

## MARATHON<sup>®</sup> AND ABPURE<sup>®</sup> STAIR TREADS RUBBER FLOORING

### INSTALLATION INSTRUCTIONS

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#### SITE CONDITIONS

1. Store the treads 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. The adhesive as well as the stair treads must be acclimated for a period of 48 hours prior to installation. The box containing these products must be unstacked off the pallet they were brought in and restacked no more than three boxes high leaving a space of 10 cm (4") all around them. Do not leave the boxes directly under an air conditioning dock or heating dock or directly in the sun.
4. Treads for visually impaired have the following restrictions: do not flex or bend treads with detectable warning strips.
5. When unpacking the treads, 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.
6. Avoid placing treads in direct sunlight (windows or doors) before installation, as it could create shading.
7. For any problem related to chemical abatement or high humidity, refer to the "Remediation Systems" document.
8. For internal use only.

#### 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 the AD-777 and AD-535 adhesives, and for the Zip-Step<sup>®\TM</sup> Adhesive Tape System.
  - b. ASTM F 2170, Relative Humidity (RH) test using in situ probes. The maximum allowable reading is 85% RH for AD-777, AD-535 and the Zip-Step<sup>®\TM</sup> Adhesive Tape System.
  - 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 measurements 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.

## MARATHON<sup>®</sup> AND ABPURE<sup>®</sup> STAIR TREADS RUBBER FLOORING

### INSTALLATION INSTRUCTIONS

---

#### SUBFLOOR PREPARATION

1. Concrete steps:
  - a. Concrete must be clean, dry, firm, fully cured and free of alkali or acid, curing compounds, paint, urethane, oil or solvents. Newly poured concrete steps must be cured for at least 6 weeks prior to tread installation.
  - b. Fill cracks and level low or rough areas with high strength Portland cement-based patching material.
  - c. NC-888 solvent-free epoxy stair nosing caulking compound can be used for repairing worn or cracked steps.
2. Wooden steps:
  - a. Wooden steps must be properly nailed, clean and free of polish and wax. Replace or repair old or worn steps.
  - b. Fill all surface cracks and holes with high strength Portland cement-based patching material.
3. Terrazzo, ceramic, natural/agglomerated marble or granite-type steps are non-porous materials and require special attention:
  - a. These types of steps have a glazed and polished finish.
  - b. Often they are treated with sealers and wax as well, which can build up. Remove glaze, polished finish, sealers and wax by sanding or bead blasting.
  - c. Ensure that the surface is free of dirt, dust, debris or any other substances that may prevent bonding of the primer; then apply a coat of self-levelling Portland cement-based compound. Follow the manufacturer's instructions and cure for at least 24 hours.
  - d. Apply a 3-5 mm (1/8" to 3/16") thick layer of the above compound over the cured primer and level it.
  - e. Cure for 24 hours prior to installing Marathon<sup>®</sup> and ABPURE<sup>®</sup> rubber products.
4. Metal steps:
  - a. The surface must be level, clean, dry, and free of any coatings or foreign materials.
  - b. Sand the metal (aluminium, steel, brass, copper and bronze) to ensure a good adhesive bond.
5. We do not recommend using gypsum-based patching or levelling compounds under any circumstances.
6. Do not use chemical adhesive removal products (chemical abatement products); their use will void the American Biltrite adhesive system warranty.
7. Do not use an oil-based sweeping powder (green powder) to clean the floor because this product will interfere with the adhesion on the concrete.
8. For detailed instructions, refer to the "Floor Preparation" document available on our Web site at [www.american-biltrite.com](http://www.american-biltrite.com).

#### ADHESIVE SYSTEMS

1. The use of the proper adhesive is critical to a successful end result. American Biltrite will only guarantee its flooring products if AD-777 or AD-535 adhesive or Zip-Step<sup>®\TM</sup> Adhesive Tape System are used.
2. On concrete and plywood steps, use AD-777 or AD-535 or Zip-Step<sup>®\TM</sup> Adhesive Tape System with NC-888 solvent-free epoxy stair nosing caulking compound.

