



Carpet Maintenance Guide.

It may not be the first thing on your mind when you purchase commercial flooring. But it's essential to keeping your carpet looking and performing its best for years to come.

Of course, your initial line of defense against soil is proper carpet selection. This includes specifying a well-constructed, quality-engineered carpet and having it installed by experts. Nylon, the world's first man-made fiber, was introduced in 1938. Since that time, INVISTA has accumulated more knowledge on carpet fiber and performance than anyone in the floor covering industry.

And out of all we have learned, one basic fact is critical: A well-planned maintenance program—that includes both preventive maintenance and regular, proper cleaning—is key to making sure your carpet retains its appearance over time. An ineffective maintenance program can result in a soiled carpet that requires more frequent replacement.

This brochure is designed to give you the information you need to create an effective maintenance program that will extend the life of your carpet—reducing life cycle costs and maximizing your commercial floor covering investment.

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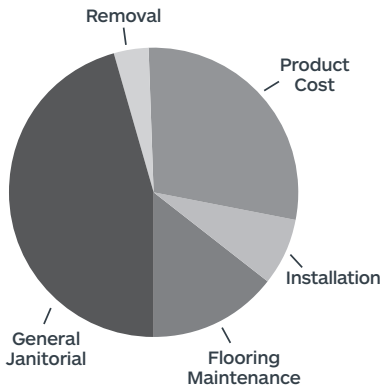
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WHY CARPET MAINTENANCE IS IMPORTANT

MAINTENANCE PROTECTS YOUR INVESTMENT

Commercial flooring is a substantial investment for any business—one you'll want to protect for years to come. **After all, the longer your flooring lasts, the less it costs.**

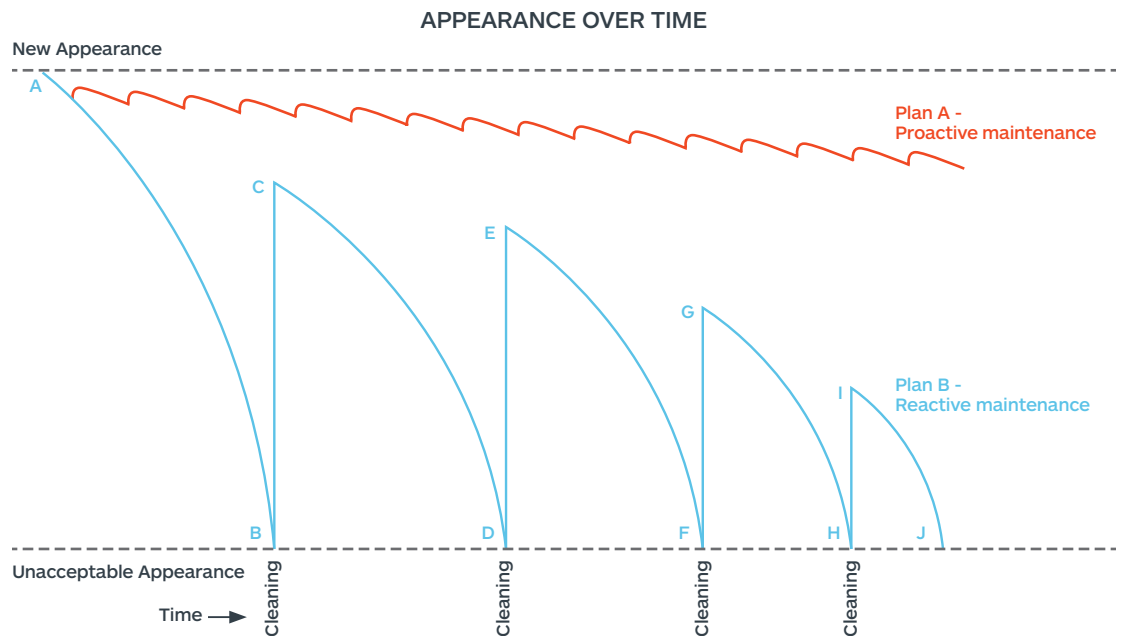
The initial cost for floor covering materials and installation does not fully encompass your total floor covering investment. The life cycle cost also factors in life expectancy of the carpet, costs for removal/disposal, lost revenues during renovations and maintenance costs over the life of the carpet. Good maintenance helps protect your total flooring investment.



