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Note: This document supersedes all printed and electronic Installation and Technical Guides previously distributed for Metroflor LVT with Attraxion Technology.

METROFLOR® LVT

WITH **ATTRAXION**
magnetic attachment technology



Professional Installation Manual

Get To Know Metroflor® LVT with Attraxion Technology™

- Metroflor LVT with Attraxion is a high-performance, revolutionary flooring product, designed for floating installations using a magnetic underlayment from Magnetic Building Solutions (MBS).
- Metroflor LVT with Attraxion is intended for interior use only and is suitable for above-grade, on-grade and below-grade in both commercial and residential applications. However, Metroflor LVT with Attraxion should not be installed in locations where the space beneath the building structure is exposed to the elements.
- Metroflor LVT with Attraxion is a floating floor and should be allowed to expand and contract freely. It must not be nailed, or fastened through the flooring and into the substrate. Fill expansion spaces around potentially wet areas with premium waterproof flexible sealant. Always remove standing water, urine and other liquids promptly.
- Direct sunlight may cause Metroflor LVT with Attraxion to fade or the joints to separate. Protect the flooring from direct sunlight using window treatments or UV tinting on windows. Metroflor LVT with Attraxion is not recommended for areas without permanent HVAC.



PRE-INSTALLATION ESSENTIALS

Your job will be smooth, fast and easy when you follow the essentials every time you install Metroflor LVT with Attraxion Technology.

It is important to avoid problems from the outset. If you are unsure of any information provided in this document, or are having a problem with your installation, please stop your work and contact Metroflor Customer Service at (888) 235-6672, Monday through Friday, 8:00am to 5:00pm EST.

EVALUATE THE JOB SITE

Exterior

Damage caused by water and high humidity should be addressed *prior to installing Metroflor LVT with Attraxion*.

- Examine the driveway and landscaping surrounding the building. Be sure that they slope and direct water away from the foundation.
- Inspect gutters, down spouts and drains for blockage. Remove clogs caused by leaves, dirt and debris, allowing runoff to flow freely away from the foundation.
- Check crawl spaces for cross-ventilation air vents equaling at least 1.5% per 100 square feet of floor space. Crawl spaces should measure a minimum of 18 inches high and should be insulated according to the latest building code requirements. The ground should be covered with a minimum 6-mil vapor barrier.

Interior

Moisture issues should be addressed and corrected at the job site prior to installation.

- Examine the installation site for leaky plumbing, including leaks from water heaters, dishwashers, washing machines, or any other water-bearing fixtures or pipes.
- Inspect substrates for level. They must be sturdy, sound, and flat within $\frac{3}{16}$ " in a 10-foot radius without any abrupt height differences. The substrate should not slope more than 1 inch per 6 feet in any direction.
- All concrete substrates must be tested for moisture and pH before installing Metroflor LVT with Attraxion. Test results should not exceed 85% relative humidity (RH). The Calcium Chloride Test for moisture should be no more than 8lbs per one-thousand square feet in 24 hours MVER, (Moisture Vapor Emission Rating) and pH tests for alkalinity levels should register between 7 and 9.
- All wood floors must be checked for moisture. Obvious signs of moisture issues include warping, peaking, degradation of the integrity of the substrate, rusted fasteners, and rusted floor registers. Even if obvious signs are not present, the wood substrate and wood structure should be tested using a wood moisture meter; moisture levels should not exceed 14%.

ATTENTION: Mold and mildew grow only in the presence of moisture. Moisture issues should be addressed and corrected at the job site prior to installation. Please visit www.epa.gov/mold for information about safely preventing and removing mold, mildew and other biological pollutants.

Metroflor LVT with Attraxion should only be installed by flooring professionals that have demonstrated successful installation of jobs in similar size and scope. For the most secure warranty protection, Metroflor LVT with Attraxion flooring should be installed in strict accordance with the information and procedures outlined in this and corresponding documents. It is highly recommended that you review this document in its entirety before starting a Metroflor LVT with Attraxion flooring installation.

