



CARPET MAINTENANCE & CLEANING MANUAL



THE ULTIMATE
FLOORING EXPERIENCE

Extending the life of your investment

75 years of carpet experience

A carpet's life will be governed by many factors, starting with the selection process that must take both aesthetic and performance considerations into account. Once selected, nothing will work to extend the life of your carpet more than a carefully planned and conscientious program of maintenance.

In addition to protecting your investment, regular maintenance will enhance the cleanliness and appearance of your carpet, thus providing a healthy environment for your occupants. Desso has more than 75 years of carpet maintenance experience, and we are committed to sharing our valuable knowledge with our customers.

Selecting the right carpet

The most diligently planned maintenance program will not overcome a poor choice of carpet, and careful consideration should be given during the selection process to both volume and patterns of foot traffic that will be tracked through the facility, as well as varying soil types which may be governed by factors such as geographic location and weather conditions. Since traffic flow is generally distributed unevenly throughout a vessel, particular attention must be given to critical areas such as public areas on board, corridors and elevator lobbies.

The choice of carpet construction (e.g. loop pile versus cut pile), fiber (e.g. wool versus nylon), color (e.g. light shades versus dark shades), and pattern coverage (e.g. low pattern content versus high pattern content), will all combine to influence on how readily your carpet will show soil and retain an acceptable level of appearance.

Desso's worldwide team of marine sales specialists are ready to guide you through this critical process. For more information, please visit our website at www.desso-marine.com.

Maintenance programs

One of the keys to preventive maintenance is instituting a maintenance program that is designed to keep your carpet looking good every day at a reasonable cost. Specialist suppliers can provide you with programs that have been developed to assist maintenance planning tailored to the needs of your facility. They will help you to manage the carpet appearance and cleaning activities in your facility while controlling costs. A thorough maintenance program helps you schedule vacuuming, spot removal and deep cleaning when and where needed for clean and dry carpet that looks its best every day.

The keys to effective maintenance

A beauty of carpet lies in its ability to hide soil. This however can work to its detriment, since soil hidden below the surface (invisible to the naked eye) will work over time to destroy the carpet fibers. Most soils contain high concentrations of sharp silicate particles, and if these particles are not removed, friction and abrasion caused by constant foot traffic will eventually cut through the carpet fibers, causing the carpet to mat down and flatten.

The following recommendations are provided to help prevent abrasive soil from damaging the carpet fibers, thus adding significantly to the life and beauty of your carpet.

- A. Daily pile lifting & vacuuming
- B. Spot and spill removal
- C. Deep cleaning

A. Daily pile lifting & vacuuming

At least 85% of all soil is typically dry, and the most effective way to deal with destructive dirt particles is through daily pile lifting and vacuuming. Pile lifting is an essential activity that should be performed at least once a week in high traffic areas. A good, professional pile lifter will lift up the carpet pile, break loose and remove embedded soil that commercial vacuums cannot reach because of matting and crushing caused by heavy traffic. Regular use of pile lifting will make routine vacuuming more efficient, since the counter revolving brushes combined with powerful airflow and filtration will remove the deep down dry dirt and grit. The best commercial vacuums are equipped with rotating brushes, and vacuuming alternately in both length and width directions will help to dislodge soil from carpet fibers during daily vacuuming.



B. Spot and spill removal

Left untreated, and allowed to dry, spills can quickly become unsightly, difficult to remove, and may cause permanent discoloration in the carpet. Spills therefore should be reported immediately, and treated as quickly as possible. Quick action may remove the spilled substance before it penetrates into the carpet, and when tackled immediately, 95% of a liquid spill may be removed without the use of detergent.

Always try first to determine what has caused the spot, since it will help in deciding what type of spot remover to use. The majority of spills are easily removed with water and a microfiber towel. When removing spots, the following points should be taken into consideration:

- The sooner a spot is removed, the better the result will be.
- Always work from the edge of the spot inwards.