MAINTENANCE HELPS CARPET LAST LONGER AND COST LESS

Proactive, regularly scheduled maintenance removes soil before it can build up and damage carpet fibers. This can actually extend the life of the carpet, reducing the costs of restoration, replacement and disposal.

Reactive maintenance cannot fully restore a carpet to a like-new appearance. This results in shorter carpet life and higher carpet life cycle costs. This chart demonstrates how proactive and reactive maintenance compare over time.



Plan A shows that with a proactive maintenance program, carpet retains most of its original appearance over time. Plan B illustrates that reactive maintenance cannot bring carpet appearance back to the levels maintained with a proactive maintenance program.

MAINTENANCE OF COMMERCIAL FLOOR COVERINGS

MAINTENANCE IS GOOD FOR THE ENVIRONMENT

Our life cycle analysis of commercial carpet shows that the overall environmental footprint of carpet is reduced by increasing the amount of time a carpet remains on the floor. A consistent, proactive maintenance program can significantly improve the appearance retention throughout the life of the carpet. Less carpet waste going to landfills must be a consideration to protect our environment.

In any commercial environment, it is virtually inevitable that cleaning will be the biggest operating cost. Cleaning is a labor-intensive process. And while the cost of labor has soared in the last 50 years, cleaning equipment technologies have evolved very little.

Result: The International Sanitary Supply Association¹ estimates it costs about \$500 to remove just one pound of dirt from a commercial building.

That's the bad news. The good news is that carpet costs less to maintain than other types of commercial floor coverings. While all floor coverings require consistent maintenance to endure the rigors of a commercial environment, the techniques and equipment for properly maintaining commercial carpet are relatively simple.

Carpet requires fewer chemicals for maintenance. Hard surface floors can require sweeping, mopping, buffing, stripping and finishing. Carpet, on the other hand, requires three basic maintenance operations: vacuuming, spot cleaning, and regularly scheduled maintenance or periodic deep cleaning. When it comes to hours spent on maintenance, carpet is clearly the economical choice.

In addition, the inherent nonslip and cushioning characteristics of carpet may help lower insurance cost, by reducing the likelihood of falls as well as minimizing the injuries sustained in falls that do occur. And the natural insulating properties of carpet help keep floors warm in the winter and cool in the summer, which may reduce the cost of heating and cooling.

SOIL AND YOUR CARPET

COMPOSITION OF TYPICAL CARPET SOIL

Component	Weight (%)
Dry Soils	
Silica and silicates	30-40
Oxides, carbonates and phosphates	6-24
Animal/cellulosic fibers	0-24
Oily Soils	
Resins and gums	6-10
Greases and fats	3-8
Moisture	3




HOW DIFFERENT SOIL TYPES AFFECT CARPET

A practical advantage of carpet is its natural ability to look fresh and clean under the worst conditions. As a result, soil that is ground in below the surface of the carpet may not be visible. But unless this soil is removed, the binder materials in the soil will continue to attract more soil. Foot traffic will continue to drive growing concentrations of sharp silica particles against carpet fibers. Eventually, the combination of sharp, abrasive particles and friction will flatten carpet fibers and tufts.

Carpet soil is made up of two components: dry soil and oily soil. Clay, dust and silicates are the dry soiling agents that can destroy the appearance of carpet. Fortunately, most dry soil found in a typical commercial environment can be removed by regular vacuuming.

