

GLOSSARY

Abrasion Resistance

That property of a surface that resists being worn away by a rubbing or friction process.

Absolute Humidity

The amount of water vapor present in a unit volume of air, usually expressed as grains/cu.ft.

Absorption

The process by which water is drawn into permeable pores in a porous solid. Also used to indicate the amount of water absorbed by a material, as a percent by weight of a test specimen.

Acceptable Thermal Environment

A thermal environment that a substantial majority (more than 80%) of the occupants find thermally acceptable.

Acclimation

The act of allowing wood moisture content to become at equilibrium with the environment in which it will perform. See Equilibrium Moisture Content (EMC).

ACI 302.2R

A guide by American Concrete Institute (ACI) that contains materials, design, and construction recommendations for concrete slabs-on-ground and suspended slabs that are to receive moisture-sensitive flooring materials. These flooring materials include sheet rubber, epoxy coatings, vinyl composition tile, sheet vinyl, carpet, athletic flooring, laminates, and hardwood. Refer to the most current editions of both ACI 302.1R, "Guide for Concrete Floor and Slab Construction," and ACI 360R, "Design of Slabs-on-Ground," for general guidance on floor design and construction that is needed to achieve successful floor covering performance.

Acid

Chemical substance rated below 7 on the PH scale.

Acid Etching

Application of acid to clean or alter a concrete surface; typically used only when no alternative means of surface preparation can be used.

Acoustical Properties

Absorbance, reflection, or transmission of sound waves generally measured in terms of Impact Insulation Classification (IIC), Sound Transmission Classification (STC) or difference between concrete substrate IIC and IIC of same concrete assembly with finished wood floor installed (Delta IIC).

Adhesion

A chemical process by which two materials can be held together.

Adhesive

A group of materials used to cause similar or dissimilar materials to cohere.

Adjustability Time

The window of time, in a glue-down installation, during which the floor covering can be repositioned without compromising the bond of the adhesive.

Air-Dried

Dried by exposure to air in a yard or shed without artificial heat. Not kiln-dried.

Alkali

Salts of alkali metals, specifically potassium or sodium, occurring in constituents of concrete and mortar, usually in the form of water-soluble hydroxides, which increase the pH of concrete.

Alkali-Aggregate Reaction

A chemical reaction between certain silica or carbonate aggregates and alkali hydroxides in concrete, producing undesirable expansion and cracking.

Alkaline

A measurement of an alkaline rating above 7 on the pH scale.

Anhydrous Calcium Chloride

A white, deliquescent, hygroscopic compound, CaCl₂. A chemical used in ASTM F1869 in the form of prilled beads with a minimum purity of 94%. It can also be used in various technical grades as a drying agent, an accelerator, a deicing chemical, a refrigerant, and to prevent dust.

Anisotropic

Exhibiting different physical properties in different directions.

Annual Growth Ring

The layer of wood growth formed on a tree during a single growing season.

Application Rate (Spread-Rate)

The quantity (mass, volume, or thickness) of material applied per unit area.

ASHRAE (American Society of Heating, Refrigerating and Air Conditioning Engineers)

A building technology society with more than 50,000 members worldwide. ASHRAE's activities include research, standards writing, publishing, and continuing education. Its areas of interest include building systems, energy efficiency, indoor air quality, and sustainability within the industry.

Asphalt-Saturated Felt Paper

A #15 asphalt felt paper that meets ASTM Standard D4869 or asphalt-laminated paper that meets federal specification UU-B-790a Grade B, Type I, Style 1a, or asphalt-saturated paper that meets federal specification UU-B-790a, Grade D, Type I, Style 2. Commonly used as a Class II vapor retarder.

ASTM (American Society for Testing and Materials)

Develops and publishes voluntary technical standards for a wide range of materials, products, systems, and services. ASTM uses a consensus process involving technical committees that draw their members from around the world. ASTM International has no role in requiring or enforcing compliance with its standards, but in many instances, its standards have been adopted by rules-making industry and governmental bodies. Standard designations usually consist of a letter prefix and a sequentially assigned number. This may optionally be followed by a dash and the last two digits of the year in which the standard was adopted. Prefix letters correspond to the following subjects:

- A = Iron and Steel Materials
- B = Nonferrous Metal Materials
- C = Ceramic, Concrete, and Masonry Materials
- D = Miscellaneous Materials
- E = Miscellaneous Subjects
- F = Materials for Specific Applications
- G = Corrosion, Deterioration, and Degradation of Materials

ASTM C39

This test method covers determination of compressive strength of cylindrical concrete specimens such as molded cylinders and drilled cores. It is limited to concrete having a density in excess of 800 kg/m³ [50 lb/ft³].

ASTM C109/C109M

This test method provides a means of determining the compressive strength of hydraulic cement and other mortars and results may be used to determine compliance with specifications.

ASTM C349

This test method covers the determination of the compressive strength of hydraulic-cement mortars, using for the test specimens portions of prisms made and broken in flexure in accordance with Test Method C348.

ASTM C472

These test methods cover the physical testing of gypsum, gypsum plasters, and gypsum concrete. Test methods are detailed for the following: precautions for physical tests, reagents and materials, free water, fineness, normal consistency of gypsum plaster and gypsum concrete, setting time (temperature rise method), compressive strength, and density. Materials include distilled or deionized water and standard sand. For each test method, the following are specified: significance and use, apparatus, and procedure.

ASTM D3498

Standard specification for adhesives for field-gluing wood structural panels (plywood or oriented strand board) to wood based floor system framing.

ASTM D3575

Standard test methods for flexible cellular materials made from olefin polymers.

ASTM D4263 (Plastic Sheet Test)

Standard test method for indicating moisture in concrete by the plastic sheet method. This test method is used to indicate the presence of capillary moisture in concrete.

ASTM D4442 (Oven-Dry Method)

Standard test method for direct moisture content measurement of wood and wood-based materials.

ASTM D4444

Standard test method for laboratory standardization and calibration of handheld moisture meters.

ASTM D4933

Standard guide for moisture conditioning of wood and wood-based materials.

ASTM D4944

Standard test method for field determination of water (moisture) content of soil by the calcium carbide gas pressure tester.

ASTM E1155

Standard test method for determining floor flatness (FF) and floor levelness (FL) numbers. This test method covers a quantitative method of measuring floor surface profiles to obtain estimates of the floor's characteristic FF (flatness) and FL (levelness) face floor profile numbers (F-numbers) using the inch-pound system of units.

ASTM E1745

Standard specification for plastic water vapor retarders used in contact with soil or granular fill under concrete slabs.

ASTM E1993

This specification covers bituminous water vapor retarders for use in contact with soil or granular fill under concrete slabs.

