

INSTALLATION MANUAL FOR CUSTOM PRINTED VINYL FLOORING

1. SUBFLOOR PREPARATION

1.1 CLEANING FLOOR

Floor must be clean, smooth, flat and dry. Remove all foreign substances such as wax, grease, dirt, construction marks and contaminants, and any substance or chemical that would interfere with a good bond. LSI Floors recommends priming extremely porous floors to prevent over absorption of adhesives, dust containment, and to ensure a better bond of the adhesive to the subfloor/underlayment.



1.2 MOISTURE TESTING

LSI Custom Printed Floors are intended for use in high-traffic areas, therefore, preparation is especially important. In most cases, you must remove all existing floor coverings before installing the material. Before starting the installation, all concrete under-floors must be tested for moisture using either; the Anhydrous Calcium Chloride Test following ASTM F1869 procedures, and/or the IN-SITU Relative Humidity Test following ASTM F2170. The maximum permissible Moisture Vapor Emission Rate (“MVER”) is determined by product construction and adhesive type. The Relative Humidity Test readings, according to ASTM F-2170, should not exceed (RH) 85%. If both tests are performed, the RH test is the qualifying standard. The maximum acceptable MVER for LSI Floors Custom Printed homogenous vinyl is up to 5lb moisture per 1000 sq.ft. per 24hr period.

1.3 UNDERLAYMENTS (FLOOR SMOOTHING)

LSI Floors recommends the use of cement based patching compounds for self-leveling or repairing concrete subfloors and/or underlayments. Do not use gypsum based floor patch. It is strongly recommended that patching compound be light grey in color so as to not impact the visuals of the printed material.

2. MATERIAL HANDLING PROCEDURES

2.1 CONDITIONING OF MATERIAL

It is imperative that the material, adhesive, and job site be maintained at a temperature of between 65°F and 85°F (18°C - 30°C) for 48 hours before and during the installation. If the material has been stored at colder temperatures it will need to be unrolled and allowed to relax overnight before proceeding with the installation.

NOTE: If the flooring contractor elects to install new floor covering over an existing floor covering, the flooring contractor assumes all responsibility as to the suitability and continued performance of the existing floor covering. If removal of existing resilient floor covering is required, follow all recommended Resilient Floor Covering Institute (RFCI) work practices as described at www.rfci.com.

2.2 INSPECTION OF MATERIAL

Inspection of flooring material prior to installation is required. Any defects should be immediately reported to the original place of purchase prior to installation. LSI Floors will not be responsible for labor costs to repair or replace material with defects that were apparent before or noticed at the end of an installation.

2.3 MATERIAL HANDLING TIPS

- Resilient homogeneous sheet products must be tightly rolled face out on a sturdy core designed for that purpose.
- If material is flattened or distorted during storage or transportation, do not attempt to install it.
- Marking pens, felt-tipped markers, or waxed crayons must not be used to write on the vinyl backing nor used to mark layout under the flooring, as they could bleed through and stain the material.

3. CUTTING & FITTING



LSI Custom Printed floors are flexible and will handle easily when cutting and fitting. This characteristic enables the installer to fit the material using freehand knifing techniques. Plan your layout before cutting material. Measure and square up area to be installed. If the job site is complex and requires a precise fit, use pattern-scribing techniques. LSI Custom Printed floors may also be fit using direct scribing techniques.

Once the pattern has been matched and the material has been fit, it is necessary to tube or lap back half of the sheet to expose the underfloor for the adhesive application. Take care when folding the material back. Always fold the material in a wide radius to avoid sharp kinks and creases, which may cause damage to the image and/or product.

4. APPLYING ADHESIVE

4.1 METHOD

LSI Floors recommends W.F. Taylor 2091 TPS™ Adhesive for standard installs and Taylor MS+ Resilient Adhesive for outdoor or high-moisture applications. All materials from Adhesive to Custom Printed floor, as well as the area that is to receive flooring, must be maintained at a temperature of 65°F to 85°F (18°C to 30°C) and at a relative humidity of 30% to 60% for 72 hours before, during, and after installation.

When applying adhesive, use a notched trowel size; 1/16 in. x 1/32 in. x 1/32 in. If the notches are too large they place too much adhesive which can lead to trowel-marks showing through the material and/or excessive indentations. This can cause swelling and buckling throughout the material. If the trowel notches are too small the adhesive will not hold the flooring down.

