



## Specification Data -- RESILIENT TILE FLOORING 09 65 19

### **BurkeTurf Recycled Tile** Installation Instructions

Only Approved Adhesives Must Be Used For Warranty to Apply:  
BR 711™ Acrylic Solvent Free – One Part Solvent Free – Porous and Non Porous  
BR 721™ Epoxy Adhesive – Solvent Free  
BR 725™ Urethane Adhesive – Solvent Free

#### **I. Storage**

- A. Check tiles for completeness of order. Check for correct product.
- B. Store tiles off the ground and out of the elements. Do not stack skids, or stack other materials on tiles or treads.
- C. Prior to installation, the tiles and adhesive must be conditioned to an ambient temperature at the actual job site of not less than 59°F (14°C) to not more than 85°F (29°C) for at least 72 hours.

**II. Sub-floor Preparation** - For Additional Required Information, refer to ASTM F-710 - Practice for Preparing Concrete and Other Monolithic Floors to Receive Resilient Flooring.

#### **A. Concrete Sub-floor**

1. On-grade and below-grade sub-floors must be protected against ground moisture with a properly installed membrane type moisture barrier.
2. New concrete sub-floors should be allowed to cure a minimum of 30 days.
3. Sufficient moisture test sampling should be made. The emission of moist vapor from the slab should not exceed 3 lbs. per 1,000 sq. ft. per 24 hours. Perform RMC/Calcium Chloride test to test for proper dryness conditions.
4. *RMA/Calcium Chloride Moisture Test*
  - a. The RMA moisture test provides a specific moisture reading for a limited area of the concrete slab. This procedure is the preferred way to judge the moisture content of the concrete substrate in question. Test kits can be purchased from your local flooring supplies distributor. Follow instructions in the kit.
  - b. The RMA (“Calcium Chloride”) test should be conducted after the HVAC has been turned on and the area being installed has been appropriately acclimated. False readings are possible if the area is not

brought to normal operating temperatures for at least 5 days. If the readings are above 3 pounds per 1,000 square feet, **DO NOT INSTALL!**

2. *Concrete Sub-floor Condition:* The concrete sub-floor should be dry, clean, non-scaled and free of dust, and flat to within 1/8" in 10 linear feet. The surface should also be finished to a texture similar to 100-grit sandpaper. If the concrete is glazed or very smooth, it must be thoroughly sanded or shot blasted (see B-2) to assure proper adhesion. Remove all dust by vacuuming.
3. **An adhesion test of at least 24-hour duration should be performed.** This is the safest check for bonding success to determine if curing compounds, other adhesive bond-breakers or too smooth a surface are present.
  - a. *Adhesion Test* – First, determine *sub-floor temperature* using a floor thermometer, noting the cure rate chart under Section IV B.2., then determine *moisture content* (see II A-3).
  - b. The installer should make an adhesive bonding test (at least one per every thousand square feet). Use full Size Burke Turf pieces and install them using the recommended adhesive. These test patches should remain in place for a minimum of 24 hours to determine if there is good bond to the sub-floor and to observe if there is sufficient transfer of adhesive both to the sub-floor and to the back of the floor tile.
  - c. Removing the test patches from the sub-floor should be difficult with most of the cured adhesive remaining bonded to the sub-floor. If proper bond is not accomplished, do not proceed with the installation. Contact Burke Flooring distributor.
4. **Important:** With respect to the type of concrete or other cementitious patching material used in the sub-floor, responsibility for a warranty and performance of the sub-floor belongs to the concrete or cementitious patching material manufacturer and the installer.
5. *Curing compounds, bond breakers or sealers* will seriously inhibit the adhesion of the tile to the sub-floor. They should be completely removed by scarifying, grinding (with a terrazzo grinder) or by shot blasting. One shot blasting machine, Blastrac, is made by U.S. Filter Blastrac; (405) 478-3440; (800) 256-3440; [www.surfacepreparation.com](http://www.surfacepreparation.com).
6. *Oil or Grease on the sub-floor.* Grease or oil stain must be thoroughly washed with a degreaser and thoroughly flushed. If the concrete sub-floor is impregnated with oil or grease, do not attempt to install BurkTurf tile.

