

Types of Soiling

Three types of soiling are found on carpets whilst a fourth type would be combinations of the three types of soiling

- 1 Dry soil
- 2 Water soil
3. Oily soil
4. Combinations of the above (e.g. water & dust = mud)

These soils may be present in any of the three levels in the carpet:

1. Soiling on the surface
2. Soiling present in mid-pile
3. Soiling held in the backing of the carpet.



Preventative Maintenance Procedures

It is obvious that if we are able to prevent the depositing of soils on the carpet, our maintenance program is going to be that much easier.

The most cost effective method of achieving this objective is the correct placement of effective entrance mats. These resi-loop construction mats may trap up to 75% of the dirt that would normally be tracked into a building. Bearing in mind that on average 80% of the soiling present on carpets is tracked in dirt whilst the remaining 20% precipitates out of the atmosphere, entrance matting is an indispensable part of any carpet maintenance program.

The second important preventative method is the application of a carpet fibre protector such as 3M Scotchgard Carpet Protector. This product effectively seals the carpet fibres in much the same way as an acrylic polymer seals a vinyl floor. The benefit is that the carpet is far more resistant to staining and in addition carpet maintenance methods such as vacuuming are more effective,

Maintenance Cleaning Procedures

Vacuuming

The fact that 85%-95% of carpet soiling is dry soiling means the importance of efficient vacuuming cannot be overstated. There are two basic types of vacuum cleaners available on the market.

Commercial Upright Vacuum Cleaner

This type of vacuum cleaner normally has two motors, the vacuum turbine providing the airflow necessary to transport the dirt from the carpet surface to the vacuum bag. While the second motor drives a turbulator brush. The turbulating action of the brush opens the pile and assists in the removal of mid-tuft dirt particles by lifting these into the airstream.

This type of vacuum cleaner is the most effective available.

Commercial Tank Type Vacuum Cleaner

In its basic form this machine relies purely on suction power to remove soil from the carpet as the floor tool is pushed and pulled across the carpet. In this form the machine is best suited to low profile carpet types and light to medium traffic loads as it only removes soiling present on the surface of the carpet.

Many of these machines can be fitted with power nozzles which provide the same turbulator brush action as upright vacuum cleaners, and in this form their performance is raised to levels achieved by upright vacuum cleaners.

Vacuum Bags on Vacuum Cleaners

The performance of any type of vacuum cleaner is largely dependent on the condition of its filtration system. The disposable paper filter bag provides the most efficient method of filtration. Cloth bags are less effective and if they are used, thorough cleaning of the filter cloth is essential if vacuum efficiency is to be maintained.

Frequency of Vacuuming

Vacuuming frequencies should be related to degree of soiling and traffic volumes.

In areas such as lobbies, corridors, reception areas etc. daily vacuuming is recommended. In fact in inclement weather vacuuming may have to be carried out more than once per day. In medium to low traffic areas, vacuuming every alternate day or even as infrequently as once per week may be sufficient.

Carpet Spray Cleaning

This is an optical surface brightening method and maintains a carpets appearance level at relatively low cost. It is also a fast method and because it does not wet the carpet is ideally suited to cleaning high traffic areas such as entrance lobbies and corridors.

A fine spray of Carpet Spot Remover is applied to about 2—3 m⁻¹ using a trigger Spray or Fixornat Pump. Unlike Spray buffing a resilient or hard floor, the entire area to be cleaned should be sprayed lightly. The surface soil is then removed by several passes over the carpet with a single brush machine fitted with a Carpet Cleaning Pad Actual soil removal is restricted to the surface only and this method is not a substitute for shampooing or extraction. Pads should be turned over or replaced when dirty and washed out and hung up to dry on completion of the job.

Spot and Stain Removal

Factors Affecting Spot and Stain Removal

1. **Material producing the stain - some stains may be impossible to remove.**
2. **Age of the stain - the longer the stain is left the more difficult it will be to remove.**
3. **The concentration of the material.**
4. **The temperature of the material when spilled - the higher the temperature the more readily the material penetrates the carpet fibre.**
5. **The initial removal procedure used -the use of inappropriate chemicals or harsh scrubbing with a brush may permanently damage the carpet.**
6. **The type of carpet fibre - care must be taken when dealing with stains on wool or wood blend carpets.**
7. **The construction of the carpet - certain carpet styles are more susceptible to pile distortion than others.**

Most spills are easily removed with two or three basic spotting agents provided the following steps are followed:

1. Attend to the spillage immediately, before it has time to set.
2. Blot up spillage with paper towels or if spillage is dry and encrusted, use a scraper or dull knife to remove encrustation.
3. Identify the spillage or stain.
4. Select the appropriate spotting product by consulting a spot removal guide.
 - Water-based stains – a Carpet Spot Remover.
 - Solvent-based stains — Carpet Stain Remover.

(In some instances a combination of the above products should be used as directed.)

5. Test the spotting agent in an inconspicuous area to check for colour fastness of the carpet.
6. Spray on chemical and allow working on stain for about 1 minute.
7. Agitate spotted area working from the perimeter towards the centre so as not to spread the stain.

