

# How to Qualify a High-Performance Coating



## The Challenge: UV Degradation

Sunlight, heat and moisture cost the architectural industry millions of dollars in damage every year. When a coating starts to weather from UV exposure and other natural elements, the surface gets rougher, which is the result of the film breaking down.

Then, loose polymer resin and pigment appear on the surface, an effect called chalking. The continuation of chalking on a coated surface means that the coating is getting thinner and will eventually wear away completely.

## The Need:

# A Specially-Formulated Coating That Withstands UV Exposure

To reduce the risk of chalking and fading, a coating must be formulated to withstand UV exposure, and lots of testing is needed to qualify it.

## The Task:

# Qualifying Testing Methods

### ASTM G-155

The ASTM G-155, commonly known as the accelerated weathering test, uses Xenon Arc Light equipment to replicate the effects of sunlight, moisture and heat on a coated specimen.

Outdoor weathering studies, in conjunction with accelerated testing, are also key to understanding the true performance of an exterior coating formulation. This takes much longer but will provide a more realistic representation of the coating's performance.

"Conducting outdoor weathering studies in conjunction with accelerated testing is key to understanding the true performance of an exterior coating formulation."

### Outdoor Weathering Test

We are in the ongoing process of carrying out a decades-long outdoor weathering study in South Florida. Original Polyvinylidene or PVDF resin technology has been weathering since 1967 with minimal fading, chalking or degradation.

Panels of PVDF resin are positioned at a 45-degree angle facing south and are periodically compared to non-exposed, control portions of the panels to look for signs of color change, gloss retention and chalking.





## Choose High-Performance Coatings from APV

Whether it's being put to the test in a controlled lab setting or exposed to real-world elements, one thing is clear: Kynar Aquatec<sup>®</sup> PVDF is a big reason why **NeverFade<sup>®</sup> Façade Restoration Coatings** are effective.

Kynar Aquatec<sup>®</sup> PVDF polymer, the primary resin in NeverFade<sup>®</sup> Façade Restoration Coatings, does not break down under harsh UV conditions. The product is also engineered with high-performance, complex inorganic pigments that are encapsulated by the polymer. The resulting formulation provides the substrate with long-term weathering properties.



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