CAST NATURAL STONE

BEAUTY STRENGTH DURABILITY

At Cast Natural Stone, we build each and every stone to stand up to the most brutal weather conditions. And with our manufacturing and headquarters located in Wisconsin, we know weather conditions.

How do we know Cast Natural Stone is strong and durable?
We test it under the most intensive standards in the industry, as guided by ICC-ES, the leader in providing independent evaluation of building products, components and systems.

AC51
The foundation of testing is AC51, a set of rigorous tests designed to ascertain the long-lasting durability of manufactured stone veneer. Combined, the entire AC51 series of tests encompasses every characteristic of stone veneer necessary to ensure it holds up under exceptionally harsh conditions…like we have in Wisconsin.

Quality Control
But testing under ICC-ES standards goes well beyond AC51. Our Quality Control practices guide everything we do, ensuring that every aspect from our raw materials to our daily testing meets the highest specifications in the industry. See the ICC-ES third party report on Cast Natural Stone (ESR #3566).

STRENGTH AND DURABILITY OF THE INSTALLED STONE

AC-51 CRITERIA	GUIDELINES	WHY	MEET/EXCEED
Compression Strength	Tested on 28 Day Cured Samples. Samples must withstand 1,800 PSI without damage.	For decades of strength and durability, you want a stone that holds up.	✓
UBC Standard 15-5 Moisture Absorption	Based on the stones' density, it must absorb less than a specific amount of moisture. For example, for density <85 lbs/ft, absorption must be less than 22%	Predictable weight per foot, and lower absorption means less water permeability.	✓
Tensile Strength (ASTM C190)	Tested on 28 Day Cured Samples. Results must be reported, and all samples within specific range	Tensile strength must be sufficient to resist breaking and cracking as mortar beds cures and shrinks .	✓
Flexural Strength (ASTM C348)	Tested on 28 Day Cured Samples. Results must be reported, and all samples within specific range.	Walls can move, and you want a stone that can hold up without breaking.	✓
Freeze Thaw (ASTM C67)	Testing the stone requires that the stone be saturated, frozen, then thawed - for 50 cycles. Stone must not crack, break, or deteriorate.	We build all of our stone to withstand the harsh climates of the Northern US and Canada – it must hold up to decades of freezing and thawing conditions.	✓
PROCESSES AND MATERIALS			
Cement (ASTM C150) and other Raw Materials (ASTM C33 or C330)	Raw materials such as cement and aggregate must meet specific standards. We demand mill tests and certificates of analysis assuring each shipment meets specifications.	We want predictable, consistent production with the strength and quality we demand	Mill Certificates required for all of our cement material. And aggregate shipments meet our specs, ensuring a predictable manufacturing result.
Quality Control Processes	Quality Control Manuals provide operational protocol for the entire manufacturing process - all designed to provide a consistent, high quality product.	Our Quality Control documents demand attention to every detail including rigorous daily tests throughout the plant.	✓