ASTM F710

Standard practice for preparing concrete floors to receive resilient flooring. Note: The ASTM standard also states: "Although carpet tiles, carpet, wood flooring, coatings, films, and paints are not specifically intended to be included in the category of resilient floor coverings, the procedures included in this practice may be useful for preparing concrete floors to receive such finishes."

ASTM F1869 (Calcium Chloride Test)

Standard test method for measuring moisture vapor emission rate (MVER) of concrete subfloor using anhydrous calcium chloride.

ASTM F2170 (Relative Humidity Probe Test)

Standard test method for determining relative humidity in concrete floor slabs using in-situ probes.

ASTM F2659 (Electronic Meters)

Standard guide for preliminary evaluation of comparative moisture conditions of concrete, gypsum cement, and other floor slabs and screeds using a non-destructive electronic moisture meter.

ASTM F3191

Standard practice that describes the procedure for assessing the substrate water absorption (often referred to as substrate porosity) of horizontal substrate surfaces, prior to the installation of resilient floor coverings.

Backing

Layer of the engineered wood floor that provides balance, generally bonded to the bottom of the core layer.

Balanced Construction

An engineered wood plank construction that has materials of similar properties (stiffness, dimensional stability, etc.) bonded to both sides of the product.

Balusters

A vertical member used to in-fill and restrict the size of openings within a balustrade and/or provide support to the top of a balustrade or guard system by transferring a portion of the load applied to the balustrade to the structure of a stair or floor system.

Balustrade

A system of rails, newels, balusters, panels, or other ornamental components used to separate two areas. Balustrades used to minimize falls from elevated walking surfaces and the sides of stairs are also guards.

Banister

A simple post-to-post balustrade typically with small diameter, square or rectangular section balusters used to provide a handrail and minimize falls from the side of stairs.

Base Shoe

A moulding designed to be attached to baseboard moulding to cover expansion space. It is the alternative to a quarter-round in profile.

Basement

A story of a structure that is below grade, or below ground level.

Bevel

An edge of a board that is not perpendicular to the face of the piece of wood flooring, plank, block or parquet. Types of beveled edges may include:

Square edge: Edges with no bevel.

Full bevel: A larger bevel (typically $>1/16''$) 30-45° edges.

Micro bevel: A smaller bevel (typically $\leq 1/16''$) 30-45° edges.

Pillowed/eased bevel: A bevel with a slight radius profile.

Chiseled edge: A rough bevel that varies in depth, width, and texture.

Board Foot

A unit of measurement of lumber represented by a board 1 foot long, 12 inches wide, and 1 inch thick, or its cubic equivalent. In practice, the board foot calculation for lumber 1 inch or more in thickness is based on its nominal thickness and width, and the actual length. Lumber with a nominal thickness of less than 1 inch is calculated as 1 inch.

Bond

See adhesion.

Bond Classification

Exposure ratings for wood structural subfloor panels, may be Exterior or Exposure 1. The classifications are based on the severity and duration of weather and moisture exposure the panels are designed to withstand, and the wood materials and adhesives used in manufacture.

Border

Simple or intricate designs that frame and customize a flooring installation.

Bow

The distortion of lumber in which there is a deviation, in a direction perpendicular to the flat face, in a straight line from end-to-end of the piece.

BTU/H (British Thermal Units per Hour)

The amount of heat energy needed to raise the temperature of one pound of water by one degree F, in one hour, expressed in British thermal units per hour.

Builder

Any individual or entity (including, but not limited to, homebuilders, remodelers, general/restoration contractors, DIYers) that coordinates and oversees the different suppliers, trades, installers, and other experts involved in building or remodeling a home, office, or other building.

Building Enclosure

The system or assembly of components, that provides environmental separation between the conditioned space and the exterior environment.

Building Thermal Envelope

The basement walls, exterior walls, floors, roof, and any other building element that enclose conditioned space. This boundary also includes the boundary between conditioned space and any exempt or unconditioned space.

Bullnose

See nosing.

Buyer

Any individual or entity (including, but not limited to, distributors, end-users, installers, flooring contractors, general contractors) that is the first to use/handle/possess/receive/deliver the wood flooring material prior to installation of the wood flooring product.

Calibration

The act of checking and adjusting the accuracy of a measuring instrument. ASTM D4444 is the standard test method for laboratory standardization and calibration of handheld moisture meters.

Capillary Action (Capillary Flow)

The movement of water within the spaces of a porous material (such as concrete) due to the forces of adhesion, cohesion, and surface tension. It is the ability of a liquid to flow in narrow spaces without the assistance of, and sometimes in opposition to, external forces like gravity.

Capillary Break

Layer of no-fines coarse aggregate placed on subgrade soil to stop capillary rise.

Capillary Rise

Action of certain fine-grained soils that can draw water upward from the natural water table.

CARB (California Air Resources Board)

A California state agency that regulates the impact that many industries have on the state's air quality, including controlling emissions for everything from trucks to cows. "CARB P2" refers to "Phase 2" of the Air Toxic Control Measure 93120 (ATCM 93120), which governs formaldehyde emissions from composite wood products. Most engineered and laminate flooring sold in the U.S. will have a CARB P2 compliance statement.

Cement

Any number of materials that are capable of binding aggregate particles together.

Cleat

A barbed fastener commonly used as a mechanical device to fasten hardwood flooring.

Climate

The exterior environmental conditions that will impose a load on the building enclosure, including temperature, humidity, rainfall, wind, and solar radiation. Dividing a map into climate zones allows designers, code bodies, and others to make recommendations based on expected regional loads.

Climate Zone

A geographic region based on climatic criteria as defined by ASHRAE (American Society of Heating, Refrigerating and Air Conditioning Engineers) and as specified in the International Residential Code (IRC).

Color Change

Visual changes in the color of the wood species caused by exposure to light, deprivation of light and air, or some chemical reaction.

Colorfastness

The ability of a material to retain its original color upon exposure to light or other source of degradation (e.g., light resistance).

Composite

A product or system made from two or more constituent materials that remain distinct, but combine to form a material with properties not possessed by any of the individual constituents.

Compression Set

Caused when wood strips or parquet slats absorb excess moisture and expand so much that the cells along the edges of adjoining pieces in the floor are crushed. This causes them to lose resiliency and creates cracks when the floor returns to its normal moisture content.

Concrete

A mixture of Portland cement, water, fine and coarse aggregates. Cement and water form paste that acts as the binding material. Concrete may also contain mineral and chemical admixtures.

Concrete, High-Strength

Concrete that has a specified compressive strength for design of 8000 psi (55MPa) or greater.

Concrete Surface Profile (CSP)

A standardized measure for the roughness, or topography, of a surface that is defined by the International Concrete Repair Institute (ICRI).

Condensation

The change of state from a vapor or gas to a liquid. A common factor in moisture-related damage. Condensation occurs on cool surfaces, when humid air comes into contact with it.

