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# **HARMONIUM<sup>®</sup> xf SHEET FLOORING**

## **Veneto, Etrusco, Toscano and Allegro**

### **Handling and Storage**

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1. Johnsonite Flooring and adhesives must be site conditioned at room temperature for 72 hours prior to, during, and after installation. Room temperature must be maintained between 65° and 85°F (18° and 24°C) with HVAC system operating. A minimum temperature of 55°F (13°C) must be maintained afterwards.
2. In areas that are exposed to intense or direct sunlight, the product must be protected during the conditioning, installation, and adhesive curing periods, by covering the light source.
3. The highest quality of materials and workmanship is employed in the manufacture of Johnsonite Flooring and careful inspection is made before shipment. However, a quality installation is the responsibility of the installer. It is the installer's responsibility to verify the accuracy of the order and to ensure the materials are checked for damage, defects, and satisfactory color match. An authorized Johnsonite distributor or Johnsonite representative must be notified of any defects before installation proceeds.
4. Johnsonite cannot accept responsibility for any loss or damage that may result from the use of this information, due to processing or working conditions and/or workmanship outside our control. Users are advised to confirm the suitability of this product by their own tests.

### **General Subfloor Preparation**

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1. **All subfloors** must be clean, smooth, flat and dry. The surface must be free of all dust, loose particles, solvents, paint, grease, oil, wax, alkali, sealing/curing compounds, old adhesive, and any other foreign material, which could affect installation. Fill all depressions, cracks, and other surface irregularities with a good quality Portland cement based underlayment patching compound.

**NOTE:** Contamination on the substrate can cause damage to the resilient flooring material. Permanent and non-permanent markers, pens, crayons, paint, etc., must not be used to write on the back of the flooring material or used to mark the substrate as they could bleed through and stain the flooring material. If these contaminants are present on the substrate they must be mechanically removed prior to the installation of the flooring material. **Caution: Do not use liquid solvents or adhesive removers.**

**Johnsonite does not recommend installing over existing resilient floors.** All existing flooring and adhesives must be removed prior to installing the new flooring material. Remove existing adhesive mechanically – do not use chemical adhesive removers or solvents.

**Caution:** Some resilient flooring products and adhesives contain "asbestos fibers" and special handling of this material is required.

2. **Concrete subfloors** must be constructed as recommended by the American Concrete Institute's ACI 302.1 R-96 "Guide for Concrete; Floor and Slab Construction" and prepared to receive resilient flooring according to ASTM F 710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring".

**Do not install** Johnsonite flooring over expansion joints.

**All concrete subfloors** must be tested for moisture, pH (alkalinity), and proper adhesive bond:

Moisture tests shall be conducted in accordance with ASTM F 1869 "Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride" or ASTM F 2170 "Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs using *in situ* Probes". Three tests should be conducted for areas up to 1,000 sq. ft. and one additional test should be conducted for each additional 1,000 sq. ft. of flooring.

- ◆ Results must not exceed 5 lbs. per 1,000 sq. ft. in 24 hours when tested to ASTM F 1869, or exceed 80% when tested to ASTM F 2170.
- ◆ If the tests results exceed the limitations, the installation must not proceed until the problem has been corrected

A pH test for alkalinity must be conducted. Results should range between 7 and 9. If the test results are not within the acceptable range of 7 to 9, the installation must not proceed until the problem has been corrected.

An adhesive bond test should be performed using the actual flooring materials and adhesive to be installed. The test areas should be a minimum of 36" x 36" and remain in place for at least 72 hours and then evaluated for bond strength to the concrete.

3. **Wood subfloors** must have a minimum 18" (47 cm) of cross-ventilated space between the bottom of the joist and ground. Exposed earth crawl spaces should be sealed with a polyethylene moisture barrier.  
Subfloors should meet local and national building codes. Trade associations, such as the APA – "The Engineered Wood Association", offer structural guidelines for meeting various code requirements.  
**Single Wood and Tongue and Groove subfloors** should be covered with 1/4" (6.4 mm) or 1/2" (13 mm) APA approved underlayment plywood. Use 1/4" (6.4 mm) thick underlayment panels for boards with a face width of 3" (76 mm) or less. For boards wider than 3" (76 mm) face width use 1/2" (6.4 mm) underlayment panels.  
Countersink nail heads and fill depressions, joints, cracks, gouges, and chipped edges with a good quality Portland cement based patching compound.  
**Do not install over OSB (Oriented Strand Board), particle board, chipboard, lauan or composite type underlayments.**
4. **Terrazzo and Ceramic floor** surface must be thoroughly sanded to remove all glaze and waxes. Remove or replace all loose tiles and clean the grout lines. Use a Portland cement based leveling compound to fill all grout lines and other depressions.
5. **Steel floor** surface must be mechanically abraded to assist with the adhesive bond. The floor must be cleaned to remove all dirt, rust and other contaminants. When applying adhesive the non-porous installation instructions must be followed.
6. **Concrete floors equipped with a radiant heating system:** Turn the heat down to 65°F (18°C) for at least 48 hours before installation. Heat may be gradually returned to operating temperature 48 hours after installation. Temperature should not exceed 85°F (30°C).

