

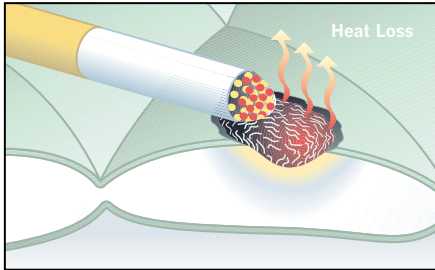
Polyurethane foam and poly-fiber fabrics are everywhere in the home

How flammable are they?

For the most part, polyesters and urethane foams have replaced cotton and other natural fibers in modern bedding. Many of these synthetic materials are treated to resist fire from such things as smoldering cigarettes. However, exposure to open flames for a long enough period will cause almost anything to reach its ignition temperature.

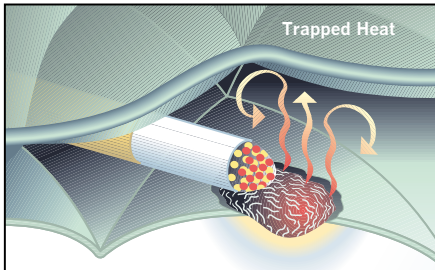
Smoldering burn

When a cigarette is dropped onto a synthetic comforter, layers of fabric may be penetrated by the burn. In most cases it will not transition to flame because most of the heat will be lost to convection. Today's thermoplastics are more likely to melt and smolder than to burn.



Heat build up

If the burning cigarette is dropped into a fold of fabric, however, the chances are greater that the smolder will build up enough heat for the material to reach its ignition temperature.



Transition to flame

When this happens, the synthetic material is likely to produce a much larger and more energetic fire than natural fibers would. It will burn faster, produce more smoke and create a more lethal variety of gases.

