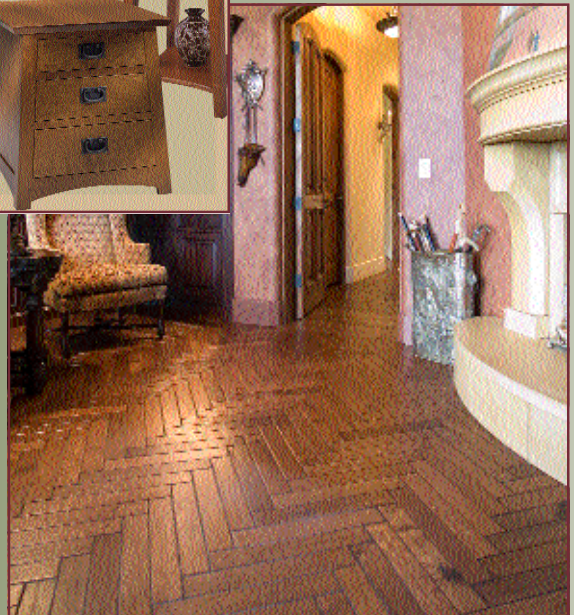


# Glossary of Terms for the Hardwood Industry



## GLOSSARY OF TERMS

**Angiosperm** -- A plant that has true flowers and bears its seeds in fruits. In temperate zones, many angiosperms are deciduous trees, while in tropical zones, many are evergreen trees. Examples include oaks, willows, maples and birches.

**Annual Ring** -- The combination of one earlywood layer (light colored) and one latewood layer (dark colored) seen in a cross-section of a tree. One annual ring usually represents one year of growth.

**Artificial Regeneration** -- The growth of new trees through seeding and planting.

**Board Foot** -- A unit of measure equal to a board that is 1 inch thick, 12 inches long and 12 inches wide, or 144 cubic inches.

**Broadleaf** -- A class of trees that have broad, flat leaves of many different shapes; most are deciduous; also called hardwood because most broad-leaved trees have harder wood than do conifers. Examples include oak, hickory, maple and ash.

**Burl** -- a swirl or twist in grain of the wood, which usually occurs near a knot, but is not a knot.

**Cambium** -- A thin layer of specialized cells within a tree's trunk that divide to produce new inner bark cells to the outside and new sapwood cells to the inside. The narrow band of cells that is responsible for the tree's growth in circumference.

**Canopy** -- The "roof" of the forest formed by the crowns of the tallest trees.

**Cellulose** -- The scientific name for wood fiber.

**Check** - A lengthwise separation of the wood that usually extends across the rings of annual growth and commonly results from stresses set up in wood during seasoning.

**Clearcut** -- A harvesting and regeneration method that removes all trees within a given area. Most commonly used in pine and hardwood forests that require full sunlight to regenerate and grow efficiently.

**Close Grain** - Wood with narrow growth rings.

**Coarse Grain** - "Rapid growth" wood with wide growth rings.

**Conifer** - A class of trees that are evergreen, have needle or scalelike foliage and conelike fruit; often called softwood. Examples include pine, hemlock, cedar and cypress.

**Conservation** -- Planned management and wise use of natural resources for present and future generations.

**Crook** - A form of warp; deviation from end-to-end straightness along the edge of a board.

**Deciduous** -- A group of trees that lose all of their leaves every year.

**Dendrology** -- The study of trees; tree identification.

**Earlywood** -- Wood cells produced at the beginning of a tree's growing season that are generally light in color. Also called springwood.

**Equalizing in kiln drying** - Obtaining the same moisture content from board to board in a charge of lumber.

**Evergreen** -- A group of trees that do not lose all of their leaves every year but go through a gradual replacement by dropping only their oldest leaves each year. Instead of being bare in winter, these trees have leaves all year.

**Figure** - Unusual wood grain pattern.

**Flitch** - 1) A hewn or sawed log or section of a log made ready for cutting into veneers by shaping up the edges; 2) After cutting, a complete bundle of thin sheets laid together in sequence as they were sliced or sawn.

**Forest Management** -- Caring for a forest so that it stays healthy and vigorous and provides the products and values the landowner desires.

**Forest Stewardship Plan** -- A written document listing activities that enhance or improve forest resources (wildlife, timber, soil, water, recreation and aesthetics) on private land over a five-year period.

**Forestry** -- The art and science of managing forests to produce various products and benefits including timber, wildlife habitat, clean water, biodiversity and recreation.

**Grain** - The direction, size, arrangement, appearance, or quality of the fibers in sawn wood. Straight grain is used to describe lumber where the fibers and other longitudinal elements run parallel to the axis of the piece.

**Green** - Freshly sawn lumber, or lumber that has received no intentional drying; unseasoned.

**Growth Ring** (Growth Layer, Growth Increment) - The layer of wood (or bark) added to the stem in a given growth period; in the temperate zones, one layer is added per yearly growth period and is often termed annual ring.

**Gum Pocket** - An excessive local accumulation of resin or gum in the wood.

**Gymnosperm** -- A plant whose seeds are not enclosed in flowers. Most gymnosperms produce their seeds on the surface of the scales of female cones and are pollinated by wind. Conifers are the most common type of gymnosperm.