Conditioned Air

Air treated to control its temperature, relative humidity, or quality.

Conditioned Space

An area or room within the building that is intentionally heated or cooled, and humidified or dehumidified, either for the comfort of occupants, or for preserving temperature and humidity-sensitive goods.

Conditioning

Exposure under controlled temperature and relative humidity to bring wood to a desired moisture content.

Contamination, Substrate

Any extraneous material on or within a substrate that can cause deterioration, inhibit bond, or adversely impact performance of any product used in the installation of wood flooring.

Core

The material layer that provides thickness, dimensional stability, and other properties needed for the engineered wood flooring product. Note: The core layer generally consists of wood, finger blocks, HDF/MDF, or any composite material.

Cove

A moulding profile with a concave quarter round radius or arc on the face.

Crack Bridging

The ability of repair or protective surface treatment to remain continuous when installed on a cracked concrete surface.

Crook

The distortion of a board in which there is a deviation, in a direction perpendicular to the edge, from a straight line from end-to-end of the piece.

Cross-Directed

Laying of material perpendicular to the material below it.

Crowning

A convex or crowned condition or appearance of individual strips with the center of the board higher than the edges. The opposite of cupping.

Cupping

A concave or dished appearance of individual boards with the edges raised above the center. The opposite of crowning.

Cure (Concrete)

The process by which a compound attains its intended performance properties by means of evaporation, chemical reaction, heat, radiation, or combinations thereof. The opposite of drying.

Curling/Warping (Substrate)

A deviation of a substrate surface from its original shape, usually caused by either temperature or moisture differentials, or both, within the material or in the zones adjacent to its opposite faces.

Deciduous

See hardwood.

Deflection

The bending of a material between supports when a load is applied.

Deformed Fasteners

Fastener in which the sides are not smooth and the head shape may be irregular. Examples are ring-shank and screw-shank nails.

Degree Days (Cooling and Heating)

Degree days are a measurement designed to reflect the demand for energy needed to heat or cool a building. It is derived from measurements of outdoor air temperature. Degree days are based on the assumption that when the outdoor temperature is 65°F (18°C), we don't need heating or cooling to be comfortable. Degree days are the difference between the daily temperature mean (high temperature plus low temperature divided by two) and 65°F. If the temperature mean is above 65°F, we subtract 65 from the mean and the result is Cooling Degree Days. If the temperature mean is below 65°F, we subtract the mean from 65 and the result is Heating Degree Days.

Design Criteria

Code, standards, loads, displacement limits, materials, connections, details, and protections used in the design of a project in order to be successful.

Dew-Point

The temperature at which the atmospheric water vapor condenses out as a liquid.

Diffuse-Porous Woods

Certain hardwoods in which the pores tend to be uniform in size and distribution throughout each annual ring or to decrease in size slightly and gradually toward the outer border of the annual growth ring. Hard maple is an example.

Diffusion

The movement of individual molecules through a material. The movement occurs because of concentration gradients and (to a much lesser degree) thermal gradients, independent of airflow. A mode of water vapor transport in building enclosures that is much slower than airflow.

Dimensional Change Coefficient

A number that reflects how much a certain species of wood will change in size depending on how it is cut from the tree, in relation to a change in moisture content.

Dimensional Stability

The ability to maintain the original intended dimensions when influenced by a foreign substance. Wood is hygroscopic (readily takes up moisture) and isn't dimensionally stable with changes in moisture content below the fiber saturation point.

Discoloration

Fading or other alterations of a color that changes the normal appearance.

Distressed

An artificial texture in which the floor has been scraped, scratched, or gouged to give it a time-worn, antique look.

Drying (Concrete)

The removal of moisture from concrete usually through evaporation at the surface. Drying is the opposite of curing.

Durability

The ability of the wood species or finish to withstand the conditions or destructive agents with which it comes in contact in actual usage, without an appreciable change in appearance or other important properties.

Efflorescence

A powdery deposit of soluble salts formed by evaporation of water at a concrete surface.

Elasticity

The property of a material that enables it to return to its original size and shape after deformation.

Elastomeric Adhesive

Adhesives with polymers that have rubber-like, elastic properties which permit them to stretch in response to stresses caused by vertical or lateral movement, and then return to approximately its original size and shape.

End-Grain

A slice of wood cut so that the growth rings are facing up, as the transverse cut.

End-Joint

The place where two pieces of flooring are joined together end-to-end.

End-Matched

In tongue-and-groove strip and plank flooring, the individual pieces have a tongue milled on one end and a groove milled on the opposite end, so that when the individual strips or planks are butted together, the tongue of one piece fits into the groove of the next piece. See side-matched and tongue-and-groove.

End User

Any individual or entity that physically receives and puts to use the final wood flooring product.

Engineered Wood Floor

An assembly normally made using multiple wood veneers or slats of wood glued together at opposing directions. Engineered wood flooring is real wood from top to bottom. Composite engineered wood flooring contains real wood on the wearable surface only. The backing and core material may be made up of any type of composite material.

Environmental Protection Agency (EPA)

An independent agency of the United States federal government whose mission is to protect human and environmental health. President Richard Nixon proposed the establishment of EPA on July 9, 1970 and it began operation on December 2, 1970, after Nixon signed an executive order.

Equilibrium Moisture Content (EMC)

The moisture content at which wood neither gains nor loses moisture when surrounded by air at a given relative humidity and temperature.

Ettringite

A hydrous calcium aluminium sulfate mineral that is formed when gypsum comes into contact with a cement-based product. The crystallized minerals increase in volume, filling the voids of the reactants in the latex Portland cement. As the salts grow and expand, they can chemically destroy the integrity of gypsum-based subfloor toppings.

Expansion Gap/Space

A space necessary between fixed objects (e.g., walls of a room, pipes, and cabinets) and between the wood flooring material itself, to allow for the movement of the flooring system.

Factory-Finished

Wood flooring that has been colored and finished at the manufacturer's facility prior to packaging. See also Prefinished.

Fading

The loss of color due to exposure to light, heat, or other destructive agents.

Fastener

A method or device used to attach wood flooring to a subfloor.

Feature Strip

A strip of wood used at a threshold or to border a room or to otherwise serve as an accent. Usually made of a contrasting color or species.

Fence

A device that helps locate and/or guide the workpiece during the cutting process.

Fiber Saturation Point (FSP)

The stage in drying or wetting wood at which the cell walls are saturated with water and the cell cavities (lumina) are empty of free water. It is usually taken as approximately 30% moisture content, based on oven-dry weight.

Fiberboard

A broad generic term inclusive of sheet materials of widely varying densities manufactured of refined or partially refined wood or other vegetable fibers. Bonding agents and other materials may be added to increase strength, resistance to moisture, fire, or decay, or to improve some other property.

