

## Tuff-Seal Installation and Maintenance

Tuff-Seal Interlocking Floor Tile is designed to solve many common flooring problems—residential, institutional, aviation, industrial, and commercial. It is both quick and easy to install and requires minimal care and maintenance.

The secret to its simplicity is Tuff-Seal Tile's patented, hidden joining and sealing method. It allows you to cover any firm, flat surface, using nothing more than a few common tools. For most applications, the Tuff-Seal Tile is installed without adhesive.

### Before you begin

#### APPROPRIATE USE

Tuff-Seal Tile is recommended for interior applications only and all those areas should be weather-tight. Tuff-Seal is not recommended for exterior use or for use in commercial/industrial kitchens. For some applications it may be advisable or necessary to glue tiles to the subfloor.

#### DIRECT SUNLIGHT

Tile exposed to direct sunlight in areas such as airplane hangars, garages, or loading docks, may heat up and expand quickly causing the tiles to buckle. In that event, the exposed tiles may need to be adhered to each other with the joint adhesive or be fully adhered to the subfloor.

#### TIRE STAINING

Although not a common problem with Tuff-Seal tile, it is possible that certain rubber tires and wheels may stain the tile. This is a result of a chemical reaction that occurs between the floor and the anti-oxidant (6PPD) that is used in some rubbers to give it its flexibility and protection against ozone and ultraviolet light. The stain/reaction is yellowish to brown in color so it may not be visible on certain colors of tile like black or dark gray. Flooring Adventures recommends you always place a scrap tile or other material under the tires as a precaution.

If your application is susceptible to staining from tires, hair dyes, and other harsh chemicals, consider the application of a two-part, solvent free, waterborne polyurethane coating from Dr. Schutz at [www.thefloorguy.com](http://www.thefloorguy.com)

#### COOLING GLOSS RING

In some cases, the cooling of the tile in the mold produces a slight variation in the surface gloss that appears as a ring in the middle of the tile. This is normal and should be imperceptible after the initial maintenance procedure — the application of a floor finish or a spray and buff system (see Initial cleanup and maintenance, page 7).

### Prepare the site

#### CLIMATIZE MATERIALS

Climatize all materials to room temperature prior to installation. Failure to climatize tile may result in variances in tile size and difficulty in joining the Tuff-Seal interlock.

#### Potential preparation hazards with your existing subfloor

Tuff-Seal Tile is not hazardous but it is important to be aware of potential hazards in the preparation of the site.

#### SILICA WARNING (EXISTING SURFACE)

Concrete, floor patching compounds, toppings and leveling compounds can contain free crystalline silica. Respirable crystalline silica (particles 1-10 micrometers) can be produced by cutting, sawing, grinding or drilling. Respirable silica is classified by OSHA as an IA carcinogen and is known to cause silicosis and other respiratory diseases. Avoid actions that cause dust to become airborne. Use local or general ventilation, or protective equipment, to reduce exposure below applicable exposure limits.

#### ASBESTOS WARNING (EXISTING SURFACE)

Resilient flooring, backing, lining felt, paint or asphaltic "cutback" adhesives can contain asbestos fibers. Avoid actions that cause dust to become airborne. Do not sand, dry sweep, dry scrape, drill, saw, bead blast or mechanically chip or pulverize. Regulations may require that the material be tested to determine asbestos content. Consult the document titled, *Recommended Work Practices for Removal of existing Resilient Floor Coverings*, available from the Resilient Floor Covering Institute.

## LEAD WARNING (EXISTING SURFACE)

Certain paints can contain lead. Exposure to excessive amounts of lead dust presents a health hazard. Refer to applicable federal, state and local laws and the publication, *Lead based Paint: Guidelines for Hazard Identification and Abatement in Public and Indian Housing*, available from the United States Department of Housing and Urban Development.

## Subfloor preparation

### GENERAL

Tuff-Seal Interlocking Floor Tiles can be installed directly over any flat, structurally-sound surface, including new or uncured concrete, contaminated or moisture-problem subfloors. Because Tuff-Seal is an interlocking system, it is not normally necessary to remove old paint, epoxy coatings, concrete sealers and/or curing compounds, oils, grease or other contaminants.

