

Asphalt Shingles 101

Learn everything you need to know about asphalt shingles—their type, style, color choices, cost and durability.

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Economical to produce, relatively easy to install and widely available, asphalt shingles are today's most popular roofing material—not only because they're less costly than wood, wood shakes, tile, [metal](#) or slate, but also because their guaranteed life span pits them favorably against competitors. At least a dozen major U.S. and Canadian building-product manufacturers market asphalt shingles, including GAF, CertainTeed and Owens Corning.

THE BASICS

Asphalt shingles come in two varieties: Fiberglass and organic.

Fiberglass shingles are made of a woven fiberglass base mat, covered with a waterproof asphalt coating, and topped with ceramic granules that shield the product from harmful UV rays. Because of the composition of the fiberglass mat, less asphalt is needed to give the shingles their durability and strength. The result is a lighter weight and thinner [roofing](#) material. Fiberglass shingles also have a higher fire rating than organic varieties and generally carry a longer warranty. Fiberglass shingles were developed in the 1980s, but have quickly become the roofing material of choice for most homeowners and contractors today.

The traditional organic mat-based shingles are made from a recycled layer of felt paper, asphalt-saturated for waterproofing, and coated with adhesive asphalt into which the ceramic granules are embedded. With 40 percent more asphalt than their fiberglass counterparts, the traditional organic mat-based shingles are heavier, thicker and more costly. While organic shingles are considered more rugged and more flexible, they are also more absorbent and can warp over time. The additional asphalt content also makes them less environmentally friendly.

SHINGLE TYPES

Regardless of whether they are fiberglass- or organic-based, asphalt shingles generally measure 12 by 36 inches and are commonly manufactured in two different types:

[Three-tab shingles](#) are distinguished by cutouts—tabs—made along their long lower edge. The result, says Joan Crowe, a technical services director for the National Roofing Contractor's Association (NRCA), is that “each shingle looks like three separate pieces when installed, but it's only one.” Three-tab shingles have been around a long time and are still the most economical and most popular shingle today.

Architectural asphalt shingles contain no cutouts, but their lower portions are laminated with an additional asphalt layer. This creates the contoured, dimensional look that gives them their name. Asphalt sealant bonds the layers, reinforcing the shingles' waterproof capability. Though durable, [architectural shingles](#) are not recommended for low-sloping roofs, which are more vulnerable to wind-driven rain.

STYLE AND COLOR

Installed properly, asphalt shingles are no longer easy to identify. Why? Some are made to convincingly mimic the look of slate, wood shakes or even tile. And shingle shapes can be similarly varied; consider the scalloped-edge tabs that complement Victorian architecture or the square, slate-like shingles perfectly suited for Colonial homes.

Color choices are more varied than ever, depending on your taste and the style of your home. You'll generally find tones ranging from pale gray, medium gray and dark gray to beige, reddish and medium brown to dark brown, plus shades of blue and blue green. There are also variegated looks achieved by mixing light and dark tones skillfully, plus weathered looks designed to make a new roof-look suit a vintage house. There are interactive tools online that can help you "try on" colors and styles to find the asphalt shingle best suited to your [home](#).

In addition to color and style, today's manufacturers are also adopting energy-saving, cool-roof technology to help reduce the amount of heat absorbed by the roof. [CertainTeed](#)'s Landmark Solaris, for example, is a steep-slope, solar reflective asphalt roofing shingle that contains advanced colored granules that reflect the sun's rays and can reduce a roof's temperature by as much as 20% in the summer. Similar ENERGY STAR-rated technology is available with [Owens Corning](#)'s Duration Premium Cool Shingles and [GAF](#)'s Timberline Cool Series Energy-Saving Shingles.

DURABILITY AND COST

Manufacturer warranties currently guarantee asphalt shingles a 15- to 30-year useful life. Why the wide span? Climate, weather and environmental factors. Homeowners in areas enduring long summers with high heat may need to replace roofing sooner than homeowners in cooler regions. Most damaging are sudden spiking temperatures—from 40 or 50 degrees at night to well over 100 by midday, for example. Similarly, in areas known for severe winters, [ice dams](#) formed as water freezes may aggravate tiny cracks and fissures that eventually necessitate repairs.

Roof pitch also affects shingle life. The steeper the slope, the likelier it is that water and ice can drain off quickly and not remain to become destructive. It is for this reason that architectural shingles, though durable, are not recommended for low-sloping roofs, which are more vulnerable to wind-driven rain and ice buildup.

Algae and fungus growth can also be potentially damaging for roofing in perennially damp or subtropical areas. Depending on where you live, you might want to consider algae-resistant shingles, some of whose ceramic granules are coated with leachable copper to prevent discoloration and long-term damage from algae and moss growth. Keep in mind that algae resistance could add 10 to 15 percent to your materials budget.

Asphalt shingle pricing is influenced somewhat by geography but mostly by regional differences in labor cost. According to Tom Bollnow, senior director of technical services at the National Roofing Contractors Association ([NRCA](#)), "Labor-wise, asphalt shingles are still the least expensive to install on a roof." This, he believes, may be one reason nearly 70 percent of domestic roofing installations are asphalt shingles. Even so, price swings are notable. Says Crowe, "We tell homeowners all the time to get three or four contractor estimates. In the same region it's possible to get different numbers."

Generally speaking, the average cost of asphalt shingle roofing is \$.80 to \$1.20 per square foot for the materials. According to CostOwl.com, for a medium-pitch roof, the average cost will be somewhere between \$100 and \$200 per square for the shingles alone. (A square in “roofing lingo” is equal to the size of a 10’ x 10’ area, or 100 square feet.) Making asphalt shingles even more desirable is the fact that they can be applied directly over old shingles, providing the [roof deck](#) is in good condition. If, however, there are already two or more shingle layers, or your existing roof is shake-shingled, it’s advisable to remove the old before applying the new.

No matter which type, style or color you select, you’ll want your asphalt-shingle purchase to include a long-life warranty. Be aware, however, that DIY-installed shingles may not be covered—and that warranty coverage can be nullified if the manufacturer determines its product was installed improperly. This is not to say that an experienced DIYer shouldn’t install roof shingles, only that choosing not to hire a licensed, certified and fully insured roofing contractor may involve more than just physical risk.

Warranties mainly cover defects—shingle cupping or curling, for example, plus granule loss and thermal splitting. Study the proffered warranty before making a purchase decision. Make sure you understand that your warranty may not include the cost of labor for shingle repair or replacement. Also, most warranties don’t cover the wrath of Mother Nature: earthquakes, hurricanes, tornadoes, severe wind or hail storms. Note that if you sell your home during the warranty period, coverage will likely end.