

**DEPARTMENT OF CONSUMER AFFAIRS,
BUREAU OF ELECTRONIC AND APPLIANCE REPAIR,
HOME FURNISHINGS AND THERMAL INSULATION**

INITIAL STATEMENT OF REASONS

Hearing Date: March 26, 2013

Subject Matter of Proposed Regulations: New Flammability Standards for Upholstered Furniture and Articles Exempt from Flammability Standards

Sections Affected: §1101, §1126, §1370, §1373.2, §1374, §1374.1, §1374.2, §1374.3 and §1383.2 of Title 4, Division 3, Articles 1, 2, 13, and 15.5 of the California Code of Regulations

Background

Upholstered Furniture Flammability Standard: In 1972, AB 2165 (Burton) was signed requiring the Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation (Bureau) establish upholstered furniture flammability standards. AB 2165 enacted Business and Professions Code Section 19161, which required all upholstered furniture sold in California to be fire retardant, as defined by the Bureau, and labeled in such manner.

The Bureau develops flammability standards in the form of Technical Bulletins which are adopted through regulation. There are also a number of other federal flammability standards developed by the United States Consumer Product Safety Commission (CPSC) which are currently in effect nationwide. While CPSC has been studying a national residential upholstered furniture standard for several years, California remains the only state with a residential upholstered furniture flammability standard.

Upholstered Furniture Exemptions: In 1975, AB 2446 (Brown) was signed which added Business and Professions Code Section 19161.5 empowering the Bureau Chief to exempt certain items of upholstered furniture which were deemed not to pose a serious fire hazard. This was an urgency statute resolving the issue that the recently enacted statutes unintentionally imposed fire retardant requirements upon certain items of upholstered furniture, which did not pose a serious fire hazard, resulting in an unfair burden on manufacturers. Following this bill, in 1977 California Code of Regulations Section 1374.2 was adopted which established the criteria for exemption. The Bureau currently requires that exempted products which are specified in regulation must have an exemption label affixed.

Introduction

Upholstered Furniture Flammability Standard: Flammability standards are designed to limit or slow the propagation of upholstered furniture fires and reduce the probability of death or injury by providing an opportunity for detection and escape. They are performance-based standards and do not prescribe the use of any specific material or manufacturing methods to meet the standard.

In October 1975, regulations were promulgated and resulted with the development of Technical Bulletin 117 (TB 117) entitled, "Requirements, Test Procedures and Apparatus for Testing the Flame Retardance of Filling Materials Used in Upholstered Furniture". This mandatory performance standard requires that the concealed filling materials and cover fabric of upholstered furniture undergo individual component testing to ensure that they pass open flame

and cigarette smolder tests. (Attachment 1)

The main emphasis of the current upholstered furniture flammability standard is on the open flame testing of interior filling materials. Manufacturers meet this requirement, predominately, through using polyurethane foam treated with flame retardant chemicals, which must withstand exposure to a 12 second small open flame.

In an actual fire, upholstery cover fabric is the first item to ignite and in turn exposes the foam to a much larger flame than the current small open flame testing method. Once the upholstery cover fabric burns, the foam quickly ignites. The Bureau has determined that the current standard does not adequately address the flammability performance of the upholstery cover fabric and its interactions with underlying filling materials upon ignition whether by an open flame or a smoldering source. Furthermore, flame retardant foam can actually increase smolder propensity.

Specifically, a study conducted by the United States Department of Commerce, National Bureau of Standards, concluded that there are no significant differences between the flame retardant foams formulated to pass TB 117 and untreated foams. (Attachment 2) These findings were consistent with another study conducted by the CPSC. (Attachment 3) CPSC also concluded that upholstery cover fabrics play a more important role in fire behavior performance than filling materials. (Attachment 4) Further research conducted by CPSC, concluded that flame retardant treated foam with a relatively low concentration of flame retardant chemicals actually increases the damage to cover fabrics from a smoldering cigarette relative to untreated foam. (Attachment 5)

Bureau research confirmed that the cover fabrics and their combination with underlying filling materials impact the smoldering performance of upholstered furniture. The Bureau found that heavier smolder prone fabrics when exposed to a smoldering cigarette impart more energy to the mock-up substrates, resulting in significant weight loss of the polyurethane foams. In many cases, the polyurethane foams were totally consumed in laboratory tests. When the cover fabrics were changed to less smolder prone fabrics, smoldering resistance of the mock-up assembly significantly improved and the weight losses of the underlying foam decreased substantially. (Attachment 6) These results were consistent with the observations made by CPSC.

