

## INSTALLATION MANUAL #Z106

### SOLID CORK FLOORING

#### SECTION I. SUB-FLOOR PREPARATION

Proper sub-floor preparation is critical. All guidelines contained in these instructions must be followed to ensure a successful floor covering installation. Should you have any questions regarding sub-floor preparation, contact Zandur or your local distributor.

##### 1. General Information & Requirements For All Sub-Floors

- A. Zandur products must be installed on a subfloor that is permanently dry, clean, smooth and structurally sound. The sub-floor must be free of contaminants such as paint, oil, wax, mold, adhesive residues, sealers or any other materials that may interfere with adhesive bonding. See section I.2.A for approved wood sub-floors or section I.3.A for approved cementitious sub-floors. **DO NOT INSTALL MATERIAL OVER EXISTING FLOOR COVERINGS OR ADHESIVE RESIDUE.**
- B. Prior to installation an adhesive bond test must be performed by gluing a tile to the sub-floor. Allow adhesive to cure overnight. If bond is sufficient, tile will be laying flat and it will not be possible to remove tile by hand.
- C. Zandur flooring products are not intended to be installed over existing floor coverings and are not warranted for such use. Existing flooring must be removed or (if installed on a wood subfloor) covered with 1/4" or 1/2" plywood.
- D. All Sub-floors shall be flat to within 3/16" in 10' and shall be patched or skim coated with a hard setting underlayment compound to ensure substrate is completely smooth. Only Ardex brand or equal products are approved by Zandur and must have a minimum compressive strength of 3,000 psi. Do not apply patching material over existing adhesives. Zandur is not responsible for any claims submitted on floors where patching materials have been applied over adhesive residue or existing floor coverings regardless of manufacturer instructions. After patching or skimming is complete, floor must be sanded or scraped to remove any trowel marks or other inconsistencies which may telegraph through the finished flooring material. Follow manufacturers guidelines for product mixing and use instructions. **Gypsum products are not approved for use.**

**Should the following instructions for sub-floor preparation and floor covering installation leave any questions unanswered contact Zandur at 888.397.2656.**

##### 2. Preparation of Wood Sub-Floors

- A. Zandur floor covering products may be installed over 3/8" or greater A/C grade plywood or underlayment board such as Tecply or Halex (Arctic or Baltic Birch).
- B. Zandur products are not approved for installation over panel underlayments such as Masonite, luan, particle board, OSB, cementitious underlayment panel, wood underlayment with knots or coated wood.
- C. Prepare wood sub-floor per ASTM F 710, *Standard practice for installation and preparation of panel type underlayment to receive resilient flooring*, as it relates only to approved wood underlayments.

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- D. Follow manufacturers instructions for installation regarding fastening pattern and joint spacing. Do not install underlayment with screws.
- E. Once installed, patch subfloor with cementitious material as instructed in section I.1.D.

### 3. Preparation of Concrete Sub-Floors

- A. Concrete sub-floors shall be prepared in accordance with ASTM F 710 *Standard practice for preparing concrete sub-floors to receive resilient flooring*.
- B. Concrete sub-floors must be clean as per section I.1.A. Pay specific attention to possible presence of a sealer which must be removed. It is highly recommended to shot blast or bead blast existing concrete sub-floors prior to installation to remove sealers, adhesives and/or any other surface contaminants.
- C. Concrete sub-floors on or below grade must have a moisture retarder and all concrete subfloors, regardless of age, must be tested for the moisture vapor emission rate and relative humidity to ensure the sub-floor is suitable for floor covering installation.
- D. Testing of concrete shall be performed **ONLY** when the building is enclosed and when the HVAC system has been in operation for at least 7 days. Furthermore, job-site temperature and humidity must be at the level expected during normal use or in the range of 65°F to 85°F and 45% to 55% relative humidity.
- E. Moisture tests must be performed at a rate of 3 for the first 1,000 square feet and then 1 additional test per additional 1,000 square feet.
  - i. **Moisture Vapor Emission Rate** shall not exceed 3 lbs./1,000 square feet/24 hours as tested in accordance with ASTM F 1869 (Calcium Chloride Test).
  - ii. **Concrete Relative Humidity** shall not exceed 75% as tested in accordance with ASTM F 2170 (Relative Humidity Probe Test).
- F. **Sub-Floor pH** must be tested with wide range pH paper and verified to be no greater than 9. Test as per ASTM F-710.
- G. Level sub-floor as specified in section I.1.D.
- H. Allow patching materials to dry naturally without the use of direct air or temporary HVAC.
- I. Zandur flooring may be installed over terrazzo floors, however terrazzo must be bead or shot blasted to ensure adhesion.

