

# KEY FLAMABILITY TERMS

**M**attress flammability involves an array of acronyms and terms that can be confusing if you don't speak the language. Here's a look at some of the key terms and what they mean:

## **California Technical Bulletin 117**

A mandatory standard, is both an open flame test and a smoldering cigarette test for the component materials used to make residential upholstered furniture which is to be sold in the state of California. In this test, each upholstery component except the covering fabric is time exposed to either an open flame or a smoldering cigarette in a defined test chamber, and the propagation of the open flame or the cigarette char length is measured to a specific criteria contained in Technical Bulletin 117. All upholstered furniture components except frames must comply with this test procedure and criteria.

## **CBHF**

California Bureau of Home Furnishings. This is the governmental regulatory agency in California that's required to develop the new open-flame standards for that state.

## **FLASHOVER**

This is what happens when a fire's heat is so intense that everything in the room bursts into flame. Generally, a peak heat release rate (see definition below) of about 1,000 kilowatts leads to flashover. Many king-sized bedclothes can contribute 400 kilowatts or more. A mattress and box spring contribution of 500 kilowatts or greater is at risk of leading to flashover.

## **FR**

Fire-resistant or fire-retardant (or flame-resistant or flame-retardant). This refers to the materials used to make mattresses which are less likely to burn when exposed to an open flame. There are several types: fabric-like materials, cushioning materials and coatings, among others.

## **HRR**

Heat release rate. This is the amount of energy given off by a burning mattress. In laboratory testing, this serves as the best proxy for a real-life fire scenario.

## **NIST**

National Institute of Standards and Technology. This agency was formerly known as NBS (National Bureau of Standards), and this term is found in some literature on flammability. NIST is an arm of the U.S. Dept. of Commerce that has conducted a variety of mattress flammability tests. The bedding industry has supported NIST's research studies. NIST has developed a burner that replicates the type of mattress fires that occur with burning bedclothes. The bedding industry supports the use of this burner, referred to as the NIST burner, in tests used to formulate the flammability standards in California.

## **OPEN FLAME**

This refers to a fire coming from matches, lighters, candles or other sources of ignition. New flammability regulations aim to make mattresses more resistant to small-open-flame ignition. Federal

standards issued in 1973 are designed to protect mattresses against ignition by smoldering cigarettes.

### **SPSC**

Sleep Products Safety Council. This group, created by the International Sleep Products Assn., works to educate the public about fire safety and supports research and industry changes aimed at reducing the hazards associated with mattresses and other sleep products. It is playing the lead role in coordinating the bedding industry's work on the flammability issue.

### **TB-129**

Technical Bulletin 129, issued in California, which covers open-flame standards on public live-in occupancy housing. The test burner used in conjunction with that standard is one option under consideration by the CBHF for use in developing California's new flammability standard. This is referred to as the TB-129 burner.

### **TB 603**

Stands for California Assembly Bill 603, signed into law on Aug.12, 2001. It mandates that California adopt an open-flame residential standard for mattress and box springs by Jan.1, 2004. It also requires California officials to mandate open-flame standards for bedclothes (pillows, quilts, bedspreads and comforters) if they determine bedclothes contribute to bedding fires. This legislation is the key driver of the bedding industry's current work on mattress flammability.

