



1-866-997-3777
www.kalleyflooring.com

SOLID END GRAIN AND PLY

SPECIFICATIONS AND INSTALLATION INSTRUCTIONS

SPECIES: Douglas Fir, Hemlock, or Alder
CONSTRUCTION: Kiln Dried (6-9%) solid wood blocks turned on end and double edge wired with soft aluminum to form a flexible strip
APPLICATION: Commercial or Residential
FINISH: Unfinished
SURFACE TREATMENT: Smooth
STRIP LENGTHS: 12" – 34"
WIDTH OPTIONS: 2 3/4", 3 1/4", 3 5/8", 4 5/8"
THICKNESS OPTIONS: 3/4", 1", 1 1/2", 2", 2 1/2"
ENDS: Precision square cut
BACKS: beveled for flush fit on face
LEED CONTRIBUTION:
MR 4 – Pre consumer content
MR 5- Within 500 miles of Portland, OR
MR 7 – When FSC is specified
IEQ 4.2 – Low VOC oil (WOCA) and adhesives
IEQ 4.4 –No added urea formaldehyde (End Grain Only)

INSTALLATION: Glue Down

ADHESIVE RECOMMENDATION:

- Bostik "Best"
- Franklin "811"

STORAGE: Temporarily, while the units are still wrapped on pallets, store anywhere clean and dry. The HVAC during storage may be on, intermittent, or off providing the wrap is not removed.

ACCLIMATE: Although End Grain/Ply is kiln dried between 6 & 9% moisture content it must be restacked for acclimating only after the HVAC is on long enough to consistently bring the space to occupancy temperature and humidity. Remove strips from the pallets (being sure to keep thin ends on the strip) and place 25 to 30 strips on edge parallel and gapped so that air can contact face and back. Another 25 to 30 strips in the opposite direction on top of the first group also on edge and gapped. Continue cross hatch stacking upward as high as you can reach. Repeat stacks

as necessary. Allow a minimum of four days for acclimation.

DO NOT INSTALL OR ACCLIMATE UNLESS HEATING, AIR CONDITIONING, AND HUMIDITY CONTROL FACILITIES ARE IN FULL OPERATION AND ON LONG ENOUGH TO INSURE OCCUPANCY LEVELS OF TEMPERATURE AND HUMIDITY. FLOORS ARE OFTEN LAST TO INSTALL AND WHEN THERE IS PRESSURE FROM THE GENERAL OR OWNER FOR A PREMATURE INSTALLATION IT CAN CAUSE UNECESSARY REPAIR.

(1) ACCLIMATE, and (2) INSTALL ONLY AFTER HVAC IS ON LONG ENOUGH TO NORMALIZE BOTH TEMPERATURE AND HUMIDITY. OTHERWISE YOU MIGHT CAUSE A DIMENSIONAL CHANGE THAT IS UNNECESSARY. DO NOT INSTALL UNDER CONSTRUCTION CONDITIONS WHERE DOORS AND WINDOWS ARE OPEN AND HVAC INTERMITTENT.

CHECK HUMIDITY : With reliable hygrometer (or sling psychrometer) check humidity which should read between 35% and 50% assuming a 65° to 75° temperature. If humidity is not normal postpone installation until conditions are normal.

CHECK CONCRETE SUBFLOOR: Floor shall be depressed by masonry contractor to block depth when using 1" thick material. If cork specified for added resiliency allow for extra depth. For slabs on grade a permanent and reliable waterproof membrane must be within or under the slab extending to all slab edges vertically above surface. Concrete slabs must be protected from outside moisture vapor. New slabs must be cured (at least 50 days old) and dry. Below grade installation not recommended unless conditions equivalent to properly protected slab above grade. Less than 3 lb. retention if tested with calcium chloride.

CHECK FOR SMOOTHNESS: Be sure concrete subfloor is smooth and level. Tolerance should not exceed 1/4" (6.4mm) on a 10 foot (3m) straight edge in any direction. Check floor level with straight metal strip on edge. Double check edges and corners. Eliminate any washboard irregularity. All rough spots or gravel protruding must be ground smooth and low areas filled with leveling compound. If tolerance not as specified, floor contractor shall INSIST masonry contractor make necessary corrections.

