

Johnsonite®

ELECTROSTATIC FLOORING

Installation Instructions

Toro EL and Granit AS

(Sheet and Tile)

HANDLING AND STORAGE

1. Johnsonite Electrostatic Flooring and adhesives must be site conditioned at room temperature for 72 hours prior to, during, and after the installation. Room temperature must be maintained between 65° and 75°F (18° and 24°C) and relative humidity no greater than 50%. A minimum temperature of 55° F must be maintained afterward installation.
2. Keep material rolled face out on a sturdy core until time of installation.
3. Flooring should be stored standing on end and secured to prevent falling.
4. In rooms 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.
5. Johnsonite Electrostatic Flooring is not recommended for exterior use. Exposure to excessive UV rays can result in fading and/or color variation.
6. The highest quality of materials and workmanship is employed in the manufacture of Johnsonite Electrostatic 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 during the dry laid installation. An authorized Johnsonite distributor or Johnsonite representative shall be notified of any nonconformance before final adhesive application proceeds.
7. Johnsonite cannot accept any responsibility for the 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 PREPARATIONS

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 and adhesive bonding. Fill all depressions, cracks, and other surface irregularities with a good quality cementitious 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 removers.

2. **Do not install** Johnsonite Electrostatic Flooring over expansion joints.
3. **All concrete subfloors, old or new,** should be tested for moisture, pH (alkalinity), and proper bonding:

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 3 pounds per 1,000 sq. ft. in 24 hours when tested to ASTM F 1869, or exceed 75% when tested to ASTM F 2170.
- ◆ If the tests results exceed the limitations, the installation must not proceed until the problem has been corrected.

It is recommended that alkalinity be tested by using a pH test. Results should range between 7 and 9. If the test results exceed the limitation, the installation must not proceed until the problem has been corrected.

An adhesion bonding test using the actual materials to be installed should be performed. The test pieces should remain in place for 72 hours and then evaluated for bond strength to the concrete.

Fill all depressions, cracks, and other surface irregularities with good quality cementitious underlayment filler.

4. **Wood subfloors** must have a minimum 18 inches (47 cm) of cross-ventilated space between the bottom of the joist and ground. Exposed earth crawl spaces should be covered with a polyethylene moisture barrier.

Wood joists should be on 16" (41 cm) centers with 1" (2.5 cm) boards installed diagonally and covered with 1/2" (12.7 mm) A.P.A. approved underlayment plywood. Nail on 4" (10.2 cm) centers around perimeter and across field. Countersink nail heads. Fill all depressions, joints, cracks, gouges, and chipped edges with a good quality latex patching compound and sand entire surface smooth.

Single Wood and Tongue and Groove subfloors should be covered with 1/2" (12.7 mm) or 3/4" (19 mm) A.P.A. approved underlayment plywood.

Johnsonite does not warranty installations over OSB, "particle board" or "chipboard", Lauan or Maranti type underlayments.

Johnsonite does not recommend or warrant Electrostatic Flooring installations over existing resilient floors. All resilient flooring and adhesives must be removed prior to installing the Johnsonite flooring system.

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

5. **Terrazzo and Ceramic Floors** - The floor surface must be thoroughly sanded to remove all glaze and waxes. Remove all loose tiles and clean the grout lines. Fill all grout lines and other depressions with a cementitious leveling compound.
6. **Steel floors** - The surface must be thoroughly cleaned by sandblasting, wire brush or other mechanical means to remove all rust and other contaminants. Wash the floor with Trisodium Phosphate, and then treat the floor as a non-porous floor.
7. **Concrete floors equipped with a radiant heating system** - Care must be taken that the floor surface temperature does not exceed 85° F (30° C) during normal operation. Lower the radiant heated floor temperature to 65° F (18.3° C) 24 hours before, during and 48 hours after installation. Heating pipes/element(s) must be at least 2" below the floor surface and in the walls at least 2" above floor level.

ELECTROSTATIC FLOORING INSTALLATION

- ❖ These products are not approved for use in wet areas.
- ❖ If local building standards or regulations state any special installation technique or requirements for this type of product not corresponding to these instructions, our instructions are automatically subordinated and should only be taken in consideration as guidelines.

