



AmericanBiltrite
Flooring

CITADEL ELEMENTS & FORTRESS ELEMENTS

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 (windows 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 reading is 5 lbs/1,000 sq. ft./24 hours (2.26 kg/92.9 sq. m/24 hours) for AD-535 adhesive.
 - b. ASTM F 2170, Relative Humidity (RH) test using in situ probes. The maximum allowable reading is 80% RH and 85% RH for AD-535 adhesive.
 - 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 Underlayment 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 SYSTEMS

1. A good quality rubberized adhesive can be used with Citadel Elements and Fortress Elements provided site conditions and moisture subfloor conditions meet requirements mentioned above.
2. For porous and non-porous surfaces and for demanding applications such as heavy rolling load traffic, a two-part epoxy (AD-535) is recommended.
3. Protect 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.

AD-535 ADHESIVE

1. AD-535 is a two-part epoxy-based adhesive that is off-white when mixed.
2. It has a pasty consistency when mixed and are formulated to bond Citadel Elements and Fortress Elements tiles where a high performance installation is required. AD-535 will create a very strong bond when applied to porous and non-porous surfaces.
3. Remove the lid of part A and stir using a mechanical mixer. Remove the lid of part B and pour all the 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.
4. Pour the entire adhesive onto the floor immediately after mixing and spread using a trowel corresponding to the type of surface (porous or non-porous).



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5. **Porous and non-porous surfaces:** spread adhesive with a 0.8 mm x 1.6 mm x 0.8 mm (1/32" x 1/16" x 1/32") U-notched trowel over porous and non-porous surfaces.
6. Flash time is 0 to 10 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. Lay the tiles immediately on the adhesive so that the seams are just touching to form a tight seam. Do not force them together.
8. The floor must be rolled prior to adhesive hardening with a 34-45 kg (75-100 lb.) sectional roller; roll flooring in both directions; 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: porous surfaces up to 15 sq. m/3.79 litres (up to 160 sq. ft./gal.); non-porous surfaces up to 18.6 sq. m/3.79 liters (up to 200 sq. ft./gal.).
11. We recommend the following guidelines for traffic:
 - First 6 hours: no traffic;
 - 6 to 24 hours: light to moderate traffic only;
 - After 24 hours: regular rolling traffic.

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 until the work of all other trades has been completed.
2. Do not start any maintenance procedures for a minimum of 24 hours 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 fibers or crystalline silica. Avoid creating dust as inhalation increases the risk of cancer and respiratory diseases. Smokers exposed to asbestos fibers 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.

