

A large, ornate dining hall with a patterned carpet, wooden tables, and chandeliers. The room features a high ceiling with decorative moldings and several chandeliers. The carpet has a complex, abstract pattern in shades of grey, blue, and green. The tables are set with white linens, glassware, and cutlery. The chairs are upholstered in a patterned fabric. The overall atmosphere is formal and elegant.

# Wilton Carpets

## Contract Carpeting Maintenance Guide



# Introduction

## Prevention

It is vital to prevent as much soiling taking place as possible. Maintenance costs will be reduced and appearance retention greatly improved if some form of approved entrance matting is employed. We therefore strongly recommend:

### Barrier matting

All main entrances should have at least 2 metres of heavy duty barrier matting laid either immediately at the doorway or, if possible externally. This should contain some form of scraper bar to remove large contaminants and be removable for cleaning of the under-floor and matting itself. It is often overlooked that a highly contaminated barrier mat can become the source of soiling if not properly maintained.

### Secondary matting

If possible, implement a second line of defence. Designed to absorb moisture and the smaller particles, these mats can be smaller than the barrier matting (1-1.5 metres) and should be changed as part of the regular maintenance programme. Depending on the installation method and location, these can overlay the carpet or sometimes inlaid to the carpet.

## Importance of carpet maintenance

Programmed cleaning is key to retaining the original appearance and life expectancy of carpet. In fact, the maintenance programme is no less important than the initial carpet specification and installation.

Poorly maintained carpet will:

- a. Lose its smart appearance years before it should
- b. Physically wear out
- c. Become a soil distribution point.

Carpet cleaning is labour intensive, therefore costly. A good maintenance and cleaning programme will ensure the time spent cleaning is cost effective. Note: The greater the soiling, the less efficient the cleaning, hence the need for an effective programme from day one.

## Nature of soil

Soil deposited upon carpet is approximately 20% from air (dust) and 80% from foot traffic. Soil sources will vary from place to place and industry to industry. However, foot-borne soil is transported from uncarpeted areas and deposited on the carpet from either: • Outdoor soil sources – car park, road, yard, pavement, all contributing grit, dirt, mud, sand, slush, tar, oil and salt. • Indoor soil sources – hard floor areas adjacent to the carpet such as garages, halls, warehouse, contributing dust, wax, fluff, grease, dirt and grit, or badly soiled carpets.

**Distribution of this soil** – from a carpet cleaning point of view, this soil can be broken down into: • Large particles which work their way down into the base of the carpet pile and build up from the bottom. • Fine and oily particles which tend to cling to the pile surface and cause overall deterioration of carpet appearance and general loss of brightness. Note: Wet soil can cause actual staining.

**Static electricity** – will attract soil.

**Accidental spillage** – such spots and stains can ruin the carpet appearance. The discolouring agents involved cover the complete range of materials known to man. Once the stain has set (dried), the difficulty in removing it is increased or becomes impossible. Incorrect stain removal may increase likelihood of setting or damaging tufts by over bursting pile. It is most strongly recommended that any spot/stain removing agents be tested first on an off-cut or carpet mainly hidden from view. Please see "Spot and stain removal."

# Introduction

## Appearance of carpet

The satisfaction of a carpet depends almost entirely upon its appearance. Most assessments of a carpet's cleanliness are made subjectively. The appearance of a carpet depends upon several factors other than proper cleaning and installation.

**Fibre** – Of the multiplicity of fibre types used in carpet manufacture, it is generally agreed that wool has the best appearance retention characteristics.

**Colour (including pattern or design)** – medium or deeper shades of green, greenish blue, blue, violet, brown, beige and grey tend to disguise soiling. Brighter colours of yellow, red to all depths of shade along with white and pastels show high apparent soiling.

**Construction** - density of the carpet is important as this will not only affect its appearance, but also its performance. A correctly constructed carpet for contract use is made with the face fibres packed in tightly.

**It is therefore recommended that you take professional advice when considering the exact specification, design and coloration to ensure that the product selected is of the correct quality, that the design assists in appearance retention and that the colours used are not too light in shade.**

## Carpet hides soil

This is a fact. A dense contract carpet can contain more soil by weight than the total carpet weight was when new. Because of this, there is a natural tendency to give only superficial maintenance until it is too late, when drastic cleaning measures are required.

