

# Hydrolysis — Ultrafabrics

Not all coated fabrics are created equal, especially when it comes to performance. Ultrafabrics is proud to announce that majority of our core portfolio now meets 16 weeks hydrolysis in both the ISO 1419 and ASTM D testing methods, exceeding expectations in both durability and aesthetics.



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## About Hydrolysis Testing —

Polyurethane can be affected by heat and moisture, which can cause it to crack, peel, or degrade over time. The material's ability to withstand those effects is proven through hydrolysis testing. Hydrolysis is a chemical reaction in which a molecule of water breaks chemical bonds. Hydrolysis testing is then used to determine the resistance of a material to chemical breakdown or decomposition due to exposure to water or moisture. This validates polyurethane's performance and is what you should refer to when seeking the most durable option.

There are two tests commonly used to rate hydrolysis for polyurethane coated synthetic leathers.

### ISO 1419 (“Tropical” Test, Method C, Also known as “Jungle” Test) —

- A sample is placed in a testing chamber at 158° Fahrenheit and at 95% humidity.
- After a pre-determined number of weeks, or until failure, the sample is visually compared to an untested control sample, checking for any signs of degradation, discoloration, or damage.
- A specimen passes if no perceivable change has occurred
- The Association for Contract Textiles (ACT) performance guidelines for coated textiles calls for 5 weeks to deem it a durable material.

# ASTM D3690 Standard Performance Specification for Upholstery Fabrics, Indoor (Section 6.11, Hydrolytic Stability) —

- A visually inspected sample is placed in a testing chamber at 158° Fahrenheit and at 95% humidity. And physical properties tests are done on an un-exposed control sample.
- After a period in the testing chamber, which can be as low as 15 days or up to UF's remarkable 16 weeks, the sample is visually compared to a control and subject to tests to evaluate the physical properties of adhesion, surface abrasion and resistance to flexing.
- The material only passes if it clears the visual comparison and meets the minimum requirements on all physical tests, with no degradation after the test.

\*There is no direct correlation of testing weeks to years of service in the field. As with any textile, multiple factors including environment, usage, abuse, and application type can contribute to longevity.

## Bottom Line —

The recommended industry minimum (ACT) for hydrolysis resistance is 5 weeks for the ISO Method to be suitable for commercial applications.

Because our core portfolio is specifically engineered using the highest quality polycarbonate resins, Ultrafabrics is head and shoulders above the industry standard and similar products. We believe in artisan craftsmanship and providing materials that never compromise.

Exceptions:

Uf Select achieves 10 weeks