



## What Can I Expect from Synergy?





## Welcome to Synergy Wood™

In the following pages you will find information and guidelines on what to expect from Synergy products. The premise being that with this understanding of how we make our products, how to use what is delivered to the jobsite, how we grade each piece of wood and the finishes we use to create a beautiful, long lasting product, will help educate the reader on What To Expect From Synergy.

Synergy uses real wood on all of our products. Our various species of wood come from lumber mills across the United States and include cypress, ponderosa pine and southern yellow pine. Variations in the wood, which can include knot structure, grain color and grain patterns, should be expected and is where the beauty of real wood comes from. These variations in the wood are the reason real wood is chosen to beautify a home.



*Honey on #2 Cypress showing variation in the wood through the stain*

### Our Process

The first step in producing our tongue and groove products is to run the raw wood through our molder. This is the machine that puts the profile on the long edge of each board.

The wood is then resorted and inspected for any objectionable defects such as holes, splits, cracks, loose or missing knots. The visible defects are removed and then each piece is end matched with a male/female interlocking end.

After the end matching process, the wood is wide belt sanded from 150 grit and then 180 grit. From there, the board proceeds into a multi-head, rotary brush sander which "eases" the edges of the boards making them ready for the staining process.



*End Matched Board*





One of the reasons for all of this sanding is to remove “chatter” marks on the boards from the molding operation. Chatter marks are horizontal lines on the board caused by the knives of the molder cutting the board while it is being run through the molder. These lines will not come out of the board without this wide belt sanding process and if they were not removed, they would be exacerbated once stain is put on the board.

Yet another process that separates our products from other companies is in the next step; application of the stain. We hand-wipe each piece of wood after the stain is applied which “pushes” the stain deeper into the wood. The result is a deeper, consistent color that cannot be achieved without the hand wiping procedure.

After the stained material goes through our drying process, a clear sealer coat of an exterior grade polyurethane is applied. The sealer coat is designed to envelope the porous wood (which includes the stained portion of the wood), preventing the next coat of polyurethane from being excessively absorbed into the wood.

Upon completion of another drying cycle, the wood is lightly sanded and is now ready for the final coat of exterior grade polyurethane.

## Grading of Lumber

Even though each type of wood has its own grading system, the purpose of grading lumber is the same; a method to communicate between buyer and seller of what is and isn't acceptable.

The lumber that comes into our facility is graded at each of the lumber mills we buy from. During our production process, Synergy inspects and re-grades each piece of lumber. Even with this extra grading, is the Synergy product going to be perfect? The answer is, no it isn't. Wood is a natural product and therefore, each piece is going to be different.

For the pieces that make it through our facility and to the jobsite that might have some undesirable issue, please see the section labeled “How To Use What's Delivered”. Everything that is delivered to a jobsite is useable. A complete guide to Synergy Grading is available in our Downloads section of our website: [synergywood.com](http://synergywood.com).

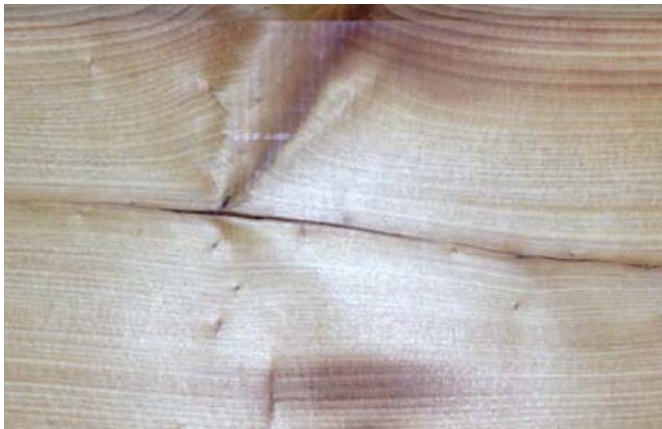




## What Synergy Allows

Even though Synergy grades each piece of lumber based on accepted industry grading rules, there are other things we look at, such as side bend and checks.

A check is a lengthwise separation of the wood, which occurs usually across the rings of annual growth. The photo below showing a check on a plank of cypress.



A side bent board is a board that when laid flat, there is a slight curve in the axial direction. A diagram of this is shown on our website Download "How To Use What's Delivered".