<ul style="list-style-type: none"> • Adhesive: 	Standard application:	Vinylbond (Wet Tacky Set) Trowel size – 1/32" x 1/16" x 1/32" To be used in conjunction with Conductive Adhesive (960) and Copper Grounding strips for
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		grounding.
	Full Spread Conductive Adhesive application:	Conductive Adhesive (Wet Set) Trowel size –1/16"x1/16"x1/16"
	<u>Special Notes for Adhesives:</u> <ul style="list-style-type: none"> The conductive adhesive film forms the electrical pathway under the flooring material. It is extremely important to ensure a full transfer of conductive adhesive to the material back for proper conductivity. Incomplete transfer will result in improper electrical performance. We suggest that material periodically be checked for adhesive transfer. It is recommended that each batch of Conductive Adhesive provided for an installation be tested for proper conductive properties prior to installation. This can be easily conducted by applying a band of adhesive approximately 6 inches wide and four feet long on either a scrap piece of material or the subfloor. After adhesive is fully cured, about 48 hours, readings should be taken with a floor megohmmeter. Properly performing adhesives or primers should have readings of less than 3×10^5 ohms. 	

ELECTROSTATIC FLOORING INSTALLATION

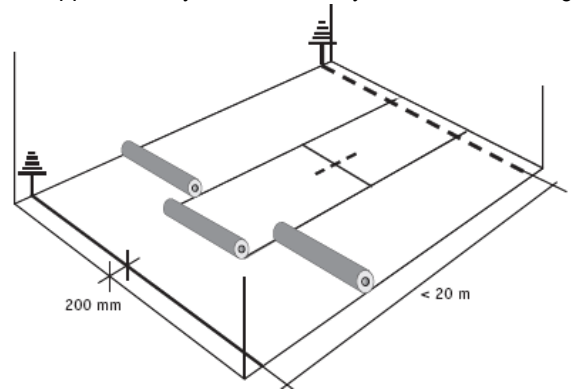
General Information for Sheet Installation

• Rolls:	<ul style="list-style-type: none"> Install rolls in sequential order. Prior to installing sheets should be laid out to acclimate. Avoid creasing or folding the material as this can produce permanent alterations. Roll flooring in both directions with a 100 lb sectional floor roller
• Pattern Match:	<ul style="list-style-type: none"> No pattern <ul style="list-style-type: none"> – Reverse alternate sheets
• Fitting:	Freehand knifing, Direct scribing, or Pattern scribing Do not double cut flooring material.
• Seam method:	Underscribe/recess scribe sheet
• Factory edge:	Trim approximately 1/2" off the factory edge of first sheet. Do not use factory edge to scribe seams. After first sheet is installed, overlap 2 nd sheet approximately 1/2" to 1" then trim (underscribe/recess scribe) second sheet as soon as possible.
• Heat welding seam treatments:	Heat weld seams 24 hours after installation Use coordinated PVC rod. Rout approximately 3/4 of the depth of the wear layer.
• Treat end or head seams same as side seams:	<ul style="list-style-type: none"> End seams may require the area to be weighted down. Special application may be required for grounding, depending upon the adhesive system used.

Using Vinylbond as Field Adhesive for Installation

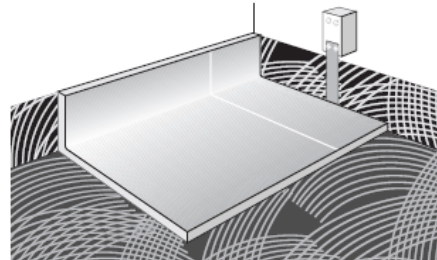
Using Vinylbond as Field Adhesive for Installation

