

INSTALLATION MANUAL FOR CUSTOM PRINTED VINYL FLOORING

1. COMMENT

LSI Floors custom printed vinyl sheet flooring may be installed on approved substrates on all grade levels. It is required that appropriate adhesives be used and that maintenance be carried out using the detailed product information found in the Maintenance Guide.

1.1. SELECT

It is essential that the correct flooring be specified for a particular area bearing in mind traffic (both foot and wheeled), acoustic restriction, electrical and anti-slip requirements. If you have any questions please contact the LSI Technical Department at 800.449.3916.

1.2. PROJECT PLANNING

The following guidelines should be noted to ensure accurate documentation prior to the commencement of work:

- a. Directional drawing if appropriate
- b. Detail of subfloor construction
- c. Information on pattern, border and/or coving requirements
- d. Tests for moisture and electrical resistance must be completed and approved
- e. Tests for screed strength and leveling must be completed and approved
- f. Unacceptable standard of workmanship must be stated
- g. Removal of waste product, off cuts, adhesives, etc. must be clearly documented

2. SUBFLOOR PREPARATION

- a. Substrate must be fully cured, permanently dry, smooth and flat. Surface should be level to 1/8" over 10' (3mm over 3m). Check surface level with a 10' (3m) straight edge
- b. Substrate should be clean and free of all foreign materials including but not limited to; dust, paint, grease, oils, solvents, curing and hardening compounds, sealers, asphalt and old adhesive residue
- c. Substrate defects should be repaired using an approved patching compound

2.1 TEST FOR MOISTURE

Always conduct moisture tests on all concrete substrates regardless of age or grade level. Determine the moisture vapor emission rate (MVER) of the concrete by testing conducted in accordance with ASTM F1869. The MVER of the concrete must not exceed 8.0 lbs. per 1,000 square feet in 24 hours when using LSI 300 adhesive. When moisture vapor emissions exceed these requirements, call the LSI Technical Department at 800.449.3916 for further advice on limiting the moisture before installation.

Determine the internal relative humidity of the concrete by testing conducted in accordance with ASTM F2170. The internal relative humidity of the concrete must not exceed 85% when using LSI 300 adhesive. When the internal relative humidity exceeds these requirements call the LSI Technical Department at 800.449.3916 for further advice on limiting the moisture before installation.

The concrete surface pH must be tested and must not exceed a pH of 11 when using LSI 300 adhesive.

2.2 UNDERLAYMENTS (FLOOR SMOOTHING)

Cement based floor patches should be the only thing used to level the subfloor for material installation. Floor must be absolutely smooth or material will telegraph subfloor imperfections. Call the LSI Technical Department for your specific job site patching recommendations.

In the case of Jypcrete or any similar type product, contact the LSI Technical Department for further installation instructions.

2.3 EXPANSION JOINT

Flooring must never be laid over expansion joints. Neither should such joints be filled with sealant and/or mix of any kind. Contact LSI Technical Department for advice on what acceptable proprietary joint covers are available pertaining to your particular problem area.

2.4 SUITABLE SUBSTRATES

- a. Exterior-grade plywood, Group 1, CC type and other approved wood underlayment as per manufacturer's recommendations
- b. Concrete slabs with up to 8 pounds moisture vapor emission (ASTM F1869) and 85% RH (ASTM F2170)
- c. Cement based patching compounds over existing, properly prepared and fully bonded ceramic tile and fully bonded vinyl composition tile (VCT), one layer only
- d. Properly prepared and primed gypsum underlayment that meets ASTM F2418 requirements for compressive strength
- e. Radiant-heat systems that have been properly installed

Note: Do not install over any substrate containing asbestos, nonporous surfaces or adhesive residues including cutback adhesive.

2.5 WOODBLOCK FLOORS

Quite simply, do not lay LSI flooring material directly on woodblock flooring. Similarly, do not overlay woodblock with any underlayment including ply or hardboard. In all cases, woodblock flooring must be removed and the subfloor rejuvenated.

3. PROCESS OF INSTALLATION

Ensure that all recommendations for substrate and jobsite conditions are met prior to beginning the installation. Beginning the installation is an implied acceptance of site conditions by the parties involved and liability for any failure directly related to inadequate site conditions becomes the responsibility of the installer and/or flooring contractor.

Material should always be visually inspected prior to installation. If there are any questions regarding the quality of material contact your local LSI Floors representative or LSI Floors Technical Department at 800.449.3916 PRIOR to installing the materials.

Store flooring material on a flat surface.