IDENTIFY YOUR SUBSTRATE

Approved Substrates

Metroflor LVT with Attraxion is suitable for use over a wide variety of substrates:

Concrete

Metroflor LVT with Attraxion is waterproof, but moisture issues should be corrected at the jobsite before installation begins to prevent serious damage to the substrate and surrounding structure, and to discourage the growth of mold and mildew. Concrete substrates should be prepared in accordance to the most current version of ASTM F710 (Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring). Concrete substrates must be sturdy, sound, and flat within $\frac{3}{16}$ of an inch within a 10-foot radius with no abrupt height differences. The substrate should not slope more than 1 inch per 6 feet in any direction. Moisture and alkalinity tests should be performed on all concrete substrates regardless of grade level or age of slab. Perform either ASTM F2170 In-Situ Relative Humidity (RH) test or ASTM F1869 Calcium Chloride Moisture Test (MVER: Moisture Vapor Emission Rating). Perform pH test per ASTM F710 to determine alkalinity of the slab. RH Test results should not exceed 85% relative humidity. The Calcium Chloride Test for moisture should measure no more than 8lbs per one-thousand square feet in 24 hours MVER, and pH tests for alkalinity levels should register between 7 and 9. Electronic meter testing is not considered a replacement for a Calcium Chloride Test or Relative Humidity Test. All moisture tests should be conducted prior to installation to ensure that moisture is at recommended levels. Follow current ASTM F710 guidelines. Metroflor Corp. highly recommends that substrate moisture and pH testing be conducted by an ICRI (International Concrete Repair Institute) tier 2 certified technician.

Radiant Heat

Radiant heating systems must be cast ½-inch below the surface of the concrete slab, and should be operating at least 2 weeks before installing Metroflor LVT with Attraxion. Set the temperature of the radiant heating system to 68°F 48 hours before, during, and 72 hours after installation. The temperature of the radiant heat floor may be increased gradually 72 hours after installation, but the surface temperature should never exceed 85°F. Contact the manufacturer of your radiant heating system for further recommendations.

Plywood, OSB, Particleboard & Chipboard

Wood substrates must be A.P.A. approved with a minimum grade of “BB” or “CC”. They must be sturdy, sound, and flat within ⅜ of an inch within a 10-foot radius with no abrupt height differences. The substrate should not slope more than 1 inch per 6 feet in any direction. Metroflor Corp. recommends performing moisture tests prior to installation to prevent serious damage to the substrate and surrounding structure, and to discourage the growth of mold and mildew. Moisture readings should never exceed 14% for plywood, OSB, particleboard and chipboard substrates. If moisture readings exceed 14%, it is advisable to correct moisture issues at the jobsite before installing Metroflor LVT with Attraxion.

Tile, Terrazzo, Asbestos Tile, Resilient Tile, and Non-Cushion Sheet Vinyl

Existing floors must be firmly attached to the structural floor. They must be sturdy, sound, and flat within ⅜ of an inch within a 10-foot radius with no abrupt height differences. The substrate should not slope more than 1 inch per 6 feet in any direction. Fill all grout joints on ceramic tiles, terrazzo, quarry tiles and similar floors with a leveling and patching compound.

NON-APPROVED SUBSTRATES

- Carpeting/Carpet Pad
- Cushion Back Sheet Vinyl
- Engineered Hardwood Over Concrete
- Floating Floors
- Hardwood Over Concrete
- Parquet Over Concrete
- Cement Tile Backer Boards
- Ferrous Substrates
- Sleeper Substrates

NOTE: Various Federal, State and Local government agencies have established regulations governing the removal of in-place asbestos-containing material. If you contemplate the removal of a resilient floor covering structure that contains (or is presumed to contain) asbestos, you must review and comply with all applicable regulations. Do not sand, dry sweep, dry scrape, drill, saw, bead blast, or mechanically chip or pulverize existing resilient flooring, backing, lining felt, asphalt “cut-back” adhesive, or other adhesive. These products may contain asbestos fibers and/or crystalline silica. Avoid creating dust. Inhalation of such dust is a cancer and respiratory tract hazard. Smoking by individuals exposed to asbestos fibers greatly increases the risk of bodily harm. Unless positively certain that the product is a non-asbestos containing material, you must presume it contains asbestos. Regulations may require that the material be tested to determine asbestos content. The RFCI’s Recommended Work Practices for Removal of Resilient Floor Covering are a defined set of instructions addressed to the task of removing all resilient floor covering structures. For further information, contact the Resilient Floor Covering Institute website at www.rfci.com

MATERIAL RECEIVING, HANDLING, AND STORAGE.

- 1) Upon receipt, immediately remove any shrink-wrap and check material for damage, and that the material is of the correct style, color quantity, and run number.
- 2) Immediately report any discrepancies
- 3) General Storage: Store all materials flat and off of the floor in an acclimatized, weather-tight space between 65°-85°F. Do not double-stack pallets.

