

The Cleaning and Maintenance of Wool Carpets



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Introduction

Regular maintenance and periodic cleaning will increase the life span of a carpet and also greatly contribute to maintaining its good appearance. Cleaning should be proportional to the amount of soiling to which the carpet is subjected - the more dirt is deposited on the carpet, the more intensive the required maintenance programme has to be.

To appreciate the reasons why carpets are cleaned in a particular way, it is essential to know what makes carpet cleaning necessary in the first place - soiling. To understand why certain cleaning or maintenance techniques are used in certain locations and on given types of carpet, it is necessary to know something about the relationship between the available cleaning systems and different types of carpet.



There is a distinct difference between *cleaning* and *maintenance*:

- cleaning is the removal of accumulated dirt and is generally carried out when needed;
- whilst maintenance is a planned procedure, started on the day the carpet is installed and on-going to retain a carpet's good appearance.

This booklet is an introduction to the increasingly sophisticated techniques of carpet cleaning and maintenance.

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1 How Carpets Soil

Dirt particles carried into a building on the soles of shoes or by air currents are deposited on the carpet surface and stick to the pile fibres. These dirt particles are held by mechanical forces in the yarn structure, or by adhering to the fibre surface because they are sticky (oily) themselves, or because the fibre is sticky, damaged, or has other sites where soil can lodge.

There are two main types of soil (dirt):

- Type 1* coarse, dry, heavy soil – e.g. sand, fibres, salts etc – which causes carpet "to fill up with dirt", and which is deposited as far down as the roots of tufts
- Type 2* fine, sticky, lightweight soil – e.g. soot, oil, rust, etc – which causes most of the discolouration of the carpet surface and makes the carpet "look dirty"

These two kinds of dirt have to be removed using different techniques:

- Type 1* by mainly mechanical means – e.g. vacuum (suction) cleaning
- Type 2* by mainly chemical means – e.g. shampooing, or impregnated compound cleaning

The more carpets soil, the more difficult and often expensive, it becomes to clean them. It therefore makes sense to try to reduce the rate at which carpets soil by somehow trying to reduce the amount of soil reaching the carpet. This can be done by taking preventative measures such as the installation of adequate lengths of entrance mats, and by good housekeeping – e.g. by preventing spillages and by putting mats in lifts and in front of drink dispensing machines.

2 Maintenance Planning

The importance of proper planning of a maintenance programme for the carpeting in a building, however large or small, cannot be over-emphasised. The maintenance plan should take into account foot traffic loads, traffic patterns, desired appearance levels of the carpeting in different areas of the building, building occupation, the personnel responsible for the maintenance, available equipment and cleaning costs.

Correct and regular maintenance will be cost-effective and also increase the life span of carpeting.

Carpet maintenance usually consists of three categories:

- routine
- interim
- periodic

2.1. Preventive measures

To minimise the ingress of air-borne soil it is important to maintain a positive air pressure within a building via air conditioning and the incoming air must be filtered. To prevent draught (filtration) marking all edges of rooms beneath skirtings must be sealed.

Most dirt is tracked into the building from outside. As preventive maintenance, entrance mats, also referred to as scraper, walk-off or barrier mats, should be placed *outside* the front and rear entrances. Adequate lengths of matting *inside* these entrances ensure that walked-in dirt causes as little damage as possible to the textile floor covering.

Applying a WoolSafe approved carpet protector can prevent excessive soiling of sensitive carpets.

2.2. Routine Maintenance

Usually carried out on a daily basis, this comprises **vacuum (suction) cleaning** of all regularly trafficked areas and **spot removal**. Extra care must be taken of the most heavily used areas, including entrance mats. Areas of minimal use can be vacuum cleaned at a lower frequency, for instance twice weekly.

Spills should be given attention as soon as possible – the older the stain, the more difficult it is to remove.



Always at hand and free to download the award winning WoolSafe Carpet Stain Cleaning Guide App is an essential tool for Facilities Managers and cleaning staff to have at their fingertips. The app is easy to use with step by step stain removal instructions, lists of professional and consumer approved products and contact details of Approved Service Providers.

