1967

Carpet and Rug Fiber Chart: The Deeper, the Denser, the Better...

Cooperative Extension South Dakota State University

Follow this and additional works at: https://openprairie.sdstate.edu/extension_fact

Recommended Citation
South Dakota State University, Cooperative Extension, "Carpet and Rug Fiber Chart: The Deeper, the Denser, the Better..." (1967). SDSU Extension Fact Sheets. 1040.
https://openprairie.sdstate.edu/extension_fact/1040

This Fact Sheet is brought to you for free and open access by the SDSU Extension at Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in SDSU Extension Fact Sheets by an authorized administrator of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact michael.biondo@sdstate.edu.
Carpet & Rug Fiber Chart

The deeper, the denser, the better . . .

COOPERATIVE EXTENSION SERVICE
SOUTH DAKOTA STATE UNIVERSITY
U. S. DEPARTMENT OF AGRICULTURE
The deeper, the denser, the better...

by DONNA M. SPOONER, extension home furnishings specialist

WEARABILITY

Wearability of carpet is not determined by fiber alone. Equally important are:

- **Construction of yarns**—(continuous filament yarns rather than staple tend to eliminate shedding, pilling and fuzzing. Textured filaments increase resilience, bulk, and wear.)
- **Pile**—height, uncut or cut, levels (multi-level wears better than cut, one-level pile).
- **Closeness of weave**—density (compact tufts support each other and stand upright).
- **Type and construction of backing**—dimensional stability (consider double backings, bonding, and latex).
- **Care**—amount and type of cleaning (one-level is easier to clean, but two or multi-level does not show traffic patterns or soil as quickly).
- **Amount of wear given carpet**—(consider location in home, neighborhood, part of U.S.)

Appearance during wear and after cleaning is also important. A carpet may not be “worn out” but its appearance may be so poor during wear and after cleaning that replacement is a must. This, of course, depends on the values of a family and the importance they place on appearance and what they consider “poor” appearance.

BLENDs

A minimum of 20-30 percent of one fiber is recommended in order to realize is advantages in the carpet. A blend looks like the predominant fiber. Some blends on the market: wool and nylon (20 percent nylon needed for durability); wool, nylon, and rayon; wool and acrylic; acrylic and modacrylic (usually 70/30 or 80/20 proportions); acrylic and nylon; rayon and nylon; and acetate and nylon.

FINISHES

Carpets may be given certain finishes to retard soiling, eliminate static, prevent insect damage, etc.

LABELS

According to the Textile Fiber Products Identification Act of 1960, carpets, rugs and samples must be labeled for the consumer to show:

1. exact fiber content of the pile surface (percentages)
2. country of origin (where made)
3. manufacturer’s name, registered number or housemark

Other helpful information may be included.

COST

Avoid low quality except for limited temporary use. Low price ranges up to $9 per square yard. Medium ranges from $9 up to $12 per square yard. High ranges from $12 and up per square yard. To figure exact costs, include cost of pad or cushion and installation charges if any.

For more information see Extension Fact Sheet 288, “Selecting Rugs and Carpets.”
### I. NATURAL FIBERS:

<table>
<thead>
<tr>
<th>Fiber family or generic name</th>
<th>Price range</th>
<th>Notes</th>
<th>Tradenames</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wool</td>
<td>Medium to high</td>
<td>Imported wool (domestic wool is too fine and soft)</td>
<td></td>
<td>Good resistance to soil and abrasive wear; excellent resilience; major manufacturers treat to resist moths and beetles; easily cleaned; broad selection of subtle colors and textures; warm feeling; excellent flame resistance</td>
<td>Not allergy proof; not moth or beetle proof unless treated at factory or at home; harmed by salt, ammonia, chlorine bleach, alkaline soaps and strong detergents which weaken fibers; not as readily spot cleaned as true synthetic fibers; mildews</td>
</tr>
<tr>
<td>Cotton</td>
<td>Low</td>
<td>Recommend for light traffic only</td>
<td>Resists abrasive wear; allergy proof; loop pile wears better than cut; many are treated to retard soiling; easily cleaned; wide color range; flame resistance good if dense construction; unaffected by most acid and solvents</td>
<td>Low resilience; mats quickly; soils easily unless treated for soil resistance; mildews; light weight rugs difficult to vacuum</td>
<td></td>
</tr>
<tr>
<td>Linen (flax)</td>
<td>Low</td>
<td>Reversible flat weaves for temporary use or light wear areas</td>
<td>Kraft fiber (twisted paper) used alone or with cotton, wool, sisal, or rayon</td>
<td>Kraft fiber is suitable for outdoor or indoors</td>
<td>Highly absorbent</td>
</tr>
<tr>
<td>Other (sisal, rush, hemp, paper, jute)</td>
<td>Low</td>
<td>Sisal resists mildew and insects, is very durable, fairly resistant to soil and stains, can be vacuumed, has a wide range of colors, available in woven, braided 12- or 18-inch squares</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (sisal, rush, hemp, paper, jute)</td>
<td>Low</td>
<td></td>
<td>Sisal resists mildew and insects, is very durable, fairly resistant to soil and stains, can be vacuumed, has a wide range of colors, available in woven, braided 12- or 18-inch squares</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### II. MAN-MADE FIBERS:

Basically each fiber family or generic group is chemically the same; however, each manufacturer varies the chemical formula, method of construction, techniques, etc., so that fibers within the same family have similar yet somewhat varied characteristics and will act and perform somewhat differently.