### 4. Radiant Heated Sub-Floors – Concrete and Wood

- A. Zandur flooring products may be installed over radiant heat with the exception of Veneered Cork flooring materials. Refer to [www.zandur.com](http://www.zandur.com) for a list of these items.
- B. Lightweight concrete such as Gypcrete or other gypsum based products are commonly used with in-slab radiant systems and many times have a low compressive strength. Concrete sub-floors must have a compressive strength of no less than 3000 PSI and must be dust free. If after cleaning, a white dust is present when you wipe the floor it is most likely of insufficient compressive strength and may not be suitable for flooring installation. Contact Zandur for information on how to prepare a sub-floor with this condition.
- C. Only in-slab or below sub-floor radiant heating systems are compatible with Zandur materials. Do not install product over mat type systems commonly used with ceramic tile floors. Heat must be limited to a maximum of 85° at all times during and after installation.
- D. Prior to sub-floor preparation, heating system must be activated to achieve a surface temperature between 65°F and 75°F for a minimum of 5 days prior to sub-floor preparation or installation of flooring.

## SECTION II. FLOOR COVERING INSTALLATION

### 1. Pre-Installation Checks

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- A. **Acclimation** – Flooring Materials, adhesives and finishes must be acclimated to jobsite at least 72 hours prior to installation. Should relative humidity be below the required level, materials must be acclimate a minimum of 5 days. Should relative humidity be above the recommended level, material should not be installed. Except to verify material is correct and within specifications, it must remain in its original packaging during acclimation period. Cork tiles must be packaged face to face during this time.
- B. **Job Site Conditions** – Job site conditions must be maintained between 65°F and 75°F with a relative humidity between 45% and 75% for 72 hours prior to, during and 72 hours after installation. Temporary heating may not be used during acclimation or installation. Air must be free of dust and must be circulating normally.
- C. **Sub-Floor** – If you have not reviewed sub-floor preparation instructions read them now. Once prepared per instructions, verify the floor is dry, level and dust free.
- D. **Patching/Skim Coat** – Ensure that the correct Ardex or equal cementitious patching compound was used and is properly cured. For solid cork flooring, patch must dry overnight. If sub-floor or patching material is easily scratched, indented or is dusty even after being cleaned installation cannot occur. Contact your distributor or Zandur for assistance.
- E. **Material Verification** – Prior to installation, randomly remove a few pieces of material from different cartons and compare to submittal sample to ensure client is satisfied with color, shade and/or shade variation. Additionally, verify tiles are square and otherwise visually acceptable. If the material does not meet client expectations, contact Zandur to arrange for replacement material. Installation signifies acceptance of material in all visual aspects. After the product is installed, the Zandur warranty does not cover incorrectly shipped or use of incorrect materials regardless of the situation. Additionally the Zandur warranty does not cover visual defects including pattern, color, shade variance, squareness or thickness after the product is installed.
- F. **Adhesion Test** – In order to verify proper adhesion, two tiles must be installed on the sub-floor 12 hours prior to general installation. After 12 hours, the tile should lay flat and be difficult to remove. Should tile be curled or not adhered in any way, contact Zandur. DO NOT proceed with installation.

