



Abrasion Testing and Fabric Pilling

There is a lot of confusion regarding abrasion testing numbers and fiber pilling in our industry. Abrasion testing (Wyzenbeek double rubs or Martindale cycles are the two types of abrasion testing done worldwide) tests to determine the breaking, or failure, point of a woven fabric. Many people think that the higher the abrasion testing number, the more indestructible the fabric. That is simply not the case.

A paper-thin taffeta fabric may rate 100K Wyzenbeek double rubs, but not be suitable for upholstery in a family room, while a heavy woven fabric may only pass 15K Wyzenbeek double rubs and be durable in the same setting for years to come. Abrasion testing is simply a test to see under laboratory conditions when the fibers of a fabric will break and a hole will appear.

Some fabrics are only tested to meet the generally accepted standard number for a specific industry. For years, the residential furniture industry standard for upholstery fabrics has been 15K Wyzenbeek double rubs. Many fabrics are tested just to assure they pass that number, although a vast number could meet a much higher rating if the testing machine was left running. The reason this does not always occur is that the cost of the test is based in ranges. A test of zero to 15K Wyzenbeek double rubs is cheaper than a test for 15K – 30K double rubs.

Fabric pilling is a condition that many think means their fabric is defective, or not wearing well. Pilling is not an indication of this at all. Below, you will find a description of pilling, its causes, and ways to correct the problem. There is no way of knowing if a fabric will have a pilling issue ahead of its application, as all fibers are susceptible to pilling. Do not assume that a higher abrasion test result will keep a fabric from experiencing this common condition with textiles.

What causes pilling?

Loose fibers have a natural tendency to move to the surface of a piece of fabric, where they are subject to friction, which causes them to twist together into small balls. Fibers that are still secured to the fabric are also twisted into the ball, so that the pill is secured to the surface of the textile. Friction is caused in the normal course of people using the furniture, rubbing against the surface of the fabric. Laundering also causes friction – washing machines agitate fabric, causing the surfaces to rub together. Pilling is more noticeable on man-made fibers. This is mainly because natural fabrics shed loose fibers easily and less noticeably, while man-made fibers are notoriously strong, so the pills are anchored strongly to the fabric.

Should the fabric be sent back?

It is important to note that pilling is not a fabric defect or fault, and is not covered under warranty. It can be compared to the shedding experienced when purchasing new carpet – think about the way carpet behaves when newly installed, as there are constantly new loose fibers coming to the surface over the first few months of use. This is completely normal and will reduce once the excess fibers are

gone. Consumers are sometimes concerned that pilling means that the fabric is wearing away and disintegrating – this is not the case. Pilling is a normal occurrence caused by wear and tear, and does not affect the durability or functionality of the fabric. It is easily removable.

Can pilling be removed?

The quickest and most cost-effective approach is to use a battery-operated pill shaver to remedy the situation. These small, cheap appliances are available in most sewing stores, or the sewing area of large department stores. A pill comb is also effective, and performs the same task manually.