

## 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 protective cover.
2. Areas to receive flooring should be weather tight and maintained at a minimum uniform temperature of 65°F (18°C) for 48 hours before, during, and after the installation.

## II. SUBFLOORS

1. Amarco Products Pro Turf Rubber Backed Turf Flooring may be installed over concrete, approved Portland- based patching and leveling materials, and wood.

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

2. Wood Subfloors – Wood subfloors should be double construction with a minimum thickness of one inch. The floor must be rigid and free from movement with well-ventilated air space below.
3. Underlayments – The preferred underlayment panel is American Plywood Association (APA) underlayment grade plywood, minimum thickness of 1/4-inch, with a fully sanded face.

**NOTE: Particleboard, chipboard, Masonite and lauan are not considered to be suitable underlayments.**

4. Concrete Floors – Concrete shall have a minimum compressive strength of 3000 psi. New concrete slabs should cure for a minimum of 28 days before installing . It must be fully cured and permanently dried.

## III. SUBFLOOR REQUIREMENTS AND PREPARATION

1. Subfloors should 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. Subfloors 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" (4.8 mm) in 10' (3.0 m).
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 adhesive.

#### **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 so it's 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, beadblast, 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 States Department of Housing and Urban Development.

7. Moisture must be measured using the RH Relative Humidity test method per ASTM F2170 standard. Moisture content should not exceed 85% RH. If the levels exceed the limitations, the installation should not proceed until the situation has been corrected.
8. In the event that a moisture mitigation system is required, it must conform to the ASTM F3010 Standard Practice for Two-Component Resin Based Membrane Forming Moisture Mitigation Systems for use Under Resilient Floor Coverings.
9. 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.
10. Adhesive bond tests should be conducted in several locations throughout the area. Glue down 3' x 3' test pieces of the flooring with the recommended adhesive and trowel. Allow to set for 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 subfloor and on the back of the test pieces.

#### **IV. MATERIAL STORAGE AND HANDLING**

1. Material should be delivered to the job site in its original, unopened packaging with all labels intact.
2. Roll material should always be stored laying down. Storing rubber on end will curl the edges resulting in permanent memory of the material. All edges with memory curl must be straight edge cut before installation. Do not store rolls higher than 4 rolls or for more than six months. Material should only be stored on a clean, dry, smooth surface.
3. **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.**
4. The material and adhesive must be acclimated at room temperature for a minimum of 48 hours before starting installation.

5. All Pro Turf rolls must be unrolled and installed in the same direction. See diagram 1. Laying rolls in the opposite direction can cause color variations between the rolls.

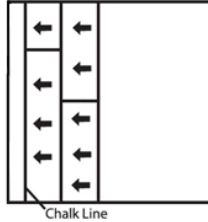
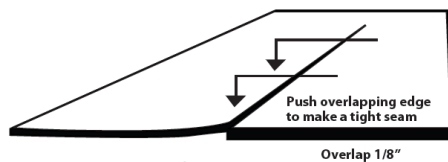


Diagram 1

6. Roll material is stretched slightly during the manufacturing process. At the job site, the installer should unroll all cuts and allow to relax overnight. A bare minimum of two hours is required. Shaking the material once it is unrolled can help it to relax.

## 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. The chalk line should be set where the first seam will be located.
2. Remove the Pro Turf from the shrink wrap and unroll it onto the floor. Lay the rubber 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 a few inches.
3. If end seams are necessary, they should be staggered on the floor and overlapped approximately 3". End seams will be trimmed after acclimation period using a square to ensure they fit tightly without gaps.
4. After rough cutting, allow the cuts to relax in position for a minimum of two hours, but 24 hours is preferred.
5. After allowing the flooring acclimate and relax you may begin the installation.
6. Align the first edge to the chalk line. It is very important that the first seam is perfectly straight.
7. Position the second roll with no more than a 1/8" overlap over the first roll at the seam. After adhesive is applied to substrate the material will be worked back to eliminate the overlap. This procedure will leave tight seams and eliminate any gaps. Care should be taken to not over compress the seam. Over compressed seams will cause peaking.



8. Repeat for each consecutive sheet necessary to complete the area or those rolls that will be installed that day.



## VI. INSTALLATION - GLUE DOWN

1. After performing the above procedures, begin the application of the adhesive. We recommend a one-component moisture-cured polyurethane adhesive. Apply adhesive to the substrate using a 1/16" square- notched trowel.
2. Fold over the first drop along the wall (half the width of the roll).
3. Spread the adhesive using the proper size square-notched trowel. Take care not to spread more adhesive 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.
4. 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. Temperatures 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.
5. 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.
6. Immediately roll the floor with a 75–100 lb. 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. Roll again within the first 60 minutes.
7. 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 ensure 100% coverage across the seam. Roll the flooring.
8. Continue the process for each consecutive drop. Work at a pace so that you are always folding material back into wet adhesive.
9. Do not allow adhesive to cure on your hands or come in contact with the finished flooring. Immediately wipe off excess adhesive with a rag dampened with mineral spirits! Cured adhesive is very difficult to remove from hands.
10. In some instances, it may be necessary to weigh down the seam until the adhesive develops a firm set. Keep traffic off the floor for a minimum of 24 hours. After installation, floor should be free from rolling loads for a minimum of 48-72 hours. Foot traffic and rolling loads can cause permanent indentations or bond failure in the uncured adhesive.
11. Where a transitional molding is required, Amarco Products offers a straight transition option. Molding size is 48" x 4" x 3/4" and may be secured using a high quality double-face tape.