SUBFLOOR: END GRAIN/PLY

may be installed directly over concrete or over wood or plywood subfloors which are level and well ventilated underneath. There should not be any cupped area or projecting nails. If END GRAIN/PLY is to be installed on existing synthetic floor a 1/4" (6.4mm) plywood or untempered hardboard underlayment should be thoroughly nailed. Over Gyp-crete (minimum 3,000 PSI), apply primer insure proper adhesion.

EXPANSION VOID: Cork expansion or 1/2" expansion gap at perimeter recommended for walls and columns 1/2"(12.7mm) to 1- 1/2" (38.1mm) wide. Place on edge along walls and columns lumber or plywood strips uniformly equal to width of expansion joint. After installing END GRAIN/PLY flush to strip then remove strips leaving uniform void for expansion cork. In aisle way or other narrow areas where END GRAIN/PLY meets carpet or other flooring the expansion void may be omitted.

DAMP PROOF SLAB (OPTIONAL): This step may be omitted if you are certain the concrete (or other substrate) is adequately protected from moisture either by its location above grade or by a permanent and reliable vapor barrier under the slab. If there is doubt concerning the effectiveness of the vapor barrier then either 1) substitute Bostik's "Ultra Set Hardwood Adhesive", which is a urethane formula requiring two applications, or 2) seal the slab with Franklin's Titebond #531 Moisture Control Sytem.

APPLY ADHESIVE:

Apply per Manufacturer's Recommendations
If using 1" Solid End Grain, use the following additional instructions:

- Bostik "Best": Use 1/4" x 1/4" (6.4mm) square notched trowel. Spread rate: 35 square feet per gallon.

- Franklin "811": Use 3/16" (4.8mm) x 1/4" (6.4mm) x 11/16" (17.5mm) V-notched trowel

APPLY STRIPS (Parallel Pattern):

Use snap lines to start and maintain keep square. Place first strip in corner parallel and tight to temporary lumber filler. Place adjoining strips close as possible to next strip to avoid crowding adhesive between strips. Stagger ends. Tap tight with the metal rake furnished by OL. Be sure strips are flat prior to placement by flat tapping out any curl. If after acclimation blocks are loose to eliminate cracks, carefully end tap blocks on the strip tight with a hammer or mallet and snip excess wire from ends. Alternately, drive the blocks tight against the angle iron Jig furnished on plywood. Continue snap lines to maintain squareness. All adhesive must be kept off exposed surfaces.

CUTTING: Strip ends will be square as received. When you reach a wall or column and need shorter lengths BE SURE YOUR END CUT IS EXACTLY SQUARE TO THE STRIP LENGTH. OCCASIONALLY SOME BLOCKS ARE SLIGHTLY ANGLED WITHIN THE STRIP AND REMOVING BLOCKS WITHOUT RECUTTING PERFECTLY SQUARE TO STRIP LENGTH CAN PUT ONE END OUT OF SQUARE CAUSING A SEPARATION. FILL EXPANSION VOID WITH CORK.

ALLOW ADHESIVE TO CURE 48 HOURS

SAND: (4 grits) – END GRAIN/PLY will be pre-sanded at the factory with 40 & 60 grit. Any light brown (mottled) brownish resin spots or discoloration will be removed by your subsequent sanding.

Should slab irregularity cause over wood after installation drum sand with 40 or whatever lower grit necessary to flush all blocks to even height.

Assuming slab is sufficiently smooth, and there is no overwood after laying; then using drum sander (or a riding sander) sand first with 60 grit. Drum sander is better than a belt sander, but both are sufficient.

For corners and other locations where the drum or disc sanding is too close to a wall use an edger with the same grit sequence. Initial scratch marks must always be removed by the subsequent grit. Keep all sanding machines moving to avoid burn marks or excessive heat. Otherwise they will be magnified when the finish is applied. Be absolutely sure no liquids (paint, water, mud, etc.) contact the

floor and avoid traffic until the surface is protected with oil and buffed.

FILL OPTION 1: After 60 grit sanding fill using *Wood Wise*

SAND: Again with the drum sander or belt sander, sand for the **second** time with 80 grit. Sand for the **third** time with a rotary buffer (either high or low speed) lightly and quickly using a 100-grit disc or screen and **fourth** (last) with 180 grit (see *Instructions for Finishing with WOCA oil for 120 grit option*). Replace all sand paper grits as required to maintain a clean cut and consistency.

Save the sander dust from all grits, except disc screen, which can be later mixed with oil and used to fill cracks.

