

The Flammable Fabrics Act passed in 1953 gave the Department of Commerce (DOC) the authority to regulate the manufacture of highly flammable clothing. This act was amended in 1967 to permit regulation of a wider range of clothing and interior furnishings. A Federal act passed in 1972 which not only created the Consumer Product Safety Commission (CPSC) with its broad jurisdiction over product safety, but transferred the responsibility of the Flammable Fabrics Act to the CPSC.

Although modern carpet shows little tendency to affect the spread of fire, there are two federal standards which pertain to carpet and rugs. The first standard, DOC FF 1-70, required all carpet and large rugs to pass a small scale ignition test, i.e., the “pill test”. The second, DOC FF 2-70, states that small rugs less than 24 square feet do not have to pass the pill test; however, if they do not, they must have a permanent label stating “Flammable: (Fails U.S. Department of Commerce Standard FF 2-70) Should not be used near sources of ignition”. The requirements of FF 1-70 and FF 2-70 apply to all domestically produced carpets as well as those imported.

The “pill test” subjects a carpet or rug to similar conditions of a lighted cigarette, match or a fireplace ember. Eight 9-inch by 9-inch specimens are cut from the same carpet roll. The specimens are placed in an oven to remove the moisture and then allowed to cool in a moisture free container. Each specimen is placed in a specially designed box which eliminates any drafts. A methenamine tablet is placed in the center of the carpet specimen, and the tablet is ignited with a match. If the burned or charred area is more than three inches in any direction from the center, the specimen fails. If two or more specimens fail, then the carpet roll fails.

The regulation requires “reasonable and representative” tests be performed for all carpets. For one-of-a-kind carpets or large rugs, at least one test of an identical representative sample must be made. For one-of-a-kind small rugs, at least one test of an identical representative sample must be made or a permanent label stating “Flammable: (Fails U.S. Department of Commerce Standard FF 2-70) Should not be used near sources of ignition” must be affixed to the rug.

For products with fire retardant treatments, a special labeling with the letter “T” is required, and testing must be after a series of washings and dryings have been performed.

An additional flammability test, the flooring radiant panel test, may be required where fire safety is more critical such as hospitals, nursing homes, hotel corridors, etc. In this test (ASTM E-648), the flame spread is measured in a simulated corridor fire situation. Local building and fire codes should be consulted for applicability of this more stringent test.

Note: In Canada, a test similar to FF 1-70 (methenamine tablet) is required under the National Standard of Canada CAN 2-4.2, Method 27.6.