



ELECTROTILE

INSTALLATION INSTRUCTIONS

SITE CONDITIONS

1. Store the flooring and adhesive in the installation area.
2. The temperature must be kept between 18 °C (65 °F) and 24 °C (75 °F) for 48 hours before, during and after installation.
3. Both flooring and adhesive must be acclimatized 48 hours prior to installation. Flooring should be removed from the pallet 24 hours prior to installation and stacked no more than 3 cartons high with at least 10 cm (4 inches) of airflow around the cartons. Do not leave boxes close to heat or cooling ducts or in direct sunlight.
4. When unpacking the tiles, some of them could have an inconsistent gloss appearance. This effect occurs during the manufacturing and packaging process and will disappear when the initial maintenance procedure is performed.
5. Avoid placing flooring in direct sunlight (window or doors) before installation, as it could create shading.
6. Flooring products with arrows on the back must be installed with the arrows all pointing in the same direction.
7. For any problem related to chemical abatement or high humidity refer to the "Remediation Systems" document.

MOISTURE TESTING

1. Follow ASTM F 710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring". This includes determining Moisture Levels, Relative Humidity and pH Levels, as per the ASTM specifications listed below:
 - a. ASTM F 1869, Anhydrous Calcium Chloride test for Moisture levels. The maximum allowable readings are:
 - 5 lbs/1,000 sq. ft./24 hours (2.26 kg/92.9 sq. m/24 hours) for AD-555SF adhesive;
 - b. ASTM F 2170, Relative Humidity (RH) test using in situ probes. The maximum allowable reading is 80% RH.
 - c. ASTM F 710, pH levels (test procedure 5.3.1). The readings should be between 8 and 10.
2. The ASTM test frequency recommendation is 3 measures for the first 1,000 sq. ft. (92.9 sq. m) and one measure for each additional 1,000 sq. ft. (92.9 sq. m).
3. Ensure Moisture, Relative Humidity and pH tests have all been conducted according to the latest ASTM version, and measures meet manufacturer's specifications.
4. For all grade installations (on, above or below), it is the flooring contractor's responsibility to ascertain that there is not too much moisture in the concrete and that it will not increase at a future date above the recommended levels. American Biltrite will not be responsible for hydrostatic pressure which may occur in the future.

SUBFLOOR PREPARATION

1. Porous surfaces: for construction-grade plywood, cementitious underlayments, dry concrete that is above, on or below grade, refer to ASTM F 1482 "Standard Practice for Installation and Preparation of Panel-Type Underlayments to Receive Resilient Flooring" for general guidelines. A porous concrete surface will absorb a drop of water within 5 minutes.



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2. Non-porous surfaces: for terrazzo, ceramic tile, metal, existing fully adhered non-cushion backed resilient on all grade levels except existing tile below grade, refer to ASTM F 710 for general guidelines. The non-porous surface shall be sanded to facilitate the anchoring of the adhesive.
3. Concrete subfloor must be smooth and flat, as imperfections in the subfloor may show through the finished flooring. All cracks, voids and undulations must be repaired prior to flooring installation with high strength Portland cement-based patching material.
4. Saw cuts must be cleaned carefully and filled using cement based compound. Flooring must not be installed over expansion joints.
5. All surfaces must be clean, dry and free of dust, grease, paint, oil, sealers and curing compounds or any other foreign material that may interfere with proper adhesion.
6. Do not use chemical adhesive removal products (chemical abatement products); their use will void the American Biltrite warranty.
7. Do not use dry sweep oil-based material, as the oil in the sweeping compound will interfere with the adhesion of the material to the concrete.
8. For detailed instructions, refer to the Floor Preparation document available on our Web site at www.american-biltrite.com.

ADHESIVE SYSTEM

1. The use of the proper adhesive is critical to a successful end result. American Biltrite will only guarantee its flooring products if AD-555SF adhesive is used. It is specially formulated to conduct electricity and must be used with the Electrotile flooring to obtain the expected conductivity.
2. For above-grade or below-grade slabs, use AD-555SF adhesive.
3. Protect adhesive from freezing in transit and storage.
4. Trowel specifications are written as follows: depth /width / spacing.
5. Use kneepads and work off the flooring whenever possible.
6. Clean spills, oozing and tools promptly using soapy water, ethyl alcohol or isopropyl alcohol.
7. Do not reuse container. Dispose of container and adhesive in accordance with federal, provincial/state and local waste disposal regulations.
8. If there is any doubt about which adhesive to use, contact American Biltrite or its distributors for additional information.
9. Do not rework trowel. Always use a trowel in good condition.

