



HOUSING

Selecting Residential Carpet

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Quick Facts...

To make an informed choice about carpet consider your budget, how much traffic the carpet will receive, and how much maintenance is required.

Wool carpet is expensive, has an excellent crush resistance and resists stains moderately.

Nylon carpet may have built-in static control, has excellent abrasion and crush resistance, and cleans easily.

Tufted carpet accounts for the bulk of the carpet on today's market.

Consult reliable dealers who carry dependable brand names.

Residential carpet represents a substantial financial investment for consumers. An informed choice about carpet requires a balance between style requirements and practical considerations. Think about your budget, the amount of traffic the carpet will receive, and the amount of maintenance required. Assess your carpeting requirements by completing the following preliminary carpet needs analysis.

1. What room or rooms will be carpeted?
2. How many square yards of carpet do you need?
 - Measure the length and the width of each room in feet,
 - Multiply these numbers together and divide by 9.
 - Add square yardage numbers for each room.

Carpet usually comes in 12-foot rolls. Carpet dealers can help calculate how much carpet you will need if you have an estimate that includes the measurements of the rooms. Make sure the installer remeasures the rooms for a precise calculation.

3. What is your budget? Cost of carpet includes an appropriate pad under the carpet and an amount for installation per square yard. For each carpet sample you consider, get the price per square yard for carpet, pad and installation. Keep this information in a notebook or on cards so you can compare samples.
4. Do you need to have old carpet removed? Is there a charge for this service?
5. Are the spaces to be carpeted high, medium or low traffic areas?

Fiber: The Basic Component of Carpet

Table 1 lists the carpet fibers used for residential carpet and their major characteristics.

Tufted carpet accounts for the bulk of carpet on today's market. It consists of yarn inserted into a primary backing that creates a pile or three dimensional textile. A secondary backing is applied with an adhesive to strengthen and stabilize the carpet.

Table 2 shows the three general types of tufted carpet construction: cut pile, loop pile and cut and loop pile.

The following terms describe additional features of tufted carpet.

- **Density:** how tightly carpet fiber or yarn is packed together and bound into the carpet backing.
- **Face weight:** the number of ounces of fiber in a square yard of carpet; applies to the pile yarn.
- **Pile height:** the height of the cut pile yarns or uncut loops when measured from the primary backing.



Table 1: Properties of fibers used in residential carpeting.

Fiber	Properties
Wool: Expensive, soft feel, luxurious appearance, easy to dye.	Fair abrasion resistance, excellent crush resistance, moderate resistance to stains, attacked by moths, poor sunlight resistance, burns slowly, self-extinguishes in flames.
Nylon: Easy to dye, may have built-in static control; trade names: Anso, Antron, Ultron, Zeftron.	Excellent abrasion and crush resistance, can be manufactured to conceal and resist soil, cleans easily, poor sunlight resistance, burns slowly with melting.
Polyester: Relatively inexpensive, use in moderate to low traffic areas; trade names: Pentron, Trevira.	Moderate abrasion resistance, may show some pilling, crush resistance depends on density, resists water-soluble stains, good sunlight resistance, burns slowly with melting.
Olefin: Can be used indoors and outdoors, light weight, inexpensive; trade names: Marquesa Lana, Genesis.	Excellent abrasion resistance, poor crush resistance, poor sunlight resistance, excellent stain resistance, easy to clean, extremely heat sensitive, burns with melting.

Table 2: Types of tufted carpet.

Type of Pile (Examples)	Construction	Characteristics
Cut pile	Saxony plus velour	Individual standing tips, wide range of densities, suitable for most living spaces
Loop pile nnnn	Level loop berber	Loops form the surface of the carpet, tend to be very durable
Cut and loop pile nn n	Sculptured	Wide variety of patterns and designs, random patterns tend to hide soil

All three terms are associated with the quality of carpet. High density and high face weight mean more yarn covers the primary backing. The result is increased durability and appearance retention. While longer pile may look luxurious, it crushes more easily.

Performance Criteria

Consumers want to know how a carpet will wear and how it will look over time. You must balance the descriptive characteristics of fiber and construction with the performance criteria required for your needs. Table 3 presents performance criteria and what to look for in carpet.

