

GENERAL INFORMATION

These instructions cover all fully adhered installations of Mannington Commercial VCT and Premium VCT products **Essentials, Progressions, Touchstone** and **SafeWalks**. All recommendations are based on the most recent available information. The information on this sheet provides general guidelines. For complete details consult Mannington's Professional Installation Handbook or visit our website at manningtoncommercial.com. All instructions and recommendations must be followed for a satisfactory installation.

Always store Mannington Commercial VCT and Premium VCT in a protected, dry interior area. Do not double-stack pallets. Keep the job site, adhesives, and tile at a minimum temperature of 65°F and maximum of 100°F for at least 48 hours before installation. Maintain this minimum temperature during the installation and for 48 hours after the installation, to assure proper bond of the adhesives.

Store VCT and Premium VCT on a dry, level surface. Do not stack VCT or Premium VCT cartons more than five cartons high. Be careful to stack cartons in straight tiers. Never double-stack pallets of VCT or Premium VCT cartons. Store pallets so they are protected from accidental damage from forklift trucks or other traffic. Protection of the carton corners is highly recommended.

If you intend to cover a concrete slab with resilient floor covering, always test the concrete slab for the presence of moisture.

The required quantitative tests are the calcium chloride test or the in situ relative humidity test. The maximum acceptable moisture vapor emission rate (MVER) is not to exceed 8 lbs per 1,000 sq ft per 24 hours per ASTM F 1869 or not exceed 90% RH as measured by ASTM F 2170 for all VCT and Premium VCT products when installed with Mannington M-Guard V-11 adhesive. Maximum pH is 10. This only applies to Mannington Commercial VCT and Premium VCT installations using M-Guard V-11 adhesive. If any other adhesive is specified or selected, follow the adhesive manufacturer's warranty and recommendations regarding acceptable maximum moisture emission levels.

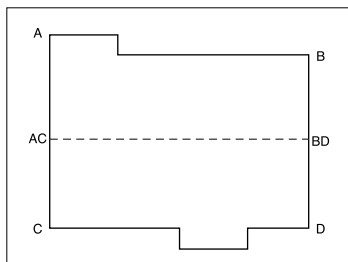
NOTE: Moisture testing can only indicate conditions at the time of the test and cannot predict any future changes in moisture levels. Neither Mannington nor the flooring contractor can be responsible if moisture levels change in the future.

Install Mannington VCT and Premium VCT only after the job site has been cleaned and cleared of other trade apparatus that may damage the finished tile installation. The lighting on the job site must be sufficient to permit inspection and preparation of the underfloor, layout, installation, cleanup, and final inspection of the tile. Always check the cartons to assure the pattern number is correct and that there is a sufficient quantity of tile for the installation. Make certain the lot numbers are the same on all cartons. To minimize any minor shade variation on large installations, mix and install tiles from several different cartons. If the shade variation is extreme, do not install the tile.

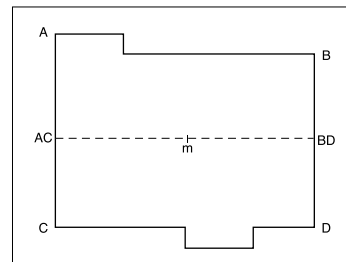
NOTE: Please be aware that installing VCT and Premium VCT over existing flooring may reduce its excellent indentation resistance.

You may position VCT and Premium VCT either square or diagonal to the room. In both cases, layout is critical. All border tiles should be relatively even in width and, if possible, at least one-half of a tile wide. Additionally, if you lay the tile on a diagonal, border tile color and/or graining against the wall should be consistent within the area.

TILE LAYOUT Square Layout



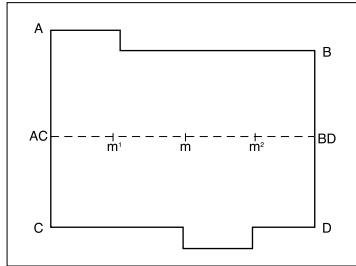
Divide the room into equal quadrants. Because most sites will not be perfect rectangles and will have irregular walls, begin laying the tiles from the center of the work area. To determine the center, take accurate measurements of the length and width of the room, disregarding small offsets, alcoves, etc. Find and mark the midpoints of the end walls (AC & BD) and strike a chalk line between these points. This line bisects the work area across the length of the room.



