

Purchasing Commercial Carpets 101: Solutions for Budget, Design and Durability



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Purchasing Commercial Carpets 101

Selecting flooring materials that match your aesthetic vision and align with budget and schedule goals is no small task. We've created this buyer's guide to help you make an informed carpet purchasing decision.

In this buyer's guide, we cover:

- *The basics of carpets*
- *Common measures used to assess a carpet's quality and durability*
- *Key elements of selecting carpets for various environments*
- *The advantages and disadvantages of different types of carpet*
- *Benefits and tradeoffs of using carpets vs. other types of flooring*
- *Different types of carpet materials and their advantages and disadvantages*

We also give you a high-level look at costs in carpeting and show you why Life Cycle Costing helps you achieve the greatest value for your flooring investment.



WHY PICK CARPET: CARPET VS. OTHER TYPES OF FLOORING

Your floor says a lot about your business to customers, employees and associates alike. The right choice can help you create an environment that supports your corporate vision to all parties and brings together your aesthetic ideal.

Carpet offers a complete range of design options to create your ideal atmosphere. It insulates well and can play a part in creating an environmentally friendly facility. Carpet can support a welcoming, playful aesthetic, create a bold, innovative look or communicate a premium, upscale feel and artistic environment. It's generally softer, more comfortable and more inviting than any other type of flooring.

Traditionally the disadvantages associated with carpet are its propensity to collect dirt and its difficulty to maintain. Common concerns are stains from spills, matting due to foot

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traffic and fading because of sunlight. Other types of flooring, such as hardwood, ceramic tile, stone tile and premium laminates are known to last longer. But, as we'll later show you, certain types of carpet are stain-resistant, easier to maintain than traditional carpet and stand up to the harshest wear and tear. The question is whether your design aesthetic and budget calls for the kind of carpeting solution your environment requires or whether you'll be better off with an alternative solution, such as tile or hardwood.



LIFE CYCLE COSTING: COST ANALYSIS AND SELECTING THE GREATEST VALUE CARPET SOLUTIONS

Achieving the greatest value for your carpet investment isn't just about finding something that looks great and matches your budget. It's also about choosing a solution that will last and deliver value over the long term. Why? Because if you select the wrong carpet material for your environment, your maintenance costs could far outweigh the initial costs of installation and materials. Through the life cycle of your floor, the durability of your carpet also affects its functional use and appearance.

Life Cycle Costing reports, which provide an analysis of short-term and long-term costs, should be part of any major purchasing decision. Different carpet materials are best suited for certain environments and use types. By evaluating how your facility will be used and selecting the best material options, you can mitigate the risk of degradation and reduce future costs.

Factors affecting your carpet selection

Aside from budget and schedule, the two main factors that will affect your choice of carpet material are the design aesthetic you want to create and the hazards your carpet faces.

Some interior designs call for intricate flooring solutions, limiting material options. In particular, some materials only come in certain colors, so if you have a design that calls for a rare color that's difficult to achieve, you may have fewer options available.

The more hazards your carpet faces, the more susceptible it is to degradation over time, and the more maintenance costs you may incur. Several different types of hazards affect carpets in different ways. Some of the biggest include constant exposure to sunlight, food consumption, moisture (particularly from spills), exposure to chemicals and general wear, such as high foot traffic.

Decisions to make

From the type of carpet you choose to your carpet's materials, colors and construction, you have many decisions to make. All affect the quality and durability of your carpet and the value it delivers to you. Understanding the environment of your carpet, along with your design aesthetic and your budget can help you choose the best solutions. As we progress through the guide, we show you the options you have and give you a framework to evaluate choices for your carpet and facility.



Broadloom carpet with unique designs from wall to wall.

TYPES OF CARPETS: BROADLOOM VS. CARPET TILE

The two primary types of carpets are broadloom (roll) carpets and carpet tile. Broadloom carpets come in large rolls, usually at least 12 feet wide, and are laid onto a carpet pad that sits on your floor substrate. Crews install them by aligning large pieces together and cutting some of them, including the carpet pad underneath, to the correct size for a room.

Carpet tiles, also called carpet squares or modular carpet, come in pre-sized squares with their own integrated backing and base. They sit directly on your substrate. Your installer will lay individual tiles one at a time, with minimal cutting, only resizing certain pieces where necessary.

