



DaVinci Slate, Shake & Fancy Shake

Third Party Testing

Test	Objectives	Method	Results
Fire test ASTM E 108	Earn classification for fire.	Burning brand, Intermittent flame, Spread of Flame.	Passed Class A
UL 2218 Impact	Earn UL classification for impact.	Two-inch steel ball weighing 1.2 lbs is dropped from 20 feet on to an installation. Test is repeated. Both impacts must be within a 1/4."	Passed Class 4
ASTM D3161 same as UL 997 Wind Uplift	Earn certification for wind.	A roofing assembly is subjected to sustained winds at specified velocities for two hours. Test ran at 110 mph.	Passed test at standard 110 mph setting.
Accelerated Weathering ASTM 4798	Determine material performance in respect to brittleness, color-fade, curling/warping and coating adhesion.	4500 hours of exposure to UV radiation, elevated temperature, moisture, and thermal shock.	Nearly imperceptible color change. No appreciable change in tensile strength
Freeze-thaw ICC-ES Acceptance Criteria ACO7 section 4.9	Determine material performance in extreme temperature cycling.	Exposure to temperatures from -40 F to 180 F in 22 hour cycles for approximately a month.	There was no sign of crazing, cracking, or other deleterious surface changes.
ICC-ES ACO7 Section 4.4	Penetration	Samples subjected to applied load in an Instron Machine	200 lbs. Passed
ASTM D 471 Water Absorption	Determine if material absorbs water to discount freeze-thaw issues.	Sample is put in water at 158 F for 166 hours and then weighed to find out if any water absorption has occurred.	Virtually no water absorption.
ASTM D 3462 Nail Pull Through Resistance at 32 F and 72 F	Identify nail tear resistance to determine if nails will pull through the shingle.	Shingle is nailed and stabilized at 73 F and then at 32 F. Force is applied until shingle is pulled past nail.	138 lbs/ft of force required at 73 F and 166.9 lbs/ft at 32 F.

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ASTM G21 Fungus (algae) test	Determine if algae wants to grow on DaVinci Slate	Our sample is inoculated with blue green algae and put in a warm, damp place along with a control sample for four to six weeks	The algae did not grow on our sample shingle
ASTM D 638 Tensile Strength	Determine effects of long-term weathering on material strength	Tensile strength of sample is measured before and after accelerated weathering. Weathering duration is 4500 hours	No meaningful reduction of strength. Post test results showed a 2.6% reduction in material strength from pre-test measurement.
TAS-100	Earn certification for wind driven rain. Pass or fail only.	A roofing assembly is subjected to increasing wind speeds along with an abundance of water blown at the system at speeds up to 110 mph.	Passed
UL 1897	Earn UL Certification for static uplift resistance.	A roofing assembly is subjected to differential air pressure until failure.	Passed
TAS-125	Earn certification for wind uplift resistance in High Velocity Hurricane Zones. Pass or fail only.	A roofing assembly is subjected to positive and negative pressure in cycles to measure wind uplift resistance.	DaVinci Slate passed at -118.5 psf. DaVinci Shake passed at -93.5 psf. DaVinci Fancy Shake passed at -131 psf.

Code Approvals

DaVinci Slate & Shake: ICC-ES ESR-2119
 Florida Building Code
 Slate: TDI RC-166 Shake: TDI RC-164
 Slate: Miami Dade County, FL NOA No. 12-0503.01 Shake: Miami Dade County, FL NOA No. 13-0107.01
 Go to www.davinciroofscapes.com for the most up-to-date technical information.