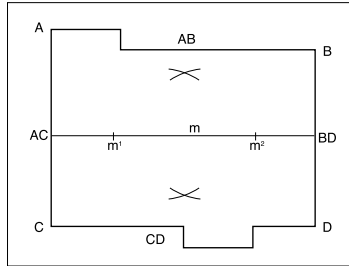
Measure line AC/BD to find and mark the midpoint (m).

TILE LAYOUT continued

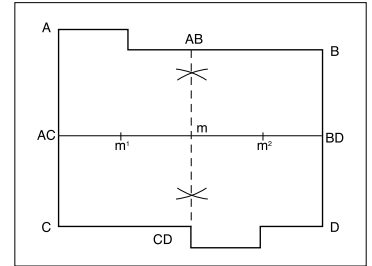
NOTE: Do not install VCT or Premium VCT over existing VCT or Premium VCT below grade.



Using point m as the center, measure out an equal distance from the center on both sides of the midpoint (usually 3" to 5") and mark points m1 and m2.



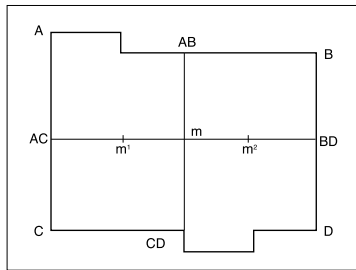
Using any convenient measurement greater than m to m1, strike two arcs perpendicular to line AC/BD from points m1 and m2.



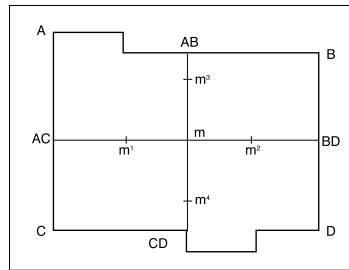
Strike a chalk line between the arcs from the intersection of the arcs. This line will pass through point m at right angles to line AC/BD. Once the work area is divided into equal quadrants, the tile should be dry-laid, or precise measurements taken to determine the size of the border tile. Adjust lines AB/CD and/or AC/BD to ensure equal border tile (at least one-half of a tile).

Diagonal Layout

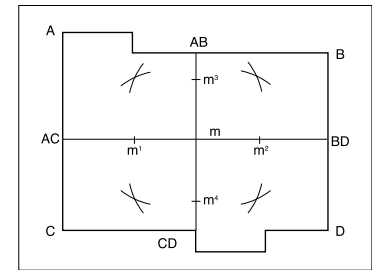
If you intend to lay the tile on a diagonal (45°) to the work area, square the room as outlined in the diagram.



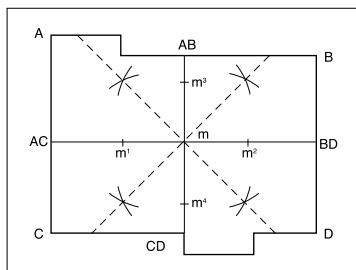
Using point m as a center, measure out any workable dimension along lines AC/BD and AB/CD. Typically, the measurement will be equal to m to m1 and m2.



Mark line AB/CD, creating points m3 and m4.



Using a dimension greater than m to m1, etc., strike an arc from m1, m2, m3, and m4.



Connect the intersecting points to create lines AD and BC. Dry-lay tile or take accurate measurements along lines AD and BC to determine the size of the border tile. If proper tile size or color is not obtained, adjust the diagonal lines. The grain of border tiles laid on a diagonal should run in the same direction as the grain of the corresponding tile.