Spot removal kits containing all the tools to tackle spills likely to occur must be available to maintenance personnel trained in their use and with access to the kits at all times during carpet maintenance periods.

It is important to check the chemicals in the kits are compatible with the carpet installed – applying them must not cause colour bleeding or bleaching, or any other damage to the carpeting. Products that are safe and effective on wool and advanced generation nylon fibres are identified by the WoolSafe Mark.



Spot removal kits should contain at least the following:

- clean tissues and/or towels
- small brush, spoon (or spatula) and sponge
- solvent for removing greasy/oily stains
- carpet shampoo
- acetone/nail polish remover
- carpet shampoo
- chewing gum remover (solvent or freezing type)
- neutralising agents: acetic acid solution, ammonia solution (5%)
- methylated spirits and turpentine or white spirit
- rust remover.

Spot removal chemicals must be used with proper precautions. When in use, the area must be well ventilated, the agents should not come into contact with skin or the fumes be inhaled. Flammable agents must not be used when the operator is smoking, or near open flames, sparks etc. Proprietary spot removers must carry the **WoolSafe Mark**.

The recommended spot removal procedure is as follows:

- Scoop up solids and blot up liquids first - *avoid rubbing the carpet surface*.
- Spots of known origin are treated according to the **Spot Removal Guide**, see pages 6 and 7.
- For spots of unknown origin, apply solvents (for greasy/oily stains) first, followed by water-based spot removal agents.
- In all cases, apply agent to clean towel or tissue, **not** directly to the stain. Use **small** quantities at a time - always work from edge of stain inwards towards the centre. If at all possible, as a final treatment, rinse spot with clean water - **do not over wet**
- blot as dry as possible with **clean** tissues or towelling.

Some chemicals are hazardous and they all should only be used strictly in accordance with their use and safety instructions.

EASY SPOTS

Spot or stain	Try 1st	Try 2nd	Try 3rd
<i>Blood</i>	5	6	3
Burn/scorch marks	13	14	
Butter	7	5	
Candle wax	8	7	
Chewing gum	9		
Chocolate/cocoa	5	7	6
Cola	3	5	6
Cream	7	5	
Egg	5	6	
Floor wax	7	5	
Fruit juice	3	5	
Gravy and sauces	5	6	
Herbal tea	3	6	
Metal polish	5		
Mustard	5	6	
Oil and grease	7	5	
Paint (emulsion)	3	5	
Shoe polish	7	5	
Tea	3	5	6
Wine	3	5	

- 1 Blot with white kitchen roll or paper tissues
- 2 Vacuum clean
- 3 Cold water
- 4 Warm water
- 5 WoolSafe-approved carpet shampoo solution (diluted)
- 6 WoolSafe-approved spot remover for water-based stains
- 7 WoolSafe-approved spot remover for greasy/oily stains
- 8 Absorbent paper or paper tissue and hot iron (on wool carpet only!)
- 9 Chewing gum remover (solvent or freeze type)
- 10 Nail varnish remover or acetone
- 11 White spirit or turpentine substitute
- 12 Surgical spirit (ethyl alcohol or ethanol)
- 13 Rub with a coin
- 14 Rub gently with coarse sand paper

DIFFICULT SPOTS

Spot or stain	Try 1st	Try 2nd	Try 3rd
Artificially coloured drinks	3	6	
Bleach	3	17	
Central heating radiator fluid	16		
Coffee	4	6	
Felt-tip pen	7 or 11	12	5
Furniture polish	7	5	
Glue/adhesive (plastic base)	10	11	
Ink (fountain)	3	6	5
Ink (ballpoint pen)	12		
Lipstick	7		
Milk	4	5	15
Nail varnish	10		
Paint (oil)	11		
Rust	16		
Soot	6	5	2
Tar (asphalt)	7		
Urine (fresh stain)	3	5	15
Urine (old stain)	6	15	
Vomit	5	6	15
Wine (red and rosé)	1	6	

Treatments used by professional carpet cleaners

- 15** *WoolSafe-approved disinfectant or deodoriser*
16 *Rust remover*
17 *Carpet re-colouring kit*

For the best results engage the services of **WoolSafe Approved Service Providers**, who are specially trained in all aspects for caring for wool carpets (see also page 12).

