

## Frequently Asked Questions About AC438 & Asphalt Roofing Shingles

### What is AC438?

AC438 is an acceptance criteria established by ICC Evaluation Services\* to evaluate asphalt shingles. When an asphalt shingle meets the requirements found in AC438, they are shown to meet the “intent” of the building code requirements.

### How is AC438 Different from ASTM D3462 (the traditional standard for fiberglass asphalt roofing shingles)?

AC438 includes the same physical performance requirements found in ASTM D3462 and then, instead of requiring ‘what’ raw materials to be used, AC438 includes additional physical performance testing beyond what is in D3462. This is a summary of what is in both:

D3462	Both Standards	AC438
<ul style="list-style-type: none"> <li>• Finished Weight</li> <li>• Glass Mat Weight</li> <li>• Mineral Surfacing Weight</li> <li>• Filler/Stabilizer Weight</li> <li>• Requirement for glass mat, granules, and sealant</li> <li>• UL 790 Class A</li> <li>• Weight of the Displaced Granules</li> </ul>	<ul style="list-style-type: none"> <li>• Dimensions</li> <li>• D3161/D7158 (wind resistance)</li> <li>• Behavior on Heating</li> <li>• Tear Strength</li> <li>• Fastener Pull-Through Resistance</li> <li>• Penetration &amp; Softening Point of Asphalt</li> <li>• Pliability</li> </ul>	<ul style="list-style-type: none"> <li>• Weather Resistance</li> <li>• Temperature Cycling</li> <li>• Wind Driven Rain</li> <li>• UL 790 Class C</li> <li>• Weight of the Displaced Surfacing</li> </ul>

### Why Does AC438 Only Require a UL 790 Class C Rating?

Because the fire classifications allowed in the building code include Class A, B, and C, and AC438 does not mandate the reinforcement type (a “recipe requirement”), this requirement for Class C is aligned with the intention of AC438 to evaluate to meet the code. This requirement does not mean that shingles cannot have better performance, such as our fiberglass shingles, all of which are Class A rated.

### What Makes AC438 so Important for the Roofing Industry?

This is the first standard/set of requirements for asphalt shingles that tests the performance of the shingle after accelerated aging. Until AC438, asphalt shingles were only tested “at time of manufacture”.

By providing a path for certification and proof that an asphalt shingle meets the intent of the code, this acceptance criterion allows the roofing industry to take advantage of advancements in material science that are precluded by the “recipe” requirements of ASTM D3462.

### How Does a Manufacturer Show Compliance to AC438?

Shingle manufacturers can show compliance to AC438 requirements by conducting in-house testing or by having an independent test agency conduct testing and verification to the requirements. When a manufacturer has had 3<sup>rd</sup> party testing conducted and has provided quality control documentation, they can also apply to ICC Evaluation Services for evaluation of their products to this criteria.

### Why Has GAF Pursued an Evaluation Report Under AC438?

Every GAF shingle on the market today complies with ASTM D3462 and maintains 3<sup>rd</sup> party certification to this standard and the other requirements of the building code through our ICC Evaluation Report ESR-1475. GAF considers ASTM D3462 to be the baseline standard for asphalt shingles and AC438 as a higher “bar” – so in 2012, we pursued and received an evaluation of our asphalt shingles to AC438 (ESR-3267), becoming the first shingle manufacturer to provide independent verification to these additional physical performance requirements. We consider this achievement further evidence that we are manufacturing shingles that will deliver long term, sustainable solutions to the marketplace.

\*ICC Evaluation Services provide technical evaluations of building products that directly address the issue of code compliance. Building inspectors use these evaluation reports to help determine code compliance and enforce building regulations.