California is the only U.S. state with a mandatory flammability standard for residential furniture. According to existing fire statistics, residential upholstered furniture fires have declined significantly in California and across the nation over the last two decades. National fire incidents related to upholstered furniture have dropped 80 percent resulting in a significant reduction in consumer deaths. (Attachment 7) Substantial reductions in upholstered furniture fatalities nationwide may be attributed to a number of consumer protection improvements which include child-resistant lighters, introduction of self-extinguishing cigarettes, candle industry's compliance with voluntary fire-safe candle standards, furniture manufacturer's compliance with voluntary upholstered furniture flammability standards, and residential smoke alarms and fire sprinkler requirements.

A recent national study conducted by the United States Department of Homeland Security, U.S. Fire Administration, concluded that approximately 92% of residential fire fatalities occur as a result of smoke inhalation and or a combination of smoke inhalation and thermal burns. Smoke inhalation affects internal organs and can lead to inflammation and blockage of the airways from breathing smoke containing harmful gases or toxins that are present during a fire. Smoke

inhalation alone accounts for 40 percent of residential fire fatalities and is the primary source of all residential fire fatalities. (Attachment 8) Another recent national study conducted by the United States Department of Homeland Security, U.S. Fire Administration, found that smoking materials are the leading cause and the greatest risk factor of upholstered furniture fires and losses today. This study determined that the fatality rate was more than seven times greater in smoking-related residential fires than non-smoking-related residential fires; the injury rate is triple that of non-smoking related fires. (Attachment 9)

The California Department of Public Health reports that California mortality averages 234,000 per year. (Attachment 10) In California, upholstered furniture fire fatalities have caused an estimated 50 deaths annually based on residential building fires, of which 44 are smoking-related deaths.

The Bureau has concluded that the current standard does not adequately address the flammability performance of the upholstery cover fabric and its interactions with underlying filling materials. Further, based on evaluation of current statistics, related studies and currently available technologies, the new standard should address the predominant source of upholstered furniture fire deaths, which are smoldering materials.

Through this regulatory proposal the Bureau seeks to establish new performance and labeling requirements under the new flammability standard Technical Bulletin 117-2013 (TB 117-2013), entitled "Requirements, Test Procedure and Apparatus for Testing the Smolder Resistance of Materials Used in Upholstered Furniture". (Attachment 11) TB 117-2013 supersedes TB 117 and is based on the American Society for Testing and Materials International voluntary upholstered furniture flammability standard, ASTM E-1353-08a¹.

The American Society for Testing and Materials International (ASTM) is a non-profit organization that develops voluntary consensus standards. All ASTM standards have unanimous approval of their working committee, and the main committee prior to a standard being adopted and published. Today approximately 12,000 ASTM standards are used around the world with over 30,000 members.

Under Public Law (section 104-113) federal governmental agencies must consider for use privately developed standards whenever possible. This law is intended to save taxpayers money in duplicative standard development efforts. Although this law does not apply to state agencies, there is similar intrinsic value in using a voluntary standard as opposed to development of a brand new standard. In fact, several ASTM standards have been adopted and referenced through regulation and law by various federal and local state governmental agencies.

The new TB 117-2013 standard as detailed below is based, in part, on the ASTM E-1353-08a standard. ASTM E-1353-08a is a voluntary standard entitled Standard Test Methods for Cigarette Ignition Resistance of Components of Upholstered Furniture. This voluntary upholstered furniture standard has been in place since the late 1990's, and was last amended in 2008. It was developed and is modified with broad stakeholder participation and the test methods are reproducible, reliable, and well known and practiced by industry and independent laboratories.

¹ The ASTM E-1353-08a standard is copyrighted. The Bureau has obtained copyright permission to incorporate the ASTM standard in its entirety.

Approximately 80-85% of U.S. manufacturers currently comply with the ASTM E-1353-08a standard. With such large stakeholder participation, it substantially reduces the need for extensive laboratory testing and associated costs, deeming it less burdensome on manufacturers.

Through this proposed rulemaking, consumer fire protection will be preserved while the reliance on flame retardant chemicals will be significantly reduced or eliminated. In addition, this proposal aims to benefit stakeholders by decreasing the fire potential of today's primary ignition source.