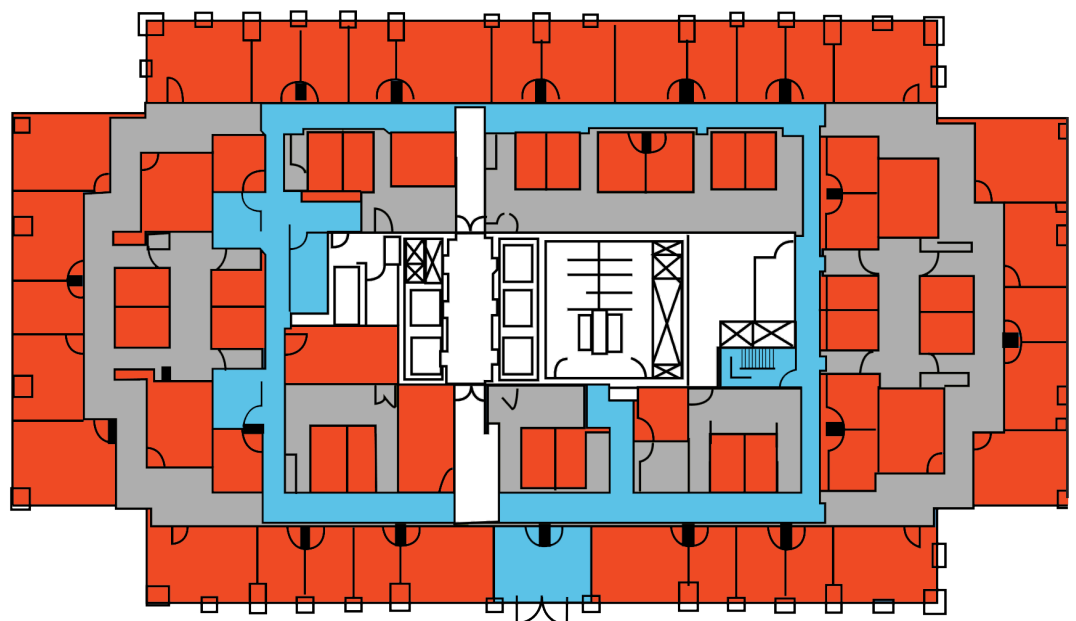
Oily soil, including resins, gums, greases and fats, act like binders—attracting and holding dry soil to the carpet. This results in a dingy gray or brown appearance. Oily soil is the largest contributor to poor carpet appearance. It adheres to carpet fibers, cannot be easily removed and continues to attract more dry soil.

TYPICAL HEAVY, MODERATE AND LIGHT-TRAFFIC AREAS

-  Heavy - Clean 12 times per year
-  Moderate - Clean 4 times per year
-  Light - Clean 2 times per year

UNDERSTAND HOW TRAFFIC AFFECTS SOILING

Soil that makes it into your building will be most visible—and potentially damaging—in high-traffic, high-volume areas. These include entrances, elevator lobbies and corridors, doorways, and the natural paths between furnishings. These areas will have more visible soil than under desks and around the perimeters of offices and conference rooms. These typical traffic patterns, along with cleaning requirements and methods for each area, are illustrated in the office floor plan below².



² Carpet and Rug Institute - <http://www.carpet-rug.org>

CREATING A CARPET MAINTENANCE PROGRAM

Once you understand the importance of proper carpet maintenance, you are ready to create a comprehensive maintenance program for your facility.

STEP 1: MAKE PREVENTIVE MAINTENANCE A PRIORITY

Preventing soil from entering the environment is easier and less expensive than removing it from the carpet. Here are five simple but important steps in a preventive maintenance program:

KEEP OUTSIDE AREAS CLEAN

Outside maintenance helps minimize immediate sources of soil. The cleaner you keep sidewalks, parking lots, garages and other areas around the perimeter of your building, the less dirt that will be tracked inside. During winter months, remove as much snow and ice as possible rather than treating it with chemicals or sand.²

USE SOIL BARRIERS

Walk-off mats, grates and removable elevator carpets help collect soil before it can be tracked throughout the building. Be sure soil barriers are large enough to allow for at least five steps across. **Using mats that exceed 6-15 feet will trap 80% of soil and moisture from footsteps³.** Vacuum daily, clean frequently and change often for best results.²

PROTECT DESK AREAS

Chair pads under desk chairs prevent casters from crushing carpet and grinding in soil.²

