

QUALITY ASSURANCE



For more than 85 years Pella Corporation has established the most rigorous and comprehensive quality assurance and testing program in the industry. We remain the only manufacturer to incorporate online testing for air infiltration compliance into the manufacturing process. Our state-of-the-art testing laboratory is one of the largest and most extensive in the industry. We are continually developing more sophisticated test equipment and procedures to ensure that existing products and proposed modifications meet, and surpass, industry performance standards.

Xenon and UV Exposure	Simulates exposure to the sun or UV rays. After six weeks products are checked for color fade, gloss loss, and material property changes.
Acid, Rain, Salt, Fog Test	Tests corrosion resistance of painted aluminum, plated steels and hardware using imitation acid rain or salt fog.
Humidity Test	Exposes products to 100 percent relative humidity for four weeks. Products are checked for paint adhesion, mold and mildew on wood.
Packaging Test	Tests packaging methods—products are dropped and vibrated in order to simulate shipping. Products are checked for dents, cracks and loose fasteners.
Door Cycle Test	Cycles doors open/close and lock/unlock 100,000 times. Doors are checked for hinge wear and weatherstrip deterioration.
Double-Hung Cycle Test	Cycles double-hung windows open/close and lock/unlock 6,000 times. Windows are checked for jambliner and balance cord wear, and weatherstrip deterioration.
Casement Cycle Test	Cycles casement windows open/close and lock/unlock 10,000 times. Windows are checked for hinge wear, weatherstrip deterioration and locking forces.
Tensile Tester	Tests for fastener strength and glue bond strength in tensile and shear.
Insulating Glass (IG) Accelerated Weather Test	Exposes IG to severe weather conditions. Accelerates test so years of weathering can be accomplished in months.
Thermal Stress Test	Tests the performance of windows and doors in temperatures ranging from -40 degrees F to 160 degrees F.
Frost-Point Test	Tests the frost point of IG (the point at which condensation forms inside two panes of glass).
Thermal Test	Tests condensation and frost resistance, and measures U-Factor. U-Factor is the ability of the product to insulate; a Lower U-Factor equates to better insulation.
Air-Water-Structural Test	Air component simulates a 25 mph wind and measures the air leakage through the product. Water component simulates an eight inch per hour rain and a 30 to 60 mph wind (depending on the product), and tests for water leakage. Structural component simulates an 80 to 200 mph wind in positive and negative directions (depending on the product) and tests for structural failure.

PATENT INFORMATION

Pella is an industry leader in the development of highly innovative products. Pella Corporation owns numerous U.S. and foreign patents on Pella® window and door technologies and aggressively protects its intellectual property.