

Veneer Specification



Veneer is manufactured in an endless variety of grades, colors, species and other characteristics



Wood Species

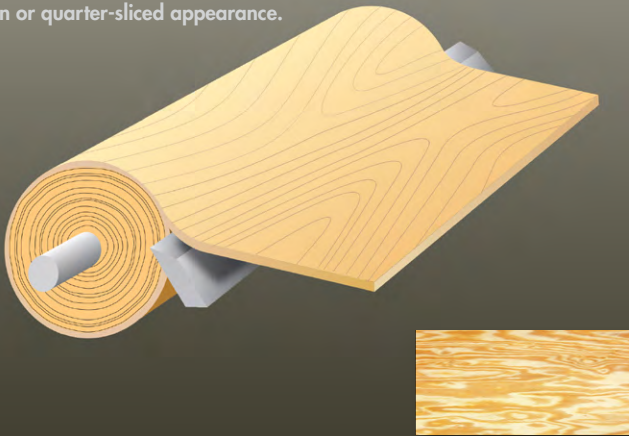
Wood species is the primary determinant of color and grain characteristics in veneers. Generally, wood species are divided into hardwoods (deciduous or leaf bearing) and softwoods (coniferous or cone bearing). In addition, wood species are often classified as open grain or closed grain, which refers to the texture of the wood's cell structure.



Veneer Cutting Methods

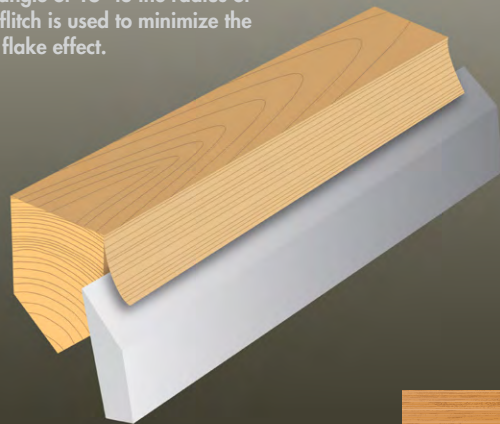
Rotary

The entire log is peeled. This method can yield full sheets of veneer. The grain pattern is broad with no plain or quarter-sliced appearance.



Rift Cut

An angle of 15° to the radius of the flitch is used to minimize the ray flake effect.



Plain Sliced

This method produces a cathedral grain pattern. Most logs will also yield some quarter appearance.



Quarter Sliced

This method produces a series of stripes – straight in some woods, varied in others. A flake pattern is produced when slicing through medullary rays in some species, principally oak.



Veneer Matching

Different matching techniques are used for specific panel applications.

Other than rotary cut whole piece faces, all veneers for full-sized panels must be

assembled into large sheets or “spliced” together. How the individual veneer leaves are arranged is called veneer matching and will produce a specific pattern in the finished

panel. Veneer matching should not be confused with panel matching, which refers to the relationship between several panels in a sequence, as in a large auditorium.



Pleasant Match

Pleasant Match veneers are selected for uniformity of color without regard to grain pattern. No sharp color contrast is allowed, but grain patterns may not match.



Book Match

Book Match is the most common matching method in which alternating leaves of veneer are turned over like the pages of a book. The result is a pleasing symmetrical pattern of mirror images of grain.



Slip Match

In Slip Match, adjoining veneer leaves are fed out in sequence without being turned so that the same side of the veneer leaves is exposed. This allows the grain pattern of the leaves to repeat across the face of the panel, improving color uniformity.



Random Match

Random Match assembles veneer leaves without regard to grain pattern or color. Visual continuity is not guaranteed, though some species are naturally more uniform than others.



Whole Piece

One single piece of veneer is used with continuous grain characteristics running across the sheet.

Veneer Grading

Face Grades

AA: A premium face grade for exclusive uses such as architectural paneling and interiors, case goods and quality furniture.

A: Where AA is not required, but excellent appearance is still important.

B: Where the natural characteristics and appearance of the species are desirable.

C: Allows for unlimited color and increased natural characteristics. Perfect for applications where an economical panel is needed.

D & E: Provides a sound surface but allows unlimited color variation and repairs in increasing size ranges. Applications: where surface will be hidden or a more rustic character is desired.