## Linoleum Sheet Installation

1. **Recommended Adhesive:**
  - a. For standard application use:  
Johnsonite 950 Linoleum Sheet Adhesive.  
Trowel: – porous substrate: 3/32" x 3/32" x 3/32" 'V' notch.  
Trowel: – non-porous substrate: 1/16" x 1/16" x 1/16" 'V' notch.  
**Caution: The 950 adhesive is sensitive to substrate porosity. Determine substrate porosity for proper trowel selection. Follow the adhesive label instructions regarding porous and non-porous s installation. To achieve proper adhesive bond the linoleum must be laid into wet adhesive.**
  - b. For application in areas subject to heavy point loads, topical moisture, or temperature extremes use:  
Johnsonite 975 Two-Part Urethane adhesive.  
Trowel: – porous and non-porous substrates: 1/16" x 1/16" x 1/16" 'SQ' notch.  
**Caution: When installing with 975 Two-Part Urethane Adhesive the installer must work off of the flooring material or use kneeling boards to prevent adhesive displacement.**
2. **Adhesive Application:** Follow adhesive label instructions for proper use.
3. **Sheet Installation:**
  - a. Install rolls in sequential order following roll numbers on the labels.
  - b. Do not reverse sheets.
  - c. Cut pieces to length allowing approximately 3" (76 mm) excess for trimming.
  - d. Cut the first piece to fit by using the direct scribing or pattern scribing method.
  - e. Remove 1/2" (13 mm) off the factory seam edge using an edge trimmer or straight edge and knife.
  - f. Position all remaining sheets so that the top sheet overlaps the previous sheet by 1/2" (13 mm). Trim 1/2" (13 mm) off opposite seam edge using an edge trimmer or straight edge and knife.
  - g. Fold back the sheets and apply the adhesive to the substrate – proper adhesive transfer must be achieved by laying into wet adhesive.
  - h. Roll the flooring in both directions using a 100 pound three-section roller. Stay approximately 3" (76 mm) from the seams.
4. **Heat Weld Seam:**
  - a. Recess scribe the seam with a slight gap not to exceed 1/64" (0.4 mm) to help guide the router.
  - b. Insert a scrap of material under the scribe mark to protect the seam edge of the first piece.
  - c. Use a sharp knife to cut the seam following the scribe mark. The knife should be held at a slight angle to undercut the material.
  - d. Remove the scrap material and seam trimmings before rolling the seam with a small hand roller.
  - e. Roll the seam area with a 100 pound three-section roller.
  - f. Wait a minimum 24 hours after installation before heat welding the seams.
  - g. Route the material down to the jute taking care not to cut through the jute fibers. On 3.2 mm or 4 mm gauge linoleum

route 2/3 the thickness of the material.

**h.** Use Johnsonite linoleum weld rod.

**5. Flash Coving:**

**a.** Use Johnsonite CFS-00-A Cove Filler Strip.

**b.** Apply the 950 Linoleum Adhesive to wall area using a trowel or paint brush.

**c.** Net fit the flooring material into the cove cap.

**d.** Roll the coved material with a small hand roller.

**6. Traffic:**

**a.** No traffic for 24 hours after installation.

**b.** No heavy traffic, rolling loads, or furniture placement for 72 hours after installation.

## Adhesive Clean Up

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**Excess adhesive should be removed during the installation process.**

**950 Linoleum Sheet Adhesive**

- Use a clean white cloth dampened with water to remove wet adhesive from floor covering and tools
- Dried adhesive may require the use of denatured alcohol applied to a clean white cloth.  
(Follow manufacturer's precautions when using denatured alcohol.)

**975 Two-Part Urethane Adhesive**

- Before the adhesive sets, remove excess adhesive from flooring and clean tools with denatured alcohol applied to a clean white cloth (Follow manufacturer's precautions when using denatured alcohol.)
- Do not allow adhesive to dry on the flooring surface.
- Removing dried adhesive may cause irreparable damage to the flooring surface.

## Maintenance

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1. Wait 72 hours after installation before performing initial cleaning
2. A regular maintenance program must be started after the initial cleaning.
3. Refer to Johnsonite's Maintenance Instructions for complete details.

Check Web Site ([www.johnsonite.com](http://www.johnsonite.com)) for current instructions.

For any questions contact Johnsonite at 1-800-899-8916.



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