Consult reliable dealers who carry dependable brand names. Ask to see the guarantees before you purchase. Keep track of information from each dealer to make selection easier. Read the labels on the back of carpet samples to determine fiber content, descriptive characteristics and expected performance. By comparing the types of fibers available and assessing your needs, you will be able to make an informed choice about carpet.

References

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Table 3: Carpet performance criteria and what to look for.

Health and Safety	
Flammability	Carpeting is required to be fire resistant. Carpet samples should state the standards the carpet meets.
Indoor Air Quality	<p>Follow these guidelines to keep indoor air pollution under control:</p> <ul style="list-style-type: none"> • ask your carpet retailer for information on emissions from carpet • ask for low-emitting adhesives if adhesives are needed • be sure the retailer requires the installer to follow Carpet and Rug Institute installation guidelines • be sure the ventilation system is in proper working order before installation begins • open doors and windows, if possible, during installation; consider using window fans, room air conditioning units, or other means to exhaust emissions to the outdoors • operate the ventilation system with maximum outdoor air during and after installation for 48 to 72 hours • consider leaving the premises during and immediately after carpet installation; you may wish to schedule the installation when most family members will be out of the house • contact your carpet retailer if objectionable odors persist • follow the manufacturer's instructions for proper carpet maintenance
Durability	
Appearance Retention	Factors that contribute to loss of appearance include crushing, soiling and abrasion. Crushing is a function of fiber type, pile height and density. Soiling depends on fiber properties as well as maintenance. While most carpet fibers are manufactured to resist abrasion, yarn deterioration and distortion can occur under abrasive conditions. There are trade-offs associated with all carpet fibers. For example, olefin tends to crush more easily than other fibers, but is extremely resistant to stains, fading and moisture. Wool is resilient and luxurious, but has only moderate resistance to stains. Consumers should look at the criteria most important to them.
Colorfastness	<p>Colorfastness is the ability of the carpet to withstand color changes due to sunlight, abrasion, chemicals and cleaning. UV light can seriously damage textiles by increasing fading and causing deterioration of the fibers. Make sure that carpet exposed to intense sunlight is protected by window treatments that filter light or choose sunlight resistant fibers.</p> <p>Most carpet meets or exceeds colorfastness requirements. Solution-dyed carpet means that the dye is added to the fiber as it is manufactured and is extremely colorfast. Yarn-dyed carpet provides color variation and is colorfast as well.</p>
Dimensional Stability	The greatest potential for shrinkage comes from improper care. Be sure to follow the manufacturer's guidelines for cleaning and avoid overwetting carpet during care.
Maintenance	
Preventive	<ul style="list-style-type: none"> • Use walk-off mats at all entrances to absorb soil and moisture. Clean mats regularly so they don't become sources of soil themselves. • Use a quality pad under your carpet, particularly on stairs. A good pad gives better resilience underfoot and extends the life of your carpet. • Move heavy furniture occasionally to avoid excessive pile crushing. • Protect your carpet from prolonged periods of direct sunlight with blinds, shades or awnings. • Vacuum thoroughly and frequently, particularly in high-traffic areas, to remove the dry soil. As particles of dry soil work down into the pile, they are more difficult to remove and can scratch the fibers leading to premature wear of the carpet. • Remove spills and stains promptly. • Clean your carpet every 12 to 18 months according to the manufacturer's recommendation.
Soil Resistant Finishes	<p>There are a variety of techniques used to hide or minimize soil accumulation on carpet. Manufacturers can produce carpet fibers with nonround cross-sections to hide soil until cleaning takes place. Antron XL by DuPont and Zeftron ATX by BASF are fibers that have been modified to hide soil.</p> <p>Fluorocarbon compounds are added to polymer spinning solutions to add built-in soil repellency. Examples of this method of dealing with soil are Anso IV by Allied Fibers and Trevira Pentron by Hoechst Fibers Industrial.</p> <p>Application of surface finishes can coat fibers to make stain and soil removal easier. Scotchgard and 3M Brand Carpet Protector by the 3M company, and R9000 Soil Shield by Armstrong World Industries are examples of compounds that are added after the carpet has been manufactured.</p>