GROUNDING THE FLOOR

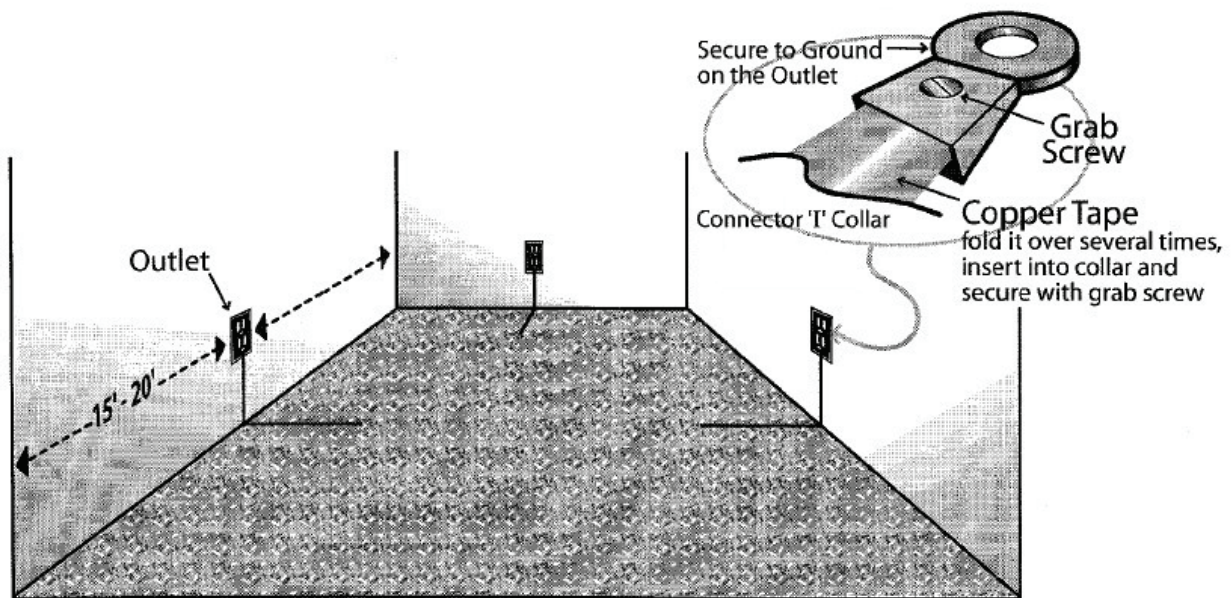
1. The copper tape is fragile and care must be taken during its installation.
2. Grounding copper tape must be installed on the subfloor prior to spreading the adhesive.
3. The copper tape adhesive must make good contact with the subfloor to ensure it does not move.
4. Take care not to break the copper tape when applying the grounding strips to the floor. If the copper tape is broken, there is no need to replace it entirely but simply join the broken tape with a piece of copper tape.
5. Using lengths of copper tape 13 mm (1/2") x 1.8 m (6 ft.) long x 0.003" thick, apply the first 1 m (3 ft.) to the floor out from the wall into the floor area. Take the remainder of the tape and attach it to the wall ready for installation to the permanent grounding service or bus bar.



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- This procedure should be repeated every 4.9 m (16 ft.) around the room's perimeter (note: electrical outlets are generally spaced every 8 ft. apart).
- All extremities of the copper tape should be temporarily protected with masking tape until installation is completed.
- The copper tape shall be free of stress at the intersection of floor and walls.
- Care must be taken not to damage copper tape while walking in the room or when spreading the adhesive.
- See diagram below for more details and [click here for detailed pictures](#).



[Click here for detailed pictures.](#)

AD-555SF ADHESIVE

- AD-555SF is a two-part conductive epoxy adhesive with a syrupy consistency formulated to bond ElectroTile where a high performance installation is required.
- Remove the lid of part A and stir using a mechanical mixer. Remove the lid of part B and pour the entire content into the container of part A. Use a rubber spatula to remove everything from the container. Use a mechanical mixer to ensure proper blending, as inadequate mixing could cause bond failure.
- Pour the entire mixed adhesive onto the floor immediately after mixing. Do not leave mixed epoxy adhesive in original can; the heat generated by a chemical reaction reduces the open time of the adhesive.
- Porous surfaces:** spread with a 0.8 mm x 1.6 mm x 0.8 mm (1/32" x 1/16" x 1/32") U-notched trowel.