Upholstered Furniture Exemptions: Currently, several items are exempted under the California Code of Regulation section 1374.2, including strollers, infant carriers, and nursing pillows. The Bureau proposes to exempt seventeen (17) additional baby and infant products:

- Infant walkers
- Car seats
- Changing pads
- Highchairs
- Infant swings
- Infant bouncers
- Playards
- Infant mattresses
- Infant mattress pads
- Booster seat
- Infant seats
- Floor play mats
- Highchair pads
- Bassinets
- Nursing pads
- Playpen side pads
- Portable hook-on chairs

The Bureau finds that these items contain a much lesser fuel load content (i.e. foam, batting) than average adult seating furniture. In addition, these products are less likely to be ignited or come in contact with an ignition source under the exercise of reasonable care and supervision of adults. The Bureau has concluded that the seventeen (17) proposed items are subject to flammability standards unnecessarily as they are not inclined to pose a serious fire hazard. Therefore the Bureau is exercising its authority to exempt these products from flammability standards as specified in Business and Professions Code section 19161.5.

Currently, the Bureau requires that all exempted products which are specified in regulation must have an exemption label affixed and failure to label the product or label with incorrect verbiage is subject to citation and fine.

The Bureau finds that affixing an exemption label on products that are exempt from regulation by the Bureau does not benefit consumers. Further, the current verbiage in the label implies that the article for which the label is attached failed to meet the Bureau's flammability standard, leading to consumer confusion. Confusion regarding the label has historically been problematic for the Bureau and for manufacturers of exempted products. The Bureau finds that the requirement for an exemption label is unnecessary and unduly burdensome on manufacturers.

Implementation of the New Standard TB 117-2013

Flammability standards provide very specific and prescriptive testing procedures to accurately measure and assess the performance of materials. While the test procedures are prescriptive, the Bureau's flammability standards are in actuality performance standards as they do not prescribe the use of any specific material or manufacturing methods. The new flammability standard TB 117-2013, which is based in large part on the ASTM E-1353-08a, is also considered a performance standard as only the performance of the material is determined as

passing or failing; manufacturers determine if, and how, a material will be used in the upholstered furniture based on the materials performance. Determinations on the actual fabric, filling materials, coatings or treatments, and manufacturing methods used to comply with the standard and used in upholstered furniture are made exclusively by the manufacturer.

The Bureau proposes to use the ASTM E-1353-08a standard as the starting point for its new flammability standard as this is already widely-used by the Bureau's licensees, as well as laboratories and others in the furniture industry. The standard has existed since the late 1990's, and has proven to be a reliable testing method for the ignition of upholstered furniture from smoldering sources. The Bureau has examined the ASTM standard and has determined that, with the modifications set forth in TB 117-2013 and described below, the ASTM standard will provide consumers with adequate protection from upholstered furniture fires resulting from smoldering sources.

Problem being addressed:

The Bureau does not have a smolder test method for cover fabrics. Also, interliner-barriers and resilient filling material can be smolder tested in a more stringent manner.

Anticipated benefits from this proposed action:

The Bureau finds that the ASTM E-1353-08a standard provides for the sound foundation needed to achieve the intent of this regulation. With the proposed modifications to the ASTM standard specified in TB 117-2013, the new flammability standard aims to decrease the fire potential of today's primary ignition source.

The test methods of this voluntary standard are well known and practiced by industry and laboratories therefore; implementation of TB 117-2013 saves manufacturers money in duplicative testing efforts as opposed to implementing a brand new standard.

Rationale:

The Bureau held public workshops on the development of a new flammability standard and consulted with a wide-range of members of industry during the development process. The ASTM E-1353-08a standard was jointly recommended by several California and National Associations of furniture manufacturers, retailers, polyurethane foam and textile associations, and the Upholstered Furniture Action Council. The Bureau finds that the ASTM E-1353-08a standard provides for the sound foundation needed to achieve the intent of this regulation. With the proposed modifications to the ASTM standard specified in TB 117-2013, the new flammability standard aims to decrease the fire potential of today's primary ignition source.

TB 117-2013 Standard:

The TB 117-2013 standard is described below:

INTRODUCTION

An introduction was incorporated into the standard to provide an overview of the testing guidelines of the new flammability standard.

1. SCOPE (ASTM section 1)

The scope provides what testing methods are covered in the standard. The scope is limited to the three test methods proposed under TB 117-2013 – cover fabric test, barrier materials test and resilient filling materials test.

TB 117-2103 does not include the interior fabric, welt cords, and decking materials tests referenced in the ASTM standard.

Problem being addressed:

The interior fabric, welt cord and decking materials test methods were eliminated as they pertain only to the very rare occasion, if any, of causing a smoldering fire.