Spread adhesive covering 100% of the exposed subfloor, leaving no gaps or puddles. Keep trowel away from vinyl backing as it may scratch the flooring and show through. Maintain uniform coverage by keeping the trowel clean and properly notched.

4.2 W.F. TAYLOR 2091 TPS™

Use Dry Set Method - In most cases it is advisable to give the adhesive sufficient open time, usually about 5-10 min. (Follow adhesive manufacturer instructions) Open time allows the moisture to flash off the adhesive, permitting the adhesive to develop more body and immediate tack. Open time is always determined by subfloor porosity and atmospheric conditions. Be certain to provide ample open time on non-porous subfloors and at seam lines.

IMPORTANT: When providing open time, do not permit the adhesive to “skin over” or dry. Too much open time will result in insufficient bonding. If the installer/contractor does not allow enough time and “wet sets” the adhesive it will take longer for the adhesive to dry and may cause the material to blush, as it is trapped between two impervious surfaces.

4.3 TAYLOR MS+ RESILIENT

Use Wet Set Method - The wet set method is essentially what its name infers. The adhesive is troweled on the substrate, with the appropriate trowel, and sheet goods are laid immediately into wet adhesive. Adhesive must wet-transfer 100% to flooring product to ensure proper bond. Adhesive working time is approximately 45-50 minutes but will vary with ambient job site conditions. After installation of the flooring, roll installation with a 75-100 lb. roller.

4.4 "W.F. TAYLOR TPSA 2091 ADHESIVE PERFORMANCE" WARRANTY:

If there is a failure related to defective adhesive within Five Years of the installation date, the W.F. Taylor Company will be responsible for the repair or replacement of the installation, including material and reasonable labor charges. This warranty applies only to adhesive related failures. However, W.F. Taylor cannot warrant those variables over which our company has no control. Factors such as: the quantity of adhesive used, workmanship of the installer, condition of the subfloor, stability of the flooring product or its suitability for the installation on the particular job, excessive moisture or alkalinity, or any other conditions that affect the installation. W.F. Taylor reserves the right to inspect the cause for any claim as deemed necessary or this warranty is null and void. This warranty is non-transferable.

WARNING: DO NOT USE MULTI-PURPOSE OR VCT ADHESIVE. ADHESIVE MUST BE PLASTICIZER MIGRATION RESISTANT.

5. SEAMS - COLD WELD

Traditional Double-cutting method using Johnsonite Cold Weld Liquid:

1. After aligning the pattern and providing adequate overlap, adhere the sheets of material up to the designated dry zone.
2. Cut the seam using a utility knife with a new, sharp blade. Using a steel straightedge, cut through both sheets of flooring at a 90° angle to the floor covering.
3. Do not lift knife out of floor during seam cutting.
4. Once you have cut the seam, remove the selvage and fold back the sheets to expose the dry zone.
5. Apply adhesive with a properly notched trowel across the dry zone.
6. Allow the adhesive to develop tack and lay the sheet that was on the bottom during the cutting process into the adhesive first.
7. Place masking tape over the seam and press it down firmly.
8. Cut through the masking tape over the joint between the two sheets using a straight knife.
9. Press the needle of the tube firmly into the seam and pull the tube along the joint. Control the flow of liquid so that a 5 mm wide glue line appears on top of the masking tape.
10. Wait about 10 minutes for the glue to bond and then pull the masking tape off.

6. SEAMS - HEAT WELD

6.1 COMMENT

Heat welding is the process of heat fusing two sheets of resilient sheet vinyl flooring together at the seam. A properly executed heat welded seam offers impervious, reinforced seams recommended for areas of high traffic, including those subjected to heavy rolling or wheeled loads, areas exposed to excessive moisture (frequent washing), healthcare applications (sanitation), laboratories, and clean rooms.

LSI Custom Printed floors welding thread is 3 mm in diameter and is meant to be used with a 3 mm nozzle. Use of a larger nozzle will cause improper bonding or permanent damage to the flooring, including burning or glazing of the vinyl wear layer surface.

