Wood Shingles? Or Are the Shakes?

Compiled by Kushner Home Inspection LLC.

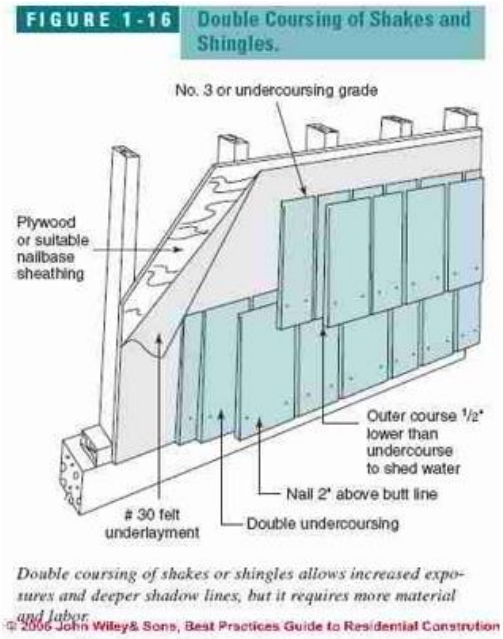
Are shingles what you find on a roof and shakes are what you find as siding on a house? Or is it the other way? Are they always made of Cedar? Let us start with the definitions. Wood Shingles are sawn on both sides. This means that both sides are relatively smooth and not deep grained. They are as you have seen tapered. The woods tend to be clear and

straight grained as well as free of knots. Shakes on the other hand have one side sawn, and the other hand split. The same tapered shape, but overall, the are a bit thicker and one side is deeper grained. The woods also tend to have more imperfections and the grain may not be quite as straight.

As you can see from the diagram above, there are at least three different materials. By and large here in the US, we use different species of Cedar.

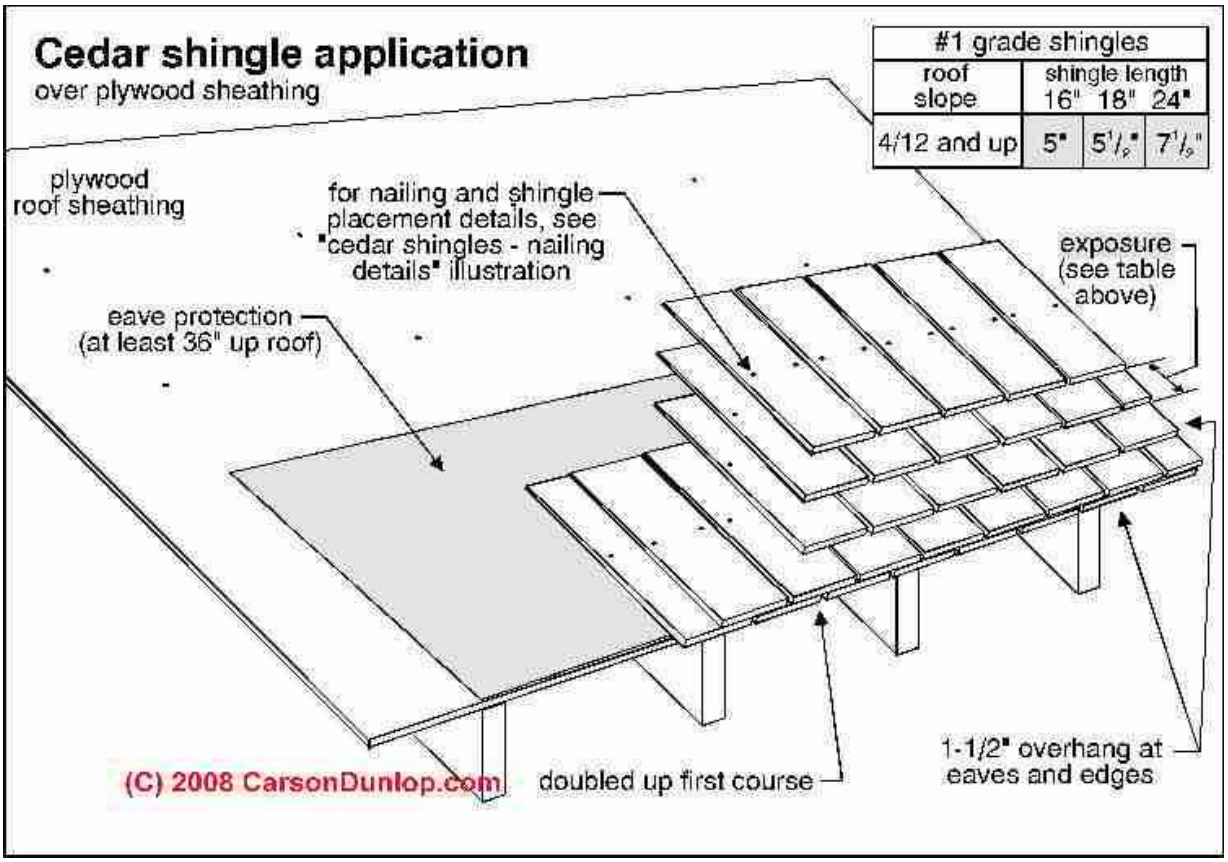
Installation - Walls

Seams must be staggered, the first course (at the bottom) has the least face exposed. They are installed directly over a house wrap such as felt paper. There are all kinds of variations, but this is the basic idea. Do not forget to use nails that do not rust or "bleed".