- Must be installed in conjunction with Conductive Adhesive and Copper Grounding Strips.
- Apply Vinylbond Adhesive over the exposed subfloor including seam area. The adhesive should be spread in a straight line approximately 12 inches away from where flooring is tubed back on itself. At the same time lay copper grounding strips into the adhesive as demonstrated in accompanying figure. The copper grounding strips should extend from wall to wall and allowing enough to extend up the wall to a known ground. After field adhesive has been given sufficient time to tack, apply a fresh band of field adhesive to the 12 inch area at the fold in the sheet. This will allow for easier pull back of the second half of material and will help prevent adhesive ridges from telegraphing. At the same time brush apply over the grounding strips a 3" band of the Conductive Adhesive. Then position flooring slowly into the adhesive. Roll flooring across width then length of sheet with a 100 lb. sectional floor roller. When rolling stay approximately 6" from seam area.
- Copper grounding strips are to be installed across the shorter width of the room
- In general grounding strips should occur every 500 square feet of flooring. – Install copper grounding strips every 30 to 60 feet with a minimum of at least 1 copper grounding strip.
- Install copper grounding strips between each end/head seam as demonstrated in previous above.



Using Conductive Adhesive as Field Adhesive for Installation

- Spread adhesive evenly. Chose a location accessible to a known ground then lay a copper grounding strip (4 to 6 feet) into the wet adhesive allowing enough to extend up the wall to a known ground as demonstrated in accompanying figure. Then apply the floor cover material on to the adhesive film while it is still wet and transfers fully to the sheet backside. Immediately roll the floor covering with a 100 lb. sectional floor roller across width then length of sheet.
- In general grounding strips should occur every 500 square feet of flooring. – Install a minimum of at least 1 copper grounding strip.



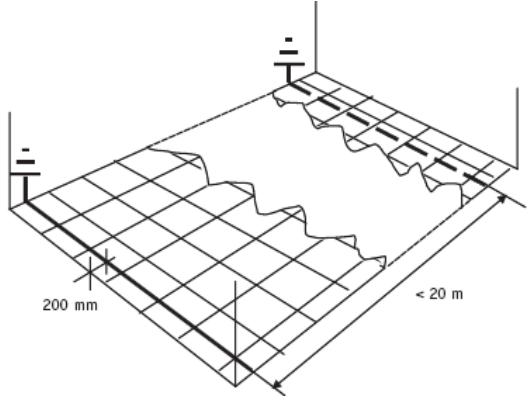
ELECTROSTATIC FLOORING INSTALLATION

Tile installation

- Install with Conductive Adhesive.

ELECTROSTATIC FLOORING INSTALLATION

Tile installation

	<ul style="list-style-type: none">• Spread adhesive evenly. Chose a location accessible to a known ground then lay copper grounding strip across the shorter width of the room into the wet adhesive allowing enough to extend up the wall to a known ground as demonstrated in accompanying figure. Then lay the floor tile in to the adhesive film while it is still wet and transfers fully to the tile backside. Immediately roll the floor tile into the adhesive.• In general grounding strips should occur every 500 square feet of flooring. – Install copper grounding strips every 30 to 60 feet with a minimum of at least 1 copper grounding strip. 
<ul style="list-style-type: none">• Access flooring systems:	<ul style="list-style-type: none">• Separate earth connection may not be required, as the grounding may be achieved by the adhesive and the metal construction. Contact the manufacturer of the access flooring system for advice concerning conductivity.• In all cases the ground must comply with local electrical and building codes and regulations.

MAINTENANCE and CLEAN UP

1. Remove excess adhesive:

a. Vinylbond:

- Use water to remove wet adhesive from floor covering and tools. Dried spots of adhesive should be removed with a fine nylon pad dipped in Johnsonite Neutral Floor Cleaner and water – do not use solvents.
- Traffic may be allowed 48 hours after installation.
- Allow at least 5 days for adhesive to achieve full bond before commencing recommended maintenance routine

b. Conductive Adhesive:

- Remove wet adhesive from flooring and tools with water.
- Remove dry adhesive with mineral spirits applied to clean white cloth. Excessive use of mineral spirits will destroy bond. Observe cautions for using mineral spirits.
- Light traffic may be allowed 24 hours after installation. Ready for heavy traffic and furniture movement in 72 hours.

2. Refer to Johnsonite's Vinyl Floor Maintenance Instructions for complete maintenance instructions.

If questions arise that have not been addressed in this document, contact your local Johnsonite distributor for assistance or Johnsonite Customer Service at 1-800-899-8916.

Johnsonite®

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