

Installation & Maintenance Instructions Tuff Roll / Tuff Lock

I. Job Site Conditions

1. Installation should not begin until after all other trades are finished in the area. If the job requires other trades to work in the area after the installation of the floor, the floor should be protected with an appropriate cover. Kraft paper or plastic work well.
2. Areas to receive flooring should be weather tight and maintained at a minimum uniform temperature of 65°F (18 OC) for 48 hours before, during and after the installation.

II. Sub Floors

Kiefer's Tuff-Roll & Tuff-Lock Tiles may be installed over concrete, approved Portland-based patching and leveling materials such as Ardex K-15 or equivalent, and wood.

Note: Ardex Engineered Cements 400 Ardex Park Drive Aliquippa, PA 15001 (724)203-5000.

NOTE: Gypsum-based patching and leveling compounds are not acceptable.

1. Wood Sub floors –Wood sub floors should be double construction with a minimum thickness of 1 inch. The floor must be rigid, free from movement with a minimum of 18 inches of well-ventilated air space below.
2. Underlayments- The preferred underlayment panel is APA Underlayment Grade plywood, minimum thickness of one-quarter inch, with a fully sanded face.
3. Concrete Floors – Concrete shall have a minimum compressive strength of 3000 psi. It must be fully cured and permanently dried.

III. Sub Floor Requirements and Preparation

1. Sub floors shall be dry, clean, smooth, level and structurally sound. They should be free of dust, solvent, paint, wax, oil, grease, asphalt, sealers, curing and hardening compounds, alkaline salts, old adhesive residue and other extraneous materials, according to ASTM F710
2. Sub floors should be smooth to prevent irregularities, roughness or other defects from telegraphing through the new flooring. The surface should be flat to the equivalent of 3/16" (48mm) in 10' (3.0m).
3. Mechanically remove all traces of old adhesives, paint or other debris by scraping, sanding or scarifying the substrate. Do not use solvents. All high spots shall be ground level and low spots filled with an approved Portland based patching compound.
4. All saw cuts (control joints), cracks, indentations and other non-moving joints in the concrete must be filled with an approved Portland-based patching compound.
5. Expansion joints in the concrete are designed to allow for expansion and contraction of the concrete. If a floor covering is installed over an expansion joint, it will likely fail in that area. Use expansion joint covers designed for resilient flooring.
6. Always allow patching materials to dry thoroughly and install according to the manufacturer's instructions. Excessive moisture in patching material may cause bonding problems or a bubbling reaction with the E-Grip II adhesive.,
7. Maximum moisture vapor emission of the concrete must not exceed 5'12 lbs. per 1,000 square feet in a 24-hour period, as measured by the calcium chloride moisture emission test conducted in accordance to ASTM F-1869. If the emissions exceed limitations, the installation should not proceed until the problem has been corrected.
8. It is essential that pH tests be taken on all concrete floors. If the pH is greater than 9, it must be neutralized prior to beginning the installation.

9. Adhesive bond tests should be conducted in several locations throughout the area. Glue down 3'x3' test pieces of the flooring with the recommended adhesive and trowel. Allow to set 72 hours before attempting to remove. A sufficient amount of force should be required to remove the flooring and, when removed, there should be adhesive residue on the sub floor and on the back of the test pieces.

HAZARDS:

SILICA WARNING –Concrete, floor patching compounds, toppings and leveling compounds can contain free crystalline silica. Cutting, sawing, grinding or drilling can produce respirable crystalline silica (particles 1-10 micrometers). Classified by OSHA as an IA carcinogen, respirable silica is known to cause silicosis and other respiratory diseases. Avoid actions that may cause dust to become airborne. Use local or general ventilation or provide protective equipment to reduce exposure to below the applicable exposure limits.

ASBESTOS WARNING – 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 the asbestos content. Consult the document “Recommended Work Practices for Removal of Existing Resilient Floor Coverings” available from the Resilient Floor Covering Institute.

