



Clean Like a Pro



***Extraction
Carpet
Cleaning***



Clean Like a Pro

How to Clean Carpets Professionally

It's soft and warm underfoot. It absorbs sounds, creating a quiet and peaceful indoor environment. It comes in a range of colors and textures suitable for every décor.

And, according to Market Insights LLC, its market share is still four times larger than any other flooring material! (Annual Report 2016: State of the industry and floor category reports).

There's only one problem: the same material properties that make carpet soft, warm, sound-absorbing and pleasantly textured also make it vulnerable to sand, dirt, grit, stains and soils.

For many people, the task of cleaning this ultra-large filter is so daunting that they end up putting it off for far too long, or paying exorbitant amounts for professional cleaning. But with the right equipment, and with competent advice from knowledgeable professionals, home owners can keep their carpets looking, and feeling like new, while also saving hundreds or thousands of dollars in professional cleaning fees.

Types of Soil

The first step in keeping a carpet clean is to know the enemy: SOIL. Carpet soils originate from two basic sources: those that form in the house and those that are tracked in on the soles of shoes and the paws of pets.

Soils can be further categorized by their solubility. There are three types: insoluble, water-soluble and solvent-soluble.

Outdoor soils are usually insoluble. They include clay, sand, feldspar, quartz, gypsum (plaster dust) and carbon. Also included in this category are fibers from clothing, paper products, grass and leaves, hairs shed by humans and their pet

companions and skin cells. These insoluble soils make up the largest part of the soil load in carpet. They can also be the most damaging type of carpet soils.

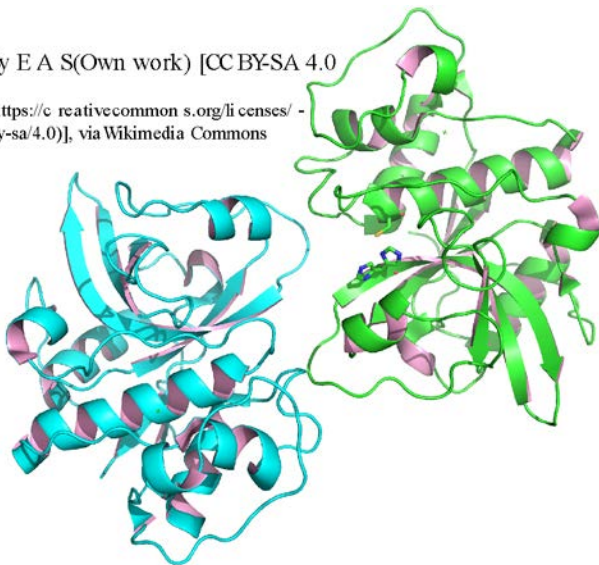
Many of these soils viewed through a microscope have sharp, jagged edges. When forced against the carpet fiber, they can abrade and separate carpet fibers, causing a loss of carpet fiber and resulting in unsightly traffic lanes.

Water-soluble soils, on the other hand, usually originate from within the home. These soils can be quite tenacious and resistant to removal. Common soils that fall into this category are sugar, starches, salts and fluid-type residues.

Finally, solvent soluble soils come from a wide variety of sources. They include cooking oils, both animal and vegetable-based, chewing gum, paints, candle wax. etc. Other solvent-soluble soils that originate outside the home include asphalt, tar, lubricating oils and oils from natural sources like tree sap and resins. These soils can become particularly troublesome if allowed to age. Many will oxidize, forming a hard yellow film that will require special pre-treatment to remove. In addition, some carpet fibers such as polyester are Oleophilic and will absorb these oily soils.

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In addition to the insoluble, water-soluble and solvent-soluble soils, there are also soils that originate from living sources. These are usually proteins and are common allergens. They are found on pet hair, saliva, and waste left behind by dust mites, which is especially allergenic. Inhalation

of dust mite allergens (Der p 1, a protein found in the guts of dust mites) is one of the most important risk factors associated with the development of allergic disease, including rhinitis, atopic dermatitis and asthma.

Although soft furnishing such as beds and pillows contain more concentrated sources of this allergen, because of their size, carpets contain more of this allergen than any other area in the home. And a study by the Wookcock Institute of Medical Research has shown that vacuum cleaning is largely ineffective at removing the dust mite allergen (Der p 1). Instead, to mitigate their allergenic effects, these soils



must be permanently denatured, which can be accomplished in the carpet-extraction process.