Synergy allows the following during our manufacturing process (based on length to curve):

- 4' to 7' long boards; up to 1/4" side bend
- 7.1/2' to 8' long boards; up to 3/8" side bend
- 9.1/2' to 10' long boards; up to 1/2" side bend
- 11.1/2' long boards; up to 5/8" side bend
- 12' to 14' long boards; up to 3/4" side bend

Over time, we have observed that it is very easy (defined as light pressure applied to a board when placed on edge) to "straighten" a board with side bend with the given dimensions above. Of course, if a side bend board is found while installing and it is undesirable, it can still be used. Synergy has provided a complete guide called, "How To Use What's Delivered" in the Downloads section of our website: [synergywood.com](http://synergywood.com).



## Synergy Samples

If you have received a sample of one of our cypress or pine products, please note that all of our samples are cut from #2 mill-graded lumber. Most of our samples may not have knots in them and this is NOT indicative of our #2 graded products, which will have knots present. Please bear that in mind when making your purchase.

## Color Variation

Wood is a natural product and when stained, variations in color and grain pattern are to be expected.

## Warranty

**A copy of Synergy's 5-year, limited warranty is available on our website in the Downloads section.**

While our products are designed for exterior porch ceiling applications, we do not recommend or warranty any Synergy items that have been exposed to direct sunlight or direct moisture.

In the unlikely event of a warranty claim, the end user is responsible for documenting the Job Number and Manufacture Date of the product being used. This information can be found on each of the packages being delivered to the jobsite. No claims can be made without this information. For any other information you might need, please call or email us.



## Definitions

**Chipped grain** means that a part of the surface is chipped or broken out in very short particles below the line of cut. It should not be classed as torn grain and, as usually found, shall not be considered a defect unless it is present in excess of 25% of the area.

**Loosened grain** means that a small portion of the wood has become loosened but not displaced.

**Torn grain** means that a part of the wood is torn out in dressing, and in depth is four distinct characters; slight, medium, heavy and deep.

**Medium torn grain** is over 1/32", but not more than 1/16" in depth.

**A skip** is an area on a piece that failed to surface. A heavy skip is one that the planer knife did not touch.

**A machine burn** is a darkening or charring of the wood due to overheating by the machine knives.

**A machine gouge** is a grooving across a piece due to the machine cutting below the desired line of cut.

**A sound knot** is solid across its face, as hard as the surrounding wood, and shows no indication of decay.

**A medium knot** is one over 3/4", but not more than 1 1/2" in diameter.

**A pith knot** is a sound knot with a soft center not more than 1/4" in diameter.

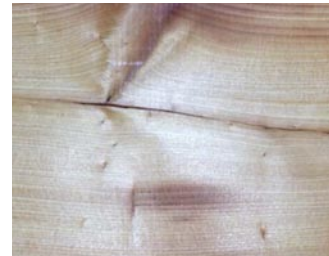
**Peck** is typically decay which appears in the form of a hole, pocket, or area of soft rot usually surrounded by sound wood. **Slight peck** is not through the piece occupying less than 10% of the surface area.

**Decay** is a disintegration of the wood substance due to action of wood-destroying fungi, and is also known as dote or rot.

**Machine bite** is a depressed cut of the machine knives at the end of the piece.

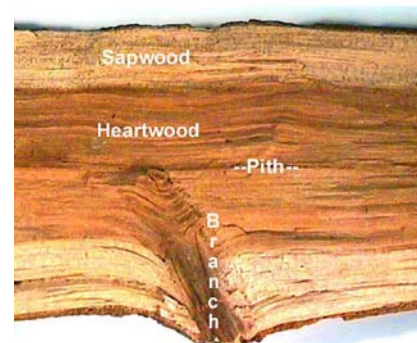
**Pitch** is an accumulation of resinous material.

**A shake** is a lengthwise separation of the wood, which occurs usually **between and parallel** to the rings of annual growth. Shown: Shake on cypress.



**A check** is a lengthwise separation of the wood, which occurs usually **across** the rings of annual growth. Shown: Check on cypress.

**Wane** is bark, or the lack of wood or bark, from any cause on the edge or corner of a piece. Shown: Wane - bark or lack of wood on edge



**Pith** is the small soft core in the structural center of the log. Shown: Pith - spongy material in center of tree



**Pitch** is an accumulation of resinous material. Shown: Pitch in Ponderosa Pine.