## Cleaning programme

Specific carpet cleaning requirements of different buildings, and areas within buildings, vary considerably. Basically the requirements of a good carpet cleaning programme can be divided into the following categories:

- Cleaning methods and equipment
- Maintenance cleaning
- Deep cleaning
- Competency of cleaning operator(s)
- Planning
- Prevention of soil deposit on the carpet
- Regular cleaning schedules
- Effective maintenance of cleaning equipment
- Evaluation of the cleaning programme.

## Carpet repair

On occasions, carpet is damaged by cigarette burns, small tears, etc. This can ruin the carpet appearance and be a safety hazard. It is possible to carry out minor repairs to restore the carpet appearance without the costly replacement of carpet in an area.

# Cleaning Methods & Equipment

## Vacuum cleaner

**Cut pile carpet on underlay:** The upright vacuum machine with a brush and beater bar action is more effective for soil removal than the wand type vacuum cleaner that provides only suction and minimum amount of fibre agitation. A pile lifter is best in heavy traffic areas as this has a more powerful vacuum and restores appearance more effectively.

**Loop pile:** Damage by vacuums with beater bar causes pilling use suction cleaner only.

**Direct stick-down carpet:** The absence of an underlay, and the inability of the carpet to move up to the cleaner nozzle, requires the cleaner nozzle to be in contact with the carpet. Such installations should be vacuumed with a carpet groomer agitator. This agitator has two rows of brushes rather than a brush and beater bar.

**Awkward places.** A wand type vacuum cleaner, or attachment to vacuum, will be needed in awkward places and for that last inch next to skirting boards or obstacles. Best results. Vacuum cleaners have only a moderate ability in removing soil from carpet. Research has shown, at best, that only 50-60% is removed after 10 passes. It is a truism to say that more effort in vacuuming will remove more soil. For best vacuuming results, move the vacuum head slowly over the carpet and let the machine do the work. For heavy traffic areas a minimum of 10 passes is required. For guidance, part the tufts to see if the dirt is still lodged near the surface. Cut pile carpet should be vacuumed with the final pass against the pile lay to give the best cleaning action and appearance.

**Vacuum bag.** With vacuum machines, make sure the vacuum bag is never more than half full, otherwise suction efficiency will decrease.

## Maintenance checks (weekly)

The maintenance of the vacuum cleaner machine is very important for achieving full effectiveness from the machine.

Check that:

- Brushes make contact with the carpet pile
- The rubber drive belt and fan blades are in good repair
- The beater bar is smooth to prevent carpet damage
- Filtration is below 7 microns to remove more pollutants
- There are no split hoses, damaged skirts and tools or leaking lids.
- There are no breaks in plug or cable
- Periodically, a qualified Service Engineer should check the vacuum cleaner.

# Cleaning Methods & Equipment

## Dry extraction method

### Commonly called Absorbent Compound Cleaning.

In the dry extraction method, soil is removed from the carpet by millions of tiny, absorbent sponges saturated with water, detergent and a small amount of solvent. The cleaning system involves the initial spraying with pre-spray (more concentrated detergent), a universal stain and spot remover. The absorbent compound is sprinkled over the solid area and brushed into and through the pile thoroughly by a cylindrical, twin brush machine. The composition of the compound begins the sponge-like 'mopping-up' action, wiping soil from the carpet fibres. The soil-laden compound is then extracted with a beater bar type vacuum.

'Dry powder systems' are a different process but operate in a similar way.

### Advantages

This method should be used in heavy traffic areas on a regular schedule of approximately 20-30 days - and this reduces or eliminates the need for wall to wall cleaning. The absorbent compound returns carpet to service immediately. It minimises detergent build up in the pile. This method is particularly useful when water solutions might damage carpet texture (twisted yarns) or cause shrinkage. It is an effective spot reducing technique. This is particularly effective in direct stick-down situations where excessive wetting could affect adhesion. It can be used on stair treads and risers.

### Disadvantages

Rotating brushing can cause some fluffing or pilling in loop pile berber carpet. Some compounds have a strong odour. It is possible that, with an ineffective vacuuming system, the absorbent compound may not be fully removed and a build up over time can lead to impairment of appearance.