Back Grades

Back Grades are designated by numbers 1, 2, 3 and 4. Requirements of Grade 1 are most restrictive, with Grades 2, 3 and 4 being progressively less restrictive.

Grades 1 and 2 provide sound surfaces with all openings in the veneer repaired except for vertical worm holes not larger than 1.6 mm (1/16"). Grades 3 and 4 permit some open defects; however, Grade 3 can be obtained with repaired splits, joints, bark pockets, laps and knotholes to achieve a sound surface if specified by the buyer. Grade 4 permits knot holes up to 102 mm (4") in diameter and open splits and joints limited by width and length.



Veneer grading is based primarily upon the appearance of the finished product. States grades its veneer based on the standards outlined by the Decorative Hardwoods Association.

Hardwood Plywood Terms

Backs: Some plywood panels are specified with different grades of veneer on each side. The lower grade side of a plywood panel is called the Back.

Bark Pocket: An area on a sheet of veneer where a tree branch grew, thus trapping a small amount of bark, usually around a knot.

Core: Inner plies of a panel product, usually composed of veneer. Alternatively, cores can be made of particleboard, MDF or lumber.

Crossbar: A defect in panel manufacturing where a piece of veneer runs perpendicular to the length of the board.

Crossbanding: The successive layering of veneer, placed perpendicular in orientation to the face and back of a plywood panel during layup.

Defects: Any number of imperfections in a panel product's appearance or surface, including splits, stains, voids, holes, open knots, bark pockets and other issues.

Delamination: Panel separation caused by adhesive failure.

Face: Some plywood panels are specified with different grades of veneer on each side. The higher grade side of a plywood panel is called the face.

Flitch: The complete bundle of thin sheets of veneer after cutting, laid together in sequence as they were sliced or sawn.

Grain: The distinctive, natural pattern, size and direction of the fibers in sliced or sawn wood.

Gum Spots: Sap or resin left on wood from veneer sawing or slicing. Gum spots can usually be removed by sanding.

Half-Round Slicing: When a log is cut tangential to its growth rings, resulting in a plain sliced or rotary grain pattern.

Hardwood: Any species of deciduous tree lumber or veneer. Coniferous tree lumber is called Softwood. The term Hardwood has no relationship to the density of the wood.

Heartwood: The oldest part of a log radiating from the center, consisting of mature wood that has stopped growing. Usually, heartwood is darker than sapwood.

Knot: The place on lumber or veneer where a branch once emerged from the trunk of the tree.

Knot (Open): The condition of a knot that has separated from the fibers surrounding it due to the drying process.

Knot (Pin): Very small knots less than 1/4" in diameter.

Knot (Sound): Knots that have not separated from the surrounding fiber during the drying process.

Knothole: A void in lumber or veneer created when a knot is missing from its original location.

Lap: Orientation of two pieces of veneer next to one another in the same layer of ply.

Medium Density Fiberboard (MDF): A wood flour material made from pressure-cooked wood fiber, resin and wax.

Mineral Streak: A discoloration of hardwood and hardwood veneer.

Particleboard: A panel or core material manufactured from pressed sawmill shavings, resin and wax.

Patches: Material placed onto defects in veneers to repair voids and other imperfections.

Plain Sliced: When a log is cut tangential to the tree's annual growth rings.

Ply: One layer in a wood panel product. Varying numbers of plies make up a sheet of plywood.

Plywood, Hardwood: A panel product with a hardwood face veneer. The back veneer is usually hardwood as well. Hardwood plywood may or may not have softwood inner plies.

Quarter Slicing: A veneer cutting method in which a log is sliced at right angles to the annular growth rings.

Rift Cut: A veneer cutting method in which a log is cut into quarters and then at a 90-degree angle to the grain direction.

Rotary Cut: A peeling process whereby a whole log is set in a lathe and turned against a large knife.

Sapwood: The youngest, newest wood in a lumber or veneer, located between the heartwood and the bark.

Slip Matched: When veneer is carefully aligned to form a whole sheet with a pleasing grain appearance.

Splits: Cracks in the wood fiber running parallel to the grain in veneer, usually from drying.

Veneer: Peeled or sliced sheets of thin wood used to make the layers of plywood.

Visit Our Website

For an inside look at how we manufacture our beautiful hardwood panels, check out the plant tour video on our website: StatesInd.com