SPECIFY EATING, DRINKING AND SMOKING AREAS

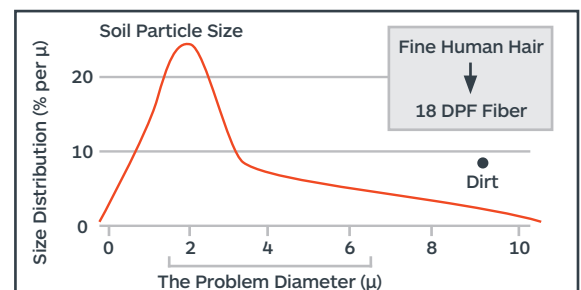
By restricting these activities to limited areas, you can help confine certain difficult kinds of soil.²

MAINTAIN YOUR HVAC SYSTEM

To remove many airborne particles before they are recirculated, regularly replace or clean filters on air-handling equipment. Airborne soil includes industrial wastes, auto emissions, tobacco smoke and pollen.²

As we continue to focus more attention on the environment, both indoors and out, business concerns and environmental concerns will become more intertwined. Environmentally sound business decisions will be as much a matter of doing the logical thing as doing the right thing.

Indoor air quality has been an environmental issue. The greatest concentration of dirt particles in a commercial environment is in the two-micron range. These fine particle sizes permeate a building by being carried through the air handling systems. HVAC filtration and conventional vacuum filter bags are capable of capturing particles of about nine microns or larger. So smaller particles are circulated again and again. Particles in the



² CRI - Carpet and Rug Institute - www.carpet-rug.org

³ CRI - Carpet and Rug Institute - www.carpet-rug.org

CREATING A CARPET MAINTENANCE PROGRAM (cont.)

two micron size range are often responsible for creating or aggravating respiratory problems. Compared to hard surface, carpet does a far better job of taking these troublesome airborne particles out of circulation. By its inherent characteristics, carpet acts as a natural filter.

Carpet needs to be regularly, thoroughly cleaned for a filter to be effective. This can be achieved through a combination of advanced fiber, soil resistance treatments and vacuum filter bags that capture particles down to one micron in size.

With these tools plus your commitment to consistent, comprehensive carpet maintenance, carpet can be the best possible means for you to get as many irritating, airborne particles out of your commercial environment as possible, once and for all.

STEP 2: MANAGE SOIL WITH REGULAR VACUUMING

Vacuuming is the most important dry soil management procedure. Effective vacuuming removes dry soil so that it cannot spread to other carpeted areas. The level of effective vacuuming has two components: frequency and equipment type. It is important that vacuum cleaner level is properly set for most effective vacuuming. It is also important to change bags before they become full or clogged in order to ensure the vacuum is operating efficiently.³

VACUUMING FREQUENCY

- Heavy- to moderate-traffic areas (entrances, elevator lobbies, reception areas, busy corridors, cafeterias, vending machine areas, employee lounges) should be vacuumed daily.^{2,3}
- It is recommended when carpet styles exhibit crushing, matting or tangling in entry, pivot or high-traffic areas that pile lifting precede or be combined with dry vacuuming.^{2,3}
- Light-traffic areas (offices, conference rooms) should be vacuumed at least two to three times per week.^{2,3}

EQUIPMENT TYPE

- Dual-motor vacuums are very effective machines for thoroughly cleaning heavy- to moderate-traffic areas. This vacuum uses two motors to clean. One motor drives a beater-brush bar that knocks dirt loose, while the second motor provides suction that pulls dirt into the vacuum bag.
- Single-motor vacuums can be very effective machines depending upon their design. For the most part, they should only be used in light-traffic areas. They are generally less powerful than dual-motor vacuums, but easier to maneuver around furniture.
- Detail vacuums can be used to clean around the edges of a room or in confined areas around furniture.
- Carpet sweepers may be used to remove larger particle-sized surface dirt and small litter in high-visibility areas during the business day. However, they are not an effective cleaning method and should not take the place of thorough vacuuming.

The Carpet and Rug Institute has identified vacuum cleaners that meet industry criteria for removal efficacy, particulate emission and carpet damage. To learn more about CRI Green Label approved vacuum cleaners visit their web site at www.carpet-rug.org.²

² CRI - Carpet and Rug Institute - www.carpet-rug.org

³ IICRC - Institute of Inspection Cleaning and Restoration Certification - www.iicrc.org

CREATING A CARPET MAINTENANCE PROGRAM (cont.)