**Hardwood** - Any close grained wood from deciduous trees. The term has no reference to the actual hardness of the wood.

**Hardwoods** -- Trees with broad, flat leaves as opposed to coniferous or needled trees. Wood hardness varies among the hardwood species, and some are actually softer than some softwoods.

**Heartwood** - The central core of wood in mature stems. At one time heartwood was sapwood but it no longer conducts sap or has living cells. In most species, extractives impart a darker color to heartwood.

**Honeycombing** - Checks that occur in the interior of a piece of wood, usually in the plan of the rays, as a result of case-hardening stresses developed in drying.

**Kiln** (Dry Kiln) - A heated chamber for drying lumber, veneer, and other wood products, in which temperature, humidity, and air circulation are controlled.

**Kiln Dried** - Lumber that has been dried in a kiln with the use of artificial heat; seasoned.

**Latewood** -- Wood cells produced at the end of the growing season that make up the darker section of an annual ring. Also called summerwood.

**Medullary Rays** - Radial vertical tissues, extending across the growth rings of a tree, that enable the transmission of sap and produce a decorative, spotted figure in quartersawn boards.

**Mineral Streak** - An olive to greenish-black or brown discoloration of undetermined cause in hardwoods.

**Moisture Content** (M.C.) - The weight of water contained in wood expressed as a percentage of the weight of the oven dry wood. Kiln Dried standard M.C. is 6-8%.

**Natural Regeneration** -- The growth of new trees in one of the following ways without human assistance: (a) from seeds carried by wind or animals, (b) from seeds stored on the forest floor, or (c) from stumps that sprout.

**Net Tally** - Otherwise known as a dried tally. The board footage of lumber figured when the board is seasoned to a 6-8% M.C.

**Phloem** -- The part of a tree that carries sap from the leaves to the rest of the tree. Also called inner bark.

**Pin Knot** - A knot which does not exceed 1/8" in average diameter.

**Pitch** - A resinous, gummy substance in firs and pines.

**Pith** - The small soft core occurring in the structural center of the log.

**Plain-Sawn** - Plain-sawn hardwood boards are produced by cutting tangentially to a tree's growth rings, creating the familiar "flame-shaped" or "cathedral" pattern.

**Quartersawn** - Quartersawing means cutting a log radially (90-degree angle) to the growth rings to produce a "vertical" and uniform pattern grain. This method yields fewer and narrower boards per log than plain sawing, boosting their cost significantly. Quartersawn hardwoods are popular for high end flooring, architectural millwork and furniture.

**Reforestation** -- Reestablishing a forest by planting or seeding an area from which forest vegetation has been removed.

**Renewable Resource** -- A naturally occurring raw material or form of energy that has the capacity to replenish itself through ecological cycles and sound management practices.

**Resin** -- A group of sticky liquid substances secreted by plants that appear on the plant's external surface after a wound.

**Rift Grain** - The surface or figure produced by a longitudinal plane of cut which is generally between 30° and 60° to the face of the board. The term is used especially for Red and White Oak, species which have pronounced Medullary Rays. Rift grain exhibits minimal ray fleck.

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**Sapwood** - The living wood of pale color near the outside of the log.

**Shrinkage** --The contraction of wood fibers caused by drying below the fiber saturation point (usually around 25-27% M.C.). Values are expressed as a percentage of the dimension of the wood when green.

**Sawtimber** -- Wood of large enough size to be used to produce lumber for construction and furniture.

**Selective Cutting** -- The periodic removal of individual trees or groups of trees to improve or regenerate a stand.

**Shake** - A lengthwise separation of the wood, occurring before the timber is cut into lumber, usually resulting from violent storms or in felling the log.

**Shrinkage** - Decrease in the volume or dimension of woods as a direct result of the drying process. Plain sawn boards will usually shrink twice as much as quartersawn.

**Silviculture** -- The art, science and practice of establishing, tending and reproducing forest stands of desired characteristics. It is based on knowledge of species' characteristics and environmental requirements.

**Softwood** -- A tree belonging to the order Coniferales. Softwood trees are usually evergreen, bear cones and have needles or scalelike leaves. Examples include pines, spruces, firs and cedars. See conifer.

**Sound Knot** - A knot that is solid throughout and shows no sign of decay.

**Springwood** -- See earlywood.

**Stain** - In hardwoods the word "stain" is used to describe the initial evidences of decay.

**Stand** -- A group of trees that are sufficiently the same in species composition and arrangement of age classes and condition so that they can be managed as a unit.

**Summerwood** -- See latewood.

**Tyloses** - Bubble-like structures that form in the vessels of certain hardwoods, usually in conjunction with heartwood formation.

**Wane** - Bark or lack of wood.

**Warp** - Warp is any variation from a true or plane surface. Warp includes bow, crook, cup and twist, or any combination thereof.

**Xylem** -- The part of a tree that transports water and nutrients up from the roots to the leaves. Older xylem cells become part of the heartwood. Also called sapwood.

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## FRANK MILLER LUMBER COMPANY, INC.

1690 Frank Miller Road, Union City, IN 47390

Toll free: (800) 345-2643 Ph: (765) 964-3196 Web site: [www.frankmiller.com](http://www.frankmiller.com)