Anticipated benefits from this proposed action:

Eliminating these test methods will benefit manufacturers as it will reduce unrelated testing.

Rationale:

Interior Fabrics:

Interior cover fabrics (when used) are often thin layers of woven or nonwoven sheer materials that encase the cushioning materials. Interior fabrics are lightweight and a minimal fuel load. It is highly unlikely that such a combination of the cover fabric + the thin interior fabric could cause a smoldering fire hazard. Therefore, the interior fabrics test was deemed unnecessary and eliminated for the proposed standard.

Welt Cords:

The smoldering test of the welt cords was eliminated as nearly all welt cords used in furniture today are made of synthetic (plastic) materials such as polyester or polyolefin fibers and are not smolder prone. In the past, welt cords were mostly made of natural fibers (cotton) and had a tendency to smolder and cause smoldering fires. Bureau research has shown that welt cords made of synthetic materials do not pose a smoldering fire hazard. Therefore, the welt cord test section of the ASTM 1353 was considered unnecessary and burdensome and therefore was eliminated from the proposed standard.

Decking Materials:

Decking materials are used underneath removable seat cushions. The likelihood of a cigarette falling through the seat/back or the seat/arm crevice and reaching the decking area is very unlikely and minimal at best. Therefore, the decking material test section was eliminated from the proposed standard.

Sub-section 1.4.3 (ASTM section 1.4.4): The term “Resilient Filling Materials Test” replaced “Filling/Padding Component Test” within this sub-section and throughout the standard. Resilient filling materials is a common terminology which is well known by industry and is used in the actual definition. This is a non-substantive change as the application and definition have not been changed.

2. REFERENCED DOCUMENTS (ASTM section 2)

Documents that are applicable to the TB 117-2013 standard are referenced in this section. This section is limited to the following two documents:

Sub-section 2.1 (NEW): The ASTM E-1353-08a standard was added, in its entirety, for reference as it provides the basis for the new standard. (Addendum 1)

Sub-section 2.2 (ASTM section 2.2): An amendment was necessary to this sub-section to update the reference source to its most current version. This changed the Federal Specification CCC-C-436-D to CCC-C-436-E.

3. TERMINOLOGY (ASTM section 3)

Terminology that is referenced throughout the standard is defined. The relevant terminology used throughout the standard is the same as that specified in the ASTM standard.

Sub-section 3.3 and Sub-section 3.4 (NEW): The definition of interliner-barrier material and resilient filling material are added and referenced throughout the standard. They are referred to in ASTM but are not defined under this sub-section. The Bureau has defined interliner-barrier material and resilient filling material to ensure appropriate use.

3.3 Barrier Material:

Problem being addressed:

The ASTM standard does not define interliner-barrier material, nor does it specify, when required, where interliner-barrier material must be used in the finished piece of upholstered furniture.

Anticipated benefits from this proposed action:

Adding a definition of interliner-barrier material and specifying the proper placement of such materials adds clarity to the standard, benefiting both stakeholders and the Bureau.

Rationale:

Defining interliner-barrier material and its proper usage provides clarity, and ensures consistent application. Interliner-barrier materials that are used properly in the furniture will enhance consumer protection.

3.4 Resilient Filling Material:

Problem being addressed:

The ASTM standard does not define resilient filling material as it is used or intended to be used in upholstered furniture.

Anticipated benefits from this proposed action:

Adding a definition of resilient filling material adds clarity to the standard, benefiting both stakeholders and the Bureau.

Rationale:

Defining resilient filling material and its proper usage provides clarity and ensures consistent application.

4. SUMMARY OF TEST METHOD (ASTM section 4)

A summary of test methods are provided. This section is the same as ASTM.

5. SIGNIFICANCE AND USE (ASTM section 5)

The significance and use of the standard are detailed in this section. This section is the same as ASTM.

6. TEST FACILITY AND HAZARDS (ASTM section 7)

Annex A provides the standard test facility/exhaust system specifications and hazards.

7. APPARATUS AND MATERIALS (ASTM section 6)

This section defines the standard materials and apparatus used and referenced throughout the standard. This section is limited to the relevant terms which are the ignition source, standard cotton sheeting material, the standard test fabrics, the standard polyurethane foam, specimen holder and apparatus used to perform the tests under the new standard. The properties and specifications on the ignition source, standard cotton sheeting material, standard test fabrics, standard polyurethane foam, and are detailed in Annex B. The specifications of the mini-mockup tester (specimen holder) and apparatus are detailed in Annex C.