6.2 INSTALLATION

Follow instructions 1-6 of Cold Seam Instructions

7. Grooving - Using a grooving tool and a straight edge, groove the seam to a consistent depth of approximately 2/3 the thickness of the floor or half the thickness of the welding thread, whichever is less. Take care not to groove completely through the backing layer.
8. Welding - Using a heat gun set between 350 °F – 400 °F, insert the welding thread into the 3mm speed nozzle as it comes into contact with the grooved seam. Keeping the nozzle perpendicular to the floor, apply slight downward pressure, and draw it along the seam at a smooth and constant speed. If stopping at any point along the seam, pull the heat gun away from the flooring, and cut the welding thread. This will prevent the heat gun from scorching the surface of the flooring and welding thread. Test seam strength by tugging a length of welding thread. If fused properly, it should break before pulling away from the seam.
9. Trimming - After allowing the thread to cool to room temperature it may be trimmed and skived. This must be done in two passes. The first pass is done using a trim plate and crescent knife, which will trim off the top half of the thread. The second pass is done using the spatula knife only, and will trim the thread flush with the surface of the flooring. Note that for embossed products, the thread can only be skived to the top of the embossing.
10. Glazing - Using a heat gun with the nozzle attached, draw it along the seam with the nozzle approximately 1/4" above the thread. Move the gun slowly enough to melt the surface of the thread, but fast enough to avoid damaging the flooring on either side. Note that glazing of the thread after trimming, is required and will ensure correct color matching of the thread to the material and prevent the seam from collecting excessive soiling.

7. ADDITIONAL NOTES:

- Always inspect the flooring thoroughly before installation. Report any defects prior to installation.
- DO NOT mop your floor for at least five days. Adhesives need time to cure.
- After installation is complete, keep traffic off of floor for at least 24 hours and heavy objects or rolling loads for 72 hours.
- DO NOT slide heavy appliances or furniture over or across the flooring. Always lift objects and place them on a hard board between the flooring and object and gently reposition them.
- Use permanent caulk next to bathtubs, showers, sliding doors, patio doors, around metal door jambs or similar areas.
- Make sure furniture legs have large surface, non-staining plastic floor protectors or non-staining felt pads. The protectors should be at least one inch in diameter and rest flat on the floor. The heavier the item, the wider the floor protector should be. Replace small, narrow metal or dome-shaped glides with smooth, flat glides that are in flat contact with the floor.

8. SUITABLE SUBSTRATE FLOOR PREPARATION INSTRUCTIONS

8.1 COMMENT

LSI Floors recommends removal of all existing flooring whenever possible. However, in certain circumstances it may be possible to install over an existing floor. LSI Custom Printed Flooring may be installed over existing flooring surfaces such as terrazzo, epoxy, ceramic tile, quarry tile, metal floors and, in certain cases, resilient floors and VCT provided they are dry, well bonded, sound, smooth, and free of waxes, polishes and/or any other foreign materials. The responsibility of determining if the existing floor is a suitable subfloor rests solely with the installer and flooring contractor. If there is any doubt, the existing floor should be removed.

8.2 CONCRETE FLOORS

Concrete Floors must be smooth, clean, and permanently dry. Floors must be free of all foreign materials, including dust, sealers, paint, grease, oils, solvents, curing/hardening compounds, asphalt, old adhesive, residue, and any other contaminants.

8.3 METAL SUBFLOORS

Metal subfloors must be clean, rigid, and free from all rust, oil, grease, coatings and all other contaminants.

8.4 WOOD FLOORS

Wood floors should be double layer construction with a minimum total thickness of 1". The subfloor must be rigid, free from movement, and have at least 18" of well-ventilated air space below. Wood subfloors must not exceed 8% moisture content when measured with a Delmhorst Wood Moisture Tester. Do not install over particle board, chip board or Masonite™.

9. TRADE SHOWS AND LOOSE LAY FLOORING INSTALLS

1. Sweep and clean floor before rolling out product.
2. Unroll LSI Custom Printed flooring and allow it to relax and lay flat. Initially, edges may be curled due to being rolled on a core (This is normal).
3. Use a broom to push out any air underneath and let the LSI Custom Printed flooring acclimate to surroundings.
4. For temporary installation, we recommend using LSI Tape Systems to the backside seams and for around the perimeter.

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