Areas to receive flooring should be clean, fully enclosed and weathertight. The permanent HVAC must be fully operational, controlled and set at a minimum of 68° F (20° C) for a minimum of seven days prior to, during, and seven days after the installation. The material and adhesive should be conditioned in the same manner for at least 48 hours prior to the installation. Areas to receive flooring shall be adequately lighted to allow for proper inspection of the substrate, installation and seaming of the flooring, and for final inspection.

Always conduct adhesive mat bond tests before beginning the installation. Bond testing will aid in identifying both the working characteristics of the adhesive (open time and working time) for the site conditions, and also any potential bonding problems.

3.1 LAYOUT

LSI Floors recommends that vinyl sheet flooring be cut and fit one sheet at a time. Dry fit the entire project and cut finished seams before adhering the materials to the substrate.

- a. Measure the area to be covered and determine the direction in which the material will be installed
- b. Determine seam placement. Seams must be a minimum of 6" (16cm) away from underlayment and concrete joints, saw cuts, etc.
- c. Unroll and position the first sheet at the starting point, usually the middle, and work your way out with multiple sheet installations
- d. Before trimming excess material off, check to insure that the material is positioned in the correct location
- e. Unroll and position remaining rolls
- f. Match graphic at seams and trim seams to match pattern in order to dry fit the entire area

PLEASE NOTE: Do not try to stretch the material. LSI Floors Custom Print flooring material has a memory and even though the material will stretch, it will return to original placement and create a gap at the seam.

3.2 ADHESIVE

Match graphic at seams and trim seams to match pattern in order to dry fit the entire area before spreading adhesive

- Use LSI 300 adhesive or LSI Floors Tape Systems (see separate installation manual)
- Use a 1/32" x 1/16" x 1/32" fine notch trowel to apply the adhesive

3.3 ADHESION

Install rolls in sequence by roll number or cut from each individual roll in consecutive order. Install one sheet at a time, making sure to place the material into tacky adhesive. Roll immediately with a 100 pound roller and always check for proper adhesive transfer. In order to achieve a secure bond there must be complete transfer of adhesive to the material backing. Remove fresh adhesive residue immediately with a clean white damp cloth. Dried adhesive residue can be removed with a clean white cloth and mineral spirits.

Lap sheet halfway over itself on the seams being careful not to move the sheet from its position. Spread the adhesive over the entire area. Be careful not to leave any adhesive ridges or puddles. For porous substrates, a short open time may be necessary before placing the flooring material into the adhesive. For non-porous substrates, a longer open time will be necessary in order to allow the adhesive to develop body before placing the flooring material into the adhesive. **DO NOT ALLOW THE ADHESIVE TO DRY.**

The flooring material **MUST** always be placed into the tacky adhesive and rolled immediately. Check for adhesive transfer frequently. There must be transfer of adhesive to the material backing in order to achieve a secure bond. Note: The open time and working time of LSI 300 will vary depending on site conditions such as ambient temperature and humidity, the porosity of the substrate and air circulation.

Push the lapped flooring from the fold into the adhesive one sheet at a time, working towards the seam. **DO NOT FLOP THE MATERIAL INTO THE ADHESIVE.** This will trap air under the material causing bubbles.

After adhering, immediately roll the flooring in both directions using a 100 pound roller. Roll first across the width and then along the length so that any trapped air pockets will be removed.

After the material has been laid into the adhesive, take your time to fit the seams. Roll the seam with a hand roller. Repeat the same procedure on the other half of the sheet until the job is completed. Take caution not to overlap adhesive lines or leave ridges of adhesive as it may telegraph through the material. After 2-4 hours the seams can be cold welded.

3.4 PERIMETER ACTION

If set-in cove skirting is being used, this should be glued to the perimeter prior to the perimeter material installation. If raised cove base is being used, this will be glued in place after the flooring has been installed.

4. PRECAUTIONS AFTER INSTALLATION

The adhesive must be allowed to dry for at least 48 hours before the floor is exposed to heavy traffic, water or cleaning materials. Light foot traffic is acceptable immediately. Since many factors enter into it, the cure time can extend to a week or more. Of all the factors that can inhibit the adhesive from curing moisture had the greatest effect.

Never use strong acid or alkaline cleaners or waxes. This will cause yellowing and eventually will require more maintenance. Do not use a high speed floor polisher or propane powered high revolution buffer. These will cause damage to any high spots in the installation. After at least 48 hours all installations should be coated with a floor finish. See LSI Maintenance Guide for recommendations from Diversey and Taski. As 85% of all dirt entering a building is via foot traffic, LSI recommends the use of a barrier mat system to a minimum of 6 feet or 2 meters within the building entrance.

Should you have any questions not answered in this manual, please call between the hours of 8:30am-5:00pm EST:
LSI Technical Department at 800.449.3916