## MARATHON<sup>®</sup> AND ABPURE<sup>®</sup> STAIR TREADS RUBBER FLOORING

### INSTALLATION INSTRUCTIONS

---

3. On non-porous substrates and metal steps, use AD-535 or Zip-Step<sup>®\TM</sup> Adhesive Tape System with NC-888 solvent-free epoxy stair nosing caulking compound.
4. Protect from freezing in transit and storage.
5. Trowel specifications are written as follows: depth / width / spacing.
6. Use kneepads, and work off the treads whenever possible.
7. Clean spills, oozing and tools promptly using soapy water, ethyl alcohol or isopropyl alcohol.
8. Do not reuse container. Dispose of container and adhesive in accordance with federal, provincial/state and local waste disposal regulations.
9. If there is any doubt about which adhesive to use, contact American Biltrite or its distributors for additional information.
10. Do not rework trowels. Always use a trowel in good condition.

#### AD-535 ADHESIVE

1. AD-535 is a two-part epoxy-based adhesive that is off-white colored when mixed.
2. AD-535 creates 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. Do not leave the mixed adhesive in the original can; the heat generated by the chemical reaction will reduce the open time of the adhesive.
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 on porous and non-porous surfaces. A surface is considered porous when a drop of water is absorbed within 5 minutes.
6. Coverage: porous surfaces up to 15 sq. m/3.79 litres (up to 163 sq. ft./gal.); non-porous surfaces up to 18.6 sq. m/3.79 litres (200 sq. ft./gal.).
7. Curing time will vary depending on site conditions (i.e. temperature, humidity). 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.
8. The treads must be rolled prior to adhesive hardening with a J type hand roller.
9. We recommend the following guidelines for traffic:
  - a. Up to 6 hours following installation, no traffic;
  - b. 6 to 24 hours: moderate to heavy foot traffic;
  - c. After 24 hours: regular rolling traffic.

#### AD-777 ADHESIVE

1. AD-777 can be used as a wet-set or a pressure-sensitive adhesive; it has a creamy color with a syrupy consistency.
2. **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. Allow 0-15 minutes open time when using as a wet-set or let dry 15-45 minutes until dry to touch when using as a PSA. Working time on concrete is up to 1 hour, depending on temperature and humidity. **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. Allow 15-45 minutes

## MARATHON<sup>®</sup> AND ABPURE<sup>®</sup> STAIR TREADS RUBBER FLOORING

### INSTALLATION INSTRUCTIONS

---

open time until dry to touch. Working time on concrete is up to 2 hours, depending on temperature and humidity. A surface is considered porous when a drop of water is absorbed within 5 minutes.

- Coverage: porous surfaces up to 17.1 sq. m/3.79 litres (up to 185 sq. ft./gal.); non-porous surfaces up to 22.74 sq. m/3.79 litres (245 sq. ft./gal.).
- We recommend the following guidelines for traffic:
  - Up to 24 hours following installation: no traffic.
  - Between 24 and 72 hours: light traffic.
  - After 72 hours: moderate to heavy traffic.

#### NC-888 ADHESIVE

- NC-888 is a two-part solvent-free epoxy caulking compound. It prevents cracking and flexing of rubber treads by bonding uniformly to the under-step.
- It is excellent for the complete restoration of existing concrete, wooden or metal steps, and can be used for repairing cracks, holes, depressions, and worn or broken edges.
- Directions:
  - Cut a 10 mm (3/8") inside diameter opening in the mixing nozzle.
  - Remove cap, and attach the mixing nozzle to the cartridge using the retaining nut.
  - Depress the trigger on the gun until the compound reaches the end of the nozzle.
  - Discard the first 15 cm (6") of compound. Do not remove internal mixer in nozzle.
  - Squeeze a sufficient amount inside the nosing of the tread so that when it is pressed firmly in place, the compound moulds it to the shape of the step edge.
  - After installing the tread, thoroughly roll it with a 'J' type hand roller, especially in the nosing area. All of the tread nosing must touch the step edge to provide adequate support.
  - Coverage: approx. 9 linear m (30 linear ft.) per unit using a 10 mm (3/8") diameter bead.
  - To save a partial cartridge or compound for future use, leave the mixing nozzle on the cartridge during storage. To use, simply replace the old nozzle with a new one.
- NC-888 curing time is 2 hours.

