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## How do I determine the lifespan of my roof?



Several questions need to be answered when determining the approximate lifespan of a roof that has been correctly installed. To start, one must examine the type of a roof. Whether the roof is sloped or flat, it has two basic elements: the roof deck, and wood planks, plywood, or oriented strand board, otherwise known as particle board. These elements are usually used in residential construction and have a weather-resistant or waterproof finish. A sloped roof can be finished with asphalt composite shingles, wood shingles/shakes,

clay tiles, metal, or slate tiles. A flat roof's membrane typically includes several layers or plies of felt with a coat of tar between each ply. The surface of the roof is then covered with gravel to protect the membrane from the sun. Other flat roof finishes include a rubberized asphalt membrane (modified bitumen), or plastic and rubber membranes. Even a flat roof is slightly sloped to allow the roof to drain properly and dry. The slope of the roof must also be taken into account. The weather resistant finish of a sloped roof

can be compared to an umbrella. It is designed to shed water or snow, and dry before the materials become saturated. The steeper the slope, the better the roof sheds water. Therefore, a typical asphalt composite shingle may last longer on a roof with a greater slope, as it allows the shingle to dry faster.

Other factors that affect the roof's lifespan include its proximity to weather. This includes: sun, wind, rain, and snow. Take exposure to the sun as an example. On a sloped roof finished

with asphalt composite shingles, the portion of a roof that faces south or southwest typically has more exposure to the sun. The sun's rays can cause the shingles to become brittle and age prematurely. This is why some areas may show more deterioration than others.

The conditions in an attic space can also affect a roof's life. If insulation and ventilation levels are inadequate, air leaks from an interior living space can cause a build-up of warm, moist air. Under certain weather conditions, moisture condenses in an attic space, potentially causing mould and mildew accumulation on the roof deck and framing, which can lead to wood rot.

It takes a trained eye to properly evaluate a roof and to understand the many facts that affect the performance of a roof system. A properly trained home inspector can provide a homeowner with an objective opinion, regarding the condition of a roof.

The following summary provides a typical life expectancy of various roof finish materials:

- Asphalt composite shingles – 15-25 years
- Wood shakes/shingles – 15-35 years
- Slate tiles – 35-100 years
- Built up roof (tar and gravel) – 10-30 years
- Modified bitumen – 15-25 years
- Rolled roofing (selvage) – 5-10 years

**My roof has several layers of asphalt shingles. Can an additional layer of shingles be added over top?**

It is not uncommon to find several layers of asphalt composite shingles installed over one another. However, the number of layers should be limited to two.

Removing used materials is beneficial for the following reasons:

- Stripping used shingles allows your roofing contractor the opportunity to inspect the roof deck and if required, to repair damaged areas.
- Installing new asphalt shingles over older materials may reduce the life of the new shingles and depending on the manufacturer, may reduce or eliminate the product warranty (i.e. by trapping water between old and new shingles).
- The weight of a roof system will be reduced. For every 100 square feet of roof, several hundred pounds of roofing material per layer is required.
- The cost of labour to remove materials and the cost to dispose of the waste will likely increase in the future.
- Improving items, such as the eaves protection, flashings and ventilation system become easier.

**I have problems with ice build-up around the edge of my roof and water stains are appearing on the interior ceilings. What causes this and how can I prevent it in the future?**

Ice build-up also known as "ice damming," typically occurs after a large snowfall; when nighttime temperatures fall below freezing and when daytime temperatures rise above freezing. Snow melts over heated areas of the home (areas within the attic that are

situated over interior rooms), and remains frozen over the unheated roof space, which creates the "ice dam." As water builds up behind the dam, it begins to rise in level, creeping up and under the roof shingles. Where no eaves protection has been installed, water can penetrate the roof, causing interior water damage. To reduce the risk of ice damming, eaves protection can be installed (a layer of felt or rubber membrane installed over the unheated air space). Secondly, inspect and identify insulation and ventilation levels. If necessary, to better control temperature on the interior attic space, insulation and ventilation levels can be improved. This upgrade would create an interior attic temperature closer to the exterior temperature. Thus, reducing heat loss and melting snow.

As a last resort, where the roof pitch is low or temperature regulation is too costly, heat cables can be used to melt the ice over the eaves and into the eavestrough.

To speak with a certified and trained AmeriSpec home inspector, contact us today.

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