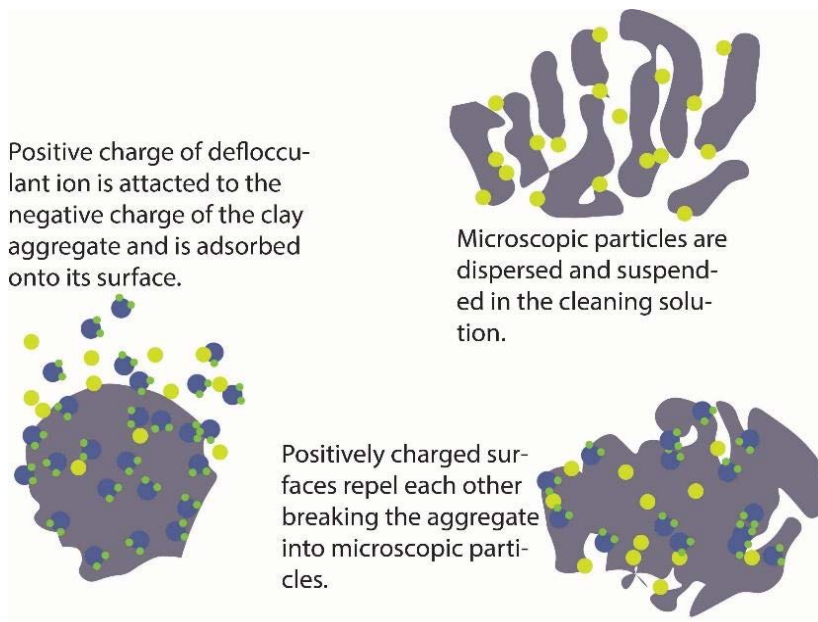
Prevention: The Best Cure, But Not Perfect

If soils stick around, they can do two things: some will oxidize and harden, and some will cut into the carpet fiber. The sooner soil is removed from carpet, the better. That's why regular vacuuming is essential to preserve the quality of carpet.

But, even with regular vacuuming, studies have found that up even the most efficient machines will leave behind 20 to 30 percent of insoluble soils. The amount of soil left in the carpet when using inferior vacuums is obviously much greater.

Extracting Insoluble Soils

The first step in the extraction of insoluble soils is called deflocculating. This essentially involves breaking down large soil particles into smaller soil particles, which are easier to remove. The ideal deflocculant is an electrolyte that provides a source of positive ions. These ions then charge clay particles, causing them to electrostatically repel each other.



The deflocculating of clay-like soils must take place in an alkaline environment. So, it is key that the carpet-extraction solution is buffered to maintain an alkaline pH during the cleaning process.

Once the insoluble soil has been deflocculated, it must then be dispersed and held in suspension, in order to prevent it from redepositing. And all of this activity must take

place very rapidly! In the carpet cleaning process, there is very little dwell time between the spray application of the solution, and the vacuum removal of the resulting combination of solution and soil. The most effective carpet cleaners need

to contain a combination of deflocculates to break down the soil, buffering agents, and dispersants and soil suspending agents to hold the insoluble soils in suspension.

Extracting Solvent-Soluble Soils

Simultaneously, the soluble soils must also be removed. Almost all carpet cleaning involves the removal of solvent-soluble soils, including hydrophobic hydrocarbon soils (vegetable, animal and mineral). These are commonly found near the kitchen, dining areas, entrances to the home and in high traffic areas.

Improperly formulated products will be ineffective in removing these soils. IF left in the carpet, solvent-soluble soils are especially pernicious, these deposits will attract and bind to other soluble soils, which causes rapid resoiling.

Commonly, a general purpose degreaser with a high pH value is used to saponify solvent-soluble soils. However, cleaners with a high pH can also dissolve some natural fibers and open dye sites on synthetic fibers, causing irreversible color loss. They can also reduce the efficacy of soil and stain repellents.

Neutral pH solvents, on the other hand, can be used to easily penetrate and dissolve solvent-soluble soils. After the soil is dissolved, it can be easily rinsed away, although some solvent soluble soils such as paints, stains, resins, tar and heavy deposits of grease may require pretreatment before extraction.

Extracting Water-Soluble Soils

Water soluble soils that have remained in the carpet for long periods of time may have acquired a hydrophobic surface. Before these soils can be removed, the hydrophobic surface must first be penetrated with a surface-active agent, before the water can solubilize them. And while one surface-active agent will improve performance, a blend of different agents is best. Specific ingredients can be matched for each soil type, providing targeted cleaning and better performance.

It's also important for the surfactants selected to be free rinsing and able to resist gelling. Most shops that repair carpet cleaning equipment have encountered problems with cleaning detergents that have solidified in solution lines. What's left over in machines is also left over in carpets; gels that do not easily rinse free and more likely to be left behind.