## Low moisture cleaning

### Also known as bonnet buffing or cosmetic cleaning

This type of cleaning is very popular for commercial carpets. Bonnets or pads are used in conjunction with a rotary machine operating at normal cleaning speed (125-225 rev/min), transferring soil only to the bonnet. The bonnet is impregnated with detergent. Direct feed from the machine is best, providing the bonnet is not allowed to become too wet. To be effective, the bonnet must not be allowed to dry out. Bonnets can be used each side, are re-usable and must be laundered. When the carpet is completely dry it must be vacuumed to remove the crystalline residues. A new cleaning solution, with a high concentration of CO<sub>2</sub>, is applied separately to the carpet with a spray from a nozzle. The bubbles lift the dirt to the surface for extraction by bonnet buffing.

### Advantages

The advantages are similar to the Dry Extraction Method. Particularly suitable for carpets sensitive to mechanical action such as synthetic loop pile berbers.

### Disadvantages

This method will only clean the surface of the pile fibres, but is cosmetic and will restore the appearance to a satisfactory level. • Prone to re-soil quickly unless a non-residual product is used. • Cannot be used on stair treads and risers.

**We do not recommend this system.**

# Cleaning Methods & Equipment

## Spray extraction cleaning

We recommend this method, sometimes known as hot water extraction or steam cleaning. This must only be carried out by an operative fully trained on the equipment used. The carpet must be tested before cleaning with the detergent solution to ensure there is no dye bleeding or transfer.

This is most probably the most effective cleaning method and gives best pile restoration. It is particularly good in removing excess detergent residue, which can build up in a carpet after wet shampooing or from frequent maintenance using dry powder or foam. This method is used periodically when other methods no longer give a satisfactory appearance level and soil level has built up within the carpet.

A low-foaming detergent is pressure-sprayed onto the carpet. The resulting soiled liquid is extracted by rinse extraction. For better results use a cleaning head which includes a rotating cylindrical brush, to open the carpet pile. This rotating brush may cause webbing and pilling in some loop pile carpets and be unsuitable.

**Caution: Over wetting can cause shrinkage and other problems. Please see “Residual moisture in carpet” overleaf.**

### Cleaning operation

Always vacuum the carpet thoroughly before wet cleaning, preferably with a pile lifter to open the pile. The cleaning head passes over the carpet, injecting liquid while simultaneously extracting the liquid by suction. Each pass should be followed by two or three passes, suction only. Normally the cleaning head will be dragged towards the operative walking backwards on un-cleaned carpet.

### Foam detergent

A low foam detergent should be used; otherwise the waste liquid tank will fill prematurely with foam and overflow with potential damage to equipment and maybe the carpets. An anti-foam can be added to the reception tank if necessary.

Operating temperature of the detergent solution tank will be that recommended by the detergent manufacturers. They vary from hot to cold. Warm to hot is preferred.

Maximum temperature in the solution tank should not exceed 150F (70C). Maximum temperature of normal supply (domestic type) will be around 122F (50C). It should be noted that there will be a considerable heat loss in transferring the liquid from the solution tank to the carpet. If the unit has an integral heater, take care the detergent is not overheated.

**Caution: Over-wetting can cause shrinkage and other problems. Please see ‘Residual moisture in carpet’ overleaf.**

### THE pH FACTOR

The pH of pure water is 7, which is neutral. Domestic water may vary from 6-8.6 pH depending on area of country; distilled is 7 pH.

Less than 7 is acidic and more than 7 is alkaline. pH for the detergent mixture should lie between 5 and 8.5. Ensure mixture proportions of water and detergent are as recommended by the detergent manufacturer to achieve the correct pH value.

pH 5 is best for wool-rich carpet and pH 8.5 is best for nylon. It must be noted that strong alkaline liquids degrade wool and may change the colour.

Ensure the pH is not altered cumulatively over a number of cleans. The effects of such may only become apparent after the last clean if this causes the carpet to ‘flip’ from one side of pH 7 to the other. Many cleaning agents have a pH of greater than 7, these can be damaging to wool-rich carpets if not properly prepared and applied.

Do not use detergents that leave a waxy residue after drying as this will cause rapid re-soiling. Detergents must dry to a crisp residue when allowed to dry in a flat dish. If gummy or waxy do not use. The detergent must not contain bleach or fluorescent brightening agents (optical brighteners).



# Cleaning Methods & Equipment

## Spray extraction cleaning (cont)

### **Residual moisture in carpet**

Most equipment extracts around 90% of detergent, but some machines deliver the column of detergent liquid faster than others. Therefore the speed of the cleaning head pass will vary from one machine to another so that the carpet is not overwetted ie detergent solution does not penetrate into the backing.

