

HOME ECONOMICS GUIDE



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Carpet Care, Cleaning and Stain Removal

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Carpet is the only textile product people walk on and special consideration to color, pattern and texture minimizes maintenance. Light and bright colors tend to show soil readily; whereas soil is less noticeable on colors that contain some gray values. Patterns, likewise, camouflage dirt and soil until it can be removed. High and low pile combinations, random tip shears and shags add interest as well as help conceal soil. In less traffic prone areas where soiling and spill rates are considerably lower, plain, lighter and brighter carpet can be used.

Regular Carpet Care

Even with attention to color, pattern and texture, regular cleaning and reconditioning prolongs a carpet's appearance and wear life. Once soil is embedded into the base of the carpet fibers, it is difficult to remove and will abrade or wear the fibers. Depending on their use and location, carpets and rugs generally need a thorough vacuuming once a week to remove most sandy, gritty type soil. For best soil removal and maximum suction, change or clean vacuum bags frequently.

Accidental spills need immediate attention. The National Institute of Rug Cleaning laboratories staff reports that prompt action removes 90 percent of all liquid spills. Before trying any stain removal procedures, blot up excess stain with a paper towel or scrape off excess stain with a spoon or spatula. For more specific stain removal procedures and products, see the chart on page 5 of this guide. Remember to always pre-test products on an inconspicuous area of the carpet for possible color change or fiber damage.

Cleaning Carpet at Home

Even with frequent vacuuming and spot removal as needed, in time every carpet needs a thorough cleaning. It is advisable to clean a carpet before it becomes too heavily



Cleaning will be easier if spots are blotted; rubbing forces the staining material into the carpet.

soiled, but premature cleaning is not desirable either. Once a carpet has been cleaned, future cleanings may be needed more frequently.

Consumers who clean their own carpets have the advantages of convenience, less expense and satisfaction of doing a thorough job. A professional cleaner may have more experience, knowledge and better equipment but must be scheduled and is more expensive.

A variety of carpet cleaning equipment and products is available in most localities. Their effectiveness depends not only on the equipment that is used, but how it is used. Most cleaning methods work when directions are followed, but cleaning does require time and physical effort.

Carpet cleaning products are based on soil removal principles and processes; they do not contain magic ingredients even though they sometimes are advertised in that manner. Avoid cleaners that leave a residue. Residues cause the carpet surface to be less resilient and to soil faster. Check for residue by diluting the cleaner according

to directions and either put a half cup of solution in a pie plate to evaporate or put it in the oven at 160F (70C) to hasten the process. If a sticky residue remains, either try another commercial brand or use this homemade solution: mix one teaspoon neutral or alkaline detergent such as Tide or All per two cups of moderately soft warm water for cleaning. In general, it is not desirable to use laundry or dishwashing detergents for carpet cleaning. These detergents are difficult to flush away and contain bleaches and other ingredients not needed in carpet cleaning. Generally, carpet shampoos are best for carpet cleaning.

Regardless of the type of cleaner used, observe the following precautions:

- Pretest the cleaning solution in an inconspicuous area to note its effect on the carpet dye.
- Protect the carpet from rust stains by putting aluminum foil under furniture legs.
- Follow the cleaner and equipment instructions as directed.
- Do not overwet the carpet. Excess moisture can cause shrinkage, streaks or mildew.
- Keep mechanical action to a minimum to avoid carpet damage or streaks.

Selecting a Cleaning Method

There are four principal methods for home carpet cleaning. The method you select depends in part on the type and degree of carpet soil, time available for cleaning, your physical ability and strength as well as amount of money available for the project. The cleaning methods include the dry powder type, dry foam, shampoo and hot water extraction.

Dry Powder Method

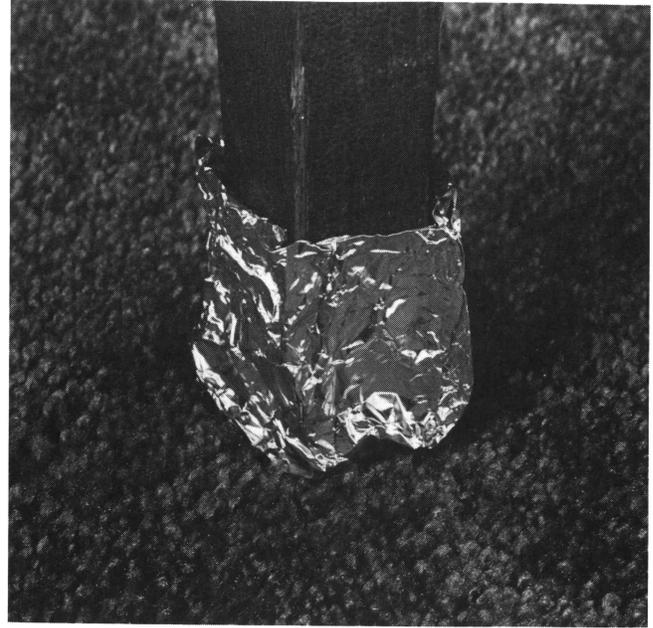
In the dry powder method, absorbent granules containing dry cleaning solvent are sprinkled over a section of carpet and worked into the pile by mechanical or hand brush. The dry cleaning solvent dissolves oils and greasy soil. These are then absorbed by the granules. After through drying the carpet is vacuumed. An example of a dry powder product is Glamorene Dry Cleaner.

