



mighty mac

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www.mightymacclean.com

(843)842-3994

RIPPLES

Ripples in carpeting are unsightly and can present a trip hazard. If not corrected it can cause permanent pile reversal, delamination and loss of tufts. Ripples can occur in wall to wall carpet installations or in area rugs. They require different processes.

Wall to wall installations

Ripples in carpet can be caused by many factors. To help understand why, you need to understand some of the basics. Carpeting, like most other textiles, is made under tension. Tension is necessary so that the loom will produce a carpet uniform from one portion to the next. Carpeting differs from most textiles in that the backing may be composed of several layers. Wall to wall installations are known as “stretch in” as the carpet is stretched onto tackless (tack) strips beneath the carpet. (In the old days, the carpet was nailed to the subfloor using carpet tacks. The wood tackless strips are filled with small nails or ‘pins’ that grip the backings and allow for a clean look.)



Ripples can be the result of a manufacturing issue. If two adjacent pieces were not manufactured under the same amount of tension, unevenness or rippling can develop. This will also occur if the tensions of the secondary carpet backing is not uniform with the primary backing. These issues will be apparent upon installation and usually require replacing the carpet.

There are installation issues that can cause ripples. Installation standards require the use of a ‘power stretcher’ in addition to a knee kicker in order to properly stretch in the carpet. Carpet will ‘relax’ after installation and if the power stretcher was not correctly used, ripples will quickly result. Carpet can also come off the tackless strips. With nothing to hold it tight, ripples will occur. The remedy is to reattach the carpet to the strips. Occasionally the pins have been damaged and a new strip must be installed.

More often, ripples develop over time. The length (warp) of the carpet is under the most tension during the manufacturing process and ripples usually extend across the width (weft) of the carpet. (See photo)

There are a number of things that can cause ripples.

- 1) Dragging heavy furniture across the carpet.
- 2) Rapid heating and cooling conditions cause uneven expansion and contraction. This could be from turning on the HVAC system after being away for an extended period of time or exposure from the sun from a window.
- 3) Moisture, spills or high humidity causes some fibers to swell relaxing yarns previously held under tension.
- 4) Carpet cleaning can temporarily cause rippling. The photo to the right is an example. This is due to the relaxation of the backings due to the heat and moisture from the cleaning process. Note that the ripples are curved and not straight lines. These should disappear once the carpet dries. If it does not, let us know.





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- 5) Delamination, or the separation of the backings of the carpet, will cause localized rippling in the area of the delamination. The affected area will feel loose or floppy compared to the surrounding carpet. This requires a different process to remedy. (See the last paragraph on this section.)

Getting rid of ripples usually entails re-stretching the carpet. It can be a complicated process. First, the furniture in the room must be removed. We then determine which direction we want to stretch. It is easier to stretch to a blank wall rather than to a wall with fireplaces, book cases, etc. We also have to consider door frame cutouts, seams, HVAC register openings and even things like a column in the middle of a room. We open the seams and use the power stretcher to stretch the carpet. Usually, we have to stretch the entire room, even if the ripples are in one section. What happens is when we stretch the offending section, it causes new ripples to appear like the wake from a boat.

We trim away the excess carpet. We then patch any areas where the stretch has shifted cut outs in the carpet like register openings and door frames and replace any seams. We finish by cleaning the carpet with the hot water extraction process. Cleaning acts like a steam iron on clothes to relax the ripples further.

Delamination ripples are caused by the separation of the backings. The ripples are usually localized to a small area and are easily recognizable by the feel. It will feel weak or floppy compared to the rest of the carpet. If you pick up a tuft, the whole affected area will lift. These are usually caused by spills that damage the latex holding the backings together or inadequate latex usage during the manufacturing process. The fix entails pulling the carpet back and applying new latex to the backings.

Area Rugs

Area rugs can be made using many different processes. Ripples tend to be smaller and are usually the result of shrinkage of the yarns used to make the rugs. The edges tend to not be straight and the whole rug can be skewed.

The process for correcting this is to soak the rug. We then attach the rug to a “portable floor” made of plywood and tackless strips. We stretch the wet rug onto the strips so it is square. When it is dried it retains its original shape much better. Since it is not held under tension, like a wall to wall installation, the situation may redevelop over time.