### 2. Layout of floor

- A. Materials may be installed in both an ashlar (staggered joint) pattern or corner to corner.
- B. Some patterns are directional as is obvious by the pattern. Tiles are not dimensionally directional and may be laid in any way specified by the client.
- C. Installer may work off of previously installed material, however a knee board must be used to ensure that indentations in the uncured adhesive do not occur. Caution must be taken to ensure tiles do not slide underfoot.
- D. Use chalk to mark installation lines, however re-mark chalk lines with pencil, then remove the chalk as adhesive MUST be rolled over the line and the adhesive will not adhere to the chalk

### 3. Installation

- A. **Adhesive** – Zandur products must be installed using water based contact cement approved by Zandur.
  - i. **Spread Rate** – 100 ft<sup>2</sup> per gallon – applied by 3/8" nap roller to both tile and sub-floor.
- B. Materials may be cut using a sharp utility knife and straight edge.
- C. Roll contact adhesive onto tiles and allow to air dry completely. Tile may be stacked ONCE DRY so that all tiles are face up. Stacks should not exceed 12".
- D. Roll Contact adhesive onto sub-floor and allow to COMPLETELY dry.
- E. Once adhesive on both tile and sub-floor is dry, tile may be installed.

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- F. Install tiles into adhesive. Keep in mind that once tiles make contact with the sub-floor, the adhesive will make permanent bond preventing significant movement of tile. Solid Cork tile should be pushed with moderate force against adjacent tile as the tile is laid onto the sub-floor. If tiles do not line up straight, you may use your foot on the surface of the tile to exert more pressure to push it into place. Once set into place, secure tile with a rubber mallet.
- G. Within 10 minutes of installing material, roll in two directions using a 100 lb 3-section roller. Roll floor again 30-45 minutes after installation. Look for any edges or corners that are raised and hand roll.
- H. Immediately after installation, inspect floor for any raised tile edges or adhesive on the tile. Should you find any raised edges, repair them. To remove any adhesive on the tile surface, remove with a lightly water dampened cloth. Use of any solvents can cause discoloration of the floor and should not be used. Dry adhesive can be carefully scraped from floor using a blunt scraper however this process may scratch the floor which will not be covered by the Zandur warranty.

### III. POST INSTALLATION PROCEDURES

- 1. Floors must be covered immediately after installation with kraft paper, plywood or other protective, breathable material. Do not cover uncured floor with plastic. Ensure that the protective covering will not scratch or otherwise damage the floor.
- 2. HVAC system must maintain temperatures in jobsite for a minimum of 72 hours according to the temperature requirements in section II.1.B. Temporary heating systems may not be used.
- 3. Minimal foot traffic is permitted on the floor 6 hours after installation. Normal use of floor cannot commence for a minimum of 24 hours after installation to allow adhesive to cure. Floor may not be submitted to heavy point loads for a minimum of 72 hours after installation. Heavy point loads include but are not limited to ladders, moving equipment, rolling loads and high heels. Should circumstances require use of the floor in a period shorter than those specified in this section, contact Zandur for alternative installation systems which can significantly reduce or eliminate use waiting periods.
- 4. Floors may not be sanded, scrubbed, screened or coated until cured for a minimum of 72 hours.
- 5. Post Installation Maintenance
  - A. Floor must not be mopped, exposed to liquids, sanded, screened or coated for of 72 hours.
    - a. Unfinished cork floors must be coated with an approved polyurethane coating prior to use. Obtain document #Z120 for further recommendations and instructions.
    - b. Pre-finished (polyurethane) cork floors may be coated with one or two additional coats of finish to seal the seams. Refer to document #Z120 for detailed instructions.

### IV. REFERENCES

- 1. ASTM Standards referenced below are available at [www.astm.org](http://www.astm.org) or by calling ASTM at 610.832.9585. There is a charge for these documents, however they must be used as a reference as indicated above to ensure the success of the flooring installation.
  - A. *F 1482-03 Standard Practice for Installation and Preparation of Panel Type Underlayment to Receive Resilient Flooring.*
  - B. *F 710-98 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.*
  - C. *F1869-98 Standard Method for Measuring Moisture Vapor Emission Rate of Concrete Sub-Floor Using Anhydrous Calcium Chloride.*
  - D. *F 2170-02 Standard Practice for Determining Relative Humidity in Concrete Floor Slabs Using in-situ Probes.*
- 2. Zandur Documents (available on-line at [www.zandur.com](http://www.zandur.com) or from your local distributor).
  - A. Floor Covering Maintenance (Cork rubber and Solid Cork) #Z123
  - B. Polyurethane Application on Cork Flooring #Z143

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C. Zandur Floor Covering Warranty #Z108