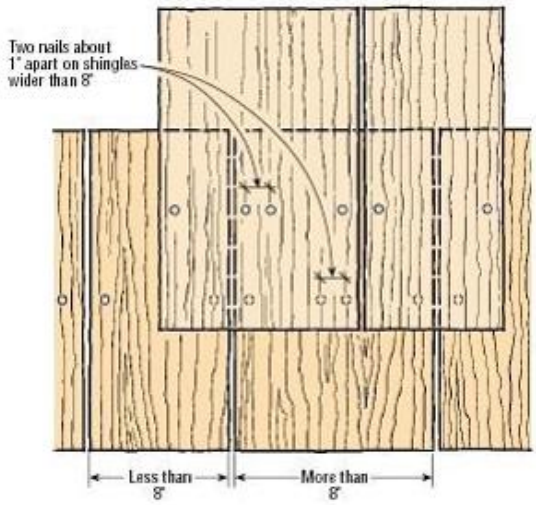


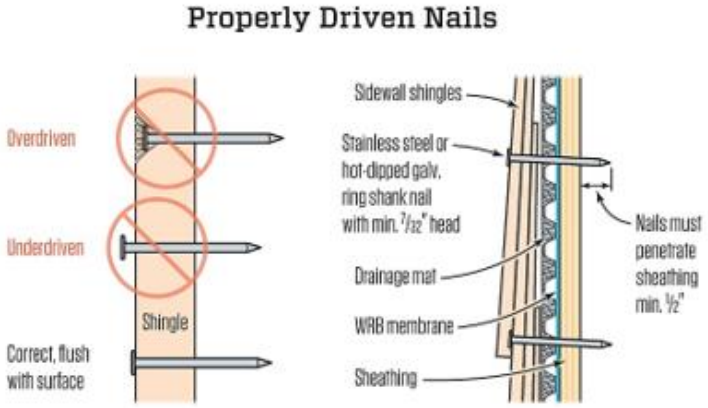
Installation - Roofs

Smooth side down rough side up. Particularly important. Roof slope should not be less that 3:12 (shingles) and 4:12 (shakes). Steep is good while low slope will have a more difficult time shedding water and drying out. Seams should be staggered. Roofing paper and snow shields on a plywood deck are below the shingles.



Note the Nailing patterns. If not done correctly the errors show up several years later. See below for what that could look like





Caring for Shakes/Shingles – This is one opinion…..There are several

There is a lot of stuff and information out there. How much is accurate, it is hard to say. Here is an excerpt. One item is not controversial and that is about not power washing. Read here:

> "Whether they're on your roof or wall your shingles may develop mildew or algae and will most certainly weather to a silver/grey appearance after years of exposure. Cleaning away the age is the first step in caring for cedar shingles.
>
> The Cedar Bureau recommends using a solution of 1-part bleach to 3 parts water. Apply it with a pump sprayer let it sit for about 15 minutes before rinsing it off with a garden hose. Be sure to keep the hose pointed downward to avoid forcing water up behind the shingles.
>
> You should find that this removes the mildew and algae and returns the shingles to a nice tan color rather than the weathered grey they were. If you find that there is still some remaining dirt or growth that remains you can use a nylon bristle brush to scrub the surface.
>
> *You want to avoid pressure washing shingles at all costs. Pressure washing can remove wood fibers thinning the wood and shortening the life of the shingles. Not only that, but it forces water into the places where it does not belong possibly causing rot and mold. Read 4 Reasons You Should Never Pressure Wash Your House*."
>
> *https://thecraftsmanblog.com/how-to-care-for-cedar-shingles/*

Sealing Cedar Shakes/Shingles……And still another take on the subject

- **Sealing** of **cedar**/**redwood roofs** **should** never be done as this will keep the **shakes** from getting the air they need to stay dry. In addition to cleaning, you **should** make sure there is no debris left in the valleys and no over-hanging trees over the roof as this will cause moisture and shade.
  Sep 4, 2013 www.angieslist.com › articles › how-maintain-your-cedar-shake-roof
- When to **Seal** **Cedar Siding** A full **seal** is important because any space that is missing **sealant** is more susceptible to water damage and chemical bleeding. ... **Cedar** has a natural tendency to dry quickly and resist moisture (with proper ventilation) so other pre-installed **siding** can also still be sealed or painted.
  www.builddirect.com › learning-center › building-materials › a-quick-guide..

