

Advanced Protection® Shingle Brochure

Updated: 1/2013



Quality You Can Trust Since
1886...from
North America's Largest Roofing
Manufacturer



**“WE CONFESS:
WE HAVE A
HISTORY OF
TORTURING
OUR SHINGLES”**

- **Testing, Testing,
Testing:** It's Just
Part Of Our DNA
- **AC438:** Setting
A New Standard
In Shingle Testing
- **All GAF Shingles:**
Now “Approved” By
Mother Nature!
- **The Bottom Line:**
Advanced Protection®
Technology For
Your Home





We're Fanatical About Testing... And Delivering **Advanced Protection**[®] For Your Home

We're 100% Committed To The Protection Of Your Most Valuable Asset

When you install a GAF **Advanced Protection**[®] **Shingle**, you're getting the very best combination of **weight and performance** that modern technology and testing can deliver. In fact, we perform over 185 individual tests in the making of our Advanced Protection[®] Shingles. The result? **No one makes a better asphalt shingle** for:

- ✓ Toughness
- ✓ Granule adhesion
- ✓ Wind uplift resistance
- ✓ Flexibility
- ✓ Fire resistance

GAF is also the first manufacturer that can say all of its shingles pass the industry's two toughest wind-resistance tests: ASTM D3161, Class F (110 mph) and ASTM D7158, Class H (150 mph).*

Since wind from hurricanes and tornados causes more than \$6 billion each year in property damage,** you need all the wind protection you can get.

* Testing performed under controlled laboratory conditions.
** Source: www.disastersafety.org/highwinds

And Now We've Taken Shingle Quality To A Whole New Level: Introducing AC438

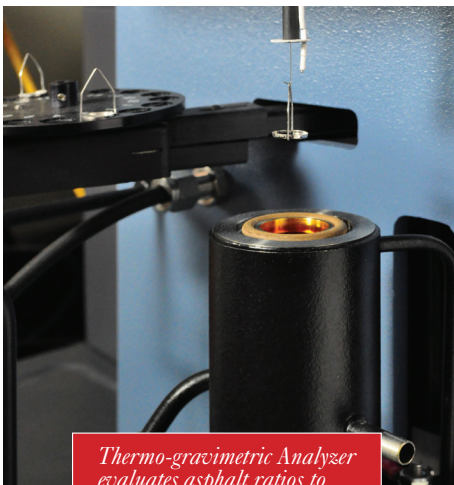
AC438 is the first set of tests for shingles that uses advanced science to predict long-term shingle performance in three critical areas:

Long-term durability: How your shingles perform after long-term exposure to the sun (the #1 enemy of your shingles).

Wind-driven rain performance: How your shingles will stand up to heavy, driving rains.

Long-term extreme-temperature resistance: How your shingles withstand extreme temperatures—like the cold of winter in Montana or the heat of summer in Arizona.

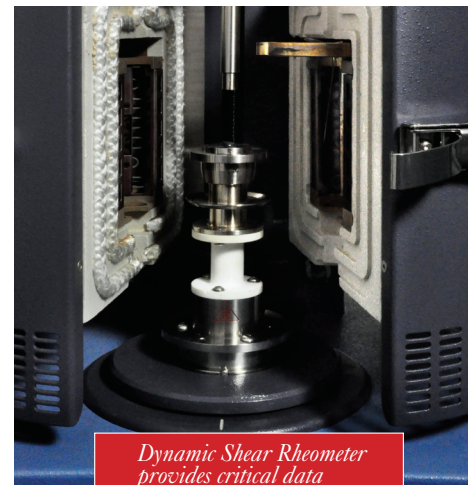
We're pleased to announce that **all of GAF's shingles have passed the requirements of AC438**. GAF is the first shingle manufacturer whose shingles pass these torturous tests. We think Mother Nature would be impressed!



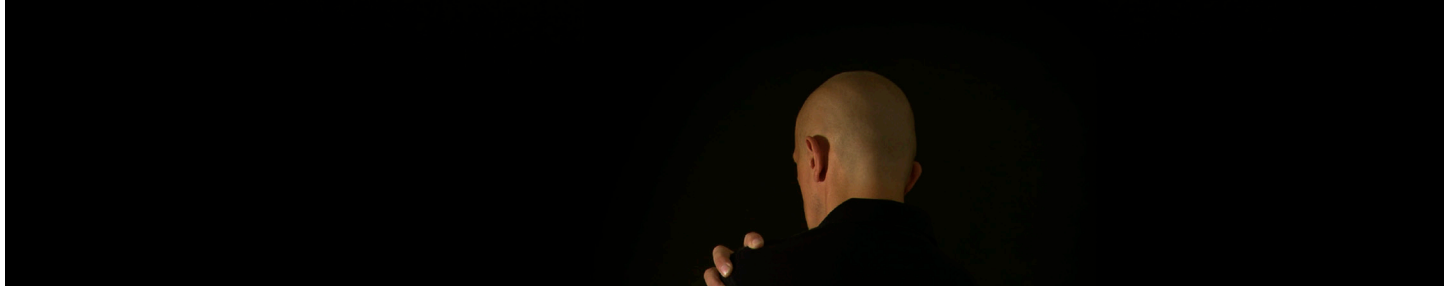
*Thermo-gravimetric Analyzer
evaluates asphalt ratios to
ensure superior durability*



*Dynamic Mechanical Analyzer
measures flexibility and toughness*



*Dynamic Shear Rheometer
provides critical data
for shingle optimization*



What Does **Advanced Protection**® Mean To **The Experts**?

