FOAM PADDING AND THE MINNESOTA STATE FIRE CODE
Know the Codes, Ensure Compliance
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The State Fire Marshal Division has been receiving a lot of questions lately on foam plastic wall pads in school buildings. This article will attempt to address some of the questions we have received.

On February 20, 2003, a fire at the Station Nightclub in West Warwick, Rhode Island was one of the deadliest fires in American history. Pyrotechnics used during a performance started wall and ceiling mounted acoustical foam on fire, and the blaze spread quickly throughout the building, making the space untenable. One hundred people lost their lives in the fire and another 230 were injured.

Model building and fire codes are typically reactive when these events occur in an effort to address things that went wrong. Since the Station Nightclub fire, model building-and-fire codes have established additional, more stringent requirements for foam plastics used as interior finish.

The use of foam plastic materials, including wall pad assemblies, has increased significantly in recent years due to its excellent sound-deadening characteristics and the cushioning it provides to protect from injury. Gymnasiums, wrestling rooms, seclusion rooms and 'quiet' rooms are some of the areas where these pads are commonly used, though often they do not fully comply with building and fire code requirements.

The Minnesota State Fire Code (MSFC) requires any material placed on a wall or ceiling to comply with a Class A (most stringent), B or C (least stringent) rating depending on its location in a building. Foam frequently complies with a Class A flame-spread rating when tested to the flame spread requirements; however, because of the Station Nightclub fire, the building and fire codes now include additional requirements for foam plastics when used as interior finish.

Foam plastics receive~~s~~ high marks on the flame spread test primarily because the product melts in the test chamber, leaving little to no test sample left to burn. In 'real world' applications, however, this presents a problem with melting and burning plastic raining down on occupants as they exit the building. Non-compliant foam plastics can also contribute to early flashover, where an entire room or area rapidly and suddenly progresses from partial fire involvement to being fully involved.

The MSFC allows foam plastic~~s~~ materials to be used as interior finish when compliant with the appropriate flame-spread rating from Table 803.3 (usually a minimum of Class C) and one of the following standards; NFPA 286, FM 4880, UL 1040 or UL 1715. These large-scale fire tests differ from the flame spread test because they try to address the proposed end-use configuration and application. It is important to mention that many of the foam plastics sold on the market comply with only the flame spread test and not to one of these other standards.

If you have any questions related to foam pads please contact the State Fire Marshal Division school inspector assigned to your area.

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