

Comparison of Carpet Cleaning Methods

There are four basic methods for cleaning carpet:

1. [Carpet Shampooing](#)
2. [Dry Powder Method](#)
3. [Bonnet Cleaning](#)
4. ["External Extraction"® Method](#)

1. Shampoo Method

The theory in the shampoo method is to generate a lot of foam in the carpet, allow this foam to dry, have the resulting residue attract the soil, and vacuum up the residue and soil the next day.

Carpet shampoo products must have the following characteristics which dictate their ingredients:

- Very high foam levels to reduce wetting.
- Very stable foam.
- High lubricity to reduce damage to the carpet fibers from the brushes.
- Dry to a non-sticky residue.

Therefore, a carpet shampoo must contain a very foamy chemical. The most common ingredient is sodium lauryl sulfate or one of its relatives. Sometime when you're taking a shower or bath, look at the ingredient statement on your hair shampoo bottle. It will say "Contains sodium lauryl sulfate" or some similar wording. Sodium Lauryl Sulfate and its relatives exhibit very high and very stable foam and are only fair detergents. The problem is that they dry to a soft, sticky residue which will cause re-soiling.

Because of the re-soiling problem, carpet shampoos will frequently also have anti re-soiling additives such as a resin to reduce this re-soiling tendency.

Because shampoos are actually very poor detergents and basically simply bury the dirt, they frequently also contain high levels of optical brighteners which take invisible ultraviolet light and convert it to visible light, thus making the carpet appear cleaner and brighter than it really is, for a while. It will eventually give the carpet a yellow cast and the yellow cannot be removed.

Two primary types of machines are used for this process:

- Cylindrical Foam
- Rotary Shampoo

The Cylindrical Foam Shampoo machine uses an air compressor to create dry foam before the foam is applied to the carpet and the carpet is then agitated with a revolving cylindrical brush which combs the foam through carpet pile. This method will leave dirt trapped in the carpet pile. Carpet must be thoroughly vacuumed before and after cleaning.

The Rotary Shampoo method uses an ordinary rotary floor machine (the same kind used for stripping wax), sprays shampoo onto the carpet from a dispensing tank, and a rotary brush whips the detergent to a foam. Most carpet mills and carpet fiber producers discourage the use of rotary brushes on carpet because of the potential damage that can occur. Overwetting is common with this method which can cause jute straining, shrinkage, and odor.

Shampoo methods are inferior due to poor cleaning plus re-soiling problems. The Rotary Shampoo method can damage the carpet, especially cut pile (which is what most residential carpet is).

2. Absorbent Cleaners – “Dry Powder Methods”

This method is often called "dry cleaning" since virtually no water is used.

In this method, dry absorbent compound (containing small amounts of water, detergent, and solvent,) is sprinkled over carpet or worked into the carpet with a machine. This purpose of this cleaner is to attract and absorb soil. Mechanical agitation from a brush works the cleaner through the carpet.

These products usually contain an absorbent carrier, water, detergent, and solvent. The theory is that the liquids dissolve the soil and this soil/detergent/solvent mixture is absorbed into the carrier and is then vacuumed up. They are often used with a detergent pre-spray in heavily soiled areas.

The absorbent cleaner most commonly is organic, but may also be polymers. The compound is supposed to absorb the dislodged soil and is then vacuumed away. Carpet must be thoroughly vacuumed before and after cleaning.

Very thorough vacuuming should be used to ensure that most of the carrier comes out of the carpet. With the extremely fine powder types, indoor air quality can be reduced. If a white powder starts appearing on shoes and cuffs of pants, too much was used and it was not thoroughly vacuumed up. A common problem is for this white powder to reappear after wet extraction cleaning.

This cleaning method has the advantage of no drying time for interim maintenance, since little water is used. This makes it a common maintenance cleaner.

Host®, Capture®, Love My Carpet®, Arm and Hammer®, and Carpet Fresh® would be included in this category.