Extracting Protein Soils

Last, to deal with some common allergens, like those attributable to dust mites, the solution used must be able to permanently denature protein. Afterwards, a post-

cleaning treatment with a solution containing linalool, a naturally-occurring ingredient found in many flowers and spices, will help reduce allergen levels between cleanings. AllerRest Carpet & Fabric Treatment contains linalool and may be used for this purpose.

Keep the Machine Clean!

As in all cleaning tasks, it's also important to keep equipment (often expensive) clean and in good working order. This can both save money and deliver better cleaning performance. Out of all cleaning equipment, carpet extractors are especially vulnerable to damage: clogged solution lines, rusted turbines and pumps, and hard-water deposit build-ups are some of the common maintenance problems.

Damage comes from two main sources: the extraction solution used and water. Damage caused by poorly formulated extraction detergent can be easily avoided by choosing a quality product. But water damage is harder to avoid. In addition to the rusting of turbines and pumps, minerals present in water can also damage equipment and decrease performance. This is easily seen in any extractor equipped with an in-line heater. Taken apart after significant use, heavy buildups of calcium, manganese and/or magnesium are usually present.

In addition, hard water can de-activate some ingredients in some carpet shampoos, leaving a dulling film on carpet fibers. A properly formulated detergent will include rust-inhibitors to protect metal components, and special ingredients called "chelating agents" that will prevent mineral build-ups.

Step-by-Step Carpet Cleaning Technique

Now that we have the knowledge to select an appropriate, effective product, here's how we recommend you use it:

1. Prepare carpet by first vacuuming with a highly efficient vacuum cleaner.
2. Best results are obtained by diluting the cleaning solution and pre-misting this solution onto the carpet 15 to 20 minutes before extraction.
3. Pretreat stains with the appropriate spotter (a spotting chart can be found at <http://kleenco.com/kleenco-spotting-chart.html>)
4. Pretreat traffic lanes with a specially formulated lane cleaner.
5. Hot water extract using hot tap water, or use the extractor's built-in heating unit, if available (inform customer it is not necessary to boil the water).

6. If carpeting has been cleaned under furniture, make sure to place foil pads under the feet of the furniture. This will prevent rust and furniture stains from depositing onto the carpet.
7. Apply post cleaning treatments (soil and stain retardants and allergen treatments).
8. After cleaning, groom the carpet with a carpet rake.
9. Speed the drying process using good ventilation and a carpet drying fan.





Advantages of Kleenco's Carpet-Brite

Economical

Many carpet shampoos cost about fifty cents per ounce and dilute at two ounces per gallon of water. What does this mean? That for every gallon of water used in a carpet machine, these shampoos cost the customer one dollar. Many consumer-grade carpet shampooers are equipped with one-gallon tanks. As any owner of one of these machines knows, these tanks constantly need to be emptied and refilled. Each time they empty and refill the tank, it is a one-dollar charge.

Carpet Brite, on the other hand, costs 16 cents per gallon at the standard dilution ratio of one half ounce per gallon. Carpet Brite is concentrated and far less expensive. Every time they empty and refill a tank using Carpet Brite, it is a sixteen cent charge.

Machine-Friendly

Carpet shampooers (extractors) break down easier than vacuums and they are more expensive to repair. Common reasons for breakdown include clogged solution lines and rust build-ups. With many other carpet shampoos, it is very easy to clog a line, as the shampoos are thick and gooey. If any shampoo is left over in the line, it can solidify and cause a clog. Carpet Brite, on the other hand, uses a combination of detergents and emulsifying

surfactants to clean the carpet. No goo, no clogs!

Carpet Brite also contains special ingredients called chelating agents that prevent the buildup of calcium and magnesium deposits that also lead to clogs. And it has rust inhibitors that prevent components like vacuum and brush motors and turbines from seizing up.



Carpet-Friendly

Carpet Brite contains no harsh alkaline ingredients that cause carpet fibers to become stiff. After shampooing with Carpet Brite, the fibers will remain soft and supple. In addition, some shampoos stick to the carpet, which will then quickly re-soil. Carpet Brite contains a hydrophilic surfactant, which rinses easily from the carpet fiber and will not stick. Thus, carpets stay cleaner longer.

And for the dealer...

Limited Distribution

Kleenco maintains a limited distribution. Your customer must return to your store once they need to purchase more product. You won't experience the frustration of selling a customer on a product, only to see them walk out the door to buy the product online. You maintain the sales channel and the profits.

Store Promotion

All Kleenco products come with the advantage of Partnership Labeling. Every bottle of Kleenco product has the dealer name, address and phone number printed right on the label. This is especially valuable for institutional use, where personnel can change often. With Kleenco, any institutional customer will know exactly where to go when their janitor's closet becomes depleted.