PREPARE THE JOB SITE

Careful preparation is the key to outstanding results. All Trades Must Finish Before Installing Metroflor LVT with Attraxion.

- **Install Permanent Exterior Doors and Windows**
- **Turn on HVAC at Least One Week Prior to Installation** Acclimate materials in the acclimatized jobsite between 65°-85°F(18°-29°C) and 35%-85% RH for 48 hours prior, all times during, and maintain temperature continuously after installation. Spread unopened cartons no more than 6 cartons high and at least 6" apart. Keep away from heating and cooling ducts and direct sunlight.
- **Allow all other Trades to Finish**
- **Perform Recommended Moisture and pH Tests** See the “Identify Your Substrate” section of this manual for further information about suggested tests.

- **Level Uneven Surfaces** Fill large cracks and voids with a proper floor patching compound. Substrates must be sturdy, sound, and flat within $\frac{3}{16}$ of an inch within a 10-foot radius with no abrupt height differences. The substrate should not slope more than 1 inch per 6 feet in any direction.
- **Remove Floor Moldings** Quarter round and wall base should be carefully removed before installation begins. It will be used to conceal the expansion space once the job is finished.
- **Fill Grout Lines** on ceramic tiles, terrazzo, quarry tiles and similar floors with a proper floor patching compound.
- **Remove Non-approved Substrates**
- **Remove or Encapsulate Old Adhesive** Old adhesives must be scraped up and left so that no ridges or puddles are evident and all that remains is a thin, smooth film. Then, encapsulate residue.
- **Undercut Wood Door Casings** Wood door casings should be undercut so that Metroflor LVT with Attraxion will fit neatly beneath them, concealing the expansion space. Position the plank on the substrate against the door casing. Lay the handsaw flat against the scrap plank and carefully cut the door casing to the height of the plank.
- **Cut Around Metal Door Casings** Do not cut metal door casings. Cut Metroflor LVT with Attraxion around them, leaving the appropriate expansion space. After installation, fill the space with a coordinating premium waterproof flexible sealant.
- **Clean Up the Job Site** Remove all debris, sweep and vacuum the substrate. Smooth, non-porous floors should be damp-mopped after vacuuming and allowed to dry thoroughly before installing Metroflor LVT with Attraxion. All dust must be removed prior to installation.

CHECK RUN NUMBERS AND MANUFACTURE DATE

Locate the run number on the short end of each carton and verify that all of the material for your job is from the same run. Minor shade variations within the same run number contribute to the natural look of Metroflor LVT with Attraxion. To avoid noticeable shade variations, do not install material from different runs across large expanses.

To determine manufacture date, locate the run number on the short end of the carton. It is the eight-digit number separated by decimal points beginning with the two-digit day, then the two-digit month, and finally the four-digit year.

Run Number/Manufacture Date
29.10.2013
DAY.MONTH.YEAR

KEY INSTALLATION CONSIDERATIONS

Subfloor Flatness Tolerances	$\frac{3}{16}$ " in 10' with no abrupt height differences. Slope no more than 1" in 6'
Is Underlayment (Pad) Required	Yes. The Magnetic Building Systems base layer underlayment must be used. No other underlayment is compatible.
Acclimation Requirements	48 hours
Transition Requirements (T-Mold) for Large Spaces	Not Required
Transition Requirements (T-Mold) Doorways/Thresholds	Not Required
Installation Over Existing Ceramic Tile Floor	Filling grout joints required. Follow subfloor flatness tolerances.
Subfloor RH/MVER Recommendations	85% RH, 8lbs. MVER
Radiant Heat	Approved – Substrate surface temperature not to exceed 85° F
Perimeter Expansion Requirements	$\frac{1}{4}$ " around perimeter walls & heavy fixed objects such as cabinetry
Required Interior Environmental Conditions	Interior environmental conditions must be maintained at 65°-85°F (18°-29°C) and 35%-85% RH a minimum of 48 hours before testing, and at all times during testing (ASTM F710).
Definition of "Waterproof"	Structural integrity of flooring will not degrade due to contact with moisture/water

INSTALLATION

Metroflor LVT with Attraxion is available in different sizes and formats.

Note: Be aware that some Metroflor LVT with Attraxion products are square edge and some are micro-beveled. Mixing different edge treatments together will require hand beveling of the square edge material.