What are the common defects found in Cedar Shakes and Shingles

Figure 21-1

Figure 21-2

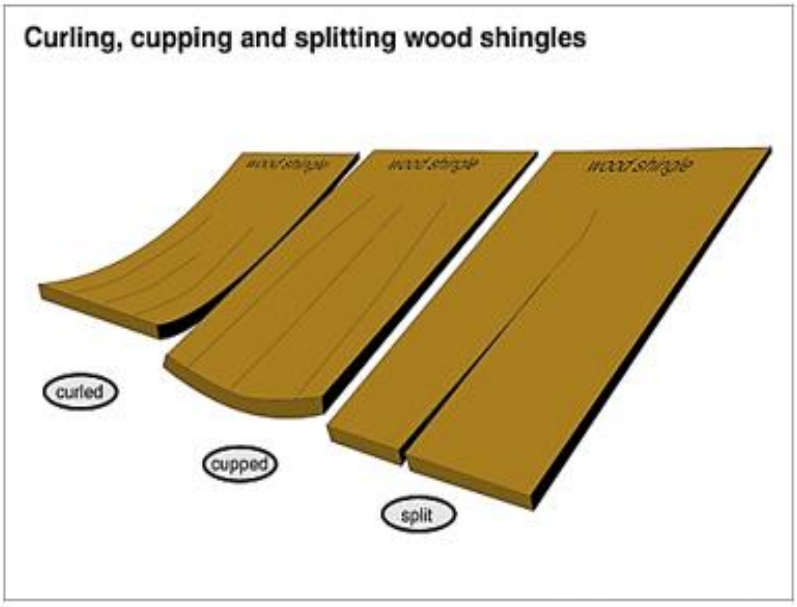
Figure 21-3

Figure 21-4

While this material ages beautifully, if maintained, unfortunately so many owners do not keep up with it. Then compound this with poor installation and years down the road, some Inspector will have a lot to write about. Extreme weathering over time will "erode" a shake. Combine that ith damp conditions and the "over time" part becomes significantly shorter.

> This little guy may be cute, but nobody bangs their heads against a wall without expecting some kind of reward or in this case lunch.

The ravages of time, sun, and weather will cause shingles to split, cup, and curl. No less of a cause can be original errors in installation. Nailing too close to edges, using shingles that have too many imperfections or low quality.



Nail Streaks or Iron staining is often seen

Are there substitutes for Cedar?

There are, naturally, or not so natural. Below is an edited excerpt from a website. This is not an endorsement but simply an illustration of what are alternatives that could be construed as Eco Friendly.

Clay: Of the available roofing choices, clay is one of the few options that are both natural and renewable. Individual tiles and shingles are manufactured from clay and water and are fired at high temperatures. Clay shingles are fairly durable: they will not curl, fade, flake or produce white salt deposits.

Plastic and Synthetics: Plastic (synthetic polymer) is a polymer that has no fibre reinforcement. There are many plastic roofing products on the market designed to look like cedar and slate. Use of plastic roofing has been on the rise, most likely due to lower product costs than traditional cedar and slate and the offer of maintenance free lifetime products. Plastic roofing shingles are lightweight, and easier to install than traditional cedar and slate. However, most plastic shingles do not look authentic, and can have a shiny finish to them. Plastic shingles are relatively thin, and with average widths of 6”-8”, they do not come close to replicating the look or the size of real cedar shake.

Rubber: Rubber roofing shingles consist of up to 95% recycled materials, the primary ingredient being rubber from recycled tires. Steel, nylon, aramid fiber, rayon, fiberglass, and polyester, as well any number of reinforcing chemicals, adhesives, curatives, oils, and anti-degrading agents are also found in rubber shingles.

Composite Polymer (Enviroshake®) Designed to emulate natural cedar in their thickness, profile sizes, colour and textures, composite polymer roofing products are the best alternative for natural wood shingle & shake roofs. Composites offer superior performance, longevity, and durability due to their unique formulation. Synthetic cedar shake roof shingles are also environmentally friendly. Many are made from recycled materials, easily replicate authentic natural wood texture, and can resist moisture, wind, thermal shock, hail damage and are not prone to crack, peel, blister, or rot.
A composite is a polymer reinforced with fibre and resins to significantly heighten resistance to cracking and thermal shock. A composite shingle is made from 95% recycled and reclaimed materials, including cellulosic fibres (*natural* wood fibres) that allow to replicate authentic wood texture and appearance. Composite cedar shingles are highly resistant to thermal shock, wind, and moisture, and are not likely to rot, blister, peel, or crack. They are also resistant to mold, mildew, and insects. Use of UV inhibitor technology allow composite shingles to block up to 99% of UV radiation, which prevents composite roof from discoloration over time.

Unlike cedar, where runoff water is not safe for drinking, the runoff water from an Enviroshake® roof is completely non-toxic, potable, and safe to drink.

Sources:

https://www.fpl.fs.fed.us/documnts/fplgtr/fpl_gtr202.pdf

https://www.customshingles.com/blog/2016/12/9/different-types-of-wood-shingles-their-uses

https://inspectapedia.com/BestPractices/Wood_Shingle_Installation_Specifications.php

https://www.enviroshake.com/why-not-cedar/better-alternatives-to-cedar-and-asphalt-shingles/