<table>
<thead>
<tr>
<th>Fiber family or generic name</th>
<th>Price range</th>
<th>Notes</th>
<th>Tradenames</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rayon</td>
<td>Low</td>
<td>Recommended for light traffic areas, major fiber improvements, Fiber E not being used currently pending further experimental work</td>
<td>Fiber E—stronger than regular viscose rayon; specially processed smooth rayon wears longer and performs better than regular rayon; high quality regular rayon has satisfactory abrasion resistance and in dense construction tends to resist crushing; flame resistance good if low pile, dense and no fuzz; unaffected by most acids and solvents; resists insects; non-allergenic; wide color range; solution dyed rayons have best color fastness and clean easily; delustered yarns resist soil better than lustrous yarns</td>
<td>Poor to fair resistance to abrasive wear and soil (may be treated to resist soil); fair to poor resilience which improves with dense construction; not resistant to oily stains; not mildew proof; some require special handling in cleaning</td>
<td></td>
</tr>
<tr>
<td>Acetate</td>
<td>Low</td>
<td>Avisco acetate (often blended with other acetate fibers)</td>
<td>Insect resistant; non-allergenic</td>
<td>Only fair resistance to oil and abrasive wear; fair resilience (slightly less than other man-made fibers)</td>
<td></td>
</tr>
</tbody>
</table>
### Man-Made Fibers

**NOTE:** The following man-made fibers are true synthetics. All possess these characteristics—non-allergenic, resistance to mildew, insects, and abrasion. All except olefin produce static electricity unless treated.

<table>
<thead>
<tr>
<th>Fiber Type</th>
<th>Price Range</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acrylic</strong></td>
<td>Medium to high</td>
<td>Developed to replace wool. Total poundage of fiber used in 1965 exceeded wool for the first time. Resilience excellent; abrasion resistance equal to wool; durable; resembles wool; bulky, soft, and warm; wide range of colors; good soil and moisture resistance; easily cleaned; dries rapidly; good resistance to most acids and solvents. Oil stains not removed immediately may become permanent dark stains; pilling in Verel; less resilience in Dynel.</td>
</tr>
<tr>
<td><strong>Modacrylic</strong></td>
<td>Medium high</td>
<td>Used mostly in blends with acrylic. Generally same as acrylics but is non-flammable. Oil stains not removed immediately may become permanent dark stains; pilling in Verel; less resilience in Dynel.</td>
</tr>
<tr>
<td><strong>Nylon</strong></td>
<td>Low, medium, high</td>
<td>Indoor carpets vying with nylon; outdoor types and those laid below or on grade need backing materials which resist moisture and alkalies. Superior bulking power or coverage with less fiber; moisture resistant; won't shrink; resists fading; rated same or equal, or between wool and nylon for wear strength; chemically resistant; almost fireproof; non-static; resists soil; spot and stain removal exceptional; available in woven or felt constructions; resembles wool. Better resistance to pilling is given by use of bulked, continuous filament yarns; these also give better pattern formation and a softer hand; dyeability improved; tendency to melt minimized by new resin treatment.</td>
</tr>
<tr>
<td><strong>Olefin (polypropylene)</strong></td>
<td>Low to medium</td>
<td>Indoor carpets vying with nylon; outdoor types and those laid below or on grade need backing materials which resist moisture and alkalies. Superior bulking power or coverage with less fiber; moisture resistant; won't shrink; resists fading; rated same or equal, or between wool and nylon for wear strength; chemically resistant; almost fireproof; non-static; resists soil; spot and stain removal exceptional; available in woven or felt constructions; resembles wool. Better resistance to pilling is given by use of bulked, continuous filament yarns; these also give better pattern formation and a softer hand; dyeability improved; tendency to melt minimized by new resin treatment.</td>
</tr>
<tr>
<td><strong>Polyester</strong></td>
<td>Medium</td>
<td>(May have 25% of the fiber market by 1970) Said to be resilient, to resist shedding, soil and stains; good bulking power; strong; cleans easily without distortion of pile or texture; color fast; versatile. Adhesion problem overcome.</td>
</tr>
<tr>
<td><strong>Saran</strong></td>
<td>Medium (Expensive for dollar value)</td>
<td>may be laid outdoors, below and on grade. Easily cleaned with soap, water, and hose; moisture and mildew resistant; fast drying; fireproof; may lay without pad; good soil and stain resistance; fair to good abrasion resistance; good durability and resilience. Color darkens over a period of time; has low melting point.</td>
</tr>
<tr>
<td><strong>Metal (stainless steel)</strong></td>
<td>Filaments 7,000 mm thick (soft to touch); used in blends (1% improves carpet)</td>
<td>Controls static electricity; improves wear, resists dirt, makes easier to clean, contributes to retention of appearance.</td>
</tr>
</tbody>
</table>
Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the United States Department of Agriculture. South Dakota State University, Brookings.

John T. Stone, Dean of Extension, South Dakota State University, Brookings.

SM-5-67-File: 12.7-2-6029

The deeper, the denser, the better...

Rug Fiber & Carpet Chart

COOPERATIVE EXTENSION SERVICE
U. S. DEPARTMENT OF AGRICULTURE
BROOKINGS, SOUTH DAKOTA 57006
OFFICIAL BUSINESS
5M-5-67-6029

Postage and Fees Paid
U. S. Department of Agriculture