Beading Water

A fallacy that many people have accepted is that water beading on the surface of wood is the only sign that a finish is preventing water penetration into the wood. This is not correct. Beading water is an indication that the surface is hydrophobic (water hating). In addition, there is no correlation between beading water and protecting wood from sun (UV) damage.

Periodically we receive a call from a homeowner asking if they need to put another coat of Advance™ on their home since when water is sprayed on their finish the water does not bead. Since none of our current finishes contain a high concentration of a hydrophobic additive, water wets the surface (spreads out).

Water sheeting on Lifeline Advance

Water beading on a finish that contains wax

Hydrophobic additives may contribute to water repellency for the short term, but they often weather away quickly, especially in those areas that are in direct sunlight or high traffic areas. Once the additive is gone, it may leave microscopic

voids that allow for water penetration and reduce the ease of keeping the surface clean. By maintaining a smooth film, we have been able to significantly increase the long-term performance of our exterior finish systems. The other feature imparted by a high concentration of wax in a finish is the difficulty of applying additional coats of a water-based finish on top of it.

There is also a misconception that only the topcoat prevents water penetration to our finish system. All our exterior and interior primers, stains and topcoats prevent liquid water from coming into direct contact with the wood fibers. So even though the topcoat may show some signs of wear, it does not mean that the finish system has lost the ability to prevent water penetration.

Water absorbing into the wood through a finish that is no longer water repellent

So how can you tell if a finish is no longer preventing water penetration? If the wood is dry, it is pretty easy. When dry wood is sprayed with water and there is no change in color it is a sign that the wood is not getting wet. On the other hand, if the wood turns dark it is an indication that the wood fibers are getting wet.