### CONCRETE SUBFLOORS

If a moisture vapor emission problem exists, the existing flooring material and adhesives should be removed and the concrete shot blasted or acid etched to help prevent any potential microbial growth problems. The concrete surface must be porous enough to absorb liquid water.

Remove base shoe moldings if present. Remove or grind and sand down any protrusions such as nails, bolts or lumps in the subfloor. Fill large holes, voids or cracks using a cementitious base-patching compound. Sweep or vacuum floor to remove all dirt and debris.

### WOOD SUBFLOORS

Wood subfloors must be smooth, rigid, flat, level, free from movement, and have at least 18 inches of well-ventilated air space below.

Remove base shoe moldings if present. Remove or grind and sand down any protrusions such as nails, bolts or lumps in the subfloor. Fill large holes, voids or cracks using a cementitious base-patching compound. Sweep or vacuum floor to remove all dirt and debris.

## Tools

(A)  
measuring tape  
Chalk line  
utility knife and  
metal straight edge  
(for cutting tiles)

Rubber mallet  
(no bounce)  
Pencil/marker

## Optional cutting tools

Carpenter's  
square (B)

Tile cutter (C)  
Table saw (D)  
band saw (E)

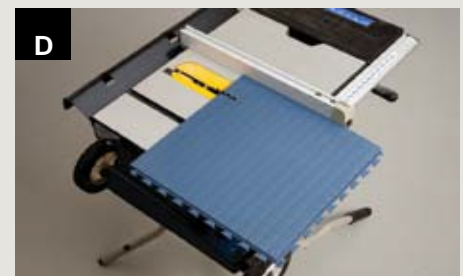
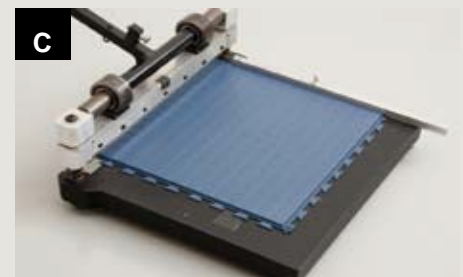
Rotozip™ or  
Dremel™ tools (for  
intricate cuts) (F)

