

YELLOWING AFTER CLEANING

Yellowing occasionally appears after cleaning of light colored carpeting, rugs, upholstery or other textile furnishings. This discoloration occurs for a variety of reasons. Many of them are indicative of another preexisting problem. The yellowing is generally not noticeable until after the item has been cleaned, either because the soil is "hiding" it or some latent defect is catalyzed by customary cleaning.

Others could be aggravated by the cleaning process itself. Usually these can be corrected.

Common Reasons for Yellowing are:

Photo-Oxidation - Some fibers are prone to photo-oxidation due to normal exposure and use. With ordinary light, sunlight, and atmospheric fumes, certain white fibers, especially when bleached or optically brightened, will eventually yellow. Customary wet cleaning is sometimes enough to induce a yellow coloration in white or off-white colored wool which was previously damaged by light or atmospheric conditions.

Stain Resistant Chemistries and Early Generation Nylon - On some stain resistant finishes, siliconebased soil retardant finishes, and early generation nylon, the manufacturing chemistries tend to yellow with age, exposure to UV light and/or cleaning with a high pH cleaner.

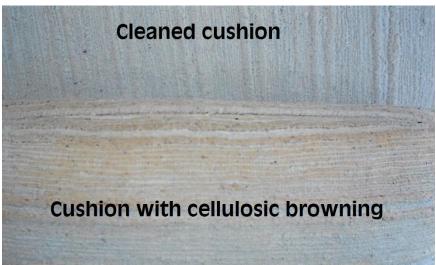
Specialty Finishes (Upholstery) - Many textile finishes also yellow with age. These finishes can include: flame-proofing, crease resistance, insecticides, shellacs, anti-static and textile lubricants or softeners.

Fluorescent Brightening Agents - Some fluorescent brightening agents can yellow with age and exposure to UV light. These brighteners are found in many over the counter detergents, spot removers (such as Resolve) and on some white colored textiles.

Anti-Oxidants - Anti-Oxidants such as BHT and formaldehyde are found in some carpet cushioning, some latex preparations, upholstery foam, in carpet backing and many other common construction materials. The anti-oxidants redeposit or wick up to the carpet face yarns or fabric surface and yellow upon contact with oxygen.

Dyes - Light colors such as beige or tan are often composed of several dyes. Some of these dyestuffs can fade, altering the hue towards yellow.

Cellulosic Browning – Cotton fabrics, especially Haitian Cotton, are subject to turning a tan color after cleaning. Lignin binds the cotton fibers together. If a high alkaline product is used or the drying process takes too long, the brown lignin will leach out. The picture on the right shows 2 cushions from a sofa. The bottom one shows cellulosic browning from storage in a high humidity location. The top cushion is what it looks like after restorative cleaning, which removed the browning.





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High Alkaline Browning – Polypropylene (Olefin) or wool carpet can develop a tan hue or streaks if the cleaning process is not done correctly. High alkaline odor control powders such as Carpet Fresh[®] or Love Your Carpet[®] will turn carpet tan if they are not totally removed during the cleaning process. Make sure your technician knows that you have used these products prior to cleaning. This condition can usually be corrected. These pictures show a wool carpet that was cleaned by one of our competitors. The first shows a large tan area



by the slider. We believe the cleaning process left the carpet in a high alkaline state which caused the bulk of the browning. The bright sun exasperated the browning on the old carpet. The original cleaner did not know how or why it happened. Worse, he had no idea of how to correct the situation. The cleaners insurance company contacted us as the homeowner was looking to have the carpet replaced. The second picture shows the carpet after we performed a multi-step process to address both issues.

Soils - Common soil and dirt from normal use can be yellow in coloration. Abrasive action on carpet fibers from normal soiling can cause permanent discoloration.

Conclusions

There are many possibilities for yellowing. A yellow discoloration is more apparent when it occurs on a white or off-white background. We have several different techniques available that may reduce the effect of yellowing caused by many of these conditions. These include treatment with special yellow removal products, bleaches and adjusting the fibers pH to improve its appearance. The discoloration can be removed in some cases and lightened in others. Unfortunately, in many situations the yellow discoloration is permanent.