7. *Burke does not warrant installation of BurkeTurf over un-removed old floor coverings (such as vinyl tile), coatings and adhesives.* Should the installer elect to install over old floor coatings or coverings such as tile, adhesives or paint, adequate adhesion may not be achieved.
8. Old black asphalt "cut back" adhesives are harmful to a good bond and must be mechanically removed or properly covered with approved cementitious patching compound (see #9 below). BR 725 can be used over cut-back **residue** left after the bulk of it has been scraped off the floor. ***Do not use*** BR-721 Epoxy or contact adhesives over cut-back adhesive residue.
8. *Ceramic tile, quarry tile or terrazzo floors.* Installing BurkeTurf tile over ceramic tiles is not recommended. However, when the ceramic glaze is sanded thoroughly and when the grout lines are filled and leveled properly with a cementitious leveler, the installation may be successful. Over terrazzo sub-floors adhesion is sometimes difficult due to waxes burnished into its very smooth surface. If installation over terrazzo is contemplated, the minimum preparation should be shot blasting or terrazzo grinding to remove all waxes or soil. Remove all dust by vacuuming. A thorough adhesive bond testing should be performed. BR 721 or BR 725 adhesives are the best suited adhesives for good bond, but caution is recommended.
9. *Cracks, depressions, "saw-cut" construction joints (non-moving) and rough areas* should be cleaned and filled with a top quality cementitious patching compound with a minimum compressive strength of 4000 psi such as Ardex or Mapei (see below). Use as directed by the manufacturer. If epoxy is used as a crack filler, plow it well into the depression. Allow to cure completely. Sand the cured epoxy for better adhesion.

**Sources include:**

Ardex, Inc., 400 Ardex Park Drive, Aliquippa, PA 15001  
(412) 264-4240.

Mapei Corp., 1144 E. Newport Center Drive, Deerfield Beach, FL 33442  
(954) 246-8888; (800) 426-2734.

9. ***Do not use gypsum based leveling or patching compounds under any circumstances. BurkeTurf is resilient. It will cause gypsum or plaster-based patching compounds to crack or split. Use only cementitious based trowel-able patching or self-leveling compounds!***
10. *Expansion Joint.* No attempt should be made to lay BurkeTurf tile over an architectural concrete expansion joint that is designed to move. Instead, the tile should stop before the joint on both sides. The joint should be protected with a metal cap fastened on one side allowing the joint to move without restriction. Use expansion joint systems as manufactured by C/S Group, Muncy, PA 17756 (570) 546-5941; (800) 233-8493.

11. *Exposure to extreme heat.* Extreme heat from sun, blowers or radiant heat during the adhesive cure will cause the tiles to expand and peak. During the period of 24 hours before installation and throughout the adhesive curing period, the sub-floor temperature should be at 72°F (24°C) and must not be colder than 59°F (14°C) or warmer than 85°F (29°C). Refer to cure time chart in Section IV B.2. Direct sunlight should be blocked during installation and for the first 8-12 hours of adhesive cure time.

**B. Wood Sub-floors**

1. Exterior grade plywood with a minimum total thickness of 1" should be used with smooth plugged side up. Hardboard, Luan, MDF, chip boards or other engineered wood substrates, are not strong or stable enough and are not recommended.
2. Wood sub-floors will require ventilation when laid over concrete to avoid wet and dry rot. At least 18" of airspace and air circulation between an on grade or below grade concrete sub-floor and the wood sub-floor is mandatory.
3. Planked wood floors used as a sub-floor may "telegraph" through a BurkeTurf tile installation. It is best to install plywood over plank floors.
4. Unevenness of wood sub-floors should be planed or machine sanded. Remove all dust by vacuuming.
5. Loose sub-floor panels should be refastened with screws.
6. Protruding nails should be leveled or removed. Holdfast or screw nails should be used.
7. Single sheets of wooden sub-floors should not exceed 16 square feet or 1.2 square meters.
8. Expansion space between wood panels should be .038" or 1 mm.
9. Dents, seams and holes may be leveled with the rubber tile epoxy adhesive or cementitious-leveling compound. After cure, the adhesive must be sanded to roughen its smooth surface.
10. Plywood sub-floors should be screwed down or nailed with flooring ring nails. Use a minimum of one fastener per 9 square inches of sub-floor.

