

Let's Talk Resilient

Posted: January 1, 2007

Step Lightly: Questions to Ask and Tips for Installing Resilient Stair Treads



A beautiful installation of rubber stair treads with matching risers and landing tile. Photo courtesy of Roppe.

If you have never installed resilient stair treads before, there are a few questions to ask before even pricing out the job and a number of things to know about stair treads before you start the job. Like any product that is new to you, it may seem intimidating but they are not that hard to install with a little advance preparation and knowledge. Take the time to do the job correctly because the last thing anyone wants is to be responsible for someone who trips down the stairs because of a loose tread.

Resilient stair treads have been around for a long time, and are a tough, durable and safe covering for stairs from heavy duty to light usage. There are two types (rubber and vinyl), two shapes (round nose or square nose), two different constructions (one piece tread and riser or separate tread and riser), and a variety of surface textures (diamond, ribbed, circular, smooth, etc.). In commercial use, rubber treads are the most commonly used and vinyl treads tend to be for light duty use such as residential basement stairs or lightly used hotel stairways. There are several questions to ask before taking on a stair tread job.

Preparation?

Before accepting the job, I recommend going to have a look at the stairs. Even on new construction there may be preparation involved, and like any other resilient flooring material, that can add up to a lot of time. Having a look may prevent you from under charging for the time needed to do the job right.

The steps must be clean and smooth before installing the treads. Paint, spackle, old adhesive, dirt or other foreign material have to be cleaned off because these can interfere with adhesive bond. Any high spots should be carefully sanded or ground down and on wood steps, countersink any nails and re-nail or replace any loose boards. Any low or rough spots need to be filled with a high quality patching compound that is made for heavy duty traffic. Don't scrimp on this part of the job because the steps will take a pounding like no other floor covering. Follow the mix ratio of water to powder to the letter so the patch dries hard and is not too porous or dusty. On metal, ceramic or terrazzo stairs, check with the manufacturer on how to prepare the substrate. Chances are they will recommend you clean the surface by wire brush, sanding or other mechanical methods, and it may be necessary to prime the surface before you start. As far as going over existing resilient flooring on steps, the word is don't. None of the manufacturers I checked with recommend this application.

Adhesive?



Stair nosings are installed much like stair treads and have added strength if epoxy is used at the nose. In this installation, 1/8" VCT is used with rubber stair nosings and risers.

Another question to ask is how much time the stairs will have between the time you install the stair treads and the time they go into use. This may make a difference in what type of adhesive gets used. On jobs where you need a quick turnaround, the tape system may be the best option because there is no waiting once the treads are installed. I've also heard of installers using contact adhesive in such cases, but with the odor and flammability of solvent based contact, I would try to stay away from this method for health and safety's sake.

The other option is a standard adhesive type of installation, which allows the installer a little more flexibility in being able to move the tread around once it is set in the adhesive, but also requires that nobody walk on the stairs for at least 12 hours or so.

Knowing which of the adhesive systems you'll use will also have an impact on pricing the job, and because there are different formulations of stair treads, compatibility of the tread material and the adhesive is best assured by using only the adhesive that is specified by the manufacturer. Before even ordering the job, check with the manufacturer to decide which system is right for you and for the job.

Conditions?

All materials and adhesive should be delivered to the job site two days in advance so they can acclimate to job site conditions, which should be 65 to 80 degrees Fahrenheit, just like any other resilient flooring material. In the winter, make it three days just to be sure.

On new construction sites it may be necessary to have that friendly chat with the general contractor about job site conditions and temperature. There is no way around it – floor covering adhesives are made to work in a certain temperature range and if you attempt a job where you are too far out of that range, the adhesives may need more or less time to cure than they should, or they may not cure properly at all.

The Nose?

The most important part of the preparation of a step is the nose itself – the very edge of the step where feet hit as people are walking up. If this edge is damaged or wavy, this will be a point of weakness that could cause the tread to crack and might cause someone to trip. One of the unique parts of stair tread installation is the use of epoxy nose filler, also called nose caulk. This is not an epoxy adhesive that is used to adhere the treads, but is filler used at the nose of the step to fill in any voids between the edge of the step and the nose of the tread. However, if the nose is severely damaged, nose filler is not going to fix that so it may be necessary to use a heavy duty patching compound to fix the nose before installing the treads. If the tread cannot be installed with a relatively tight fit at the nose, don't proceed with the installation.



There are some stair tread manufacturers who have such confidence in their products that they are sold as not needing epoxy at the nose. This is a real time savings for the installer, but make sure that step is in good condition so you have a tight fit. Personally, I feel better knowing that epoxy is there so that the installation is solid as a rock. Call me old fashioned.

When installing with the tape system, remove the release paper from the back of the tread after the epoxy nose filler is applied and after the release paper has been removed from the nosing. Photo courtesy of Johnsonite.

Width?



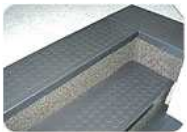
This is a nice use of two colors of stair tread material and rubber tile on the landing. This photo also shows one way of seaming a stair tread with the seams placed out of the traffic area. Photo courtesy of Roppe.