Fillets

The small components that comprise finger-block parquet. Also called fingers or slats. Fillet may also refer to the top layer of some engineered wood flooring.

Finger-Block

Parquet made from small strips of wood assembled together. See Fillets.

Fire Resistance

The property of a material or assembly to withstand fire, or give protection from it. Certain species naturally provide greater fire resistance than others. Classes are I-II-III or A-B-C with Class I or A being the most fire-resistant.

Fire Retardant

A chemical or preparation of chemicals used to reduce flammability or to retard the spread of a fire over a surface.

Flame Spread

The propagation of a flame away from the source of ignition across the surface of a liquid or solid, or through the volume of a gaseous mixture. Note: Most wood species are Class C Flame Spread unless the wood floor has been treated and marked as to flame spread.

Flash-Time

In a glue-down installation, with some types of flooring adhesives, flash-time is the recommended amount of time for a freshly applied adhesive to remain exposed to the air before the installation of floor covering should begin.

Floating Floor

A floor that does not need to be nailed or glued to the subfloor. Typically, the flooring panels are connected together by glue or a locking mechanism.

Floor Temperature

The surface temperature of the floor where it is in contact with the occupants' feet.

Formaldehyde

Formaldehyde is a naturally occurring substance that is naturally created by our bodies and can be found in food such as apples or spinach. Generally, formaldehyde becomes a concern when in a gaseous form and too much is inhaled. Formaldehyde is used in a wide variety of industries and, in the wood flooring industry, is a common component in adhesives where it is usually bonded with another chemical to create a compound (an example would be "phenol formaldehyde"). Sometimes the chemical bond will break and what is known as "free formaldehyde" will be released as a volatile organic compound (VOC) into the air. There are a number of regulations limiting the emission of formaldehyde from composite wood products.

Grade

A reference plane representing the finished ground level adjoining the building structure at all exterior walls.

Grain Angle

A description of how the wood was cut from the tree, related to the orientation of the growth rings with respect to the wide face of the board.

Ground Fault Circuit Interrupter (GFCI)

A safety device designed to sense electrical leakage to ground and quickly shut off the circuit to prevent electrical shock.

Guard

A protective device that forms a barrier between a hazardous object such as a moving blade, wheel, or cutter, and the operator.

Hardened Steel Pin

Specialty fasteners designed to penetrate and hold concrete, steel, and other substrates. Steel pins typically are installed with powder, pneumatic, or gas-powered tools.

Hardness

That property of the wood species or dried film of finishing material that causes it to withstand denting or being marked when pressure is exerted on its surface by an outside object or force.

Hardwood

Generally, one of the botanical groups of deciduous trees that have broad leaves, in contrast to conifers or softwoods. The term has no reference to the actual hardness of the wood.

HDF (High Density Fiberboard)

See MDF (medium density fiberboard).

Heating Degree Day (HDD)

Heating degree day is a measurement designed to quantify the demand for energy needed to heat a building. HDD is derived from measurements of outside air temperature. The heating requirements for a given building at a specific location are considered to be directly proportional to the number of HDD at that location.

Humidistat

A regulatory device, actuated by changes in humidity, used for automatic control of relative humidity.

Humidity

A general reference to the moisture content of the air. It is expressed in terms of several thermodynamic variables, including vapor pressure, dew-point temperature, wet bulb temperature, humidity ratio, and relative humidity. It is spatially and temporally averaged in the same manner as air temperature.

HVAC (Heating, Ventilation, and Air Conditioning) System

A system that maintains desired environmental conditions in a space. HVAC systems are categorized by the method used to produce, deliver, and control heating, ventilating, and air conditioning in the conditioned area.

Hydration

A chemical reaction between water and cement compounds that produces a hard, rock-like mass, and develops strength in concrete. Curing aids hydration whereas drying stops hydration.

Hydrostatic Pressure

Fluid pressure that develops when the liquid water level is above a specified location.

Hygrometer

An instrument for measuring the degree of humidity or relative humidity of the atmosphere.

Hygroscopic

A substance that can absorb and retain moisture, or lose or throw off moisture. Wood and wood products are hygroscopic. They expand with absorption of moisture and their dimensions become smaller when moisture is lost or thrown off.

Hysteresis

The phenomenon in which the value of a physical property lags behind changes in the effect causing it. In wood, the equilibrium moisture content (EMC) that wood attains at any given relative humidity and temperature combination depends upon many variables, including the direction from which the EMC is approached. During desorption (moisture loss), the EMC will be higher (sometimes by several percent moisture content) than during adsorption (moisture gain).

Impact Resistance

The ability to resist fracture or damage from a falling object.

In-Situ

A Latin term that means "in place" or "on site," the term applies to testing done on site, or on materials in their original location, as opposed to testing done in a laboratory. Some sound control testing is done in the field or "in-situ," and relative humidity testing in the concrete slab is often done using "in-situ" probes.

Inlay

A decorative effect used in flooring by combining elements of the same material, but with different colors or patterns (e.g., borders or feature strips).

Installer

Any individual or entity that physically installs and places into service the wood flooring product.

Intensity

The intensity of a color is its purity or degree of hue as seen by the eye.

International Building Code (IBC)

A model building code developed by the International Code Council (ICC) adopted throughout most of the United States.

International Code Council (ICC)

A membership association dedicated to building safety and fire prevention, develops the International Codes, model building codes used to construct residential and commercial buildings, including homes and schools.

International Residential Code (IRC)

A comprehensive, stand-alone residential code that creates minimum regulations for one- and two-family dwellings of three stories or less. It brings together all building, plumbing, mechanical, fuel gas, energy, and electrical provisions for one- and two-family residences.

Joint (Concrete)

A physical separation in concrete, including intentionally made cracks that occur at specified locations.

Joint, Construction (Cold Joint): Used where two successive placements of concrete meet. This cold joint becomes a weakened joint that will crack when either slab moves.

Joint, Contraction (Control or Saw-Cut Joints): Formed, sawed, or tooled grooves in the concrete slab used to induce shrinkage cracking at specific locations.

Joint, Expansion: Joints that allow for movement where expansion is likely to exceed contraction. Expansion joints are normally filled with compressible filler material allowing for independent movement between adjoining slabs.

Joint, Isolation: A separation between adjoining parts of a concrete structure, usually a vertical plane, at a designated location used to prevent a bond and allow movement between the slab and the adjoining structure.

Jointed Flooring

Strip flooring, generally birch, beech, hard maple, or pecan, manufactured with square edges, not side-matched, but usually end-matched. It is used principally for factory floors where the square edges make replacement of strips easier.

Joist

One of a series of parallel beams used to support floor or ceiling loads and supported in turn by larger beams, girders, or bearing walls.

Kerf

Describes the thickness and blade-width of the cut a saw blade makes in a piece of wood as it cuts through it.