Broadloom carpet advantages and disadvantages

Broadloom is the traditional and still most popular choice of carpeting, and it comes with many design options, including patterns, colors, even mosaics — nearly limitless aesthetic possibilities. Since broadloom is installed over a carpet pad, it can look great even if your substrate has minor imperfections. Quality broadloom that comes with a moisture backing offers superior stain resistance, and seams can be hidden well using chemical welding. Certain broadloom with the right underlay material can be used to create a softer and more plush feel than carpet tile allows. Generally speaking, broadloom carpets are less expensive than carpet tiles.

While broadloom has many advantages, it also comes with some disadvantages. First, it creates waste during installation due to the necessary process of cutting down large pieces, particularly the carpet pad. The cost of unnecessary or unused materials can offset savings in unit price. Second, it's difficult, time consuming and costly to repair. If an area of it becomes irreversibly damaged by moisture or mildew, the whole carpet in a section must be taken up and re-installed to fully fix it.



Carpet tile — these tiles are laid facing different directions to create a textured feel

Carpet tile advantages and disadvantages

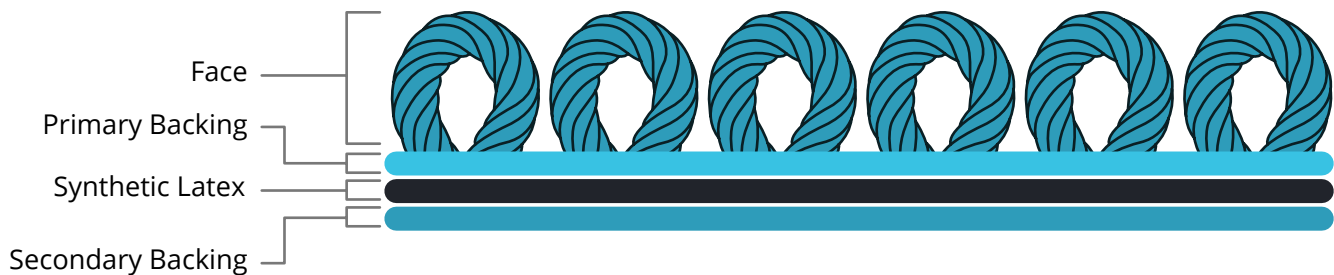
With no carpet pad required, carpet tile provides an easy and expeditious installation as compared with broadloom, reducing cost and streamlining schedule. Over time, maintenance is easy, since you can quickly remove each individual tile to clean or replace it if it becomes damaged. Due to the size of the tiles and the ease of replacing small sections of your carpet, you can cost-effectively store replacement tiles that require minimal space. Carpet tile offers a variety of design options and makes designs possible that broadloom can't cost-effectively replicate, such as a checkerboard effect or certain textured layouts.

The drawbacks of carpet tile include design limitations and cost. While carpet tile opens up certain possibilities, it's not best suited for some designs that broadloom best handles, such as larger patterns or mosaic styles. Seams are more visible with carpet tile, which can be a drawback for certain designs. The cost of certain carpet tiles is higher than broadloom. While carpet tile accounts for about 30 percent of carpets installed today, wall-to-wall broadloom carpeting remains the most popular option for commercial applications.

UNDERSTANDING CARPET SOLUTIONS FOR BUDGET AND DIFFERENT ENVIRONMENTS

In order to show you what kinds of solutions are best for certain environments, we give you an overview of the carpet essentials. In this section, we'll cover what carpets are made of, how to measure a carpet's quality, the material options you have available and how carpets can be protected from certain hazards.

Parts of a carpet and how a carpet is made



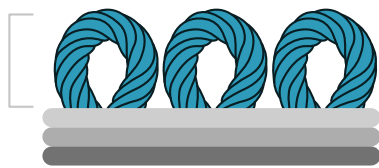
A carpet is made up of four primary parts:

- *Face material that you see when a carpet is laid, also called pile yarn, or simply, yarn*
- *Backing material*
- *Back coating that goes on backing material to hold the yarn in place (usually a synthetic latex adhesive)*
- *Secondary backing applied to the adhesive for dimensional stability*

Modern carpet is made with machines that use hundreds of needles to simultaneously “tuft” (or attach) pile yarn to the backing material. Then, the adhesive is added to the backing material, and the secondary backing is added to the adhesive layer.