Many treads come in widths up to nine feet, so most steps can be installed seamless. However, since wide width treads don't come in every design, it may be a good idea to bring this to the attention of the customer or the specifier, as they may be willing to compromise on the section in order to have a seamless tread on the job. However, if that's not an option and the step will have a seam, make sure the job is ordered with a left half and a right half so the pattern will match, and get a sign off on where the treads will be seamed. I prefer to have the seam off to the side and out of traffic if possible, which may mean the wide treads have to run up the center of the steps and have one seam on each side.

Angled riser?

Newer stairwells are designed with the riser at a slight angle back, for less of a tripping hazard. You may hear this referred to as an "ADA Step", for the Americans with Disabilities Act. Many treads for this type of step are either manufactured with a slight angle to the nose, or they have a notch at the nose so the tread will bend, almost like a hinge. If neither of these is the case, the installer will have to cut a notch in this location so that the nose will bend, so it pays to order the treads to fit the riser.

Installing the treads



This rubber stair tread was properly trimmed to butt up to 1/8" VCT in the corridor at the top of the stairs. This is also a nice use of stair treads with carpet as the riser material.

Assuming you've asked all these questions, you've gotten the job and worked out the details, it's time to install the treads. The first thing to be concerned about is handling and storage of the treads, which needs to be done very carefully. Make sure the boxes are stored flat to prevent any distortion of the tread itself. If they are bent or folded, they can become wavy and may not lay flat on the step. It will be very difficult to install these treads if you try it at all. Remember, deliver the materials and adhesive to the job site two days in advance so they can acclimate. In the winter, make it three days just to be sure.

Stair tread installation, although different from installing tile or sheet goods, is not that difficult. There are some variations in instructions among the different manufacturers, so make sure you read the installation instructions before heading out to the job.

Every tread needs to be cut to size before the adhesive is spread. You can't assume that every step in the flight is the same size, so measure each step individually. Take careful measurements of each step at the nosing and at the back of the step where it meets the riser. If you are using the one piece tread/riser, measure the riser also. If the sides are not straight, scribe the step in using dividers, or make a pattern. For cutting, a utility knife with a new

blade works well, although on large installations, the use of a saw may make this process easier. After cutting, mark each tread so you know which tread goes on which step.

Once all of the treads are cut, apply the adhesive or the tape according to manufacturer's instructions. After the adhesive is spread or the tape is in place but just before setting the tread, apply the epoxy nose filler to the inside of the tread itself. Then hold the tread up, set the nose first, and then work your way back. If using the tape system, apply the epoxy nose filler, remove the release paper from the nosing and set the tread against the step edge. Then fold the tread back carefully and remove the release paper from the back of the tread and press the tread onto the step. Whether you use tape or adhesive, a hand roller will make sure the tread makes contact with the adhesive.

After setting the tread, it's a good idea to tape the nosing so that it stays in place until the epoxy has cured. Use a recommended tape like blue masking tape so there won't be a residue left behind. The tape can be removed the next day. Risers are installed in much the same way as cove base - but the adhesive selection will depend on whether the surface of the existing riser is porous or non porous so pay attention to this detail before ordering.

Finishing touches

At the top step, careful attention needs to be paid to what the floor covering will be on the landing or corridor that the stairway leads to. Don't assume the top step will be just another stair tread. Sometimes it is better to use a heavy duty rubber nosing on that top step. For example, a nosing with 1/8" thickness will butt to a 1/8" flooring material such as VCT or rubber tile. This way it looks aesthetically better and is a smooth transition with less of a trip hazard.



The use of epoxy nose filler can prevent cracking of stair treads.

And while we are talking about nosings, they should be treated like stair treads in a lot of ways. If you are doing a job with stair nosings, such as a carpet or VCT step with rubber nosing, it's a good idea to use epoxy nose filler on the job for the same reasons you use it on a stair tread job - added strength and resistance to cracking.

If the landing and the treads will be matching, like in the case of circular design treads, then the top tread must be trimmed correctly so as to match up with the landing. The back section of a raised design tread is often smooth. For example, you'll have the nose, five rows of circles, and then the smooth section that meets the riser. On a landing, the smooth section needs to be cut off to match the pattern with the landing tile. The circles on the tread may not necessarily line up perfectly with the landing tile, but it looks better than leaving that smooth section on. Some treads have a trim mark on the back so the installer can make this cut easily.

Stringers are sometimes used on stair tread installations for a matching look on the side of the steps. This takes careful trimming, and is

best done by making a pattern of cardboard that can then be transferred onto the stringer material.

Some manufacturers have a matching color acrylic caulk available that can be a nice way to fill any gaps in a stair tread installation, such as on the sides where the tread meets the stringer.

Clean up any adhesive residue right away before it has a chance to dry. This is especially important with epoxy, which cannot be removed once it cures.

After installation, it's important to keep traffic off the stairwell for the recommended time period. If the job was done with adhesive, the treads can shift if someone starts walking on the steps too soon after installation.

Although stair tread installation has a lot of detail work, it's not that difficult once you get the hang of it, and as more and more treads are being sold now for safety and aesthetic reasons, it pays an installer to learn how to install these products.