Kerfing

A wood bending technique using a series of uniform, shallow cross cuts on the back of a board that do not penetrate the face allowing the back surface to compress to a smaller radius increasing the flexibility without reducing the thickness.

Kickback

Sudden and unintended movement of the tool or workpiece. It is typically caused by binding or pinching of the workpiece.

Kiln

A chamber having controlled air flow, temperature, and relative humidity for drying lumber, veneer, and other wood products.

Kiln-Dried

Dried in a kiln with the use of artificial heat.

Laminate Flooring

A rigid floor covering, typically in a plank or tile format, having a multiple layer product structure (e.g., overlay, décor, core, and backer). The planks/tiles have worked edges that allow the product to be joined together to form a larger integral unit. The product may vary in surface texture and gloss. Laminate flooring does not include products having a resilient, stone, textile, wood, leather, or metal top surfacing materials.

Landing

1. The space at the top and bottom of a flight at a floor level to provide clear approach to the stair or the floor level from the stair. 2. An intermediate platform between flights used to change direction of the stair and/or provide a resting place, typically with dimensions approximating the width of the flights served.

Landing-Tread

1. The top tread in a flight supported by the top riser that is attached in alignment with the floor-surface with the same nosing projection as the treads in the flight below. 2. The moulding used as landing tread and landing nosing. (Also known as bullnosing, or stair-nosing.)

Lightweight Aggregate

Manufactured aggregate such as expanded or sintered clay, slate, or shale, having low density and used to produce lightweight concrete. Lightweight aggregate often has significantly higher absorption and therefore holds more water in a concrete mix than does normal-weight aggregate.

Live Load

A moving load on a structure.

Livesawn

A method of sawing a log straight through its diameter, leaving in the heart of the log, and all of the grain and character variations seen throughout all grades and cuts of lumber.

Load Factor

A factor by which a service load is multiplied to determine a factored load used in the strength-design method.

Load Test

Procedure consisting of applying loads to verify the strength and behavior of a structure or structural member.

Manufacturer

Any individual or entity that physically manufactures a product, or has a product designed or manufactured for the wood flooring industry, and places it on the market under its' own name or trademark.

Manufacturing Defect

Includes all defects or blemishes that are produced in manufacturing, including, but not limited to, chipped grain, torn grain, skips in dressing, hit-and-miss (a series of surfaced areas with skips between them), variation in machining, machine burn, and mismatching.

Mechanical Fastener

A mechanical device such as a cleat or staple or nail specifically designed for the purpose of installing wood flooring. The fastener is coated (staples) or serrated (nail/cleats) to increase the holding power. The fastener typically is used within the "pocket" of the tongue at the point that horizontal portion of the tongue becomes the vertical edge of the wear layer. Some specialty flooring use face nailing only while other specialty products may allow for positioning the fastener in the groove side.

Medium Density Fiberboard (MDF)

A core material primarily composed of cellulose fibers combined with synthetic resins or other suitable bonding systems under heat and pressure. The materials are usually designated as low-, medium-, or high-density (e.g., LDF, MDF, or HDF). Note: High density fiberboard (HDF): A fiberboard with density greater than 800 kg/m³ (50 lb./ft.³).

Membrane, Liquid

A liquid material applied to a substrate to form a continuous moisture control film after it cures.

Membrane, Sheet-Goods

Any functionally continuous flexible structure of felt, fabric, plastic, rubber, mat, pad, or combination thereof used as a moisture control system.

Meter Drift

The decrease (or increase) in true moisture content over a specified elapsed time.

Mill Thickness Declaration

Designated wood panel subfloor thickness subject to tolerances as specified in the PS standard.

Mineral Spirits

A solvent product used as a thinner and/or cleaner.

Mixed Media

A wood floor that is made predominately of wood, but also incorporates other materials, such as stone, ceramic, leather, or metal.

Moisture Content

The amount of moisture in wood expressed as a percentage of the weight of oven-dried wood. NWFA/NOFMA hardwood flooring is manufactured at 6 to 9 percent moisture content, with a 5 percent allowance for pieces up to 12 percent moisture content.

Moisture Meter

A tool used for the rapid determination of moisture content in wood by electrical means. There are two main types of meters: pinless meters (dielectric) and pin-type meters (electrical resistance).

Monolithic

A system wherein the individual components react together as a uniform, continuous mass.

Muriatic Acid

A diluted acid used to neutralize alkalinity of concrete subfloors.

NAF (No Added Formaldehyde)

NAF indicates that no formaldehyde was added to the product during manufacturing. The term NAF may be used to indicate a route to TSCA/CARB compliance for a manufacturer, or used as a designation on products indicating emissions status, or as a qualifier for some green building credit categories.

Nailing Shoe (Nailing Plate)

An attachment to a floor nailer that broadens the impact area on the floor surface.

Newel or Newel Post

1. A vertical element or post used to connect balustrade components to the structure of a stair or floor system. 2. A vertical post to which carriages, stringers, and balustrades can be attached at junctions and angular turns in the stairway to provide the main support for the stairs and balustrades.

NIST (National Institute of Standards and Technology)

A physical sciences laboratory, and a non-regulatory agency of the United States Department of Commerce. Its mission is to promote innovation and industrial competitiveness.

NOFMA

Formerly the "National Oak Flooring Manufacturer's Association," and then the "Wood Flooring Manufacturer's Association." Currently NOFMA is the wood flooring mill certification program administered by the NWFA. NOFMA certification provides an assurance that wood flooring meets or exceeds industry standards for grade, configuration, moisture content, and average board length. Certified mills are inspected a minimum of twice per year to ensure grading standards are consistently met.

Nominal Size

As applied to timber or lumber, the size by which it is known and sold in the market, often different from actual size.

Nondestructive Evaluation (NDE)

Condition evaluation conducted with nondestructive methods.

Nondestructive Testing (NDT)

Includes, but is not limited to, the examination of materials and structures in ways that do not impair future usefulness and serviceability in order to detect, locate, and measure discontinuities, defects, and other imperfections to assess integrity, properties, and uniformity, and to measure geometrical characteristics.

Oriented Strand Board (OSB)

Commonly used as an underlayment or subfloor material. Strands tend to be oriented with their length aligned with the panel length (typically). OSB is therefore stiffer and stronger when installed with the long axis across supporting floor joists.

Oriented Strand Board (OSB), High-Performance

Some OSB products have obtained a third-party evaluation documenting greater strength and stiffness compared to either plywood or commodity OSB by virtue of their engineered design and makeup.

OSHA (Occupational Safety and Health Administration)

An agency of the United States Department of Labor. Congress established the agency under the Occupational Safety and Health Act, which President Richard M. Nixon signed into law on December 29, 1970. The Occupational Safety and Health Act of 1970 is a U.S. labor law governing the federal law of occupational health and safety in the private sector and federal government in the United States (www.osha.gov).

