The Cleaning & Maintenance of Wool Carpets

The WoolSafe Organisation
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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 and hygiene benefits. 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*:

- Maintenance is a planned procedure, started on the day the carpet is installed, but preferably already considered at the point of carpet selection. Maintenance is an on-going process to retain a carpet's good appearance.
- Cleaning is the removal of accumulated dirt not eliminated by regular maintenance and is generally carried out as and when needed.

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 must be removed using different techniques:

Type 1 by mainly mechanical means – e.g. vacuum cleaning

Type 2 by mainly chemical means – e.g. spray extraction or low-moisture cleaning

The more soil is deposited on a surface, the more difficult and often expensive, it becomes to remove it. It therefore makes sense to try to reduce the rate of soiling by reducing the amount of soil entering the building. 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 to catch spills.

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 the amount of foot traffic, traffic patterns, desired appearance levels of the carpeting in different areas of the building, carpet type, 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 and the wellbeing of building occupants.

Carpet maintenance usually consists of:

- preventative measures
- routine maintenance – vacuuming, spot removal, etc.
- interim cleaning
- restorative cleaning

2.1. Preventative 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 skirting 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 immediately after installation can prevent excessive soiling of light-coloured carpets.

2.2. Routine Maintenance

Usually carried out on a daily basis and comprises **vacuum 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, at all times.

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 carry the WoolSafe Approved Mark are safe and effective on wool and advanced generation nylon fibres.

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
- chewing gum remover (solvent, gel 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 and strictly in accordance with their use and safety instructions. Prior to use, always test products following the manufacturer's instructions. The work area must be well ventilated, cleaning agents should not come into contact with skin or the fumes be inhaled. Flammable agents must not be used near open flames, sparks etc. Proprietary spot removers must carry the **WoolSafe Approved 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 more detailed guidance refer to the **WoolSafe Carpet Stain Cleaning Guide App** (see page 4.) or the WoolSafe website.
- 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 white 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.

Spot Removal Guide

Spill Type	Step 1	Step 2	Step 3	Step 4
Bleach / Rust /Old urine stain	**7**			
Blood	2	8	11	17
Burn/scorch marks	5	1		
Butter and Cream	3	9	15	17
Candle wax	6	13	9	17
Chewing gum	4	13	9	15
Chocolate/ Cocoa	3	9	15	17
Coffee/Cordial drinks/Cola/ Tea	2	9	16	15
Dirt/soil/mud	1	10	16	
Egg	3	10	11	17
Faeces/ Vomit	3	11	15	17
Felt-tip pen	9	16	15	17
Fruit juice	2	9	16	17
Furniture polish	2	9	16	17
Glue/adhesive	14	13	16	17
Gravy and sauces	3	9	15	17
Ink (fountain)	2	8	9	15
Ink (ballpoint pen)	12	16	9	15
Lipstick	3	9	12	
Metal polish	2	9	15	17
Milk	2	8	11	19
Mustard	3	9	15	17
Oil and grease	2	13	16	17
Paint (emulsion)	3	8	16	17
Shoe polish	1	7		
Nail varnish	14	16	17	
Paint (oil)	3	13	16	15
Soot / Pollen	18	1		
Tar (asphalt)	3	13	16	17
Urine (fresh stain)	2	11	15	17
Wine (red and rosé)	2	9	15	17

Treatments key

1	Vacuum clean thoroughly (when dry).
2	Blot up as much of the spill as possible using a clean white cloth, tissue or paper towel.
3	Scoop up as much of the spill as possible with a spoon or blunt knife. Then blot spot with a paper towel.
4	Freeze with ice cubes in a plastic bag or with a specialist chewing gum remover and scrape.
5	Rub gently with a coin and brush off.
6	Place brown paper on spot and heat gently with iron on low heat (wool fibre only).
7	This type of stain may require treatment by a professional cleaner; visit www.woolsafe.org/find-a-carpet-cleaner
8	Apply clean water to a white cloth and blot. Repeat until no more stain transfers.
9	Apply WoolSafe Approved spot remover to a white cloth and blot.
10	Apply WoolSafe Approved carpet shampoo or dry compound
11	Apply WoolSafe Approved Pet Stain Remover to a damp white cloth and blot.
12	Apply surgical spirit carefully to the area of the stain only, leave for 5 minutes and blot.
13	Apply white spirit carefully to the area of the stain only, leave for 5 minutes and blot.
14	Apply acetone carefully to the area of the stain only, leave for 5 minutes and blot.
15	Repeat the blotting with clean water again to remove any residues.
16	Blot with clean white cloth or paper towel and repeat application and blotting if necessary.
17	Dry the treated area with white cloth, tissue or paper towel and align the pile.
18	Place sticky tape on top and peel back, repeat.
19	Apply WoolSafe-approved disinfectant or deodoriser.