8. CONDITIONING (ASTM section 8)

This section covers the conditioning of all test materials. Conditioning defines the standardized condition that all testing samples shall be subjected to in order to ensure consistency of testing results. TB 117-2013 specifies the relative humidity to not exceed 55%. This will improve the accuracy of testing results.

Problem being addressed:

Differences in humidity can have significant impact on testing results. The ASTM standard allows a wider variation of humidity, which could cause testing inconsistencies.

Anticipated benefits from this proposed action:

The humidity requirement specified in TB117-2013 will provide more accurate test results.

Rationale:

The use of the relative humidity proposed by the Bureau maintains consistency with other testing laboratories, industry, and government agencies. The use of this humidity range is common and well-practiced for sample conditioning and regularly used in California and federal standards. The 55% range for relative humidity is an accepted range that ensures testing of the material and products are performed where the conditions are not too dry or too moist to impact the test results either way.

SECTION 1. COVER FABRIC TEST (ASTM section 10 and 11):

This section specifies the cover fabric test procedures. This test method measures the tendency of cover fabric to smolder after exposure to smoldering cigarettes.

Section 1.1 SCOPE (NEW): The scope was added to define the purpose of the test method performed.

Section 1.2 TEST SPECIMEN (ASTM section 10): This sub-section incorporates by reference the Test Specimen procedures found in the ASTM E-1353-08a section 10.

Section 1.3 TEST PROCEDURE (ASTM section 11): This sub-section incorporates by reference the Test Procedure section found in the ASTM E-1353-08a section 11.

Sub-section 1.3.1, Sub-section 2.3.1 and Sub-section 3.4.1 (ASTM section 6.11): The specific purpose for the proposed language is to specify that the use of the draft enclosure is no longer a requirement as per the ASTM E-1353-08a.

Problem being addressed:

The ASTM standard requires the use of a draft enclosure to restrict airflow to convection only.

Anticipated benefits from this proposed action:

The TB 117-2013 makes the draft enclosure optional. This allows testing facilities and laboratories to use a wider variety of test enclosures as long as the specifications described in Annex A are met.

Rationale:

The proposed language is necessary to clarify that the draft enclosure is no longer a requirement. This allows the proposed smoldering test to be conducted either under open test hoods or in enclosures as long as the test area and air flow conditions around the test specimen, as described in Annex A, are met. The smoldering tests shall be conducted in draft free environments such that the tests are not disturbed by excessive air movement.

Sub-section 1.3.2, Sub-section 2.3.2 and Sub-section 3.4.2 (NEW): The specific purpose for the proposed language is to specify where the specimens will be placed in the test enclosure, to identify the minimum spacing required for each specimen, and to add the use of a fiberglass board in testing.

Problem being addressed:

The ASTM standard does not specify the placement of specimens in the test draft enclosure, address the minimum spacing between specimens, or specify the use of a fiberglass board in testing.

Anticipated benefits from this proposed action:

Identifying the placement and minimum spacing of specimens will add more clarity to the standard and ensure more consistent testing results. Using a fiberglass board will increase safety within the laboratory space and testing. Further, the fiberglass board is used under the specimens and can prevent damage to countertops or other test surfaces due to specimen failures. The fiberglass board is an inert substrate which does not allow heat transfer or effect test results.

Rationale:

The additional information provides clarity to the test standard. This provides more consistency in conducting tests while adding additional protection to the laboratory space and equipment.

Sub-section 1.3.3, Sub-section 2.3.3 and Sub-section 3.4.4 (NEW): The specific purpose of the language proposed is to clarify that the timer used to record the testing time is to begin after applying proper contact of materials is when the timer for testing is to begin.

Problem being addressed:

The ASTM standard currently specifies the proper placement of material but the standard is silent on when to begin the timer for testing.

Anticipated benefits from this proposed action:

Providing more specificity on when to begin the timing of the test adds clarity to the standard, benefiting both stakeholders and the Bureau.

Rationale:

The proper timing of testing is necessary to determine the performance of the material and test results. Providing further clarification will ensure consistent application of the standard and better testing performance.

Sub-section 1.3.4 (ASTM section 11.9) and Sub-section 2.3.4 (ASTM 21.9): The specific purpose for the proposed language is to measure the char length in all directions.

Problem being addressed:

The ASTM standard currently measures only vertical char length; however, charring can occur in any direction.

Anticipated benefits from this proposed action:

Measuring the char length in all directions provides a more comprehensive measurement of the smoldering performance of the material. Ensuring that charring is monitored and measured in all directions is an added consumer protection benefit.