Osmosis

Movement of water through a semipermeable membrane into a solution of higher salt concentration that tends to equalize the concentrations of salt on the two sides of the membrane. Blisters under some floor coatings can form due to osmosis where concrete can act as a semipermeable membrane.

Outdoor Design Condition

The local outdoor environmental conditions, represented by climate data, at which a heating or cooling system is designed to maintain the specified indoor thermal conditions.

Overwood/Underwood

A flooring condition in which there is a perceived misalignment of the flooring surface, with some wood pieces raised above adjacent pieces leaving a slightly uneven surface.

Panel Grade

The term "grade" may refer to panel grade or veneer grade. Panel grades generally are identified in terms of the veneer grade used on the face and back of the panel (e.g., A-B, B-C, etc.) or by a name suggesting the panel's intended end-use (e.g., APA-rated sheathing, underlayment, etc.).

Parquet

Wood flooring composed of wooden blocks arranged in a geometric pattern.

Particle Board

A generic term for a material manufactured from wood particles or other lignocellulosic material and a synthetic resin or other suitable binder. Flake board is a particle panel product composed of flakes. Oriented strand board is a type of particle panel product composed of strand-type flakes that purposely are aligned in directions that make a panel stronger, stiffer, and with improved dimensional properties in the alignment directions, making it appropriate for some wood flooring installations. Wafer board is a particle panel product made of wafer-type flakes. It usually is manufactured to possess equal properties in all directions parallel to the plane of the panel, but is not appropriate for most wood flooring installations.

Performance Category

A panel designation related to the wood panel thickness range that is linked to the nominal panel thickness designations used in the International Building Code (IBC) and the International Residential Code (IRC).

Perm

The mass rate of water vapor flow through one square foot of a material or construction of one grain per hour induced by a vapor pressure gradient between two surfaces of one inch of mercury or in units that equal flow rate.

Perm Rating

The standard measure of the water vapor permeability of a material. The higher the number, the more readily water vapor can diffuse through the material.

Permeability

The rate of water vapor transmission through a flat material, expressed in units of mass, per area, per thickness, per vapor pressure difference across the material.

Permeance

The rate of water vapor transmission through a flat material under specified conditions of specimen thickness, area, and vapor pressure difference. The unit of measurement is typically the "perm." Perm ratings of materials are actually permeance values for a product of specified thickness, while permeability is a numerical value per unit of material thickness.

pH

A logarithm of the reciprocal of hydrogen ion concentration in moles per liter, used to express the acidity or basicity of a solution on a scale of 0-14, where less than 7 represents acidity, 7 is neutral, and more than 7 is basic.

Photo-Sensitive

The property of some wood species that causes them to lighten or darken when exposed to light. See Color Change.

Pith

The small, soft core occurring near the center of a tree trunk, branch, twig or log. First growth.

Plainsawn (Flatsawn)

Cut parallel to the growth rings. Wood flooring cut so that the growth rings are mostly parallel (0° to 45°) to the wide face of the board (a tangential cut). This cut is called plainsawn in hardwoods, and flatsawn in softwoods.

Plank

Solid or engineered wood flooring manufactured in linear widths measuring from 3" up to 5".

Plenum

A chamber that forms a part of the air circulation system other than the occupied space being conditioned.

Plugs

Used to cover countersunk fasteners and/or for decorative purposes when installing wood flooring.

Plywood

Board or panel made of cross-directional veneers and/or layers of wood for dimensional stability.

Point Load

An equivalent load applied to a single point on a floating wood floor, which you can determine by calculating the total load over an individual plank's surface and attributing the entire load to its center.

Porosity

Voids in a solid substance, often expressed as a volume percent. The connectedness of voids, along with other properties of the substance, determines permeability.

Post-Tensioning

A method of concrete prestressing in which internal or external prestressing tendons are tensioned after the concrete has hardened.

Power Source

A household workplace electrical outlet, battery, or generator providing the electricity to your tool. The power source must be compatible with the requirements found on the tool's rating plate: voltage, amperage, AC or DC, and frequency.

Prefinished

Wood flooring that has been finished prior to being installed. Also see Factory Finished.

Pre-Tensioning

A method of prestressing reinforced concrete in which the tendons are tensioned before the concrete is placed.

Product Standard (PS)

A wood panel industry product manufacturing or performance specification. Voluntary Product Standard PS1 for Construction and Industrial Plywood was developed cooperatively by the plywood industry and U.S. Department of Commerce. Voluntary Product Standard PS2, Performance Standard for Wood-Based Structural Use Panels, establishes performance criteria for specific designated construction applications.

Push-Block/Push-Stick

A suitably shaped and designed hand-held device used to push the workpiece into and past cutting edges on stationary power tools.

Qualitative Test

A test method that produces information about qualities without determining a verifiable value. Examples of qualitative tests include ASTM F2659 and ASTM D4263.

Quantitative Test

A test method that produces data that measures the quantity of something that can be verified. Examples of quantitative tests include ASTM F2170 and ASTM F1869.

Quartersawn (Vertical Grain)

Cut perpendicular to the growth rings. Wood flooring cut so that the growth rings are mostly perpendicular (45° to 90°) to the wide face of the board (a radial cut). This cut is called quartersawn in hardwoods, and vertical-grain in softwoods.

R-Value (Thermal Resistance)

The inverse of the time rate of heat flow through a body from one of its surfaces to the other surface for a unit temperature difference between the two surfaces, under steady state conditions, per unit area. The higher the R-value, the more resistant to heat loss the insulation product is.

Rays

Strips of cells that run from the bark toward the center of the tree. The rays serve primarily to store food and help move sugars and other materials from pith to bark. Because they are actually a second system of live cells running perpendicular to the grain, they can contribute visual interest to finished flooring depending on how the boards are cut from the tree.

Reducer Strip

A teardrop-shaped moulding accessory for hardwood flooring, normally used at doorways, but sometimes at fireplaces and as a room divider. It is grooved on one edge and tapered or feathered on the other edge.

Relative Humidity

Ratio of the amount of water vapor present in the air to that which the air would hold at saturation at the same temperature. It usually is considered on the basis of the weight of the vapor, but for accuracy, should be considered on the basis of vapor pressures.

Returned-End

The end of a moulding profile that has been mitered to extend the profile across the end and conceal the end grain.

Revolutions per Minute (RPM)

For a tool that rotates an accessory (drill, saw, router), RPM is the number of complete turns the accessory makes in one minute.

Riftsawn (Bastard Sawn)

Cut neither parallel nor perpendicular to the growth rings. Wood flooring cut so that the growth rings make angles of 30° to 60° to the face of the board. This cut is known as riftsawn or bastard sawn.