INSTRUCTIONS FOR FINISHING WITH WOCA OIL

Warning: Oil soaked rags must be properly stored and disposed of as they can self-ignite!

+Keep a box of lint free painter's rags and a bucket of water handy. Also have a piece of cardboard available to rest tools and wet pads on. Never rest wet pads or naps on bare wood.

+Do not walk in the oil with sneakers, put plastic shopping bags over your feet.

+Once you start this process, you cannot stop until the floor is completely finished.

+Use painter's blue tape with orange core to protect door frames and base moldings if they have been installed.

+Shake well all oil before and during use. When using color oil, stir and shake well before and during use.

+Put oil soaked rags into a bucket of water or a metal container with a lid as they can self-ignite.

+Do corners, along walls and around door frames by hand.

When finishing an end-grain floor with WOCA oil, a slightly different finishing method must be applied due to the extreme absorption properties of this type of wood flooring.

- **Final screening** should be done with **180 grit**.

(120 grit final screening is an option. With this option the first coat is applied as described below and then wiped off after 30 minutes. Do not over oil)

FILL OPTION 1 CONTINUED: After final sanding additional filling may be necessary using wood wise. Fill and buff off excess.

If the floor has wide gaps, fill first by grinding cork into the floors and then trowel fill with the appropriate *Wood Wise* latex filler. This will allow the *Wood Wise* to hold the cork in the joint. Then proceed with the next drum sanding of the floor. This will remove any excess filler from the surface of the *END GRAIN/PLY*

CLEAN: Vacuum and sweep clean. Remove all sources of dust and other particles from ledges, radiators, etc. Tack with a slightly damp cloth.

FINISH WITH WOCA OIL

- The **first coat** is considered a primer coat and is done with **WOCA Master Oil**. Its role is to act as a base for subsequent oil coats. Choose your starting area and pour oil into a **paint tray**. Spread the oil with a **3/8" nap paint roller and extension pole**. Roll the oil as if you are painting the floor. Coverage should be approx. 80 sq. ft. per Liter. Continue to spread oil until finished. Do not buff the oil into the floor, as this forces too much oil into the floor and the oil base will be too deep, which may cause later bleed back. When finished rest your roller in the paint tray or on the **cardboard**.
- Let the primer coat dry and harden a minimum of 24 hours in the summer and 48 hours in the winter.
- The **second coat** is done with **WOCA High Solid Master Oil**. Using a 3/8 nap paint roller and extension pole apply oil to approximate rate 200 sq. ft per Litre. **FILL OPTION 2:** This coat may be mixed with the sanding dust from the previous sanding and trowelled onto the floor before buffing it in using a **beige 3M (or similar colorfast) pad** under a **175 rpm buffer**. Remove all excess oil-oil/filler mix. Change to a clean white pad or terry cloth and continue buffing until an even sheen has been obtained and **all excess oil removed**.
- Let the second coat dry and harden for 12 hours.
- For a **third coat**, place a **white 3M (or similar) pad** under the buffer, possibly with a **WOCA Polishing Cloth** under the pad if a slightly lower sheen is desired. Pour a capful of **WOCA Master Oil** (approx. 300 SF per litre)

onto the floor two or three feet away from the nearest wall. Start polishing.

- Polish the floor until the oil does not continue to spread as you pass the buffer back and forth across the work area. The floor should appear silky with an even look, with no spray or oil droplets visible.
- Pour more oil onto the floor as needed and continue polishing. Overlap work areas to ensure an even finish with no spray residue from previous passes. Repeat the process until floor is finished. **Be sure no excess oil is left on the surface.**
- The Master Oil will usually pre-harden in 4-6 hours. Allow the oil to cure 24 hours before placing rugs and furniture on the floor.
- Should a **fourth** coat be necessary, repeat the process of the previous coat.

- The oil must cure for 36 hours before any water or dirt comes into contact with the floor.

+If you must quit the oiling process, pick a logical place to stop. Tape off adjoining planks if necessary before oiling and wipe up any oil that may get on bare wood or you will get a "shiny" spot when you continue the oiling.

Never stop in the middle of a floor as you will get overlap marks with different sheen levels.

+Change pads as they become tacky or dirty. You can use both sides.

+Once you get use to the amount of buffer time necessary to do a section, increase or decrease the work area to get a rotation going where you do not have any down time.