LEAD WARNING – 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 State Department of Housing and Urban Development.

IV. Material Storage and Handling

1. Material should be delivered to the job site in its original, unopened packaging with all labels intact.
2. Inspect all materials for visual defects before beginning the installation. No labor claim will be honored on material installed with visual defects. Verify the material delivered is the correct style, color and amount. Any discrepancies must be reported immediately before beginning installation.

3. The material and adhesive must be climatized at room temperature for a minimum of 24 hours before starting installation.
4. All Tuff-Rolls must be unrolled and installed in the same direction. (Directional markings are stamped on the bottom of the rolls). All of the rolls are labeled with batch and roll numbers. Do not mix different batch numbers and install the rolls in consecutive order based on roll numbers.
5. Roll material is stretched slightly during the manufacturing process. At the job site, the installer should allow all cuts to relax for a minimum of two hours before installing.

V. Installation-Roll Material

1. Make the assumption that the walls you are butting against are not straight or square. Using a chalk line, make a starting point for an edge of the flooring to follow.
2. Remove the Tuff-Roll from the shrink-wrap and unroll it onto the floor. Lay the Tuff-Roll on the floor in a way that will use your cuts efficiently. Cut all rolls at the required length, including enough to run up the wall.
3. Allow the cuts to relax in position for a minimum of two hours.
4. Place the edge of the first roll along the chalk line.
5. Position the second roll with no more than a 1/16" overlap over the first roll at the seam. Work the material back to eliminate the overlap. This procedure will leave tight seams and eliminate any gaps.
6. Repeat for each consecutive roll necessary to complete the area or those rolls that will be installed that day.

VI. Installation-Method 1 Glue Down

1. After performing the above procedures, begin the application of the adhesive. We recommend E-Grip II, a one-component moisture-cured polyurethane adhesive. E-Grip II should not be mixed. It is specially formulated for use right out of the pail. Apply E-Grip II to the substrate using a 1/16" square-notch. Replace the trowel with each pail of adhesive or more frequently if the trowel begins to wear down.

2. Fold over the first drop along the wall (half the width of the roll).
3. Spread the adhesive using the proper size trowel notch. Take care not to spread more E-Grip II than can be covered with flooring within 30 minutes. The open time of the adhesive is 30-40 minutes at 70°F and 50% relative humidity.

NOTE: Temperature and humidity affect the open time of the adhesive. Temperatures above 70°F and/or relative humidity above 50% will cause the adhesive to set up more quickly. Conversely, temperature below 70°F and/or relative humidity below 50% will cause the adhesive to set up more slowly. The installer should monitor the on-site conditions and adjust the open time accordingly.

4. Lay the flooring into the wet adhesive. Do not allow the material to “flop” into place; this may cause air entrapment and bubbles beneath the flooring.
5. Immediately roll the floor with a 100 lbs. roller to ensure proper adhesive transfer. Overlap each pass of the roller by 50% of the previous pass to ensure the floor is properly rolled. Roll the width first and then the length.
6. Fold over the second half of the first roll and half of the second roll. Spread the adhesive. Spread the adhesive at right angles to the seam to prevent the adhesive from oozing up through the seam. Roll the flooring.
7. Continue the process for each consecutive drop. Work at a pace so that you are always folding material back into wet adhesive.

NOTE: Never leave adhesive ridges or puddles. They will telegraph through the material.

8. Do not allow E-Grip II to cure on your hands or the flooring. Immediately wipe off excess adhesive with a rag dampened with mineral spirits! Cured adhesive is very difficult to remove from hands. We strongly suggest wearing gloves while using E-Grip II!
9. If some seams are gapping, temporarily hold them together with masking tape. Do not use duct tape as it may leave a residue on the floor. Remove the tape after the adhesive develops a firm set.

10. Keep traffic off the floor for a minimum of 24 hours. Foot traffic and rolling loads can cause permanent indentations in the uncured adhesive.