Advantages

- short drying time
- effective for spot cleaning
- good for delicate and non-colorfast carpets
- relatively inexpensive

Disadvantages

- less effective on heavy soil or water-base soil
- complete granule removal may be a problem
- dry cleaning solvent can evaporate in storage



Put aluminum foil under furniture legs during carpet shampooing to protect the carpet from rust stains.

Aerosol Foam Sprays

Aerosol foam sprays are available in most grocery and hardware stores. Examples of this product include Glory, Woolite Spray Foam, Blue Lustre, and Glamorene Spray 'N Vac Rug Cleaner.

Advantages

- convenient
- quick drying
- needs no special equipment

Disadvantages

- best for lightly soiled carpet
- cleans only the carpet surface

Liquid Shampoos

Liquid shampoos are generally sold in a concentrated form and need to be diluted. Select a shampoo that produces a rich foam and dries to a crystalline powder rather than a sticky residue. Examples of liquid shampoos are: Bissell, Blue Lustre, Carpet Magic, Household Research (HR₂), and Rinse 'N Vac.

Advantages

- good for cleaning moderate to heavily soiled carpet
- brightens colors and fluffs up the carpet pile
- moderate price

Disadvantages

- easy to overwet the carpet
- needs longer drying time

Some liquid shampoo applicators have wet pick-up vacuums. These reduce overwetting and improve cleaning process efficiency.

Hot Water Extraction

Hot water extraction sometimes is called steam cleaning although no steam is used in the process. A hot water and detergent solution is sprayed onto the carpet under pressure to flush out the dirt and soil. This solution is immediately extracted by the vacuum action of the machine.

Advantages

- excellent for cleaning moderate to heavily soiled carpet
- can observe when the solution is soil free
- drying time somewhat less than with the shampoo process

Disadvantages

- some possibility of overwetting
- most expensive of the four methods
- equipment is heavy and bulky

Although it is necessary to rent hot water extraction equipment, the cost is less than if a professional cleans the carpet. Directions accompany rental equipment and are easy to follow.

There is no one carpet cleaning method that satisfies all consumer needs. Before selecting the cleaning method consider the amount of soil in the carpet, time and energy available to clean the carpet, drying time needed, product cost and any machine rental fees.

Special Cleaning Problems

Rust stain. Rust stains develop when metal carpet casters on the bottom of a table or chair leg become wet; this moisture in contact with the metal produces rusting and a stain transfers to the carpet fibers. Under these conditions, furniture dye may transfer to the carpet fibers along with the rust. Usually light reddish brown rust is centered in the stain, and furniture dye stain surrounds the rust and is darker in color. Avoid these stains by covering furniture leg casters with aluminum foil during carpet cleaning and by using furniture caps or cups under casters during regular use.

Products used to remove rust stains are fairly dilute acids that should be handled with care. One of these is a commercial diluted solution of hydrofluoric acid that is carried by some grocery and drug stores. Examples include Whink Rust Stain Remover and Magic Rust Remover. This acid is quite corrosive as it will etch glass and damage skin. However, if used with caution, it can produce excellent results with rust stains. Oxalic acid is a less active acid and is safer to use although it's necessary to avoid skin contact. A one percent solution of oxalic acid can be purchased at the drug store. Although slower

working, many persons prefer this acid because it is safer for carpets.

Most carpet fibers (polyester, polypropylene, acrylic and wool) are fairly resistant to weak acids. Nylon carpets pose the greatest problem because they are less acid resistant. It would be best to use oxalic acid for rust stains on nylon carpet rather than hydrofluoric acid. In addition, give special attention to the oxalic acid solution concentration. A one percent solution is recommended because, at room temperature, a three percent solution causes some



Inexpensive household cleaning solutions and specialized stain removal products are effective in removing common stains.

deterioration which increases as the temperature increases.