Ring-Porous Woods

A group of hardwoods in which the pores are comparatively large at the beginning of each annual growth ring and decrease in size, more or less abruptly, toward the outer portion of the annual growth ring. The large pores are springwood and the smaller pores are summerwood.

Ring Shank

Nail headed nail for underlayment installation with rings on the shaft (shank) to improve the holding characteristics.

Screed/Sleeper

Wood members laid over a substrate, and perpendicular to the finished floor, providing a nailing surface. Usually a 2"x4" (50mmx100mm) piece of wood laid on-end, embedded in concrete, or laid flat side down and attached to a concrete subfloor.

Seller

Any individual or entity (including, but not limited to, retail stores, big box stores, internet sales, interior designers, vendors, direct sales) that physically supplies/sells the wood flooring products to the buyer.

Sheathing

The structural covering, usually sheets of plywood or OSB, placed over exterior studding, rafters, or subfloors.

Shoe Moulding

A convex-shaped quarter round moulding, used at the joint between base and floor.

Side-Matched

In tongue-and-groove strip and plank flooring, the individual pieces have a tongue milled on one side and a groove milled on the opposite side, so that when the individual strips or planks are placed side by side, the tongue of one piece fits into the groove of the next piece.

Slip-Tongue/Spline

A small strip of wood or metal used to reverse or change direction in installing standard tongue-and-groove strip flooring.

Softwoods

Generally, one of the botanical groups of evergreen coniferous trees that have needles and are cone-bearing. The term has no reference to the actual hardness of the wood.

Solid Wood Floor

A solid piece of wood from top to bottom.

Span Rating

Two numbers separated by a slash. The left-hand number is the maximum recommended center-to-center spacing for supports in inches when the wood panel is used for roof sheathing with long dimensions across supports. The right-hand number is the maximum center-to-center spacing of supports in inches when the panel is used for subflooring with the long dimension across supports. They are based on application of the panel with the long dimension or strength axis across three or more supports.

Species Correction

A moisture meter-manufacturer-specified, user-adjusted setting that is made to the moisture meter to compensate for either varying electrical properties (for pin-type meters) or densities (for pinless meters) of the species under test, as compared to the species of the reference calibration.

Specifier

Any individual or entity including, but not limited to, architects, builders, consultants, design centers, interior designers/decorators, end-users, general contractors, flooring contractors, or sales professionals that recommends, specifies, or in any way advises the buyer prior to ordering, purchasing, and/or installing the wood floor products.

Square Edge

Flooring that abuts without a broken plane.

Squares

Parquet flooring units, usually composed of an equal number of slats.

Stack/Chimney Effect

The natural movement of air in a home from low levels (basement/crawl space) to upper levels (second story). Natural convection draws air from the crawl space up into the living spaces.

Stair

A step or change in elevation of one or more risers.

Stair-Nosing

A hardwood moulding used to cover the outside corner of a step, milled to meet the hardwood floor in the horizontal plane, to meet the riser in the vertical plane. It is usually used on landings. (Also known as bullnosing or landing-tread.)

Stair-Nosing Projection or Overhang

The horizontal distance measured from the leading edge of the tread to the trailing edge of the tread below.

Stair-Nosing, Return

A moulding matching the nosing moulding profile and projection of the tread nosing that is mitered to the tread nosing and used to project the end of a returned tread over the cut string face with identical detail to the projection of the tread nosing past the riser face.

Stair Riser

The vertical component of a step filling the space between the treads.

Stair Tread

The horizontal part of a stair upon which the foot is placed.

Stairbuilder

A person with skills specific to the arts of designing and constructing stairways and balustrades.

Staircase

That part of the building set apart for the stairs and balustrade generally including the well opening and adjacent walls.

Strip

Solid or engineered wood flooring manufactured in linear widths measuring less than 3".

Subfloor/Substrate

A preexisting supporting surface used in a building or structure over which a wood floor can be installed. May include wood panel, solid wood, concrete, lightweight concrete, screeds/sleepers, or existing flooring materials.

Supplier

Any individual or entity including, but not limited to, distributor, wholesaler, or importer that receives product from a manufacturer and supplies the wood flooring products to a reseller or buyer.

Surface

The outside or exterior boundary of any substance. One is said to surface the wood when it is rubbed or sanded to a smooth, level plane.

Surface Profile

The topographic contour of the exposed surface of a material or substrate.

T-Moulding (Saddle)

A flat moulding with beveled or rounded edges designed to transition between two surfaces of the same height. Often used to cover expansion at doorways and typically attached to the surface of the flooring products.

Temperature

A measurement that indicates how hot or cold something is. The United States uses the Fahrenheit (°F) scale. The majority of the rest of the world uses the Celsius (°C) scale.

Temperature Correction

The adjustment that is made to the pin-type moisture meter reading to compensate for the phenomena that the electric conductance of wood increases as the temperature increases, and vice-versa.

Tensile Strength

A value arrived at to demonstrate how much tension is acceptable until failure is achieved with a vapor retarder. Failure can be described as a fracture or tear.

Thermal Comfort

That condition of mind that expresses satisfaction with the thermal environment and is assessed by subjective evaluation.

Thermal Load

Load on a structure created by changes in temperature, measured in watts. Effectively, the thermal load is the amount of energy (heat) that needs to be added or removed from a house to maintain a regular temperature and control moisture, a job usually performed by a house's HVAC system. Sources that affect thermal load are the outside air temperature, indoor air temperature, underground temperature, solar radiation, and heating and cooling (HVAC) equipment.

Tongue-and-Groove

In strip, plank, and parquet flooring, a tongue is milled on one edge and a groove cut on the opposite edge. As the flooring is installed, the tongue of each strip or unit is engaged with the groove of the adjacent strip or unit.

Toxic Substances Control Act (TSCA)

A federal law that passed in 1976. Amendments are referred to as "Titles" and are usually written with roman numerals. TSCA Title VI is the short form for "The Formaldehyde Emission Standards for Composite Wood Products Act of 2010." TSCA Title VI is enforced by the US Environmental Protection Agency (EPA) and applies to all composite wood products that are sold, supplied, offered for sale, manufactured, or imported into the United States.

Trim

The finish materials in a building at the floor of rooms (baseboard, base shoe, quarter round, for example).

Truss

Engineered or solid floor joist system.

ULEF (Ultra-Low Emitting Formaldehyde)

May be a route to TSCA/CARB compliance for a manufacturer. May be a designation on an adhesive or a product indicating emissions status. May be a qualifier for a green building credit category.

Unconditioned Space

The exterior spaces or a space within the shell of a building that is neither directly nor indirectly heated nor cooled.

Underlayment

A material used between the wood flooring and the subfloor, normally used to control moisture or sound transmission.

Unfinished

A wood flooring product that must have stain and/or a finish applied after installation.