The following steps should be followed:

1. Remove as much of the spilled material as possible with a spoon, and carefully blot up liquids with a white or undyed cloth or microfiber towel, paper tissue or blanco kitchen roll.
2. Consult the Stain Removal Guide at the end of this guide to see which spot removal agent to use. Try this first on a spare piece of carpet or in an inconspicuous area of the installed carpet.
3. Apply the spot remover with a cloth. Do not pour it directly onto the spot.
4. Give the spot remover time to work in on the spot.
5. Blot the spot carefully until dry with an undyed cloth or microfiber towel, paper tissue or kitchen roll. Never rub or brush.
6. Then you may apply some of the different carpet cleaning powders that are available for professional use. Or you may use some paper towels. Pack it on the spot. Allow the area to dry. This will remove any residues of the spot material and the spot remover that you used. When the area is dry, vacuum.
7. Repeat if necessary.

Specific stains

Specific items such as chewing gum, wax or tar cannot be successfully removed without the use of special chemicals and techniques. Always be sure to use a pH-neutral product, since products with a high pH-value will create new stains if not removed thoroughly and immediately after use. For more difficult stains, commercial machines are highly recommended. They can be used during the regular pile lifting/vacuuming procedures to remove difficult spots and spills. A quick and easy approach to spot removal can be accomplished with specially designed brushes. These tools provide a quick and effective way to remove spots and spills from your carpet in larger commercial facilities.

Common Stains

As stated above, most common (water-based) stains can be removed by using a clean white (cotton) cloth or absorbent paper (without print) and lukewarm water. Other (oil-based) stains should be treated with an appropriate carpet cleaning agent. It is always recommended to remove stains as quickly as possible by following the instructions on the container and by testing it on a concealed part of the floor. In all cases repeat treatments where required until the stains are removed (always avoiding excessive rubbing). In cases where you need more information, contact Desso and/or its partners in carpet maintenance.

Coffee/Tea/Soda/Wine

First remove as much excess moisture as possible with a clean white (cotton) cloth or absorbent paper. Take another white cloth, moistened with lukewarm water to clean the last remaining spillage from the outside in (avoid rubbing and excessive use of water). Leave the carpet to fully dry and repeat this if necessary (possibly with an appropriate carpet cleaning agent).

Food/Fruit

Remove all remaining parts with a spoon (or equivalent blunt object) and follow the instructions as with coffee/tea/soda/wine. If residues of the stain remain the procedure can be repeated with an appropriate carpet cleaning agent.

Chewing gum

Chewing gum is best removed by freezing it and gently breaking it away from the fibers, using a dull knife or spoon. Do not try solvents that will dissolve the gum, since a very sticky problem may result. For best results use a specialist chewing gum removal product. Always follow the instructions on the container.

Toner/Paint/Glue

Leave the stain to dry and remove any dry compound remaining with a spoon (or equivalent). Use a carpet cleaning spot removal product on a clean white cloth and treat the remaining stain.

Blood/Urine

Similar as coffee/tea/soda/wine.



C. Deep cleaning

We recommend either the dry extraction method or the crystallization encapsulation method.

Crystallization encapsulation method

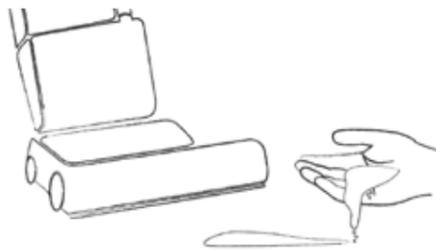
The crystallization method works in a similar way as the absorbent powder method, but uses a cleaning chemistry which contains both a detergent and a crystallizing polymer. While the detergent suspends the soil, the polymer encapsulates it and then dries to a crystal. This crystal is then vacuumed away.

Please note that both alternatives to hot water extraction can only be applied in combination with pre-vacuuming as well as careful daily vacuuming, since both methods cause a residue buildup. However, with the crystallization method this residue is not visible to the naked eye.