Before any solution is tried on a stain, test to determine its effect on the carpet dye. Protect the hands with rubber gloves and avoid breathing acid fumes. Place a couple of acid solution drops in an inconspicuous spot such as the corner of the room or behind the draperies. Allow the acid solution to remain for five minutes then blot up the solution with white paper towels. Rinse with water and blot dry. If the hydrofluoric acid changes the color, test the one percent oxalic solution. If neither



Test stain removal solutions on an inconspicuous spot, such as behind draperies, to determine its effect on carpet dye.

solution produces a color change, either one is safe except use only oxalic acid on nylon carpet.

To remove the stain, wrap a wood popsicle stick with a clean white cloth and moisten it slightly with the acid solution. Gently rub the rust stain with the cloth. Add a few more drops of acid solution to the cloth and wipe the stained area until the rust stain becomes colorless. Flush the stained area with water. Remove water with white paper towels. Place one-half inch of paper towels over the area and weight it down. Allow to dry overnight and then check the stained area. If some stain remains, the procedure may be repeated. If the remaining stain is darker and caused by furniture dye, it's doubtful that it can be removed.

Mildew. Mildew is more than a stain. It is a plant that grows when necessary moisture, air, warmth, light and food conditions exist. Once mildew occurs it remains dormant until growth conditions return and then resurfaces. Moisture that causes mildew may be a result of high humidity, flooding, spills or overwetting during cleaning. Generally, mildew is not noticed until most of the moisture evaporates as air is necessary to support growth. Ideal temperatures for growth are 75F (24C) to 85F (30C); growth generally ceases above or below those temperatures. Since mildew is a fungus plant, it does not need sunlight for growth. Food comes from mildew's host—in the case of carpets—from the jute backing or wool or cellulose surface yarns.

Mildew is a serious problem as its damage is two-fold: deterioration and discoloration. The plant root system can reduce the natural fiber strength by as much as 90 percent in two weeks. Mildew damaged fibers appear dried out and brittle. Essentially they have been consumed and other than cutting out the damaged area and replacing it with a matching scrap of carpet nothing can be done. Discoloration is readily noticeable and colors may vary from white to black, red, brown and green because of the mildew type. Generally, the discoloration can only be reduced, not removed. Complete removal requires extensive bleaching and this destroys the carpet fibers.

When moisture occurs, prompt action may reduce mildew damage and save the carpet. First eliminate the moisture and dry the carpet. If the carpet or rug can be taken outdoors, one or two days in the sun will both kill the fungus plant and eliminate the moisture. If the carpet cannot be removed, lift the wet area and dry with a fan. Once the area is dry, paint it with a one-half (0.5) percent solution of hydrogen peroxide (one part fresh 3 percent hydrogen peroxide and 5 parts of water) to kill the fungus plant. Dry-cleaning with a dilute carpet cleaning solution washes the mildew from the surface but does not kill the mildew nor completely remove the discoloration.

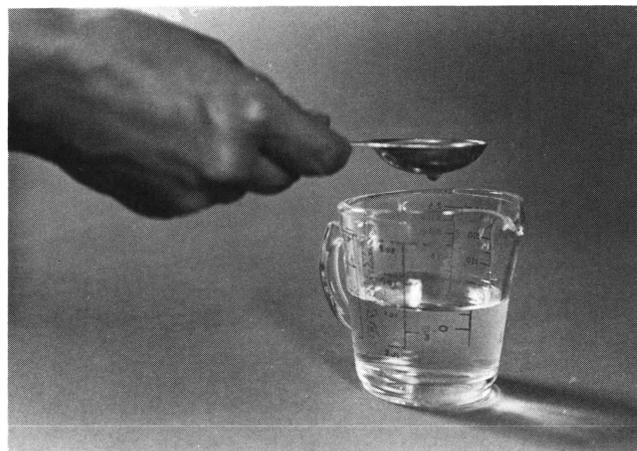
If the carpet is used under the same conditions in which the mildew originally grew, it will grow again.

Mildew spores remain present and will grow when conditions are right. If the conditions cannot be corrected, then select a carpet or rug made entirely, both surface and backings, of man-made fibers. If a carpet is to be installed over a concrete floor, be certain the floor is sealed as an unsealed floor allows moisture to pass from the ground into the concrete and eventually into the carpet. A dehumidifier will remove excess moisture from the air and reduce mildew formation.

Urine stains. Many urine stains come out if worked on within the first few hours. Blot excess liquid with a clean, white absorbent material such as paper towels or cloths. Flush the area with plain water and blot until as dry as possible. Use diluted carpet shampoo and work small amounts of the solution into the pile with the fingers. Blot. Flush with water. Blot. Mix equal parts of white vinegar and water, dampen the area and allow it to remain for a few minutes. Blot as dry as possible. Place one-half inch layer of dry, absorbent material over the area and weight it down. If the absorbent material becomes wet, replace it. Let it stand for eight hours and remove. Brush the area with the hands to blend the pile with the surrounding carpet.