Some people think that asphalt shingles are just a low-tech (albeit highly effective) roofing material.

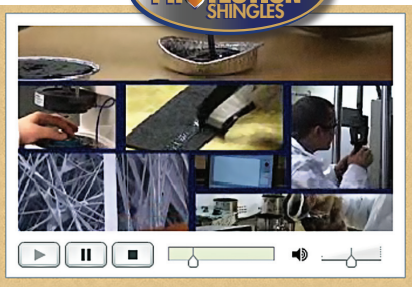
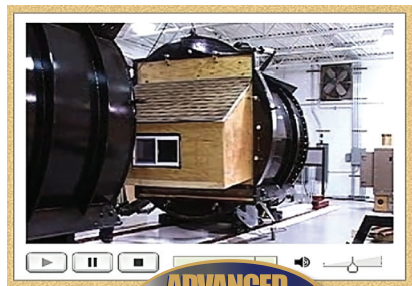
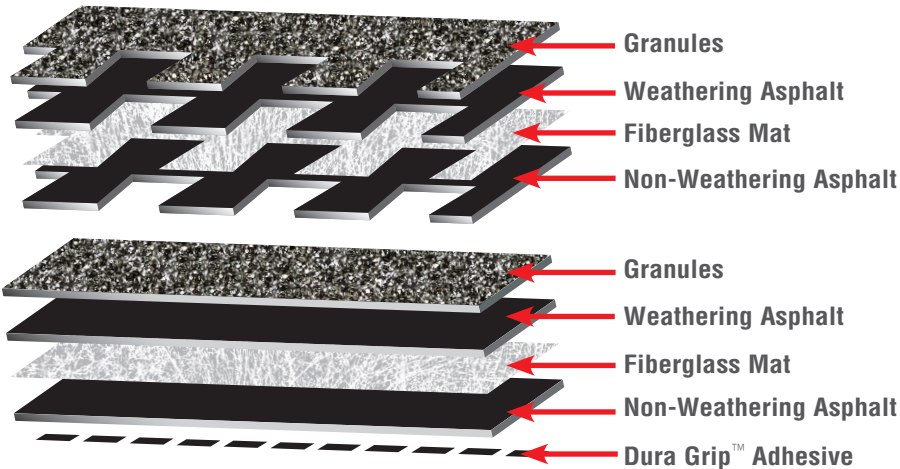
But now, GAF has turned the art of making roofing shingles into a science, with its Advanced Protection® Shingles. Utilizing some of the most advanced design, manufacturing, and testing techniques available in any industry (including computer simulation technology originally developed for the Space Shuttle), the result is today's most advanced roofing technology—now available to consumers to protect their homes.

Compare GAF's Advanced Protection® Shingles To Old-Fashioned Shingles...

	GAF Advanced Protection® Shingles	Old-Fashioned Shingle Technology
Fiberglass Mat (the "heart" of the shingle)	<ul style="list-style-type: none"> Patented low-profile technology includes a proprietary orientation of glass fibers, for maximum strength and durability* 	<ul style="list-style-type: none"> Typically requires the application of excess asphalt (weight) to meet minimum industry requirements
Asphalt (provides waterproofing performance)	<ul style="list-style-type: none"> Advanced process control allows us to optimize the critical top (i.e., weathering) layer for superior long-term performance against severe weather 	<ul style="list-style-type: none"> Excess asphalt applied to bottom (i.e., non-weathering areas) increases shingle weight with no added benefit
Filler (mixed with the asphalt to bind components)	<ul style="list-style-type: none"> Premium limestone content optimized for maximum toughness and wind resistance Unnecessary limestone eliminated 	<ul style="list-style-type: none"> Unnecessary fillers used to artificially increase shingle weight—with no benefit in performance Very excessive filler can even increase the risk of shingle cracking
Adhesive (seals shingles on roof)	<ul style="list-style-type: none"> Proprietary Dura Grip™ Adhesive locks shingles tightly in place Allows <u>every</u> GAF shingle to pass the industry's two toughest wind tests (ASTM D3161, Class F, 110 mph and D7158, Class H, 150 mph)** 	<ul style="list-style-type: none"> May not meet highest wind resistance tests (ASTM D3161, Class F, 110 mph and D7158, Class H, 150 mph)

*See gaf.com/patents for more information.
**Testing performed under controlled laboratory conditions.

The layers of a Timberline® Advanced Protection® Shingle



To learn more about **Advanced Protection**® Shingles, visit www.gaf.com/aps



“What Does **Advanced Protection®** Mean For **Nature?**”

Everyone wants to do their part to be environmentally responsible. GAF's Advanced Protection® Shingles:

- Eliminate the **unnecessary waste of natural resources**, because they use less asphalt and limestone
- Reduce **transportation waste**, because they are weight-optimized to minimize fuel use
- Result in less **landfill waste**, when the shingles are eventually replaced
- Can be **recycled** to benefit the environment. Used asphalt shingles have traditionally not been recycled—they've just been thrown into landfills. That's why GAF supports a new recycling program—that will allow our contractors to recycle old shingles for re-use in roadways!

gaf.com



**Quality You Can Trust...
From North America's
Largest Roofing Manufacturer!™**