**The following procedures are key in helping to preserve your Turf.**

<b>I.</b>	<b>Keep it clean</b>
<b>II.</b>	<b>Brush periodically</b>
<b>III.</b>	<b>Do not abuse</b>
<b>IV.</b>	<b>Report any problems promptly</b>

## I. Keep it clean

### 1. Dust, pollen, and airborne pollutants

For lightly soiled areas, it may be necessary to use a rectangular microfiber mop with three (3) ounces of Amarco A-Cleaner per gallon of water. For heavily soiled areas, repeat procedure using a three (3) percent solution of household ammonia in warm water followed by a thorough rinsing with warm water. A wet vacuum can be used to remove excess water from the surface.

### 2. Stains and other blemishes

The first rule is promptness. It is always easier to clean up a fresh spill than one that has dried and hardened. Remove any solid or paste-like deposit with a spatula or table knife. Blot up excess liquids with paper towels, a clean cloth, or a dry absorbent, such as kitty litter or fuller's earth. Dry absorbents can then be vacuumed up afterwards.

Synthetic fibers have high resistance to staining. However, it is important to realize they are only one part of a sophisticated system of various components designed for overall performance. Some cleaning agents safe for the face fibers can be harmful to other components of the Turf system. Therefore, cleaning agents are grouped into two sets, one of which can be used in liberal amounts directly on the Turf surface, and the second of which should only be applied by rubbing a cloth lightly soaked in the cleaner in order to minimize penetration of possible harmful agents below the Turf surface. In the first group of cleaners which generally can be applied without any special precautions are the following:

- A warm, mild solution of granular household detergent or any low sudsing detergent for fine fabrics. Use approximately one teaspoon to one pint of water. This will handle most waterborne stains including:

Coffee	Cola	Tea	Blood
Ketchup	Milk	Ice Cream	Urine
Mustard	Cocoa	Butter	Dye
Fruit juices	Vegetable juices	Glue	Latex paint

- A three (3) percent solution of ammonia in water may be used in lieu of household detergent for more stubborn stains.
- Do not use cleaners that contain chlorine bleaches or caustic cleaners (ph above 9) or highly acidic cleanses (ph below 5). Use only neutral cleaners such as A-Cleaner provided by Amarco Products.
- Rinse area thoroughly with clean warm water to remove any traces of soap or ammonia
- Blot up excessive liquid.

The second group of cleaners, where agent must be applied sparingly and care taken to avoid penetration beneath the Turf are the following:

- Mineral spirits or a grease spot remover like perchlorethylene (dry cleaning solution) of the type sold by most variety stores and supermarkets. In general, cleansers in this category should handle most oil-based stains including:

Asphalt	Motor oil & grease	Chewing gum	Lipstick
Tar	Suntan oil	Crayon	Nail polish
Shoe polish	Cooking oil	Ballpoint ink	Floor wax

**Caution:** mineral spirits and other petroleum based solvents are flammable. Do not smoke or permit open flames near where these are being used.

Be sure the area is well ventilated where solvent cleaners are used and remember to use sparingly.

3. Animal waste

Neutralize with mixture of white distilled vinegar in an equal amount of water. Flush thoroughly with water after application. And vacuum up excess solution with a wet vacuum.

4. Chewing gum

In addition to dry cleaning fluid, chewing gum can be removed by freezing. Aerosol packs of refrigerant are available from most carpet cleaning suppliers for this purpose, or dry ice can be used. After freezing, scrape with a knife.

5. Fungus or mold spots

A one (1) percent solution of hydrogen peroxide in water can be sponged on to the affected area. Flush thoroughly with clean water after application.

**II. Periodic brushing**

1. Matting of fibers may occur in areas of high foot traffic, especially if fibers have become soiled with dirt and other airborne pollutants.
2. Periodic "cross brushing" of the Turf can help restore the aesthetic appearance of the Turf. "Cross brushing" means all brushing activity takes place against the grain, nap, or sweep of the Turf fibers. By brushing against the Turf, the fibers are "fluffed up". A brush with synthetic bristles should be used. Never use a brush with metal or wire bristles as these will change the Turf fibers.

**III. Do not abuse**

Although Turf is made of tough, durable fibers, certain precautions should be taken to prevent any damage.

- Lighted cigarettes cannot ignite the Turf, but they can damage the Turf by fusing the tips of the fibers together.
- Furniture and equipment with sharp or jagged edges should not be placed on Turf as this may puncture or tear the Turf.
- Water from sprinkler systems or hard water areas can leave mineral deposits on Turf that may cause discoloration.
- Make sure Turf is not exposed to reflected sunlight windows as this may fuse the Turf fibers together.