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5. **Non-porous surfaces:** spread with a 0.8 mm x 0.8 mm x 0.8 mm (1/32" x 1/32" x 1/32") U-notched trowel.
6. Open time is 10 to 20 minutes depending on site conditions. It is still workable if it is wet and sticks to the fingers when touched. If a dry skin has formed on the surface of the adhesive, remove the adhesive and start over.
7. Do not force the tiles together; rather install them so they are just touching each other to form a tight seam.
8. Roll the floor in both directions prior to adhesive hardening in both directions with a 34-45 kg (75-100 lb.) sectional roller. Rolling must be done within 30 minutes of laying the tiles. Roll again 2 to 3 hours later.
9. Curing time: site conditions can greatly affect the curing time of the adhesive. Visually check the flooring to make sure the adhesive is curing by pulling back a corner. If it will not peel back easily, the curing process is underway. Do not attempt this prior to 24 hours after installation.
10. Coverage: up to 25 sq. m/3.79 litres (up to 265 sq. ft./gal.) depending on surface porosity.
11. We recommend the following guidelines for traffic:
 - First 24 hours: no traffic;
 - Inspect the adhesive as outlined above after 24 hours. If acceptable, light to medium traffic from 24 to 72 hours;
 - After 72 hours: moderate to heavy traffic, placement of furniture and light rolling traffic;
 - Allow 5 days before heavy rolling traffic such as pallet/pump jacks, food conveyers and lift machinery is permitted.

HEAT WELDING PROCEDURE - OPTIONAL

1. **Grooving:** after the adhesive has set, groove the seams with a power or hand-grooving tool. Adjust it to cut a V-shaped groove 2/3 of the tile thickness. Groove and trim all the tiles in one direction at a time.
2. **Welding:** remove all dust and shavings from the area by vacuuming. Using a heat-welding gun, insert the heat-welding rod into the welding nozzle and preheat the gun. Temperature will vary depending on the welding speed. We recommend that you conduct a trial weld on a scrap piece of material. Weld the seams in one direction at a time. (The welding temperature is in the order of 350-400 °C (662 to 752 °F)).
3. **Finishing:** when the weld is cool, remove the excess welding bead using a sharp crescent knife and a trimming plate/guide. Make the finishing trim using only the crescent knife. We suggest you use a soapy solution on the weld and on each side of the weld to reduce the friction of the knife and get a smoother cut. The angle of the knife shall be between 10° and 20°.
4. **Note:** if the welding bead is not allowed to completely cool before trimming, it may shrink, resulting in a concave joint finish. Always use a sharp crescent knife.

ELECTRICAL TESTING PROCEDURE

1. The electrical resistance of Electrotile flooring must be measured in accordance with the ESD.S7.1 test method (ASTM F 150).
2. Tests and/or approval by an American Biltrite representative are required in order for the warranty to be valid.
3. The surface resistance must be measured using two 2.7 kg ± 28 g (5 lbs ± 1 oz.) electrodes placed 91.5 cm (36") apart connected to a megOhmmeter with 100 volts open circuit voltage. Both electrodes must be at least 91.5 cm (36") from any grounded object or wall.



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4. Apply 100 volts and take a reading 15 seconds later.
5. Do 5 measurements at different locations within a 1,000 sq. ft. (92.9 sq. m) area. The ground resistance must also be measured between an electrode placed 91.5 cm (36") from the wall and the ground. Do 5 ground-resistance measurements at different locations within the area.
6. **Conductive tile:** the average surface resistance and ground resistance must be between 25×10^3 Ohms and 1×10^6 Ohms and no single reading should be greater than 5×10^6 Ohms.
7. **Static dissipative tile:** an average reading of no less than 10^6 Ohms and no greater than 10^9 Ohms.

FLOOR PROTECTION AND INITIAL MAINTENANCE

1. Following installation and cleanup of the tiles, protect it by laying sheets of non-staining brown Kraft paper over the flooring and then a layer of plywood sheets (rolls of heavy non-staining cardboard material could also be used for protection). Leave in position until the work of all other trades has been completed.
2. Do not start any maintenance procedures for a minimum of 3 days after installation.
3. Do not, at any time during the initial maintenance or thereafter, flood the floor with water or maintenance solutions.
4. Refer to Maintenance Instructions for specific details.

WARNING: REMOVAL OF OLD FLOORING

Do not sand, dry sweep, dry scrape, drill, saw, bead blast, mechanically chip or pulverize existing resilient flooring, backing, felt lining, paint, asphaltic cutback adhesives or other adhesives. These products may contain asbestos fibres or crystalline silica. Avoid creating dust as inhalation increases the risk of cancer and respiratory diseases. Smokers exposed to asbestos fibres are at greater risk of serious bodily harm. Unless certain that the product is asbestos-free, assume that it contains asbestos. Regulations may require that material be tested to determine asbestos content. Consult the Resilient Floor Covering Institute's (RFCI's) recommendations for removal of existing resilient floor coverings.

Please note that technical web site documents prevail.



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