VII. Installation-Method 2 Tape Down

1. Dry lay the rolls onto the sub floor.
2. Draw a pencil line beneath all seams to be taped.
3. Use a high-quality double-faced carpet tape with a minimum width of two inches.
4. Fold over the first drop along the wall (half the width of the roll).
5. Apply two strips of the double-faced tape along the seam, one on each side of the pencil mark.
6. Remove the release paper and place the flooring onto the exposed tape.
7. When butting one roll next to another, overlap the seams by no more than - 1/16". Work the material back to eliminate the overlap. This procedure will leave tight seams over the tape and eliminate any gaps.
8. Hand-roll the seams to ensure adequate contact. Do not roll the entire floor.

VIII. Installation-Tiles

1. General: Make sure all material is from the same batch number. Mix tiles from several boxes or skids. Ensure that moisture, pH, and bond tests have been conducted with passing results. Ensure that jobsite and sub floor conditions are met.
2. Measure the width of the area to be covered.
3. Mark the center of the area at two points, one at each end.
4. Snap a chalk line, line #1, through these two points.
5. Determine the center point of the chalk line.
6. Using a Carpenter's square or another method, snap a second chalk line, line #2, perpendicular (at 90 degrees) to the first line. The lines should intersect at their centers.

7. The area to be covered is now divided into quarters. Begin the installation at the center of the area, where the two lines intersect. Tuff –Lock tiles must be installed in the same direction. (Directional markings stamped on the bottom of the tiles must point in the same direction).

MAINTENANCE

STEPS	CLEANING PRODUCTS	DILUTE Oz./gal.*	APPROX. COVERAGE Sq. ft. / gal. *	EQUIPMENT
Initial/Daily Cleaning	Neutral Cleaner (TASKI Profi)	6 –8 oz. / gal.	250 sq. ft. / gal.	* Lint free mop or scrubbing equipment (buffing machine or auto scrubber with a soft nylon brush or contact pad) High CFM* wet/dry vacuum
Heavy Soil	Neutral Cleaner (TASKI Profi)	15 min. oz. /gal.	250 sq. ft. /gal.	*Buffing machine or auto scrubber with a soft nylon brush or contact pad High CFM* wet/dry vacuum
Restorative Maintenance	Floor Stripper (TASKI Ice It)	10 oz. / gal.	250 sq. ft. / gal.	*Buffing machine or auto scrubber with a soft nylon brush or contact pad High CFM* wet/dry vacuum

*The application rates and concentrations are based on Taski recommendations. For rates and concentration of other products, consult the specific manufacturer’ instructions.

**High Cubic Foot per Minute (CFM) vacuums recommend minimum 1.7 horsepower, 5 amp 50/60 HZ two-stage 120 volt a/c with 5 gallon minimum capacity tank.

IX. Cleaning Procedures-Initial /Daily Cleaning

1. Remove all surface soil, debris, sand and grit by sweeping, dust mopping or vacuuming with a high CFM vacuum. For large and high traffic areas, use commercial floor scrubbing equipment to clean floors.

2. Scrub floor with a neutral pH (7-9) detergent, such as TASKI profi™ cleaner (6-8 oz/gal of water), using a buffer or auto scrubber with a soft nylon brush or a contact pad.
3. Pick up the dirty solution with wet vacuum.
4. Rinse with clean water, picking up the rinse water with a wet vacuum
5. Repeat until the removed rinse water is clear.
6. Allow to dry thoroughly (6-8 hours).

X. Cleaning Procedures-Heavy

1. Same as “IX Initial/Daily Cleaning” except use higher concentrations of neutral cleaner (such as Taski profi at minimum concentration of 15 oz. Per gallon of water).

XI. Cleaning Procedures-Restorative Maintenance

1. Remove all surface soil, debris, sand and grit by sweeping, dust mopping or vacuuming with a high CFM vacuum.
2. Scrub floor with a commercial floor stripper, such as TASKI Ice It™ using a buffer or auto scrubber with a soft nylon brush or stripping pad. Avoid flooding the floor.