#### ZIP-STEP<sup>®\TM</sup> ADHESIVE TAPE SYSTEM

- For an installation without using a regular adhesive, our adhesive tape system is available.
- The tape comes in two widths: 24 cm (9.5") wide for the step portion, and 2.5 cm (1") wide for the vertical portion of the nosing. The required width for the riser can be cut from the 24 cm (9.5") tape.
- At all time, NC-888 must be used to fill the nosing of the tread.

#### INSTALLATION

##### In general:

- Fit tread snug. Do not force treads in place.
- Gypsum-based patching or levelling compounds are NOT recommended under any circumstances.
- Avoid traffic on stairs for minimum of 48 hours when using the regular adhesives, and 2 hours when using Zip-Step<sup>®\TM</sup> Adhesive Tape System.

## MARATHON<sup>®</sup> AND ABPURE<sup>®</sup> STAIR TREADS RUBBER FLOORING

### INSTALLATION INSTRUCTIONS

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4. **Protection:** Following installation and cleanup of the treads, protect them from other sub-trades by attaching sheets of brown Kraft paper over treads using adhesive tape.



A stair tread that is laid as shown in the picture above will break at the nosing due to repetitive flexing.



Make sure that the internal part of the nosing is filled properly with NC-888 epoxy caulking to prevent any flex.

#### **Regular Stair Treads Installation:**

1. Dry fit all treads. First scribe treads to fit steps. Second, place riser into position to fit tread nose on above step; do not overlap the top portion of the riser with the tread nose.
2. Carefully clean step substrate and the back of the tread for any dust or particles and then apply the adhesive as described in Adhesive Systems section. It is required that all treads have a bead of 10 mm (3/8") of NC-888 epoxy nosing compound applied along the inside of the tread nosing angle section. This will fill any voids in the steps.

## MARATHON<sup>®</sup> AND ABPURE<sup>®</sup> STAIR TREADS RUBBER FLOORING

### INSTALLATION INSTRUCTIONS

---

3. Press treads and risers firmly into place. Press nosing into stair so the epoxy caulking molds to the shape of the tread nose and stair.
4. Any excess adhesive on the surface of the treads or surrounding area should be removed immediately as described in the Adhesive Systems section. Adhesive cannot be removed if set.

#### **One-piece Tread and Riser Installation:**

1. Dry fit all treads. First scribe treads to fit steps. Second, place riser into position to fit tread nose on above step; do not overlap the top portion of the riser with the tread nose.
2. Carefully clean step substrate and the back of the tread for any dust or particles and then apply the adhesive as described in Adhesive Systems section. It is required that all treads have a 10 mm (3/8") bead of NC-888 epoxy nosing compound applied along the inside of the tread nosing angle section. This will fill any voids in the steps.
3. Press treads and risers firmly into place. Press nosing into stair so the epoxy caulking molds to the shape of the tread nose and stair.
4. Any excess adhesive on the surface of the treads or surrounding area should be removed immediately as described in the Adhesive Systems section. Adhesive cannot be removed if set.
5. When installing the one-piece stair treads using NC-888 nosing compound, repeat the caulking procedure where the tread and riser intersect.

#### **Special Instructions for visually impaired Treads:**

1. Dry fit all treads. First scribe treads to fit steps. Second, place riser into position to fit tread nose on above step; do not overlap the top portion of the riser with the tread nose.
2. Carefully clean step substrate and the back of the tread for any dust or particles and then apply the adhesive as described in the Adhesive Systems section. It is required that all treads have a 10 mm (3/8") bead of NC-888 epoxy nosing compound applied along the inside of the tread nosing angle section. This will fill any voids in the steps.
3. Press treads and risers firmly into place. Press nosing into stair so the epoxy caulking molds to the shape of the tread nose and stair.
4. Any excess adhesive on the surface of the treads or surrounding area should be removed immediately as described in the Adhesive Systems section. Adhesive cannot be removed if set.
5. Do not flex or bend treads with detectable warning strips.

