

**Harmonium xf<sup>2</sup> Sheet Linoleum**

**1. PROPRIETARY PRODUCT/MANUFACTURER**

1.1. Proprietary Product: Homogeneous Harmonium xf<sup>2</sup> floorcovering, single layer on jute backing with xf<sup>2</sup> for reduced maintenance. Recommended areas for use:

- Education – Classrooms, corridors, multipurpose rooms, gymnasiums, laboratories, cafeterias, lavatories
- Offices – Break rooms, offices, corridors, cafeterias, lavatories
- Retail – Sales areas, offices
- Healthcare – Patient rooms, exam rooms, lobbies, corridors, emergency rooms, critical care, laboratories
- Hospitality – Corridors, vending areas, lobbies

1.2. Manufacturer:

Johnsonite, Inc.,	Phone: (800) 899-8916
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1.3. Proprietary Product Description

1.3.1. Construction: Johnsonite Harmonium xf<sup>2</sup> consists of one homogeneous layer of oxidized linseed oil and natural resins mixed with wood or cork flour, limestone and pigments affixed to a jute backing. The marbled pattern extends evenly throughout the total thickness. Surface has xf<sup>2</sup> treatment for reduced maintenance.

1.3.2. Styles: Thickness and wear layer varies by product.

- Etrusco, Lenza, Tonali: Thickness of 0.100" (2.5 mm)
- Veneto: Thickness of 0.080" (2 mm), & 0.100" (2.5 mm)
- Packaging - Available in 6' 6" (2 m) wide 65-100 linear feet (20-30 m) per roll.

**2. PRODUCT PERFORMANCE AND TECHNICAL DATA**

- Meets ASTM F 2034 – Type 1 performance standards for sheet linoleum floor covering
- Static coefficient of friction (ASTM D 2047): > 0.6
- Heat Stability by Color Change (ASTM F 1514):  $\Delta E \leq 8$
- Light Stability by Color Change (ASTM F 1515):  $\Delta E \leq 8$
- Static Load Limit (ASTM F 970): Passes required with 150 psi with a result of less than 0.005 inch residual indentation
- Fire Performance Flooring Radiant Panel (ASTM E 648): Class 1

**3. INSTALLATION**

Johnsonite flooring and adhesives must be site conditioned at room temperature for 48 hours prior to, during, and after installation. Room temperature must be maintained between 65° and 85°F (18° and 30°C) with HVAC system operating.

A minimum temperature of 55°F (13°C) must be maintained afterwards. The ambient relative humidity should be between 40% and 60%.

All concrete subfloors must be tested for moisture and pH (alkalinity). Moisture testing must be conducted in accordance with ASTM F 2170 "Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs using *in situ* Probes" or ASTM F 1869 "Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.

Results must not exceed 80% when testing to ASTM F 2170 or exceed 5 lbs. per 1,000 sq. ft. in 24 hours when testing to ASTM F 1869.

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.

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" (13 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.

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.

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.

An adhesive bond test should be performed using the actual flooring materials and adhesive to be installed.

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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.

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).

**3.1. Adhesives:**

- For standard application (sheets) –  
Johnsonite #950 Linoleum Adhesive:  
Approximate Coverage:  
Porous Substrate: 100-125 sq. ft.  
Non-porous Substrate: 125-150 sq. ft.
- For special application (sheets and tiles) –  
Johnsonite #975 Two-Part Polyurethane Adhesive:  
Approximate Coverage:  
Porous Substrate: 125-150 sq. ft.  
Non-porous Substrate: 125-150 sq. ft.

Installation Manual: Refer to Johnsonite Harmonium x<sup>2</sup> Installation Instruction for complete installation details

**4. AVAILABILITY AND COST**

Available through authorized Johnsonite distributors nationwide.

**5. WARRANTY**

Limited 5 year warranty. For complete details, contact Johnsonite or an authorized Johnsonite distributor.

**6. MAINTENANCE**

72 hours after installation is completed, initial maintenance procedures must be implemented in accordance with manufacturer's requirements. Refer to Johnsonite Rubber Tile Maintenance Instructions for complete maintenance details.

**7. TECHNICAL SERVICES**

Samples: Submittal samples for verification and approval available upon request from Johnsonite. Samples shall be submitted in compliance with the requirements of the Contract Documents. Accepted and approved samples shall constitute the standard materials which represent materials installed on the project.

For current Installation and Maintenance Instructions, Product Specifications, and other technical data, visit us on the web at [www.johnsonite.com](http://www.johnsonite.com) or contact Johnsonite at 800-899-8916.