For your nearest WoolSafe Approved Service Provider, check out our online directory on www.woolsafe.org or contact the WoolSafe Organisation (01943 850 817; office@woolsafe.org).



2.3 Interim Cleaning*

Used to brighten the appearance of the carpeting by removing surface dirt. This procedure does not necessarily remove much of the deep-seated soil in the pile.

Interim cleaning is a fast and relatively low cost method of restoring the appearance of wool floor coverings. Actual soil removal is generally restricted to the use-surface only. This technique is extremely useful in high traffic areas such as lifts and traffic lanes. Correctly done, the wool floor covering can be dry within an hour.

Six basic systems can be used:

- spray mist rotary pad (bonnet cleaning) method;
- thermo-pad system;
- absorbent compound cleaning method;
- dry foam cleaning method — cylindrical-brush shampoo machines;
- crystallising or encapsulating shampoo cleaning method.

Prior to any of the following cleaning methods a thorough suction cleaning is an essential part of the overall process. After cleaning is completed and the floor covering has dried it must be suction cleaned to remove any residues of dirt and cleaning agent.

2.4 Periodic Cleaning*

However meticulously both regular maintenance and interim cleaning are carried out, the time might come when the carpeting will require a thorough, deep or restorative cleaning. Systems used are based on shampooing using a high foam carpet shampoo or spray extraction cleaning, using a low foam detergent.

Before wet cleaning, the carpet pile is usually treated with a pile lifter, a twin-motor vacuum cleaner with a large cylindrical brush and powerful suction action. This opens up the pile and removes embedded grit normally left behind by vacuuming.

*** In the maintenance programme of some absorbent compound systems *interim* and *periodic* cleaning are essentially combined. By the correct and thorough use of these systems the use of wet cleaning can be avoided all together.**

Shampooing involves the use of a rotary or cylindrical brush machine which brushes a shampoo solution ("wet" shampoo) or a shampoo foam ("dry" shampoo) into the carpet pile. After this is completed, the dirt-laden shampoo is either

- sucked out of the pile by means of a wet pick-up machine
- rinsed out using a spray extraction machine (charged with water only)

Spray extraction cleaning injects a detergent solution into the carpet pile, immediately followed by an integral wet pick-up system. The amount of solution sprayed into or onto the carpet pile varies greatly between machine models and makes and speed of each pass of the wand. This affects both the efficiency of the "flushing" out of the dirt and the chance of inadvertently over-wetting the carpet.

Cleaning efficiency can be improved by pre-spraying the carpet with the low foam shampoo 10 minutes prior to spray extraction, and by the use of rotating or oscillating brushes in the floor "wand" of the machine.

With all wet cleaning techniques, it is important to avoid over-wetting the carpet as this will greatly lengthen the drying time and may cause problems with discolouration of the pile. Brushing of the pile should also be kept to a minimum, especially with some carpet constructions. It is strongly recommended that the carpet be pre-tested before starting any wet cleaning to ensure neither the chemicals (shampoos or spot removal products) nor the actual cleaning technique cause damage to the structure or colour of the carpet. On wool (rich) carpeting, only WoolSafe approved chemicals should be used.

3 Recommended Cleaning Methods for Wool Carpets

There are no hard and fast rules on which cleaning technique is the best for wool carpets. It depends largely on the type of carpet concerned and the degree and type of soiling.

As a general rule, cleaning methods involving brushes or beaters should be avoided on long pile or coarser loop pile wool carpets. In these cases, plain suction vacuum and spray extraction wet cleaning are often the best methods. *It will also depend on the skill of the operator - no technique is completely foolproof.*

The damage to carpets in (wet) cleaning usually relates to over-wetting, too much mechanical action and the use of unsuitable chemicals. Wet cleaning has both positive and negative effects on the texture of carpets. The positive effects are:

- lifting of the carpet pile
- improvement in tuft definition (especially on loop pile)
- improved handle
- improved colour and design (if appropriate)
- improved hygiene, reduced allergens

All wet processes cause some untwisting of yarn in cut pile carpets, depending on amount of moisture applied, mechanical action, degree of "setting" of the yarn, etc. Brushing causes some fuzzing (in shampooing, but also with upright vacuum cleaners). Ridging on extremely long pile carpets can be caused by some spray extraction cleaning tools.