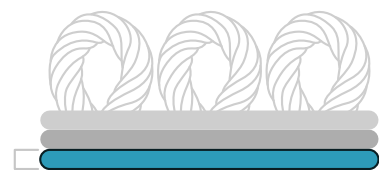
The basic quality and durability measures used to evaluate carpets

When we talk about the quality and durability of a carpet, we’re generally talking about several factors. This graphic shows you the key factors to consider.



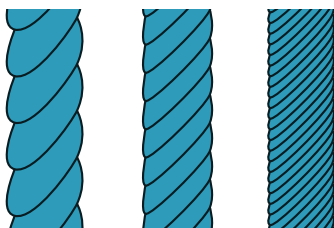
Face material

Material used as pile yarn



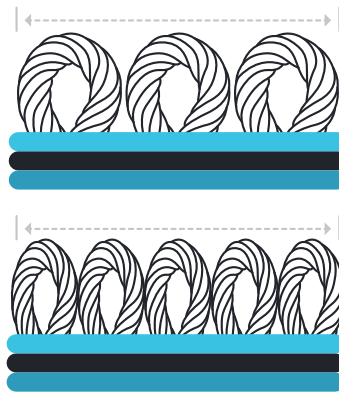
Backing material

Material used as secondary backing



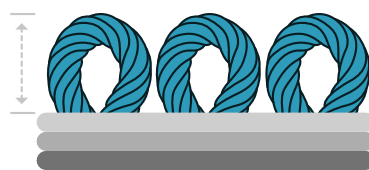
Twist level

Number of twists in pile yarn



Gauge

How closely together yarn is packed (tufts per inch)



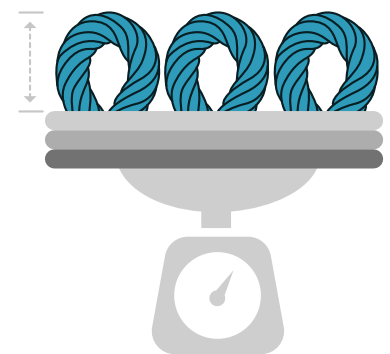
Pile thickness (also called pile height)

Height of pile yarn from backing to top



Baseweight

A carpet’s total weight



Average density

Ratio of baseweight to pile height

In general, the most durable carpets are dense, heavy carpets (high baseweight) with shorter yarn (low pile height) that's packed closely together (high gauge). The more twists in your pile yarn, the stronger your carpet. Commercial carpets are called loop pile carpets and almost always have a high number of twists (at least six). They come in [different textures and heights](#), the variation of which can be used to create unique aesthetics and fit a variety of design schemes.

As far as cost is concerned, carpets with higher gauge and higher baseweight usually come with a higher price. A higher twist level also usually means a higher price. Nearly limitless variations are available to match the right durability level with different budgets and design aesthetics. Variations in height, density and material affect color, texture and other design elements.

Face materials

Face material, also known as pile yarn or a fiber system, accounts for about 80 percent of a carpet's cost and is ultimately what you'll walk on and see. Different materials create different looks and resist different hazards, such as foot traffic, body oils, spills and sunlight. So selecting a carpet with the right face material for your environment gives you the best opportunity to realize value. Like many other items, branded carpet materials will cost more (but could be of higher quality) than non-branded ones. Any type of face material can come branded or non-branded. The type of filament you choose will also greatly affect the price you pay.



Carpet made with spun yarn — many small pieces of yarn are woven together into long strands



Carpet made with BCF yarn — yarn fiber is stitched closely together like one fiber to form a compact section of carpet

Spun yarn vs. BCF yarn

You can choose two types of yarn, spun (staple) yarns and bulked continuous filament (BCF) yarns. Spun yarns are made in short lengths and twisted together to create long threads. BCF yarns are long filaments of fiber that come together like one strand of fiber to form a section of carpet. Staple yarn provides a high degree of design versatility and is used on many premium and luxury carpets, such as shag and velvet plushes. Due to requiring more steps in the manufacturing process, it's also costly. They also shed loose fibers at first, requiring regular vacuuming. Because BCF yarns can be tightly twisted together, they provide high resilience and hold their shape even with high foot traffic. They're cheaper to manufacture than spun yarns, and new [advances in manufacturing technology allow them to be made in many more styles.](#)

Types of face materials

The two most common face materials are nylon, which accounts for about 65 percent of carpet sold in the U.S., and polypropylene (olefin), which makes up about 30 percent.