STEP 3: PROMPTLY REMOVE SPILLS AND STAINS

Although spills are inevitable, permanent stains do not have to be. Most stains can be avoided or removed by immediate, or at least same-day, treatment. It is good practice to have spot cleaners and stain removal products and equipment on hand for immediate use.

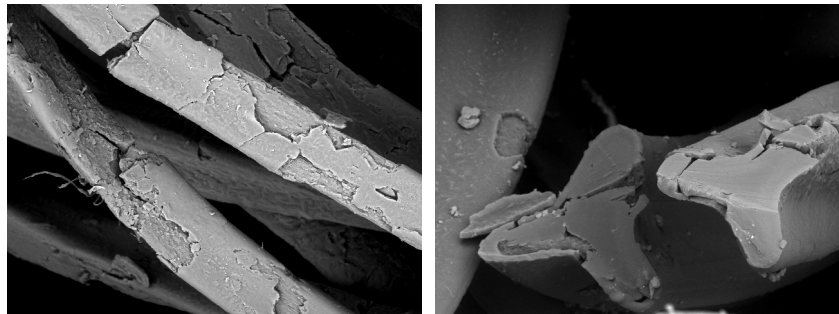
Correct identification of spots and stains is the first step in proper removal because some types of spills may require special cleaning solutions and techniques. But for most spills, the basic removal procedure is the same:

1. Blot as much of the spill as you can with an absorbent towel. Always work toward the center of the spill. Do not rub! If the spill is solid or semisolid, gently scrape off what you can using a dull knife.³
2. Apply a general-purpose carpet cleaner to the spill. This is a detergent solution that is specially made for use on carpets. Never use other kinds of cleaning solutions, such as bleach. These may permanently damage the carpet.³
3. Tamp or pat in the carpet spotter with a tamping brush.³
4. Wait three minutes, then blot again.³
5. Rinse with clean water, then blot as dry as possible.³

If the stain remains, repeat the entire process. If the stain persists after the second time, contact a maintenance professional.

BLEACH IS NOT RECOMMENDED

Bleach is never recommended as an alternative cleaning solution. If the carpet is not constructed with solution dyed fibers, bleach will take the color out. Furthermore, over time, cleaning with concentrated bleach solutions can permanently damage the carpet.



STEP 4: RENEW YOUR CARPET WITH PERIODIC THOROUGH CLEANING

Even the most effective, consistent vacuuming may leave some soil behind. Periodic cleaning improves the appearance and can extend the life of carpet. Periodic cleaning can remove oily, sticky soil from the carpet that attracts and holds additional soil.

Depending on soiling conditions and other factors, there are a number of available cleaning methods. Your choice of method should be based on what will be the most effective and compatible with your carpet and its traffic levels. If you are not familiar with the cleaning methods and products that are used in your facility, contact your maintenance provider. For carpet to look its best for the longest time, our research shows that only those cleaning methods and products that remove soil and reduce the likelihood of resoil should be used. Resoil is the tendency for detergent that is left in the carpet after cleaning to continue to attract and hold soil.²

² CRI - Carpet and Rug Institute - www.carpet-rug.org

³ IICRC - Institute of Inspection Cleaning and Restoration Certification - www.iicrc.org

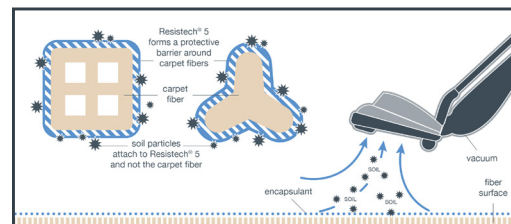
CREATING A CARPET MAINTENANCE PROGRAM (cont.)