UNDERLAYMENT INSTALLATION

STEP 1: INSTALL BASE LAYER

Roll out the MBS underlayment. MBS base layer rolls out with the magnetic (shiny) side up. Leave $\frac{1}{4}$ " expansion space around all fixed vertical objects. The panels should be butted together with no gaps or overlaps. Install MBS base layer PERPENDICULAR to the direction of the planks. (See Figure 1a) Tiles should be installed so that no joints lie on the seams of the underlayment. (See Figure 1b)

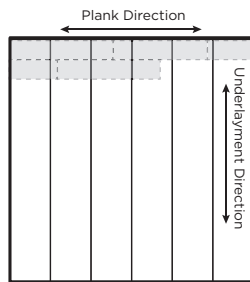


Figure 1a

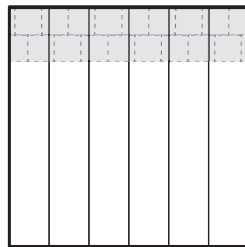


Figure 1b

STEP 2: (IF USING BASE LAYER AS A MOISTURE MITIGATION SYSTEM) TAPE UNDERLAYMENT SEAMS

Once all of the MBS base layer has been installed, tape the seams **using only the MBS tape** from underneath centered on the seam. (See Figure 2) Use a hand roller to ensure a good bond.

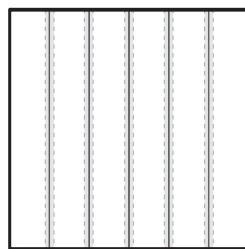


Figure 2

TILE INSTALLATION

(proceed to next section if installing planks)

STEP 1: SQUARE THE ROOM

Square the layout of the room, find the center of one end of the room. Locate the same point at the other end-wall. Snap a chalk line between these points to mark the center line on the floor. Then, measure along this center line to find the middle of the room. At the center point, mark off a line across the room at precise right angles to the first line. This can be accomplished using the 3-4-5 triangle method. Starting from the center point, make a mark measuring 4 feet vertically and 3 feet horizontally. Connect the marks with a diagonal line to complete the triangle. If the diagonal line does not measure exactly 5 feet, then the center crossing lines are not at a true right angle. (See Figure 3)

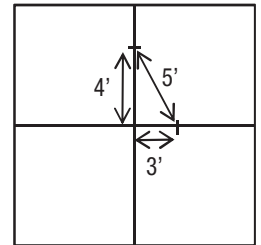


Figure 3

TIP: Multiples of the 3-4-5 triangle method may be used for greater accuracy in large rooms (e.g. 6-8-10, 9-12-15, etc.).

STEP 2: BALANCE THE ROOM

Either measure or dry-lay a row of tiles from the center line to the side wall to determine the size of the first and last tiles. If the resulting border is too small in either direction, move the starting line over by the amount equal to one-half the width of a tile. This becomes your new starting line. (See Figure 4)

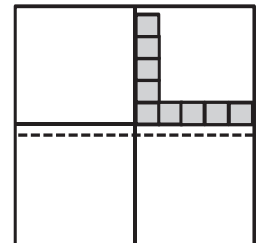


Figure 4

TIP: Use the dimensions of the room to calculate the size of the first tile without dry-laying.

STEP 3: INSTALL THE TILES

Lay tiles from the center of the room in a pyramid fashion while working towards the walls as shown in Figure 5. Measure, mark and cut perimeter pieces maintaining a $\frac{1}{4}$ " expansion space at all fixed vertical objects.

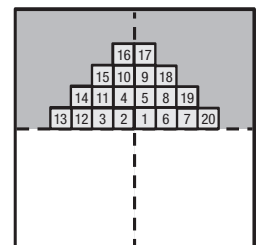


Figure 5

TIP: A tapping block should be used to align planks/tiles perfectly.

Caution: Use care when cutting Attraxion. Any debris from cutting will be attracted to the MBS base layer. If debris is trapped under planks it will telegraph through flooring.