Note: the use of cement board such as Hardie Backer is acceptable. Be sure to smooth all points and dimples made by fasteners with a cementitious patching compound.

**III. Tile Adhesive Descriptions and Procedures**

*Only approved adhesives must be used for warranty to apply.*

**A. Adhesive Descriptions**

*BR 711 One Part Tile and Tread Adhesive.* BR 711 is for BurkeTurf, rubber landing tile, treads and risers. BR 711 is a solvent-free, non-flammable synthetic polymer-based adhesive, applied to one surface. Apply BR 711 to

the floor only. DO NOT apply adhesive to the back of the tile. Allow adhesive to dry a minimum of 10-15 minutes. Adhesive should transfer to finger when touched prior to installation. DO NOT allow adhesive to dry completely before installing BurkeTurf. Drying time will vary, depending on the atmospheric conditions and floor surface conditions.

*BR 721™ Two Part Epoxy* – Solvent Free. This is the standard rubber tile adhesive where solid strength but a flexible bond is required for heavy-duty foot and vehicle traffic. Above, on or below grade concrete or wood sub-floors, this adhesive has high water resistance to surface flooding.

*BR 725™ Two Part Urethane* – Solvent Free. This adhesive will operate at temperatures to 50°F (7°C). It can be used where some **traces** of old asphalt or "cut back" adhesive remain in the pores of the slab after most of the "cut back" has been removed.

**B. Two Part Adhesive Mixing and Application Instructions**

1. *Two Part Adhesive* – The packaged units of epoxy or urethane (BR 721 Epoxy and BR 725) are marked A or B. The A & B unit should be mixed together thoroughly and with a rotary motion while at the same time lifting from the bottom. **Use an electric drill and paddle for thorough mixing.** After mixing, the color of the adhesive must be uniform (i.e., no streaking). *Never mix Parts A and B on the sub-floor itself. Once the adhesive is mixed it must be removed from the container to slow its curing time.*
2. *Temperature* – The sub-floor temperature affects the curing rate of two part adhesives. Curing will take place between 59°F (14°C) and 85°F (29°C). The ideal temperature for the adhesive cure is 72°F (24°C). This will normally take 8-12 hours. At 59°F (14°C) cure will take approximately three times longer for epoxy and about twice as long with urethane. At 85°F (29°C) cure will take approximately half the time. The chart below shows approximate temperature and appropriate cure times of epoxy and urethane adhesives:

	<b><u>ACTUAL FLOOR TEMPERATURE</u></b>		
<b><u>BR 721</u></b>			
MINIMUM REQUIRED CURE TIME	59°F (14°C)	72°F (24°C)	85°F (29°C)
Heavy Rolling Stock	4 Days	4 Days	3 Days
Foot Traffic	12 Hrs.	7 Hrs.	6 Hrs.

	<b><u>ACTUAL FLOOR TEMPERATURE</u></b>		
<b><u>BR 725</u></b>			
MINIMUM REQUIRED CURE TIME	59°F (14°C)	72°F (24°C)	85°F (29°C)
Heavy Rolling Stock	5 Days	4 Days	4 Days
Foot Traffic	16 Hrs.	7 Hrs.	6 Hrs.

3. *Pour the entire mixed contents out of the can immediately onto the sub-floor in the areas of application.* Trowel the adhesive with a 1/16" x 1/16" x 1/16" square notched trowel.