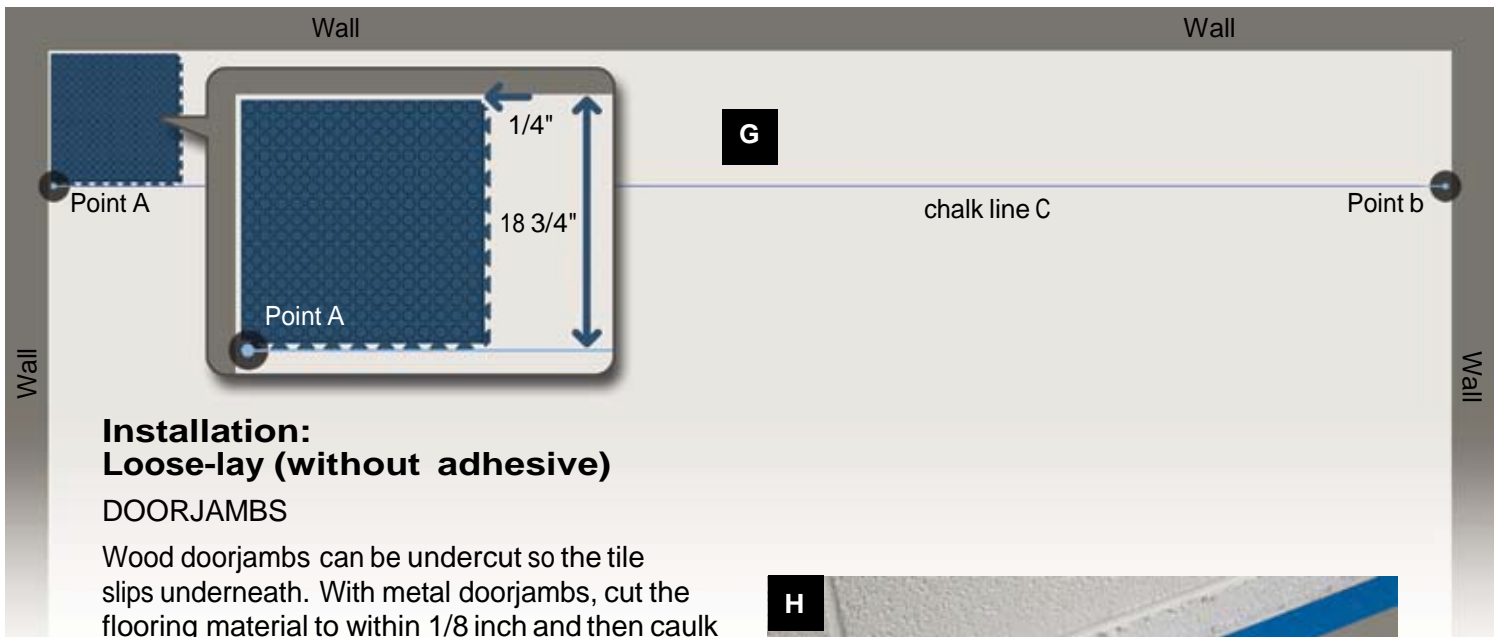
## Optional adhesives

Tile-to-tile:  
FA2010 adhesive

Tile-to-subfloor:  
FA720 adhesive

Tile-to-reducer  
strip: FA105  
adhesive  
(included with the  
reducer  
strip at no charge)





**Installation:  
Loose-lay (without adhesive)**

**DOORJAMBS**

Wood doorjambs can be undercut so the tile slips underneath. With metal doorjambs, cut the flooring material to within 1/8 inch and then caulk around the jamb.

**EXCESSIVE FLUIDS**

If your application will have an excessive amount of fluid on the floor, it is recommended that you caulk the gap between the wall and the tile. To provide maximum expansion/contraction capabilities and to prevent the adhesive caulk from adhering to the concrete, place 2 inch wide masking tape tight to the wall, around the perimeter of the room and other permanent fixtures prior to installing the tile (H). once the tile is installed, caulk the gap using a Polyurethane or acrylic caulk commonly found at hardware outlets (I).

**GENERAL STEP-BY-STEP**

Installation of the tile should begin in a corner along the straightest or most visible wall (G) (Garages, airplane hangars, and other expanse door spaces: Install the first row across the expanse door wall). Leave a 1/4 inch space between the tile and the wall to allow for the material to expand and contract with temperature changes.

Carefully measure 18- 3/4 inches out at each end of one wall to create points A and b (G). Snap a chalk line between point A and b to create line C (J).

Lay tiles with the finished edge to the wall and the tab edges to the top of the chalk line (K). It is very important to lay the first row perfectly straight, the first row affects the entire installation (L). Lay the tile from your left to your right, always placing the finished edge on top of the tab edge (M).

It is important that all the tiles are the same temperature, keeping in mind that the subfloor is usually cooler than the air (N). Once the first row

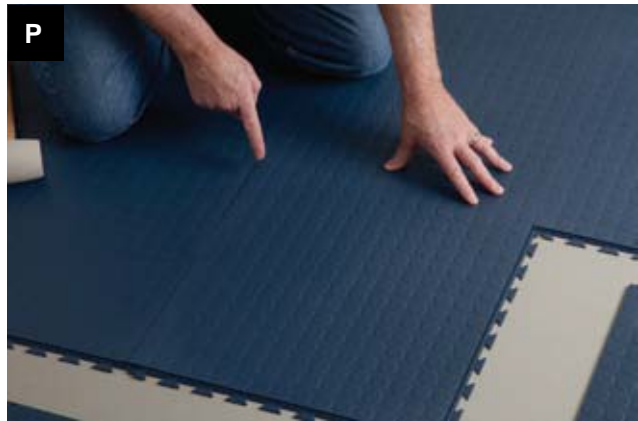




of tiles are installed and straight, "rack" as many rows of tile as possible. Racking is laying the tiles on the subfloor in the direction they will be installed and butted up to each other. This allows the tiles to become the temperature of the subfloor and also speeds up the installation process.