Overwetting during the cleaning process or due to spillage can cause: shrinkage; split seams; rapid re-soiling; mildew; delamination or release adhesion with stick-down carpet that uses water based adhesive; saponification with foam backed carpet; and browning from jute backed carpet.

Natural wool berbers are more susceptible to colour migration under alkaline conditions and if made too wet. If the carpet becomes over-wet, turn off liquid injection, and operate the suction very slowly, pulling the cleaning head over the affected area.

Allow the carpet to dry before the return of foot traffic, otherwise rapid re-soiling and pile distortion will occur. Don't replace furniture before the carpet is dry, but if this has to be done, use pieces of plastic under furniture to prevent rust or other furniture stains. Furniture flush to carpet will have to be lifted onto fibre blocks to allow air movement - failure to do so may cause browning, mildew and rot.

Depending upon the skill of the operator, denseness of the pile, type of fibre and drying conditions, eg ventilation, the time before re-use could be 12-36 hours.

### **Equipment available**

The machines available are many and varied. Varying speed of detergent solution application, varieties of cleaning head and attachments, with or without cylindrical brushes and heaters, different sizes from small to vehicle-mounted. Therefore it cannot be emphasised too much that the operator must be fully trained in the equipment used. Regular inspection and maintenance of cleaning equipment is also essential to ensure proper and safe function for both carpet and operator.

## Spot and stain removal

90% of all accidental spills can be removed, preventing staining, by simply absorbing the spillage before the stain starts to dry: applying water to the spot and absorbing the spillage dissolved in water. Once dry, a stain becomes very difficult to remove and may become fixed.

**Therefore immediate action is necessary and people must know who to contact to carry out that action. Note: Even when stains are not removable, prompt action can minimise their effect. Contact: NCCA, [www.ncca.co.uk](http://www.ncca.co.uk), tel: 0116 271 9550.**

Before using any untested spot cleaning liquids, you should try it first on a small inconspicuous section of carpet or off-cut to be sure it will not affect the colour. Blow area dry with hair dryer for true assessment prior to carrying out stain removal procedures. It must be noted that solvents can severely damage rubberbased products such as the latex that binds the carpet together, attached foam backing or rubber underlay.

**Stain removal** – locate the stain by name on the stain removal chart. Remove all excess. Scrape up solids with a spatula. Blot up liquids. Do not rub. Apply spotting chemicals with sponge or towel and brush in order listed. Blot with absorbent material after application. When the stain is removed, blot up as much moisture as possible. Place a thick (½") layer of paper towels over the area and weigh it down with a heavy object. When the carpet is dry, vacuum to restore the texture.

# Cleaning Methods & Equipment

## Spot cleaning kit

If purchased, follow directions supplied.

To make up your own kit we suggest basic items to make the following solutions:

- Dry cleaning solvent
- Detergent/vinegar solution: 1/2 teaspoon non-alkaline detergent (eg Stergene), 1 teaspoon white vinegar to 1/2 pint warm water.
- Detergent solution: 1/2 teaspoonful non-alkaline detergent (eg Stergene) to 1/2 pint warm water.
- Household ammonia solution: 1 tablespoon household ammonia, to 1 cup of warm water.

After using this solution, rinse thoroughly and neutralise with vinegar solution less Stergene. Use some clean white absorbent cloths and tissues

## Spillage

Act quickly, scrape up solids, blot up liquids, never over-wet, never rub or scrub. For fast and safe removal of most spots, old and new, use the dry extraction method.

If it is thought that the problem is too difficult contact a professional cleaner, preferably one who recommended to you by satisfied users and particularly one who is a member of the National Carpet Cleaners Association (NCCA) [www.ncca.co.uk](http://www.ncca.co.uk), tel 0116 271 9550 or who is accredited Woolsafe ([www.woolsafe.org](http://www.woolsafe.org)).

Type of spillage	Remedy
Alcohol spills, coffee, tea, liquid foods, urine	Blot up surplus spillage. Use vinegar solution, work from outer stain, using little at a time and blotting up with dry cloth frequently.
Chocolate, sweets, blood, glue, egg, ice cream, milk, soft drinks, vomiting at outer edge	Scrape up excess with dull knife. Use detergent-only solution, start and blotting dry. Follow with ammonia solution. Blot dry.
Solids, fats, tar, chewing gum, grease, oil, ointment, shoe polish	Scrape with dull knife, use dry cleaning solvent, follow with detergent/vinegar solution. Blot dry.