CHOOSE THE APPROPRIATE CLEANING METHOD FOR THE JOB

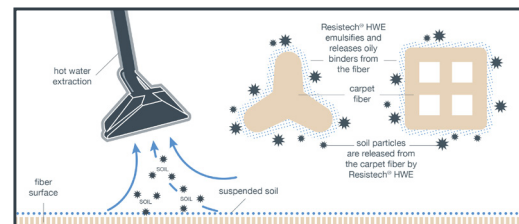
RESISTECH® CARPET CLEANING MAINTENANCE TREATMENT

A very effective method for cleaning commercial carpet is using the ResisTech® family of carpet chemistries. Resistech® 5 is a low moisture carpet care treatment that not only encapsulates soil but also adds anti-soiling technology to the fibers. It works by surrounding and neutralizing oily soil particles with chemistry that inhibits the attraction of other soils. This allows soil to be easily removed by routine vacuuming. ResisTech® 5 treatment also reduces the surface energy of carpet by creating a “difficult-to-stick-to” surface that reduces the chance of carpet resoiling. As a result, carpet is much cleaner after vacuuming and helps maintain the appearance over time. Resistech® 5 also contains a proprietary dye blocker technology that enhance the stain resist feature of Nylon fibers. The technology enhances carpet treated with a stain blocker and can help replace any loss of stain blocking due to wear and improper maintenance.

For best results, Resistech® 5 lower moisture chemistry should be used as part of a periodic maintenance program that also includes ResisTech® HWE, hot water extraction chemistry.



ResisTech® 5 Image



ResisTech® HWE Image

HOT WATER EXTRACTION

Extraction machines clean carpet by first spraying hot water and detergent into the carpet pile under pressure, and then removing water, detergent and loosened soil with a powerful vacuum. This method is the most frequently used type of cleaning in the industry and is very effective for deep-cleaning carpet. **Caution: Detergent left in the carpet will continue to attract soil (resoil) causing a dingy, dirty appearance.^{2,3} Recommended drying times can be found in the R100 Standard.**

DRY COMPOUND

In this method, carpet is vacuumed and pile lifted to remove dry soil. A light application of liquid-preconditioner is used on moderate to heavily soiled areas of carpet. Dry compound is applied per manufacturer's specs. Compound is agitated using manual or mechanical methods typically cylindrical brush, allowed to dry, then vacuumed to remove soil and dirt attached to dry cleaning compound.^{2,3}

ENCAPSULATION

This is a low moisture cleaning method. Carpet is vacuumed for dry soil removal. Liquid encapsulation cleaner is sprayed or foamed onto carpet and agitated using a dual cylindrical or rotary brush. After a dry time of 15-45 minutes, the carpet is vacuumed to remove cleaner and encapsulated soil.^{2,3}

² CRI - Carpet and Rug Institute - www.carpet-rug.org

³ IICRC - Institute of Inspection Cleaning and Restoration Certification - www.iicrc.org

CREATING A CARPET MAINTENANCE PROGRAM (cont.)

CLEANING METHODS FOR DIFFERENT SOIL LEVELS			
	Light Soil	Moderate Soil	Heavy Soil
ResisTech® Carpet Cleaning Maintenance	x	x	x
Hot Water Extraction	x	x	x
Dry Absorbent Compound	x	x	
Encapsulation	x	x	
Foam Shampoo	x	x	
Rotary Shampoo	x	x	
Rotary Shampoo and Hot Water Extraction	x	x	

ROTARY SHAMPOO

With this method, a solution of detergent and water is fed through a brush into the carpet. A rotating brush agitates the solution into the carpet pile, loosening soil particles from the carpet fibers. This method is usually used in conjunction with the hot water extraction method. **Caution: The rotary shampoo method requires the use of a heavy machine that can cause pile distortion or even carpet damage. Damage can also result if the rotating brush dries out during cleaning.**^{2,3}

LEARN MORE ABOUT MAINTAINING YOUR CARPET

The following resources are available from Antron® to assist you in maintaining your commercial floorcovering:

EVALUATING YOUR CARPET MAINTENANCE EFFECTIVENESS INDEX

This tool helps you put together your own carpet maintenance program and gauge its effectiveness. Using the index to rate and score nine key factors on a scale from zero to ten will also help you assess the relationship between your current maintenance program and carpet appearance.