**Yields:** The average *adhesive yield* from a gallon unit of BR 721 *epoxy* will be approximately 100 square feet, depending on the smoothness of the sub-floor. Coverage for BR 725 *urethane adhesive* will be approximately 135 square feet per gallon. Rough sub-floor surfaces and improper or worn trowel notching will affect the adhesive spread rate. Do not apply adhesive to the tile.

*Two part adhesive average working life* is one hour at a temperature of 72°F (24°C). Tiles may be laid shortly after spreading as no open time is needed. However, if the spread adhesive is allowed to remain open 15-20 minutes the adhesive will develop more initial tack and will help reduce tile slipping.

4. Lay tiles point to point as per dry laying instructions (Section IV).
5. Roll the adhered tiles with a 100 lb. roller diagonally, slowly, in two directions. This should be done soon after laying the tile into the adhesive.
6. A second rolling should be done one hour after the first rolling.
7. Sweep upon completion of laying to detect dropped or oozing adhesive. Remove any such adhesive with water or mineral spirits on a cloth. Do not use turpentine. **Note: Remove adhesive before it cures. It is impossible to remove adhesive after it cures.**
8. An unsheltered but roofed installation should be protected from the heat of the sun or from wetness for at least 8-12 hours after installation. Lay a light colored opaque cover over the installation if necessary for adequate protection from the sun and wetness.
9. No pedestrian foot traffic should be allowed before at least 12 hours after laying and for a longer period if the sub-floor temperature is below 72°F (24°C). These cure times can be doubled or tripled as the temperature approaches 59°F (14°C) (see adhesive cure chart on previous page). Scaffolding or wheeled conveyances must not be allowed for at least 4 days (see adhesive cure chart). Traffic directly on the tile weakens or breaks the adhesive bond and will cause tiles to buckle or lift within one year of installation if traffic is allowed too soon.

### **C. BR 711 One Part Acrylic Adhesive Application Instructions**

1. Spread the Burke 7-11 One Part Acrylic Adhesive with a 1/16" x 1/16" x 1/16" square-notched trowel.

2. For porous floor applications, allow adhesive 5-10 minutes open time before installing floor covering. Do not allow adhesive to skim over.
3. For non-porous applications, allow the adhesive to dry until it no longer transfers to the fingers when touched. When the adhesive has reached that dry-touch state, then installation can begin. You must get all materials installed within 45 minutes after the adhesive reaches the dry-touch state.

#### **IV. BurkeTurf Tile Installation Instructions**

Note: The adhesive should always have at least 95% transfer to back of flooring.

DRY LAY tiles starting at one corner, placing one row of tiles the length of the area to be covered until there is less than a 12" space to accommodate a full tile.

Measure the inches remaining to be covered. Divide the number of inches by two. This will determine the width of the tile to be used as a border at each end of the tiles.

1. Peel away the protective, white covering from the tile. This will expose a clean, dirt free surface ready to be set into adhesive.
2. Apply BurkeTurf Recycled Adhesive with a trowel to recommended size to a small area (approximately 8 sq. ft.). Follow the specific applications instructions above for the adhesive you are using.
3. Set other tiles in place on the wet cement immediately to eliminate any unreasonable space between tiles. Do so before cement becomes too tacky as movement of adjustment of adjoining tiles will become difficult. Walk on or roll tile to press firmly to surface to improve bond. If tile is not placed before adhesive sets, the bond will not be effective and tile should be removed. New fresh adhesive applied over the existing cement. Then reapply the tile.
4. Slowly roll installed floor covering with a 75-100 pound roller within 30 to 45 minutes after installation of the tile. Roll diagonally to the seams in both directions.
5. Light foot traffic permitted 12 hours after installation. Heavy foot traffic and rolling traffic permitted 24 hours after installation.
6. Avoid initial cleaning of finished floor for 72 hours to allow adhesive to fully cure.