

Script for the Children's Sleepwear Flammability Testing video

This is the C.P.S.C. Flammability Laboratory. We have the capability of evaluating mattresses, mattress pads, children's sleepwear, general clothing textiles, carpets and rugs and vinyl plastics to the federal regulations.

Hi my name is Linda Fansler. I have worked at the commission for 27 years, the last 16 here at the laboratory.

Right now I'm doing children's sleepwear as a compliance test. We get compliance samples in and often they're children's sleepwear and we test them according to the Standards for the Flammability of Children's Sleepwear.

This is very important because the standards help protect children from potential injury and it's a good thing that we do this because we find violations all the time.

Most of the time the suspect fabrics are ones that we know will burn rapidly, they are not supposed to be used to make children's sleepwear garments.

Often times they're untreated cotton. We know from experience, they will not pass our regulation and those are what we've been seeing a lot of lately.

If a child wears a sleepwear garment that does not meet the standard and if the child potentially got exposed to a small flame source, say matches, candle, lighters, they might not have time to react and the reaction time is really important.

So we want a fabric that burns slowly enough that the child can stop, drop and roll. If it burns rapidly, they won't have that opportunity. They'll get more severely burned.

Okay. We get the garment in. We will evaluate both the fabric and the seams for this particular garment.

We have templates that we have made up for the proper size of our specimen.

We cut out the specimen.

Now this is a seam that we'll be evaluating. It's inside of the garment but because two pieces of fabric are joined together with extra thread, we want to evaluate that in addition to the outer fabric.

We take a holder and we mount the specimen so that the flame will see the seam first, so seam side down. We use a little tape to anchor the fabric just in a couple spots so it lays flat.

And then we use a couple clips to hold our two pieces of the holder together.

And the specimen will go into the test cabinet and the flame is moved into place at the bottom edge of the specimen. The specimen is exposed to the flame for three seconds and allowed to burn.

There are two children's sleepwear standards. One is for sizes 0 through 6X, and the other one is for sizes 7 through 14. The standards were developed for CPSC by the National Bureau of Standards. And the data at that time showed that there was a need for a children's sleepwear flammability standard and so it's been on the books for quite some time since the 1970s.

Fabrics that pass our regulations and provide greater safety are flame resistant treated cottons, or polyester.

The garments are all labeled as far as fiber content and that's a regulation for the Federal Trade Commission not the Consumer Product Safety Commission. But that is a requirement that they are labeled as far as fiber content.

A garment made from flame resistant fabric is often labeled as flame resistant.

The other thing with children's sleepwear if the garment is tight fitting, those garments are exempt from the children's sleepwear flammability requirements but they do fall into the category of the general wearing apparel standard.

So in our regulation you take measurements at key body points, the wrist, the thigh, the waist, the hip and if they meet those tighter dimensions for specific body sizes they can be exempt from sleepwear flammability requirements but the garments do fall into the flammability requirements in the general wearing apparel standard.

So we have a flammability standard for all clothing textiles, for all the clothes you're wearing. Then we have a more stringent standard for children's sleepwear because we know they need special protection, a second level of protection.

To repeat, there's a clothing textile standard for all garments that everyone wears that must meet a minimum performance standard.

Then there's a stricter standard for children's sleepwear. Those garments have to be more flame resistant, burn more slowly, and eventually self-extinguish, allowing for more reaction time.

Now I am going to show you the test procedure. Once the specimens are mounted in the test frames, the test specimens go into the oven at 105°C for 30 minutes. They are removed after 30 minutes and go into our desiccators for another 30 minutes to cool down. Then samples are placed in the test cabinet and allowed to burn.

I will remove the specimen from the desiccator and show you an example of a flame resistant treated cotton fabric and how a compliant specimen would look.

The holder is suspended and the flame will be approached from the side and directly underneath the specimen for three seconds. Again the flame's going to be applied for three seconds.

Nothing happened. That's because this was not a regular piece of cotton. This is a treated piece of cotton because you can see nothing happened. This should have burned the entire length had it not been treated.

Now I'll show you the specimen that is 100% cotton and not flame resistant treated and we should see a big difference in burning behavior.

Hung in the cabinet as before and we will apply our flame for 3 seconds. You can see when I remove the flame, the specimen is still continuing to burn. You can see how large the flames are. And you can see the contrast with the other fabric. There's nothing left. This would not be good. A child would not necessarily have time to react, to prevent injuries.

My job does matter and so does yours. What we do is important for consumers.

Thank you!