Vapor Barrier

No material is truly a barrier. A vapor barrier is a layer of material that is used to prevent the transfer of water or water vapor from the environment into a constructed structure. It is essentially vapor impermeable (e.g., metal, glass, thick plastics, and unperforated epoxy paint). A vapor barrier is defined by some as a Class I vapor retarder, a material that has a permeance of 0.1 or less. The test procedure for classifying vapor barriers is ASTM E-96 test method A (the desiccant or dry cup method).

Vapor Diffusion

The movement of water vapor through vapor-permeable materials.

Vapor Diffusion Retarder (VDR)

A layer of material, either preformed or liquid-applied, that is used to control the rate at which moisture can move through a material.

Vapor Impermeable Membrane (Class I Vapor Retarder)

Materials with a permeance of 0.1 perm or less, when tested in accordance with ASTM E-96 test method A (the desiccant or dry cup method). Class I vapor retarders are also known as vapor barriers.

Vapor Permeable Membrane

Materials with a permeance of greater than 10 perms, when tested in accordance with ASTM E-96 test method A (the desiccant or dry cup method).

Vapor Permeance

A layer property that describes the ease with which vapor molecules diffuse through it. More specifically, vapor permeance is defined as the quantity of vapor flow across a unit area that will flow through a unit thickness under a unit vapor pressure difference.

Vapor Semi-Impermeable (Class II Vapor Retarder)

Materials with a permeance of 1.0 perm or less and greater than 0.1 perm, when tested in accordance with ASTM E-96 test method A (the desiccant or dry cup method).

Vapor Semi-Permeable (Class III Vapor Retarder)

Material with a permeance of 10 perm or less and greater than 1.0 perm, when tested in accordance with ASTM E-96 test method A (the desiccant or dry cup method).

Volatile Organic Compound (VOC)

Organic chemicals that have a high vapor pressure at ordinary room temperature. Simply put, they exist in gaseous form in the air around us. VOCs include both human-made and naturally occurring chemical compounds. The health effects caused by specific VOCs will depend on the concentration and length of exposure.

Water-Cement-Ratio (w/c)

Mass of water to mass of cement in a concrete mix, expressed as a ratio.

Water Vapor

The invisible, gaseous state of liquid water.

Wear Layer

The outermost layer of engineered flooring designed to be the visible side when installed.

Wide-Plank

Solid or engineered wood flooring manufactured in linear widths measuring greater than 5".

Wood Floor

Wood is the hard fibrous material that forms from the main substance of the trunk or branches and beneath the bark of a tree. A wood floor is any flooring product that contains real wood as the top-most, wearable surface of the floor.

Working Pressure

The pneumatic pressure range specified in pounds per square inch (PSI) to optimally run an air tool.

Working Time

The maximum amount of time, in a glue-down installation, that an adhesive can remain exposed to the air, and still effectively bond to the floor covering. This time may vary based on temperature, humidity, substrate porosity, trowel size, and jobsite conditions.

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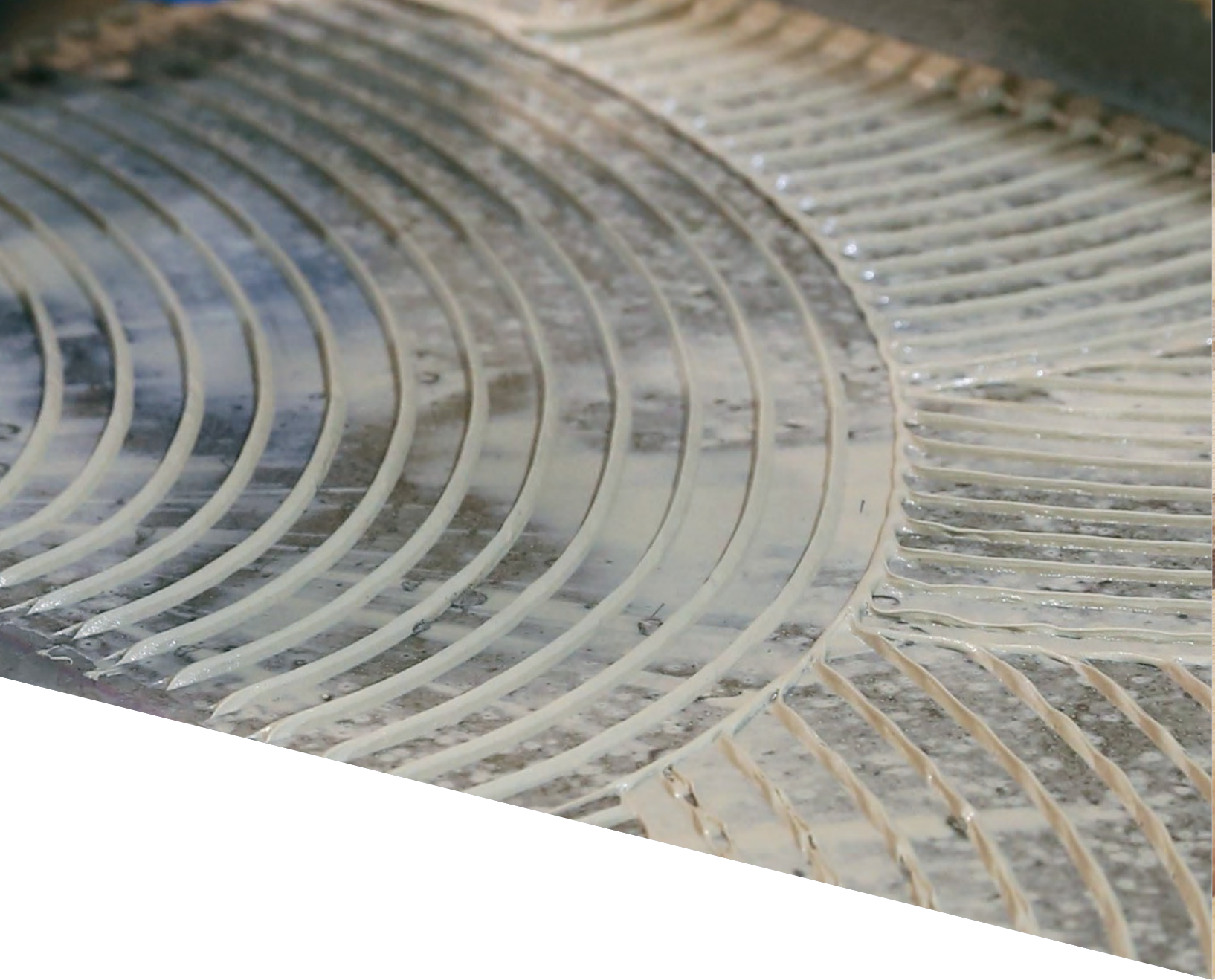
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