Dry extraction or absorbent powder method

Through a dry extraction or absorbent powder method you can deep clean your carpet anytime without the inconvenience of getting it wet. With a dry cleaning method there is no need to take the carpet out of service for a long period of time, while your carpet is clean, dry and looks its best every day.

These systems are comprised of a brush vacuum cleaner and a cleaning product that acts like millions of tiny, absorbent sponges. These sponges contain water, detergents and green cleaning chemistry which deep clean by dissolving and absorbing the greasy, oily dirt. The brush vacuum cleaner lifts the pile, removes dry dirt, chemically deep cleans the carpet and removes spots and spills immediately.



! The use of bonnet/ spin pad cleaners is not allowed for Desso carpet, and its use will void all manufacturing warranties.

Advice and recommendations

Some spots respond slowly. Spots and stains cannot all be removed from every textile floor covering due to the difference in fibers, dyes, construction, finishes, composition of the stain, length of time the stain has remained on the carpet, etc.

A wide range of detergents and cleaning aids are available for carpet cleaning and maintenance. Desso recommends the following products as they either fit within its Cradle to Cradle® philosophy and/or meet the standards of performance in cleaning and maintaining carpet flooring products:

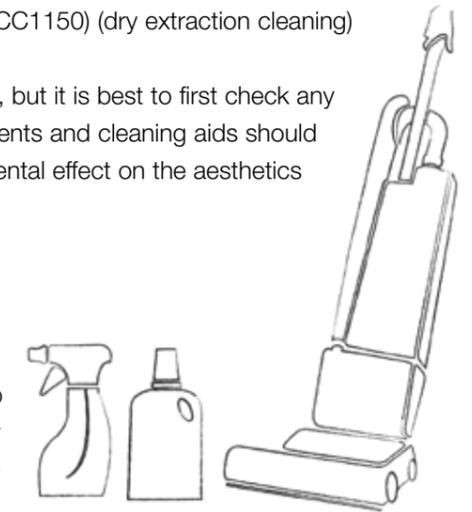
- Sebo, or equivalent (vacuum cleaning)
- Hepa, or equivalent (e.g. S-class type) (vacuum cleaning)
- Diversey (Tapi Spotex 2), Progenta (Pro Carpet), James (Vlekkenwonder) or Dr. Schutz (Floor Mate) (spot removal - general)
- Diversey (Tapi Spotex 1), James (Vlekkenspray), RZ (Vlekkenhamer) or Dr. Schutz (Super Stain Remover R) (spot removal - specialist)
- Whitaker (Crystal Dry (C2C)), Releasit (Encap Clean) or Carpet Cleaner (CC300) (dry crystal cleaning)
- Enviro-Dri (Pro 40 (C2C)), Host (Dry Carpet Cleaner) or Carpet Cleaner (CC1150) (dry extraction cleaning)

The selection mentioned above does not mean all other products are excluded, but it is best to first check any other products with Desso or its maintenance partners. However, some detergents and cleaning aids should not be used as they do not meet Cradle to Cradle® standards or have a detrimental effect on the aesthetics and performance of carpet flooring products:

Bleach (or bleaching agents)

- Products with pH levels over 7.5
- Soap
- Tri (or tri-holding products)

For the best results always follow the instructions on the container. It is also important to first test cleaning agents on a concealed part of the floor for colourfastness. Contact Desso and/or its maintenance partners if you have questions or need further support (see recommendations below).



Maintenance partners

Desso closely cooperates with specialist (carpet) cleaning companies. For support in defining a proper maintenance plan with details on methods, frequency and building zones contact Desso and/or one of the recommended partners in maintenance:

- Progenta - W: www.progenta.nl – E: info@progenta.nl - T: +31 318-471823

Pile Reversal and Shading prevention

Desso has undertaken several preventive measurements within our production facility in order to minimize the potential pile-reversal problems to an absolute minimum. However, there is no 100% cure to eliminate the risk of shading, we have tried to do as much as possible on our end to minimize the risks but it can not be excluded.