Line up the tabs at the corner to help align the Tuff-Seal joining system (O). Check to be certain the corner is down tight and flush before tapping in the sides (P). using a hard, no-bounce rubber mallet, tap tile together starting from the corner and working your way to the outside (Q).

Install one row at a time, completing each row before beginning the next.



**Installation: Joint-glued (adhering one tile joint to the next tile joint)**

For certain applications it may be useful to adhere the Tuff-Seal interlock (tile-to-tile). If you choose this option, apply a thin bead of adhesive to the joint (R) and a dot of adhesive to the corner of each male tab (S/T) and immediately connect the tiles while the adhesive is wet.

**Installation: Full-spread (adhering the tile to the subfloor)**

For certain applications, adhering the entire floor to the subfloor may be advantageous. For full-spread installation use FA720 adhesive applied



with a 1/16 inch “u-notch” trowel. On a full-spread application, conventional subfloor preparation is required. Moisture emission should not exceed 5 lbs per 1000 sq. ft. per 24 hours and a maximum In-situ relative humidity of 90%.

## **Installation: Finishing**

### **EXCESSIVE FLUIDS**

If you masked the subfloor as described on page 4, finish the process by caulking the gap between the wall and the tile using a polyurethane or acrylic caulk commonly found at hardware outlets **(U)**.

Install wall base so that it barely rests on top of the tile and does not restrict the tiles ability to expand and contract **(V)**.

## **Installation: Reducer strips**

Color-matched, 1 ½ inch wide reducer strips are available. To install a reducer strip, apply FA105 adhesive (included) to the flange of the reducer strip **(W)** and slide it under the edge of the tile until the inside edge of the flange and the outside edge of the tiles touch **(X)**. Roll the edge with a hand roller to ensure proper adhesion. Do not glue the reducer to the subfloor.

## **Care & Maintenance**

Tuff-Seal Interlocking Floor Tile is compatible with most normal maintenance practices. The procedures you choose should be based on the size of the area installed, the gloss level you prefer (high or low gloss), the type maintenance equipment you plan to use.

### **Initial cleanup and maintenance**

1. Remove all surface soil, debris, sand and grit by sweeping, dust mopping or vacuuming
2. Scrub the floor with a neutral pH (7-8.5) detergent
  - Apply cleaning solution with a mop/bucket, scrub with rotary scrubber with soft nylon brushes or automatic scrubber with soft nylon brushes
  - Pick up solution with wet-vac or mop/bucket
  - Rinse with clean water, allow to dry
3. Then apply option 3A or 3B
  - Option 3A: Apply floor finish
    - Apply 3-4 thin coats of high quality,

commercial, acrylic floor finish with clean finish mop or applicator

- Allow 30 minutes dry time between each coat

Option 3B: Dry maintenance method

- Spray, clean and buff using a rotary machine (175-1500 rpm) with an appropriate pad and spray buff solution.

### **Regular maintenance (as often as required)**

1. Remove all surface soil, debris, sand and grit by sweeping, dust mopping or vacuuming

Option 1A: Dry maintenance method

- Spray, clean and buff using a rotary machine (175-1500 rpm) with an appropriate pad and spray buff solution.

option 1B: Wet maintenance method

- Scrub or mop with neutral pH (7-8.5) detergent. If floor is exposed to grease or oil, use a degreasing detergent

- Apply cleaning solution with a mop/bucket, scrub with rotary scrubber with soft nylon brushes or automatic scrubber with soft nylon brushes

- Pick up solution with a wet vac or mop/bucket

- Rinse with clean water, allow to dry

### **Periodic scrub and recoat**

1. Remove all surface soil, debris, sand and grit by sweeping, dust mopping or vacuuming

- Heavy scrub using rotary scrubber or automatic scrubber with scrubbing pad and double- strength neutral pH (7-8.5) detergent

- Pick up solution with a wet vac or mop/bucket

- Rinse with clean water, allow to dry

2. Apply floor finish (optional)

- Apply 1-2 thin coats of high quality, commercial, acrylic floor finish with clean finish mop or applicator

- Allow 30 minutes dry time between each coat

Greatmats does not warrant or guarantee any maintenance products or their performance.

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