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).

2.3 Interim Cleaning*

Used to brighten the appearance of the carpeting by removing surface soiling not removed by regular vacuum cleaning. This procedure does not necessarily remove much of the deep-seated soil in the carpet 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. Because it is essentially a low-moisture cleaning technique, the wool floor covering can be dry within an hour.

Three basic methods can be used:

a) Spray/mist and low moisture systems,
b) absorbent compound cleaning method,
c) dry foam/crystallizing or encapsulating cleaning method.

There are many variations of the above methods using, for instance, different compounds, and chemical formulations. All methods should include thorough pre-vacuum cleaning.

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 Restorative Cleaning

Restorative cleaning (also referred to as “deep cleaning”) is aimed at returning the installed textile floor covering to as clean a condition as possible. It uses cleaning methods that remove accumulated and embedded soils and cleaning residues at a higher intensity than the ones used during interim cleaning.

Restorative cleaning primarily uses water-based cleaning methods that attempt to remove soiling from deep within the pile. A typical method consists of the following steps:

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

1. vacuum cleaning, using heavy-duty vacuum cleaner,
2. pre-spraying with the appropriate cleaning detergent,
3. 10-15 minutes 'dwell' time, often with the addition of mechanical agitation,
4. rinsing with spray extraction machine,
5. grooming of the pile,
6. drying,
7. vacuum cleaning (to remove any residues of dirt and cleaning agent).

Frequencies of restorative cleaning will depend on the effectiveness of the regular and interim cleaning routines and the installed floor covering's location, colour and pattern, rate of soiling, hygiene and environmental requirements and the level of appearance desired by the building's owner.

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 (detergents or spot removal products) nor the actual cleaning technique cause damage to the structure or colour of the carpet. On wool and 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 training and skill level of the operator - no technique is completely fool proof.*

The damage to carpets in (wet) cleaning usually relates to over-wetting, too much mechanical action and the use of unsuitable chemicals.

Wet cleaning also has many positive effects on the texture and appearance of carpets, for example:

- lifting of the carpet pile
- improvement in tuft definition (especially with 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 the amount of moisture applied, mechanical action, degree of "setting" of the yarn, etc. Brushing causes some fuzzing, while ridging on 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 (buffering capacity),
- 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 the **WoolSafe Approved Mark** on packaging and product literature and are listed on the WoolSafe website (www.woolsafe.org/woolsafe-approved-carpet-care-products/professional-products/).

5 Recommended Maintenance Programmes

When writing maintenance programmes for carpets 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, or areas within 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	*Routine cleaning*			Interim cleaning	Restorative 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 Approved Service Providers programme. WoolSafe Approved 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 completed the WoolSafe Fibre Care Specialist training course, have passed the exam and meet other requirements relating to their business and professional qualifications. WoolSafe Approved Service Providers use WoolSafe-approved products whenever they clean or otherwise maintain wool carpets or rugs.

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

… that requires an independent inspector, a network of independent carpet complaint investigators, trained and registered by the WoolSafe Organisation, is available in the UK, Ireland and Australia. To contact a **WoolSafe** Registered **Inspector** in your area visit www.woolsafe.org/find-a-carpet-inspector.

8 Green Cleaning

Since 2007 there has been a 'green', version of the WoolSafe Mark for use on environmentally responsible, WoolSafe approved cleaning products. This **Green WoolSafe Mark** highlights 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 formulation, manufacture, packaging, use and disposal.