Actions / Preventive measurements that can be taken to avoid the shading effect from appearing:

- One should avoid using uni-colored carpets. Carpets that consist out of one color only have a bigger risk of showing the shading effect. On the contrary, 'busy' designs are camouflaging possible shading effects a lot more;
- One should consider to use underlay. Underlay has deck-levelling characteristics (soft) compared to a (hard) concrete or steel sub-floor. The more levelled the sub-floor is, the better the carpet will look after installation. In general underlay is recommended by DESSO to extend the Product Life Cycle;
- One should install the carpets at the very end of the project, 1-1,5 months before the ship delivery. After covering the carpets there should be no more extensive traffic on top of the covering material in order to avoid the shapes of the covering materials to be marked in the carpet. This will damage the carpet due to the continuous pressure on top of the covering material when the ship is still heavily under construction. This might cause or accumulate the shading effect or other visual defects;
- One should install the covering materials a few days after the carpet installation has been completed in order to let the moist of the adhesive vaporize. For the exact drying time please consult the technical specification of the adhesive used. An important parameter that influences the dry-time of the adhesive is the relative humidity of the air. Please pay extra attention to this point as too much moist is harmful for carpet. When there are doubts about the dry-time please consult the adhesive manufacturer at all times. Additionally, one should use covering material that is able to 'breathe' in order to let the moist of the glue and the carpet vaporize instead of sealing the surface with a 100% closed foil and/or wooden panels.
- DESSO cannot be held responsible for the use of (IMO certified) adhesive that has never been tested together with the DESSO IMO certified carpets. In case of doubts about the adhesive to be used please consult DESSO for advice. When there are doubts DESSO can perform the required tests on your expenses to determine if the adhesive would be suitable. This is of big importance as DESSO can only apply the standard product guarantee when all conditions meet the required criteria.

It is not possible to assure that pile reversal / shading will not develop in any carpet.

Maintenance and Cradle to Cradle®

As a Cradle to Cradle® company, Desso aims to design and produce its products in such a way that they have a positive impact on people's health and wellbeing and can be disassembled and recycled. It also sets targets to step up the amount of energy we use powered by renewable sources, manage our water resources responsibly and develop take-back and recycling capabilities. Therefore our carpets become more than a product; they are a service that can contribute to a better world. Maintenance is an integral part of this service and the C2C principles need to be integrated into the maintenance programme with the definition of methods, tools and cleaning agents. Additionally, a clean environment has a positive effect on the health and wellbeing of its user(s).

The main part of the maintenance programme is covered by vacuum cleaning and spot removal by the use of water, where it is important to carefully consider the use of energy and water. In the case of specific spot removal (e.g. oil-based, chewing gum) and both periodic and specialist maintenance it is essential to use the right carpet cleaning agents. This includes, among other aspects, their chemical composition and effect on maintenance staff and users, as well as the amount of residue in the carpet. The advantage of periodic cleaning compared to specialist cleaning, is that cleaning agents and residues will not end up in the public water streams. Other tools, such as machines for specialist cleaning, need to be assessed against their use of energy and any water and cleaning agents that may end up in the public water streams. Decisions on the use of such products and tools are then made against these criteria and in terms of their effectiveness in cleaning and maintaining the carpet.

The operation of the maintenance programme and the use of cleaning agents is a determining factor for the condition of the carpet after its useful life and thus for the options to recycle or reuse the product as part of Desso's Take Back™ programme. The amount of soil and residue in the carpet determines the quality of the materials fed into the different recycling streams.

As part of the implementation process Desso is continuously researching into alternative cleaning agents and tools for their fit to the Cradle to Cradle® strategy and their performance in cleaning and maintaining carpet. Some recommended products are listed below.



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Information

Desso B.V.
Taxandriaweg
155142 PA Waalwijk

P.O. Box 169
5140 AD Waalwijk
The Netherlands

TEL. +31 (0)416 684 100
FAX +31 (0)416 335 955
marine@desso.com
www.desso-marine.com

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