Comments of the American Home Furnishings Alliance

On

Technical Bulletin 117

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The American Home Furnishings Alliance (AHFA) represents manufacturers and importers of residential furnishings that include upholstered furniture, wood furniture, home office, and decorative accessories. AHFA companies participate in a highly competitive global market characterized by ever-changing style preferences, margin pressures, and the tendency of consumers to postpone big-ticket purchases if their perceptions of value and function are not satisfied.

The AHFA respectfully submits these comments regarding Technical Bulletin 117 (TB-117). Developed in the 1970's, TB-117 is currently the only mandatory flammability standard for residential upholstered furniture in the United States. Due to the size and importance of the retail market in California coupled with factors such as tort liability, TB-117 is the '*de-facto*' standard for those companies with national distribution models.

The National Discussion

The issue of upholstered furniture flammability has been a topic of discussion and debate at the U.S. Consumer Product Safety Commission (CPSC) since it inherited the Flammable Fabrics Act from Congress in 1973. Since this time the CPSC has considered several petitions on the issue and proposed mandatory regulations in 1997, 2001, 2004, along with the current proposed rule in 2008.

The 2008 proposal focuses on the risk of smolder ignition which is the predominant hazard associated with upholstered furniture and the one that readily responds to changes in upholstered furniture construction. Consistently over time, CPSC statistics show that approximately 90% of upholstered furniture fires result from smolder ignition. The voluntary industry program developed by the Upholstered Furniture Action Council (UFAC) in 1977 (the foundation for both ASTM E 1353 and NFPA 260) has demonstrated that fabric and yarn changes along with the use of substrates between fabric and foam yield improved smolder performance.

Small Open Flame Research

The current emphasis on smolder ignition is a sensible response to the technical difficulties associated with the small open flame approaches considered during the course of the rulemaking. Early in the project, CPSC staff found that reformulated foam cushions used to comply with TB-117 and BS 5852 did not meaningfully improve small open flame performance. Subsequent testing of so-called *'TB-117 plus'* foam revealed it performed worse than conventional foam and was inferior in some smoldering scenarios.

Leading foam manufacturers reported significant variability in test results and cautioned they could consistently qualify only the most expensive and least commercially acceptable foams in a limited range of densities.

Likewise, fabrics treated to pass the 20-second open flame test required by BS-5852, exhibited '*erratic fire performance'*. A 2003 fabric industry proposal based on a five-second open flame test represented an effort to achieve more consistent flame resistance and improved functionality. However, CPSC staff concluded that this test was not sufficiently predictive of fabric performance in composite constructions.

A 2001 proposal allowed the use of flame-blocking barriers as protection against open flame ignition. However, CPSC staff has found that barrier materials perform inconsistently depending on the cover fabrics and ignition source.

Currently available barrier technology utilized by the mattress industry is not well-suited for application to upholstered furniture. In addition to the complexities created by the various geometries and spatial relationships of furniture, existing barriers would negatively impact the hand, drape, and seat of residential upholstered furniture.

Research and Regulation of Flame Retardants

TB-117 is the only reason flame retardant chemicals are found in upholstered furniture. The focus on smolder ignition minimizes the reliance on FR chemical treatments. Unlike cigarette ignition, small open flame resistance generally requires the treatment of fabrics and cushioning materials with halogenated compounds (i.e. bromine or chlorine). The widespread application of these chemicals to produce upholstered furniture components would certainly have resulted from the prescribed test methods proposed in the 1997, 2001 and 2004 CPSC briefing packages.

During the time that CPSC has been considering furniture flammability, evidence about the ecotoxicity and bioaccumulation of halogen flame retardants has reshaped the thinking about fire and chemical risks. Restrictions on FR use and production enacted by national and state governments and international agencies are depleting the compliance toolbox of compounds equipped to achieve open flame resistance in furniture and meet TB-117. The use of pentabromo diphenyl ether, once the most common formulation for flame retarding polyurethane foam, has been ended by regulatory action in the U.S. and Europe. The only PBDE still on the market in North America, is deca BDE, a fabric flame retardant effective across a full spectrum of fiber types. Critics of deca often cite evidence that it can degrade (debrominate) into more hazardous congeners that are already the subject of

regulatory action. Deca has been banned or substantially restricted in Washington State, Maine and the European Union. Asian countries and other U.S. states are considering similar legislation. Without deca, fabric mills indicate that achieving open flame resistance would require the commercialization and testing of more specialized chemical formulations geared to particular fabric types. Environmental authorities and policy makers now appear to be moving toward restrictions on bromine and chlorine FR chemicals generally.

Last year California OEHHA added TDCPP, a FR chemical commonly used in furniture applications, to its list of chemicals subject to Prop 65. Governor Brown recently issued a statement directing the state's Bureau of Home Furnishings to revise TB-117 to end the reliance on flame retardant chemicals. In the present federal rulemaking, environmental advocates have urged CPSC to forego regulatory approaches that would encourage such chemical use.

Other Trends Shaping Fire Statistics

Any current discussion of this issue should be made in the context of fire statistics that have improved significantly in response to a number of trends. In addition to the impact of voluntary industry standards such as UFAC, Americans are smoking less and are increasingly protected by working smoke and carbon monoxide detectors. Small open flame statistics are being driven downward by the use of child-resistant lighters pursuant to CPSC regulations finalized in 1993. In addition, all states have enacted requirements for reduced ignition propensity cigarettes. All of these developments can be expected to further reduce residential fires associated with upholstered furniture.

Conclusion and Recommendations

We understand the frustration some have expressed about the pace of progress on this issue. However, we shouldn't disregard the technical hurdles associated with achieving improved fire resistance for a product that is typically covered in fabric and filled with plastics, cellulosics and other cushioning materials. Add to this the differential performance of the tens of thousands of upholstery fabrics on the market; the synergy between fabrics and filling materials; and you begin to understand the challenge that California and CPSC have shouldered.

Upholstered furniture flammability encompasses not only fire science, but consumer preferences, behavioral factors, the competitiveness of domestic industries and the increasing scrutiny of chemicals that may pose a risk to human health and the environment.

An approach that addresses only smolder ignition is not perfect, but represents what is achievable at this point given these sometimes competing factors. We recommend that the Bureau immediately move to adopt ASTM 1353 to address the primary smolder ignition risk from upholstered furniture. Resources can then be concentrated on potential solutions to small open flame risk. This effort must provide multiple options for compliance and a mechanism for identifying safe and effective flame retardant chemistry.

Any revisions to TB-117 must also rely on the use of compliant components and not the use of composite testing. Furniture manufacturers are assemblers of components provided by third party suppliers. The combination of these various components results in thousands of SKU's. This volume makes the testing of full scale or mock-up composites impossible and unreasonable.

It is very likely that the CPSC will finalize a national standard for upholstered furniture flammability in the near future. It is imperative that California flammability standards do not differ from those mandated at the Federal level. Every effort should be made to harmonize revisions of TB-117 to the CPSC standard. If revisions to TB-117 are made prior to the national standard, it should include a provision that harmonizes TB-117 upon promulgation.

We look forward to working with the Bureau on this important issue and to assist our members with the compliance obligations they will face once a new rule is finalized.