Do not rub or scrub as this will spread the stain and may cause pile damage.

8. Blot up with white toweling. If stain has not been removed, repeat the procedure.

Whilst adherence to the above procedure removes most stains, stains which have set or stains by certain liquids (e.g. mercurochrome, grape juice, Kool-Aid) may be impossible to remove

9. If solvent-based stain removers have been used, rinse by spraying clean water onto the treated area and blotting up, or rinse by using a spray extraction machine



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3.3.3 Specialist Spot and Stain removal problems		
SPOT AND STAIN REMOVAL PROBLEMS		
Problem	Cause	Remedy
Permanent discoloration	Chemical reaction between the material spilled and the carpet fibre	None
Permanent staining	Material spilled cannot be removed from the carpet fibre	None
Pile distortion	incorrect initial removal procedure used	Mostly no remedy
Migration	Incorrect initial removal procedure used	Avoid further migration
Wicking	Carpet has been over wet and dirt has picked up from the backing or underfelt	and Re-clean carpet without overwetting and apply carpet powder to the area cleaned
Browning	Alkaline chemicals have been used on a wool or wool blend carpet	Dab area with cloth moistened with acetic acid solution
Shading	Carpet fibres lying in different directions giving a patchy appearance	None
Contrast with the rest of the carpet	Rest of the carpet soiled	Clean the entire area.



Cleaning Procedures and Types of Carpeting

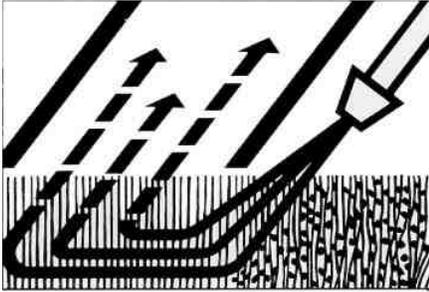
Laying Method	Shampooing Dry		Extraction	Combined
	Wet			
Jute Fabric	Yes	No	Conditionall	Conditionall
Stretched wall-to-wall (ell base	Yes	No	No	No
Fixed with adhesive lape	Yes	Conditionally	Conditionall	Conditionall
Fully glued down depending on carpet type and quality	Conditionally	Conditionally	Conditionall	Conditionall
Rayon Stable Fabric	Yes	No	No	No
Looped Pile. Flat (Boucle)	Yes	Yes	Yes	Yes
Open-loop, flat long pile and sheared	Yes	Yes	Yes	Yes
Tip-sheared	Yes	Yes	Yes	Yes
Classical Velours 5-8 mm	Yes	Yes	Yes	Yes
Soft Velvet 5-8 mm Plus 10-1 5 mm	Conditionally	Conditionally	Yes	Conditionall
Fnse crimped cut pile velours 1-8 mm	Conditionally	Conditionally	Yes	Conditionall
Saxony (10-12 mm)	No	No	Yes	No
Sliag (Longer than 20 mm)	No	No	Yes	No
Needle Felt	Yes	Yes	Yes	Yes



Basic Cleaning Procedures

Pre-spray and Extraction

This method relies on a fine spray of extraction detergent being applied to the carpet using a spray pump or spray extraction machine.



The chemical is allowed to work for about 5 minutes and thereafter direct extraction **with water or water/extraction** detergent solution is carried out.

This is a highly effective system and cleans all but the heaviest soiling from carpets.

Direct Extraction

Very similar to the previous method, this method is less effective because the reaction time of the detergent is so short.

The fresh water tank is filled with the appropriate dilution of extraction detergent and this solution is injected at high pressure into the carpet pile via spray nozzles in the wand. A powerful vacuum action in the wand immediately removes the solution along with the dirt, and the dirty water is collected in a dirty water recovery tank.

Rotary Shampooing/Fresh Water Rinse

This method offers the most effective performance of any basic carpet cleaning procedure and will generally clean even the most heavily soiled carpets.

To shampoo the carpet we require an industrial single brush machine complete with solution tank and shampooing brush fitted with a distribution plate.

An appropriate dilution of carpet shampoo is contained in

the solution tank and fed through the machine onto the carpet where the rotary action of the brush shampoos the carpet.

It is most important to "bed-in" and pre-wet the brush by operating it for a few minutes on any hard floor. The application and scrubbing pattern is also important if streaking and uneven cleaning patterns are to be avoided.

One should start in a corner of the room farthest from the door by moving the machine along the baseboard for about 4-6 metres with the solution feed open thus applying the shampoo evenly over this area. When you reach the end of your first path pull the machine towards you and apply shampoo by laying down another path overlapping the first path by about 50 mm. When you reach the end of the second path again pull the machine towards you and proceed to lay down a third path of shampoo, again overlapping by about 50 mm. Close the solution valve at the end of the third path. The application phase is now complete.

Shampoo the area where the shampoo has been applied by a gentle circular shampooing pattern with the single brush machine. The solution valve remains closed during this operation to avoid over-wetting the carpet.

Once this entire area has been completed the suds and suspended dirt should be removed by clear water rinsing with a spray extraction machine.