



U.S. CONSUMER PRODUCT SAFETY COMMISSION

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Mr. Franco Ghiringhelli, President
International Association of Users of Artificial and Synthetic Filament Yarns and of Natural Silk
U.N.I.T.E.X. (Union Inter-Entreprises Textile)
Villa Créatis-CP 601
2 rue des Mûriers
69258 Lyon Cédex 09, France

Dear Mr. Ghiringhelli:

The U.S. Consumer Product Safety Commission (“Commission”) has considered your petition to amend the *Standard for the Flammability of Clothing Textiles* in 16 C.F.R. part 1610, submitted on February 4, 2015. The petition requested that the Commission amend the standard to: (1) modify the conditioning requirements to decrease the temperature and increase humidity, and (2) increase the time permitted before beginning testing. The Commission considered the information you provided, along with comments on the petition from interested parties, and a briefing package prepared by Commission staff. After reviewing these materials, for the reasons set forth below, the Commission denied your petition.

Some of the factors that the Commission considers when evaluating a petition are outlined in 16 C.F.R. § 1051.9 and include the risk of injury the product poses and “whether a rule is reasonably necessary to eliminate or reduce the risk of injury.” The Commission’s statutory authority to adopt regulations regarding fabric flammability reiterates this focus on reducing the risk of consumer injury. Rulemaking involving 16 C.F.R. part 1610 falls under the Flammable Fabrics Act (“FFA”; 15 U.S.C. §§ 1191-1204). The FFA was designed to create a standard for determining if a fabric or an article of wearing apparel is “so highly flammable as to be dangerous when worn by individuals.” Pub. L. No. 83-88, 67 Stat. 111 (June 30, 1953). The regulation at part 1610, promulgated under the FFA, sets forth that standard. For the Commission to amend the flammability standard, the Commission must find, among other things, that the amendment is “needed to protect the public against unreasonable risk of the occurrence of fire leading to death or personal injury, or significant property damage.” 15 U.S.C. § 1193(a).

The *Standard for the Flammability of Clothing Textiles* in 16 C.F.R. part 1610 provides test methods and procedures for assessing the flammability of clothing textiles, as well as criteria for classifying clothing textiles into three flammability classes based on test results. The flammability classification of a fabric determines whether the fabric may be sold in the U.S. market. The petition addressed two specific provisions of this standard regarding conditioning of test specimens and timing of testing. Specifically, 16 C.F.R. §§ 1610.6(a)(2)(iv) and (a)(3)(v)

require testers to dry specimens in an oven for 30 ± 2 minutes at $105 \pm 3^\circ\text{C}$ ($221 \pm 5^\circ\text{F}$) and then place the specimens in a desiccator for at least 15 minutes until cool. In addition, 16 C.F.R. § 1610.6(c)(5) requires testers to begin testing a specimen within 45 seconds of removing the specimen from the desiccator.

The petition requested that the Commission modify both of these requirements. First, the petition requested that testers condition samples at a lower temperature and higher humidity level of $21 \pm 1^\circ\text{C}$ ($70 \pm 2^\circ\text{F}$) and $65 \pm 2\%$ relative humidity. The petition reasoned that the current conditioning requirements create “an extreme condition not found in reality” by removing the moisture content from fabrics during testing, resulting in faster burn times and higher flammability classifications. Second, the petition requested that testing begin within 4 minutes of removing the specimen, rather than 45 seconds. In support of this change, the petition asserted that the longer time aligns with other recognized standards on textile testing.

Commission staff reviewed the petition, the supporting information, and the comments from interested parties, and prepared a briefing package discussing the petition and its implications for assessing the flammability of clothing textiles and consumer safety. Commission staff presented the briefing package to the Commission on April 6, 2016. The package is available at:

<http://www.cpsc.gov/Global/Newsroom/FOIA/CommissionBriefingPackages/2016/PetitionFF151PetitionAmendStandardFlammabilityClothingTextiles.pdf>.

Regarding the amendment about conditioning, Commission staff’s analysis indicates that the change outlined in the petition may introduce variability and uncertainty into flammability classifications, thereby diminishing consumer safety. At 65 percent relative humidity—the level the petition requested—different fabrics and different specimens of the same fabric reabsorb different amounts of moisture. The moisture content of a specimen impacts its burning behavior during flammability testing, so variable moisture content may result in varied flammability classifications. Varied flammability classifications would make the accuracy of any classification uncertain, undermining the usefulness of the standard and consumer safety. In contrast, the current conditioning requirements provide for the same amount of moisture (*i.e.*, none) to be present in all fabrics and specimens during flammability testing, which provides for reliable and reproducible test results and flammability classifications.

As for the amendment regarding timing of testing, the briefing package explains that increasing the time lapse before testing may exacerbate the variability of test results discussed above. A longer lapse before testing could allow fibers that absorb moisture easily from their surroundings to absorb an even greater amount of moisture, contributing to the variability and uncertainty of test results and flammability classifications. Additionally, based on Commission staff’s experience conducting flammability testing, 45 seconds is ample time to complete the preparations necessary for testing.

Based on a review of the petition, relevant comments, and staff's analysis, the Commission concluded that the amendments requested in the petition are not necessary to, and do not, further the goal of protecting the public from "unreasonable risk of the occurrence of fire leading to death or personal injury, or significant property damage," as is called for under the FFA and 16 C.F.R. § 1051.9. Accordingly, the Commission denied the petition.

Sincerely,

A handwritten signature in blue ink that reads "Todd A. Stevenson". The signature is written in a cursive style with a large, stylized "T" and "S".

Todd A. Stevenson