significant outdoor weathering—the product exhibited a gloss retention of -27.5%. This minimal loss highlights its exceptional ability to withstand UV degradation. In comparison, the competitor product **Competitor 1**, recorded a gloss loss of -79.6% under identical conditions, demonstrating Deep Wood Coat's markedly superior performance.

Regarding color stability, both products showed excellent performance, with color change ( $\Delta E$ ) values less than 1 after 3000 hours, indicating that the color differences are generally imperceptible to the human eye. This  $\Delta E$  value of less than 1 is considered really good, as it reflects minimal color shift even after prolonged UV exposure. However, the pattern of color change differed significantly between the two. **Competitor 1** displayed a sharp initial increase in  $\Delta E$ , followed by a slower rate of change, suggesting an erratic degradation pattern. In contrast, **W-Guard Cover 30** exhibited a steady, gradual increase in  $\Delta E$  throughout the test. This consistent behavior indicates predictable and stable UV resistance, allowing for reliable extrapolation of long-term performance. The early spike in **Competitor 1**  $\Delta E$  introduces uncertainty about its future behavior, as it may be prone to additional significant shifts over time. While extending the test could provide further insight, the substantial gap in gloss retention and the more stable color change pattern of **W-Guard Cover 30** clearly establish its superior overall UV resistance.

### Production

The product was produced at Hagmans Nordic ABs' production plant in Stora Levene Sweden. Hagmans Nordic AB is certified according to SS-EN ISO 9001:2015 Quality Management System Standard. Certificate no: 14504125.

Stora Levene, 2025-03-05

Peter Svanström

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