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"Well, of course they are...they're accredited!" Heard that before? Trouble is, that alone is not a guarantee the testing lab can deliver.

Flooralytics is different and **capable**. Many years of experience guide our team to help you appropriately. We are **knowledgeable** with over 50 years of experience in flooring and textile testing. We know our stuff, and we are changing testing from the ground up. Our staff knows that time matters, and we are **reliable** to get the job done, on time and under budget.

Our prices are better than the competition, because we want it that way. We find ways to partner with mills, manufacturers, distributors and designers that make sense financially. And, possibly - more important than anything these days...we are **likeable**. Join us in the testing revolution...we are **able!**

WHAT'S NEW

TAKE A LOOK INSIDE

Understanding Martindale
Abrasion

INDUSTRY TRENDS

When do you know exactly
which FR test you need?

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consultation.

Industry Trends

To CMHR or not to CMHR, that is the question...

When testing upholstery fabrics for IMO (International Maritime Organization), the first question that typically comes up is which foam should you have the lab test your fabric over. Most often, you are given two choices: a non-fire retardant (FR) foam and some variety of FR foam. While the most tempting choice may be the FR foam, let's look at why it may not be the right choice.



So, what am I supposed to do? The standard states that the material is supposed to be tested in the configuration that it will ultimately be used. But often when you are testing the fabric, you don't know how it will be used - you are just developing the material and have not sold it yet. You don't know what foam the furniture manufacturer will use.

Let's look at what the results will tell you. If tested over a non-FR foam, you are determining the ability of the material to provide ignition resistance. According to the FTP standard, while this "does not eliminate the need to test the actual combination...it can help in the short-listing of material combinations and to reduce the overall amount of testing required". Specifically, they recommend testing over a non-FR flexible polyester foam with a density of approximately 22 kg/m³. In this scenario, the fabric must act as a deterrent to the ignition source, not allowing it to ignite the foam underneath the fabric.

The alternate option is to test over a flame retardant foam, such as a CMHR (combustion modified, high resiliency) foam. This will allow you to assess only the fabric's resistance to the ignition sources. The foam itself is ignition resistant, so the fabric does not need to act as a barrier like it does when testing over non-FR foam. The main drawback though is that your fabric is then only approved over that specific foam. If the end user decides on another type of foam (such as one with less ignition resistance), then retesting must occur which may lead to the need for additional flame retardant treatments.

Ultimately, the decision of whether or not to test over an FR foam should be based on how you want to market your material and the expectations of your end user. Once you determine this, give us a call and we'll help you decide on how to test!

Understanding Martindale Abrasion



For decades in the US, the Wyzenbeek test has served as the litmus for abrasion resistance of textiles. Designers will typically specify a fabric for an environment based upon how many "double rubs" the material has achieved, believing that the higher the number, the better the it will perform. But as the fabric selection pool became more global, another type of abrasion began to emerge on fabric spec cards - Martindale abrasion. This led many to ask, 'What happened to my double rubs?' and 'What is this Martindale test? Are the results just as good?'

History 101

The Martindale abrasion test originated in the UK in the early 1940s as a collaboration between Dr. J.G. Martindale (for whom the test and its machine would ultimately be names) and the Wool Industries Research Association (WIRA). Their goal was to create a better, more realistic, abrasion resistance test than what existed at that time. This would be especially critical as they were testing carbon-impregnated cloth for use in protective gear employed for gas attacks during World War II! Eventually, a number of varying Martindale methods would be established to test not only apparel, but also upholstery, shoes, luggage and even flooring. (Cont. on next page)

How it Works

Three 38mm specimens are cut and placed in holders so that they are face down against a worsted wool abrasant. The specimen holders are equipped with a weighted handle such that the material is held against the abrasant with 12kPa (1.74psi) of pressure in order to maintain consistent contact with the abrasant. The machine then moves the specimen against the abrasant in a shifting elliptical motion known as a Lissajous pattern.

While this has (incorrectly) been cited as a 'figure 8' motion, it actually operates on the same principle as a Spirograph, a toy many of us played with as children. As the specimen is moved through the series of shifting ellipses, called movements, a box shape is formed. (see figure, right) In the US, one elliptical movement constitutes a cycle; cycles are then counted and reported for abrasion resistance. Like Wyzenbeek, failure occurs based upon the type of construction being tested. Plain weaves are typically evaluated for yarn breakage while pile fabrics, along with coated and printed fabrics are assessed for "objectionable" changes in their surface sufficient to cause a customer to complain.



Martindale v. Wyzenbeek

One of the most frequently asked questions is if there is any correlation between the Wyzenbeek and Martindale methods and the answer is a definitive 'No'. The methods are conducted in completely different manners, with differing weights, tension, abrasants - factors which all contribute to the materials performance. Just because a material performs well on one of the methods, does not mean it will do so on the other method. But does that mean one is better than the other? Again, the answer is no. Both tests have a substantial history of providing guidance for abrasion resistance, which is why the Association for Contract Textiles (ACT), has included the ASTM Martindale method (ASTM D4966) in its

performance guideline as an alternate to Wyzenbeek abrasion. Their recommendation is a minimum of 20,000 cycles for low traffic environments and 40,000 for high traffic environments.

In conclusion, Wyzenbeek and Martindale are both valid, reliable methods for assessing abrasion resistance even if they do not produce correlating results. Sometimes, one test may more accurately reflect a particular construction's abrasion resistance particularly when it (or similar constructions) have a known reliability in the field but performs poorly on one test and well on the other. When it comes to meeting ACT requirements, you have the option of selecting the method that best reflects your construction's true performance.

CEO Corner



Welcome to Flooralytics Testing Lab! We are so excited to share with you the most state of the art, technically advanced testing lab for flooring and textile needs. Whether it is AATCC, ASTM, ISO, IMO, or proprietary testing...we are equipped to handle it for you. Need us to develop a proprietary testing method to help you bring a product to market? We can and it will be a great experience.

ANAB Accredited in both flooring and textile testing, we can provide testing at very competitive rates and with turn-around times that are best in the industry. Call us today at 616.369.0522 or visit www.flooralytics.com