Nylon face material is a highly durable solution but also the most expensive of the most commonly used options. It's produced in both staple and continuous filament systems.

Olefin face material is quickly growing in popularity. It's relatively inexpensive and offers great stain resistance, with the exception of oil-based stains. It's solution-dyed, so it retains its color well against spills and sunlight. But, it tends to have poor abrasion resistance and poor resiliency, so it's not a great option for high traffic areas or spaces where furniture will be regularly moved. Still, if it's well constructed and placed in the proper environment, it can be a great solution.

Four [other types of face materials](#) account for nearly all other carpets in use today, with some used in specialty and premium applications:

- Polyester
- Wool
- Acrylic
- Cotton



Solution-dyed carpets have color throughout each fiber, like a carrot, and retain color through sunlight exposure, stains and heavy cleaning.



Yarn-dyed and piece-dyed carpets have dyed color on the outside but not on the inside, like an apple. While less durable than solution-dyed carpets, they provide more color options.

Color, stains, moisture and resistance: solution dye vs. yarn dye vs. piece dye

The way color is added to your carpet's face material determines some of its cost and much of its ability to retain its color while resisting stains and moisture. There are several [ways carpets can be dyed](#), and all affect the end design result. The most commonly used methods are yarn dyeing, piece dyeing and solution dyeing. In both yarn dyeing and piece dyeing, carpet material is coated with color dye. What results is that the outside of carpet fibers has color, but the inside does not. The difference between the two is that yarn dyeing is added before a carpet is manufactured and piece dyeing is added by running a manufactured carpet through a machine that adds color.

In a solution-dyed carpet, a face material is first melted (extruded), then dyed with color and reformed into fibers usable in a carpet. Finally, the carpet is manufactured with those fibers. Solution dyed fiber retains color well since it's dyed all the way through the material, and it can stand up well to stains, sunlight and even bleach cleaning. So you can picture the difference in the end result, solution dyeing leaves you with a carrot-like appearance because color runs all the

way through your fibers. Solution-dyeing adds color all the way through carpet fibers, while yarn dyeing and piece dyeing add color to the surface of carpet fibers.

Carpets backings

There are four main types of secondary carpet backings:

- *Plastic*
- *Foam rubber*
- *Urethane*
- *Jute*

Plastic backings are the most common and can be found on carpets made of many materials. Different manufacturers offer different qualities of plastic backings.

Foam rubber backings are used as a secondary backing on some cheaper kitchen carpets and indoor-outdoor carpets. They are susceptible to adhesive failure, causing secondary backing and primary backing to delaminate so fibers fall out. These should be avoided for commercial applications.

Urethane backings stand up to time better than foam rubber. Urethane holds fibers tighter and bonds fiber to the primary backing, leading to less delamination and keeping face yarn in place.

The traditional carpet backing material commonly used decades ago, jute, is the highest quality option and also the most expensive. It must be imported into the U.S. and is difficult for manufacturers to acquire at a good price. As a result, it's rarely used today though is present on some premium, wool carpets and heavy berber carpets.

“Ultimately, the greatest-value carpet solutions depend heavily on the unique characteristics of your facility’s environment.”

SELECTING THE RIGHT CARPET SOLUTION

Now that you’ve got a framework for evaluating different carpet solutions, we’ll give you a few examples of different carpets that work for different kinds of environments.

If you need carpet for an area that sees heavy foot traffic, regular movement of large furniture or many rolling carts, such as in a hospital, you’ll want a highly durable material solution — likely something with high density, low pile height and a high twist level. If you have an area with regular food consumption and the potential for many spills, you’ll want an easy-to-clean carpet — possibly a moisture-backed, solution-dyed carpet that resists stains. If your carpet is in an area with direct sunlight, you’ll want something that’s formulated to hold its color particularly well — for example, a solution-dyed nylon carpet. Certain carpeting materials provide a level of chemical resistance. Do you need carpet for a lab, command center, networked offices or mission critical facility? If so, you’ll need a static dissipative (ESD) carpet that meets ANSI standards and helps stop static electricity from harming your equipment.

One simple solution for protecting your carpet investment from mud, snow and foot traffic is to place thick walk-off mats on the inside and outside of your doorways. Ultimately, the greatest-value carpet solutions depend heavily on the unique characteristics of your facility’s environment.



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