TECHNICAL RESOURCES:

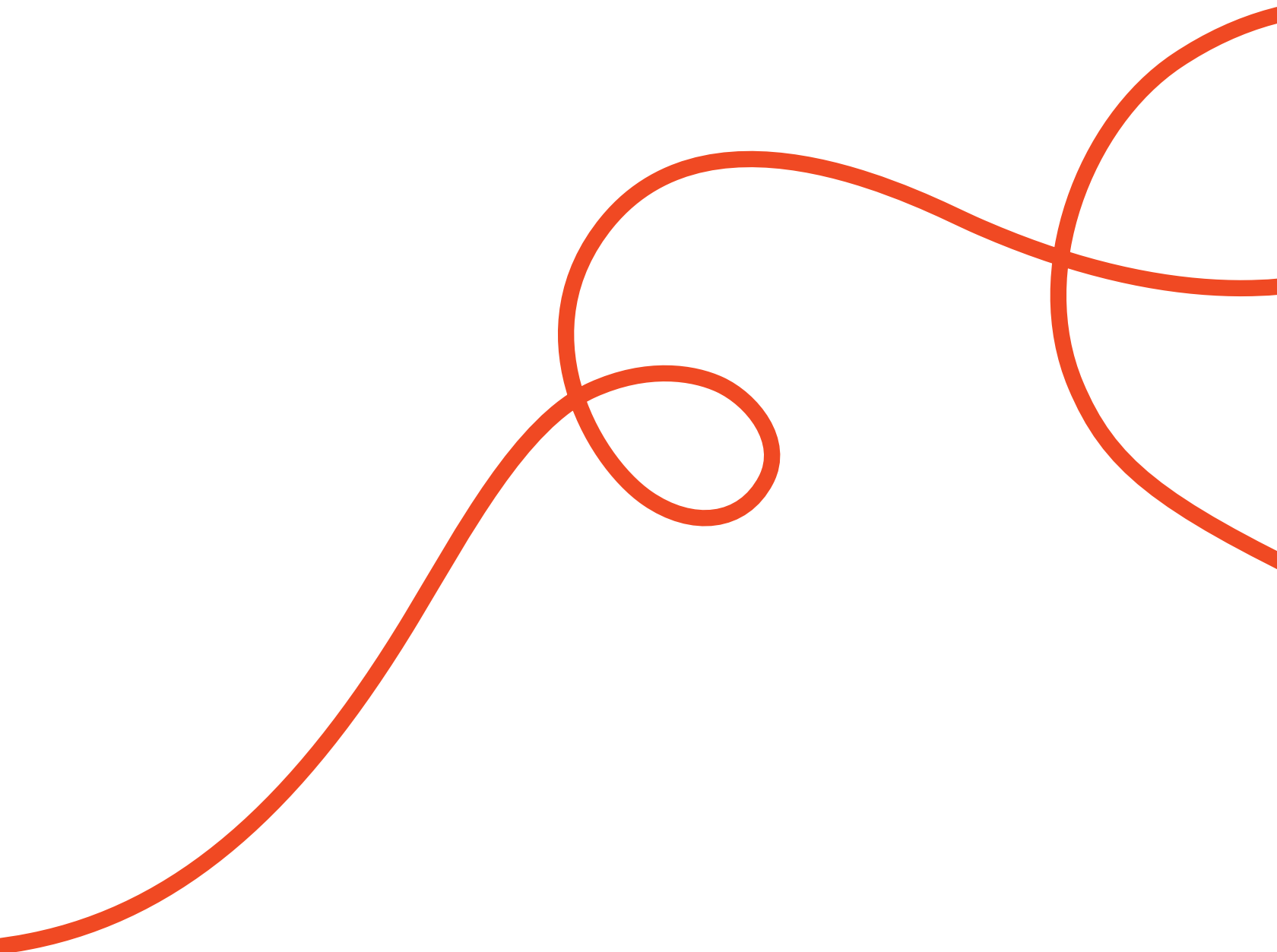
For specific information, go to antron.net to find an Antron® representative that can help you with technical issues such as stain removal and carpet performance.

WEB SITE:

For more information on maintenance, please visit us any time at antron.net.

² CRI - Carpet and Rug Institute - www.carpet-rug.org

³ IICRC - Institute of Inspection Cleaning and Restoration Certification - www.iicrc.org



To learn more, contact visit antron.net, or call 1.877.526.8766.

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antron.net