INSTALLATION

PLANK INSTALLATION

STEP 1: SQUARE THE ROOM

To square the layout of the room, find the center of one end of the room. Locate the same point at the other end-wall. Snap a chalk line between these points to mark the center line on the floor. Then, measure along this center line to find the middle of the room. At the center point, mark off a line across the room at precise right angles to the first line. This can be accomplished using the 3-4-5 triangle method. Starting from the center point, make a mark measuring 4 feet vertically and 3 feet horizontally. Connect the marks with a diagonal line to complete the triangle. If the diagonal line does not measure exactly 5 feet, then the center crossing lines are not at a true right angle. (See Figure 6)

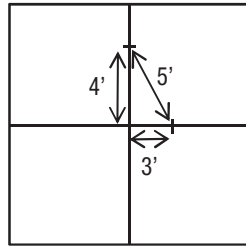


Figure 6

TIP: For large rooms, multiples of the above dimensions may be used to obtain greater accuracy. (6-8-10, 9-12-15, and so on.)

STEP 2: INSTALL THE PLANKS

After snapping the center starting chalk lines, lay the material from the center of the room, working towards the perimeter as shown. It is imperative that the first row is placed precisely and accurately against the starting line. Be sure that all planks are properly aligned and tight to any adjacent planks with no gaps between pieces. The ends of the planks should align perfectly. Lay row-by-row or in pyramid fashion (See Figures 7 & 8). Measure, mark and cut perimeter pieces maintaining a $\frac{1}{4}$ " expansion space at all fixed vertical objects.

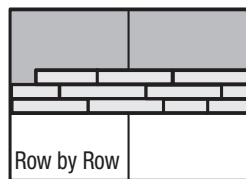


Figure 7

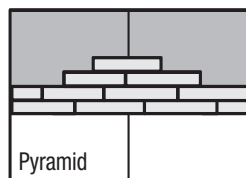


Figure 8

Tip: A tapping block should be used to align planks/tiles perfectly.

Caution: Use care when cutting Attraxion.

Any debris from cutting will be attracted to the MBS base layer. If debris is trapped under planks it will telegraph through flooring.

GENERAL CARE & MAINTENANCE

ROUTINE CARE & MAINTENANCE

- Sweep, dust mop or vacuum daily. Do not use vacuums with any type of beater bar assembly.
- Lightly damp mop with Prevail Neutral Cleaner. Remove excess soil by carefully scrubbing with a soft nylon brush or magic eraser sponge and Prevail Neutral Cleaner.
- Remove scuffs using Prevail Neutral Cleaner and a soft nylon brush or magic eraser sponge.
- Heavily soiled floors may require an occasional deep cleaning using Prevail Neutral Cleaner and a low-speed buffer not exceeding 175 RPM. Fit the buffer with a red or white scrubbing pad and work the solution over the floor. Remove the dirty residue by damp mopping with clear water.
- Remove standing water, pet urine and other liquids promptly. Follow with Prevail 1-Step Neutral Cleaner or Prevail Ready to Use Neutral Cleaner.

Notes: Stain Removal – To remove stubborn spots and stains from Aspectra floors, always begin with mild cleaners, such as Prevail 1-Step Neutral Cleaner. If such cleaners fail to remove the spots and stains, and “if permitted,” use mineral spirits. Do not use harsh solvents, such as lacquer thinner or straight acetone, as these can permanently soften and damage the vinyl surface.

For stubborn spots and stains (such as paints, permanent markers, and dyes), and “if permitted,” try applying fingernail polish remover containing acetone (do not use straight acetone) to a soft cloth and rubbing across the affected areas. Subsequent to this cleaning procedure for stubborn spots and stains, please clean the affected area with clear water to remove any residue. Any damage resulting from the use of pure solvents IS NOT covered by the Aspectra Warranty. Always test stronger cleaning agents on sample pieces or in unnoticeable areas, first.

Never use a brush or pad more aggressive than a 3M red equivalent. Blue, Green, Brown and Black pads will damage the surface of the floor.

PREVENTIVE CARE

- Use non-staining walk-off mats at all outside entrances.
- Use flat glides at least 2" in diameter under furniture legs to prevent indentations and scratches.
- Use broad surface non-staining casters at least 2" in diameter on rolling furniture.
- Do not use vinegar, polishes, waxes, oil soaps, abrasive cleaners, harsh detergents, “mop and shine” products or solvents.
- Do not expose to direct sunlight for prolonged periods.
- Do not use steam cleaners.
- Do not flood floor or subject to standing liquids, including pet urine.

WARRANTY REGISTRATION

To register and activate your product warranty, please visit metroflorusa.com. The registration information you provide will be used only to register your purchase and for no other purpose.



For further information, please call Metroflor Customer Service at (888) 235-6672, or visit our website at metroflorusa.com.