ADHESIVE RECOMMENDATIONS & APPLICATION

M-Guard V-11 is a premium moisture-resistant pressure-sensitive adhesive developed specifically for installing Mannington VCT and Premium VCT over approved substrates. Intended Use: M-Guard V-11 may be used on concrete or approved and appropriately constructed wood or wood composition subfloors/underlayments. M-Guard V-11 is suitable for use over new concrete substrates with in-situ moisture measurements of 90% RH as measured by ASTM F 2170 or moisture vapor emission rate (MVER) of up to 8 lbs (3.6Kg) per ASTM F 1869, and a pH below 11. (M-Guard V-11 is not designed to be used over floors with moisture vapor emissions rate (MVER) from water of intrusion or hydrostatic pressure. It is designed only for slabs with high vapor emission from water of hydration.) All concrete slabs on or below grade must have a functioning vapor barrier directly under the concrete slab.

ADHESIVE RECOMMENDATIONS & APPLICATION continued

Use of adhesives contrary to this recommendation is strictly the responsibility of the flooring contractor and/or the adhesive manufacturer.

Application

- Make sure the subfloor is clean of dirt, paint, oils, wax, etc. The subfloor must be smooth and level before starting the installation.
- Maintain the adhesive, tile, and job site at a minimum temperature of 65°F and a maximum temperature of 100°F during the installation, and for 48 hours after the installation.
- After you complete the tile layout, apply adhesive to one-half of the work area. Exercise caution to maintain the working lines. If necessary, re-strike the working lines over the adhesive after it dries clear.
- Apply M-Guard V-11 with a "U" notched trowel 1/16" wide, 1/32" deep, and 5/64" apart. M-Guard V-11 can also be applied using a roller or a brush.
- Apply adhesive evenly, with no bare spots or heavy puddles. Avoid overlapping edges of adhesive.
- Before installing tile, allow M-Guard V-11 adhesive to develop tack and dry. This normally takes 45 to 50 minutes. Humidity and/or subfloor porosity, however, always dictate the proper open time.
- Set tiles firmly against adjoining tiles and press into adhesive. Do not slide tiles into place.
- You can remove fresh adhesive smears with a cloth dampened with water. Dried adhesive may be cleaned using mineral spirits and a clean cloth.

TILE INSTALLATION

After the M-Guard V-11 adhesive dries, begin laying tile at the intersection of the working lines. Place the first tile squarely against the working lines. Since the positioning of this tile determines the accuracy of the entire installation, it is critical to lay the starter tile exactly on the lines.

Once you have set the first tile firmly in place, begin laying tiles outward along both guide lines. Place tiles firmly against adjoining tiles and press into adhesive. Do not slide into place. Keep tiles on the guide line.

After you have positioned several tiles along the working lines, begin stair-stepping tiles into the field area. This will keep tiles square to each other throughout the installation. Lay tiles up to where border tiles must be cut to fit. Apply adhesive to the second half of the work area, let it dry clear, then continue laying tile.

CUTTING & FITTING BORDER TILES

You may cut border tile to fit, using several techniques. The most common technique for square layouts is to place a full tile directly over the last full field tile. Using another full tile placed firmly against the wall and over the border tile, score the border tile. Be certain the graining of the border tile is properly aligned. Cut the border tile along the scored line and position factory edges of tiles together with the cut edge against the wall.

Use a template cut from stiff cardboard or hardboard to cut border tile in diagonal layouts. For Mannington Commercial 12" VCT and Premium VCT, cut the template to the diagonal dimension of the tile, approximately 17" square. Use accurate measurements to measure and cut the template. Use the template in place of the tile and proceed as outlined above.

You may direct scribe or pattern scribe the border tile for irregular walls, pipes, etc. For intricate cuts, we recommend you heat the tile from the back and cut with a sharp utility knife along the scribed marks.

FINISHING & MAINTENANCE

Do not wash or scrub the floor for at least 4 or 5 days after installation, to allow the floor tiles to bond to the underlayment/subfloor. Keep heavy furniture and equipment off the floor for at least 48 hours to allow the adhesive to set. Sweep or vacuum thoroughly, and remove any residual adhesive with a clean, white cloth dampened with mineral spirits. Apply a minimum of two coats of a high-quality cross-linked acrylic floor polish to temporarily protect the floor until regular maintenance procedures can begin. Leave Mannington maintenance and warranty literature with the end-user. These are available at manningtoncommercial.com.