4 Cleaning Chemicals

The basic requirements of cleaning chemicals for use on wool are:

- low alkalinity,
- non-sticky residue on drying,
- good cleaning power,
- no added bleaches, dyes etc.
- safe in use and safe once applied to the carpet.

The reasons for these requirements are:

- high alkalinity (often, but by no means always, reflected in high pH) can cause colour bleeding with dyed yarns, pigment bleeding in natural berbers, jute staining of pile surface in light coloured carpets, and – in extreme cases – yellowing and weakening of wool fibres;
- sticky residues cause quicker re-soiling;
- poor cleaning performance necessitates excessive mechanical agitation of the pile and added risk of pile distortion;
- additives can cause uneven cleaning, bleaching or change of colour.

Some commercially available carpet cleaning chemicals do not conform to one or more of the above requirements. To identify those that *are* safe to use, an approval programme for wool carpet maintenance products was established in 1991, called **WoolSafe**.

All products tested and approved under this programme carry one of the **WoolSafe Marks** on packaging and/or product literature. Some examples of the Mark are:



5 Recommended Maintenance Programmes

When writing maintenance programmes for carpets in contract locations a number of aspects must be considered. The level of maintenance required for a given location within a building – frequency, intensity, equipment used, etc. – depends on the severity of the traffic and the type of soiling that occurs. Most buildings can be divided into four categories: light, medium, heavy and extra heavy soiling. These in turn will require corresponding levels of maintenance. Suggested maintenance programmes for the different soiling categories are given in the Table below.

Soiling level	Maintenance	<i>Routine cleaning</i>			Interim cleaning	Periodic cleaning
		Spot removal	Vacuum traffic areas	Full vacuum		
Light	Light	Daily	Daily	Weekly	12 months	18-24 months
Medium	Medium	Daily	Daily	Every 2-3 days	6-12 months	12-18 months
Heavy	Intense	Daily	Daily	Daily	3 months	6-12 months
Very heavy	Very intense	Daily	Daily	Daily	1-2 months	3-6 months

More detailed information about carpet cleaning techniques, equipment and planning can be found in the **WoolSafe Standards WS 1000**, “The Maintenance and cleaning of wool floor coverings” and **WS 2000**, “Code of Practice for Professional Carpet Cleaning Companies”. Both are available from The WoolSafe Organisation.

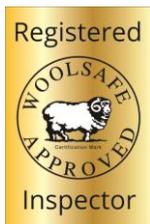
6 WoolSafe-accredited carpet cleaning companies

The WoolSafe Organisation operates an accreditation scheme for professional carpet cleaners, called the WoolSafe Service Providers programme. WoolSafe Service Providers are fully trained in all carpet cleaning techniques, have been in business continuously for a period of at least 5 years and have appropriate insurance cover. They have attended the WoolSafe training course, have passed a written exam and meet other requirements relating to their business and professional associations. WoolSafe Approved Service Providers use WoolSafe-approved products whenever they clean wool carpets or rugs.



7 If you have a problem with your carpet or rug ...

... that requires an independent inspector, a network of carpet complaint investigators, trained and registered by the WoolSafe Organisation is available throughout the UK and Ireland. To contact a **WoolSafe Registered Inspector** in your area call 01943 850817 or visit www.woolsafe.org and click “A Carpet Inspector” in the shortcut menu on the left hand side of the home page.



8 Green Cleaning

In April 2007 The WoolSafe Organisation launched a ‘green’ version of the WoolSafe Mark. This **Green WoolSafe Mark** emphasises the fact that the product is not only safe and effective to use on wool carpets and rugs, but is also significantly less damaging to the environment through its manufacture, use and disposal.