## MARATHON<sup>®</sup> AND ABPURE<sup>®</sup> STAIR TREADS RUBBER FLOORING

### INSTALLATION INSTRUCTIONS

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#### ZIP-STEP<sup>®\™</sup> ADHESIVE TAPE SYSTEM

##### Standard Stair Tread Installation:

1. Dry fit all treads. Scribe treads to fit step.
2. Carefully clean step substrate and the back of rubber tread for any dust or particles.
3. Apply the tape strips (24 cm (9.5") strip on the back of the tread and 2.5 cm (1") on the vertical portion of the nose) approximately ½ inch back from the internal angle of the tread nose.
4. Thoroughly roll the tape to ensure proper bonding to the back of the stair tread. Trim off excess tape along the edges of the stair tread.
5. Gun a 10 mm (3/8") bead of NC-888 two-part epoxy caulking compound into the nose of the stair tread to completely fill the void between the internal angle of the stair tread and external edge of the stair step. Caution: Improper application of the caulking compound can interfere with the adhesion of the tape.
6. Carefully remove the 2.5 cm (1") release paper from the nose of the tread.
7. After thoroughly adhering the nosing portion of the stair tread to the step edge, carefully lift the back edge of the tread and remove the release paper.
8. After the release paper is removed, start at the front edge of the stair tread and press the tread down firmly and uniformly onto the step surface from front to back.
9. When the tread is in its final position, roll the entire tread and nosing surfaces with a hand roller to ensure proper adhesion to the substrate surfaces.

##### Riser Installation

1. Install the risers, after the stair treads have been installed. Dry fit the riser.
2. Carefully clean step substrate and the back of riser for any dust or particles.
3. Cut the required amount of tape from the 24 cm (9.5") roll and apply across the entire back surface of the precut riser. Trim the excess tape from around the perimeter of the riser, if necessary.
4. Remove the release paper from the tape, position, and install the riser. The bottom portion of the riser should set uniformly on the tread surface. The top portion of the riser should abut tightly and uniformly to the bottom of the stair tread nose on the adjacent step.
5. Thoroughly roll with a hand roller to ensure proper adhesive bond.

##### One-Piece Tread and Riser Installation:

1. Dry fit all treads. First, scribe tread to fit step. Second, scribe riser into position to fit tread nose on above step; do not overlap the top portion of the riser with the tread nose.
2. Carefully clean step substrate and the back of rubber tread for any dust or particles.
3. Apply the tape strips (9.5" strip on the back of the tread, 1" on the vertical portion of the nose,

## MARATHON<sup>®</sup> AND ABPURE<sup>®</sup> STAIR TREADS RUBBER FLOORING

### INSTALLATION INSTRUCTIONS

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and strip cut from 9.5" roll to completely cover riser) approximately ½ inch back from the internal angle of the tread nose.

4. Thoroughly roll the tape to ensure proper bonding to the back of the stair tread. Trim off excess tape along the edges of the stair tread.
5. Gun a 10 mm (3/8") bead of NC-888 two-part epoxy caulking compound into the nose of the stair tread to completely fill the void between the internal angle of the stair tread and external edge of the stair step. Caution: improper application of the caulking compound can interfere with the adhesion of the tape.
6. Carefully remove the 1" tape from the nose of the tread.
7. After thoroughly adhering the nosing portion of the stair tread to the step edge, carefully lift the back edge of the tread along the riser area and remove the tread tape release paper.
8. After the release paper is removed, start at the front edge of the stair tread and press the tread down firmly and uniformly onto the step surface from front to back.
9. Remove the release paper from the riser section of the tread and install the riser starting at the bottom and continuing up until the top of the riser is fitted tightly and uniformly to the bottom of the stair tread nose on the adjacent step.
10. When the tread is in its final position, roll the entire tread, riser and nosing surfaces with a hand roller to ensure proper adhesion to the substrate surfaces.

#### **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.