3. Bonnet Method / "Carbonated Cleaning"

This method is sometimes called "dry cleaning", which is a misnomer, since water is used.

Bonnet Shampooing is simply an adaptation of hard floor spray buffing to carpets.

This method for carpet maintenance consists of the use of a rotary or oscillating brush adapted with a stiff brush or drive block designed to drive wet, damp or dry pads. The carpet can be sprayed with

the cleaning solution and/or the pads can be soaked in the cleaning solution and squeezed lightly before placing the pad under the driving brush.

The maintenance brochure published by the world's largest carpet manufacturer, **Shaw Industries**, suggests not using this method, especially on cut pile, due to pile distortion and fiber damage.

This method has very limited capability for soil removal and leaves much of the detergent in the pile since it employs no real extraction. As a result, rapid re-soiling often occurs. Another disadvantage is that the spinning bonnet may distort the fibers of cut pile carpet, fuzzing the pile and leaving distinct swirl marks.

Sometimes, carbonated water is used to (in theory) give better soil suspension and bring down the pH. Companies using this method frequently use "scare" tactics to convince consumers that extraction cleaning or steam cleaning will destroy the carpet.

Check with your carpet manufacturer because many leading carpet mills recommend against this method of cleaning.

4. "External Extraction"[®]

This method is often call "Warm Water Extraction", "Hot Water Extraction" or "Steam Cleaning" and is the cleaning method nearly all carpet manufacturers and carpet fiber producers recommend.

This is the only cleaning method classified as "deep cleaning". All the others are considered "light surface cleaning" because they are incapable of removing soil deep in the pile. Also, all other methods leave large amounts of cleaning agent in the carpet after cleaning.

The maintenance brochure published by the world's largest carpet manufacturer, Shaw Industries, recommends this method, because its own research indicates that it provides the best capability for cleaning.

This method is frequently called "steam" cleaning due to the fine spray of water used to force dirt out of the carpet which is sucked up by the vacuum slot immediately in front of the spray. Seldom is real live steam used, however.

This process consists of spraying a solution of water and detergent into the carpet pile and recovering the water and soil with a powerful vacuum into a holding tank. This can be done from a truck-mounted unit outside the home with only the hose and floor tool brought inside, or by a portable, system brought into the home or office.

From a health standpoint, the truck-mounted system is preferred because the dirty air and humidity are exhausted outside rather than re-circulated around the house. Additionally, truck-mounted systems usually are more powerful than portable units and do a much better cleaning job and get the carpet dry more quickly.

Depending upon the equipment, temperatures may range from cold tap water to boiling hot water and even super heated water over 200 degrees F. Of course, with extremely high temperatures, there are dangers of scalding should a solution line break. However this rarely, if ever happens.

General Comments on Carpet Care

The choice of the proper cleaning system is extremely important. Some systems leave residues which promote re-soiling and defeat the whole purpose of cleaning. Some methods actually damage the carpet fibers and shorten the life of the carpet. Check with the carpet manufacturer for recommendations.

Cleaning Frequency:

If carpet is cleaned before it becomes too unsightly, the cleaning chore will be easier and more successful. Allowing the carpet to become overly soiled may result in irreversible damage. It is a common myth that cleaning the carpet before it is absolutely necessary will cause it to get dirty faster. This goes back to the days when the shampoo methods were the most common.

Carpet in a typical household should be professionally cleaned every 12 to 18 months depending upon the number of residents, amount and type of activity, and whether the carpet is light or dark color.

Professional Cleaning versus “Do-It-Yourself” Cleaning:

The maintenance brochure published by the world's largest carpet manufacturer, Shaw Industries, recommends professional cleaning over “Do-It-Yourself” because of the potential problems that can occur from using rental equipment - such as yellowing, over-wetting, fiber tip damage, severe re-soiling, overuse of detergents, etc.

Most rental units available do not adequately clean and may actually damage the carpet.