Although the above procedure is involved and takes time, the problems from incomplete urine removal require greater effort and expense. Incompletely removed stains can cause carpet color change, odor problems, penetration to the underlay or pad as well as the sub-flooring. Carpet discoloration is due to a slow reaction of the carpet dye and urine. The only way to restore the color is to apply dye. A professional carpet cleaning person may be able to re-dye the stained area. This is expensive and may not be satisfactory. If urine is completely removed from the surface carpet yarns, discoloration should not be a problem.

If the stain was caused by animals, they tend to revisit the same spot unless the odor is completely removed. Try using a pet repellent in the area after removing the stain.



Stain removal solutions, to be effective, need to be accurately measured.

Stain Removal Chart

Key

- S - Dry Cleaning Solvent (Perchloroethylene or trichloroethane, such as Energine, Carbona)
- D - Detergent Solution (1 teaspoon All or Tide and 2 cups water or carpet shampoo)
- V - White Vinegar Solution ($\frac{1}{3}$ cup white vinegar and $\frac{1}{3}$ cup water)
- A - Ammonia Solution (1 tablespoon ammonia added to 1 cup water)
- W - Plain Water
- I - Ice

Stain	Removal Procedure (See key above)
Acids	A, W
Alcoholic Beverages	D, A, V
Ammonia	W, V
Blood	D, A, V, W
Cements and Glues	S, D, A, W
Chewing Gum	I, S
Coffee and Tea	D, V
Cosmetics	S, D, A, V, W
Dyes	S, D, A, V, W
Food Stains	S, D, A, V, W
Furniture Polish or Stain	S, D, A, V, W
Greases	S, D, W
Inks	S, D, A, V, W
Medicines	S, D, A, V, W
Milk	S, D, A, V
Oils	S, D, A, W
Paints	S, D, A, W
Soft Drinks	D, A, V, W
Tars	S
Unknown Stains	S, D, A, V, W
Vomit	D, A, V, W

A more common problem is odor. Generally, this is caused by accumulation of urine in carpet backings. It is extremely difficult to flush the urine from the back of wall-to-wall carpet. However, cleaning solutions do not penetrate into the fiber backing and remove the odor producing material. The most effective procedure is to pull the carpet back and try removal procedures on the backing. If the odor is in the underlay or pad, cut that area out and replace it. If it has penetrated into the subfloor, usually a household disinfectant will remove the odor. If these procedures fail, a more extreme measure is to take up the entire carpet and flush it with a hose of cold water. This requires an area for either suspending the carpet or laying it so that it can dry quickly. The carpet could also be sent to a professional carpet cleaner. Trying these procedures always creates the risk of shrinkage—the carpet may not fit the room after flushing and drying. In addition, the professional reinstallation of a wall-to-wall carpet adds to the cost. However, if all other procedures have failed, the carpet is in relative good condition and would have to be replaced if the odors are not removed, these procedures may be worth trying.

Melted fibers. Man-made fibers will melt before they burn. If a cigarette or fireplace ash is dropped on a carpet, some of the carpet yarns will melt. Spot removal chemicals will not remove or soften the hardened, charred ends. To improve the appearance of the hard ends, carefully cut them out.

Stain Removal

Whether a stain can be removed from a carpet depends upon the carpet fiber, the color of the carpet fiber, the staining material and how the stain is treated. Treat a stain immediately using a stain removal chart as a guide. A professional rug cleaner is another source of advice.

Not all spots and stains can be removed, but many can and it is worth the effort. The following suggestions will increase your stain removal success:

1. Test any stain removal solution before using it on the stained area. Place about 10 drops of solution in an inconspicuous area—inside a closet, behind the draperies, etc. Some solutions can damage the carpet fiber and/or dye. After the solution has been on the spot for a slow count of ten, blot with a paper towel. Check for fiber damage and color change in the carpet fiber.
2. Work with small amounts of spot removal solution and blot. Do not overwet. Blot, do not rub or brush. Excessive agitation may result in unsightly distortion.
3. Work from outer edge toward center of stain.
4. Follow the stain removal sequence, applying one solution until it is no longer effective, then go to the next.
5. Have patience. Some stains respond slowly. It takes time for solutions to dissolve the stain and time to be absorbed by blotting.
6. After thorough blotting, the final step is to place a one-half inch layer of clean, white absorbent material over the damp area, weighting it down. Allow to dry for eight hours.
7. Haphazard attempts at spot removal may result in permanent stains or pile distortion. If in doubt, seek the advice of a professional rug cleaner; a few minutes on the telephone may prevent a stain or damage to your carpeting.

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To simplify information, trade names and illustrations of products have been used. No endorsement of these products is intended, nor is criticism implied of similar products which are not mentioned.