**IV. Report any minor problem**

Minor problems can become major problems quickly if not corrected. Any problem should be reported promptly to your Turf dealer.

**V. Conclusion**

The proper care and maintenance program can enhance the aging, usefulness, and aesthetics of Turf.



All Amarco Products Pro Turf flooring is guaranteed to be free from manufacturing defects on both material and workmanship. If such a defect is discovered, the customer must notify Amarco Products either through the contracting installer, distributor, or directly. If found to be defective within five years under normal non-abusive conditions, the sole remedy against the seller will be the replacement or repair of the defective goods, or at the seller's option, credit may be issued not exceeding the selling price of the defective goods.

Pro-Turf warranty shall not cover dissatisfaction due to improper installation, normal wear, damage from improper maintenance or usage, or general misuse, including and without limitation: burns, cuts, tears, scratches, scuffs, damage from rolling loads, damage from cleaning products not recommended by Amarco Products, slight shade variations or shade variations due to exposure to direct sunlight, or differences in color between samples or photographs and actual flooring.

### **I. Items Under Warranty:**

1. WEAR – Amarco Products warrants that Pro Turf products will not wear more than 10% of its surface pile weight from abrasive wear for 5 years from the date of installation. By abrasive wear is meant fiber loss from the wear layer through normal abrasion, not crushing or flattening of the fiber surface pile in any area, nor due to abnormal usage of the fiber surface.
2. EDGE RAVEL – Amarco Products warrants that Pro Turf products will not edge ravel along seams for 5 years from the installation of the product.
3. DELAMINATION – Amarco Products warrants that Pro Turf products will not delaminate for the 5 year warranty period of the fiber surface when maintained according to our published procedures. Delamination warranty excludes roll edges that have been modified by cutting and exposed in open areas where not properly protected by an edge molding.

### **II. Limitations – This warranty does not include:**

1. Disfigurement or damage caused by abnormal use or any damage to the Pro Turf not arising out of a defect to our product. For example, the warranty does not cover tears, burns, cuts, installation on stairs or damage in transit.
2. Differential fading due to light exposure, shading, pile crush, dye lot differences and soiling.
3. Any condition that would have had a visible defect upon inspection prior to installation.
4. Damage to Turf from any use for which the product was not designed.
5. The exact matching of shade or color.
6. Any express or implied promise made by any salesman or representative.
7. Tears, burns, cuts or damage due to improper installation, improper use or improper cleaning agents or maintenance methods.
8. Labor costs for installation of original or replacement material.
9. Sale of "Remnants", "Seconds", "Off Goods" or other irregular (non-first-quality) flooring materials. With respect to "Seconds", "Off Goods", or "Remnants" such are sold "as is," and Amarco Products makes no warranties whatsoever, express or implied with respect thereto, including warranties of merchantability or fitness for a particular purpose.
10. Problems caused by moisture, hydrostatic pressure, or alkali in the sub-floor.
11. Problems caused by uses, maintenance, and installation that are contrary to Pro Turf specifications, recommendations or instructions.
12. Material installed outdoors.
13. Material installed with obvious defects.





14. Material that is not installed and maintained as recommended by Amarco Products
15. Damage to flooring products from pallet jack and tow-motor or vehicular traffic.
16. Environments where the product will be exposed to animal fats, vegetable oils, grease or petroleum based materials. (i.e.: commercial kitchens or auto repair facilities.)
17. Premature wear and deterioration from spikes or natural grass cleats.
18. Differences in color between products and photography.

### **III. Obligations of Owner**

1. The Owner must submit notice of all claims under this limited warranty to Amarco Products within the specified warranty period.
2. All areas in which flooring is to be replaced under the terms of this limited warranty must be cleared of all equipment, furnishings, partitions, and the like that have been installed over the flooring subsequent to the original product installation, at the owners expense.

### **IV. Warranty Remedies**

1. After receipt of proper written notice of the claim, Amarco Products will designate a representative to inspect that product with the Owners representative and Amarco Products will meet all warranty obligations.
2. Subject to any monetary adjustment as may be agreed to upon in writing by Amarco Products, and subject to the above warranty limitations and Owner obligation. Amarco Products shall repair or, in its sole discretion, replace any designated Pro Turf products sold by it containing a defect covered by the above limited warranty, at no expense to the owner, excluding labor.
3. Any replacement will be made with a comparable product selected by Amarco Products from the then-current Amarco Products running line. However, Amarco Products' obligation shall not include the reimbursing of any indirect costs or consequential damages, however, incurred. By way of example, and not limitation, damages arising from interruption of use of the spaces affected, nor expenses in removing furniture from the affected area be included in our obligation.

These warranties are in lieu of any other warranty expressed or implied. Amarco Products shall not be liable for any incidental or consequential damages which may result from a defect. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

These warranties give you specific rights, and you may also have rights which may vary from state to state. To know what your legal rights are in your state, consult your local or state Consumer Affairs Office or your State Attorney General.