Rationale:

Char length can develop in any direction. Fabrics that may pass a vertical char length measurement may fail in another direction. Adding char length measurements in all directions is more indicative of real world fire performance.

Section 1.4 PASS/FAIL CRITERIA (ASTM section 11.10), Section 2.4 (ASTM section 21.10) Section 3.5 (ASTM section 17.10): The purpose is to specify pass/fail criteria for the cover fabric, interliner-barrier material, and resilient filling material tests.

Problem being addressed:

The ASTM standard classifies fabrics based on the testing performance of the material. The Bureau does not use fabric classifications as a basis of determining if a material will pass or fail the flammability standard, and instead must specify testing results as pass/fail.

Anticipated benefits from this proposed action:

Specifying the criteria as pass/fail instead of fabric classifications, benefits stakeholders and the Bureau as it provides the specific performance expectations of a material and an accurate indication of whether the material passes the flammability standard.

Rationale:

Pass/fail criteria adds clarity to the standard and provides an accurate indication of whether the material passes the flammability standard, ensuring consistent application of the standard. Furthermore, it is necessary for the Bureau to enforce its flammability rules.

SECTION 2. BARRIER MATERIALS TEST (ASTM section 20 and 21):

This section specifies the barrier materials test. The test methods measure the tendency of the interliner-barrier material to smolder after exposure to smoldering cigarettes under specified conditions.

Sub-section 2.1 SCOPE (NEW): The scope was added to define the purpose of the test method performed in this section.

Sub-section 2.2 TEST SPECIMENS (ASTM section 20): This sub-section incorporates by reference the Test Specimen procedures found in the ASTM E-1353-08a section 20.

Sub-section 2.2.1 (NEW): This sub-section clarifies that the standard type II cover fabric, as described in Annex B, is to be used during the test procedure.

Sub-section 2.3 TEST PROCEDURE (ASTM section 21): This sub-section incorporates by reference the Test Procedure section found in the ASTM E-1353-08a section 21.

The purpose and application of sub-section 2.3.1 is detailed above with sub-section 1.3.1.

The purpose and application of sub-section 2.3.2 is detailed above with sub-section 1.3.2.

The purpose and application of sub-section 2.3.3 is detailed above with sub-section 1.3.3.

The purpose and application of sub-section 2.3.4 is detailed above with sub-section 1.3.4.

The purpose and application of sub-section 2.4 is detailed above with sub-section 1.4.

SECTION 3. RESILIENT FILLING MATERIAL TEST (ASTM section 16 and 17):

This section specifies the resilient filling material test method. The test method measures the tendency of resilient filling materials to smolder and contribute to fire propagation, when subjected to a smoldering source.

Section 3.1 SCOPE (NEW): The scope was added to clearly define the purpose of the test method performed in this section.

Section 3.2 WEIGHING DEVICE (NEW): This sub-section specifies the weighing device used in measuring the weight loss of resilient filling materials. Its purpose and use are covered under sub-section 3.4.6 and 3.4.7.

Section 3.3 TEST SPECIMEN (ASTM section 16): This sub-section incorporates by reference the Test Specimen section found in the ASTM E-1353-08a section 16.

Sub-section 3.3.1 (ASTM section 16.3): The fabric specimen size has been modified from 12in. x 12in. to 8in. x 15in.

Problem being addressed:

The ASTM standard addresses wrapping the fabric around the edges which requires additional fabric. Wrapping the fabric around the edges is not necessary in this test method and can be cumbersome to assembly.

Anticipated benefits from this proposed action:

Reducing the cover fabric dimensions benefits manufacturers as this will save time for the technician on the assembly process of the mock-up. The standard test fabric I is a heavy fabric and it can become cumbersome to wrap the edges of a specimen.

Rationale:

The TB 117-2013 standard will not require the edges of the panel to be covered. This change may provide more consistency in the construction of the specimen as it is easier to assemble. The specified 8in.x15in. is adequate to completely cover the top surface and partially cover the bottom surface of the test specimen.

Sub-sections 3.3.2 and 3.3.3 (NEW): These sub-sections were added for the purpose of providing additional clarification in preparing test specimens.

Problem being addressed:

The ASTM standard provides procedures on preparing test specimens but further clarification can be made to address special circumstances.

Anticipated benefits from this proposed action:

Providing clarification in test procedures including sample preparations benefits manufacturers as clear, specific, and detailed test procedures will ensure the highest degree of accuracy and precision in the test results.

Rationale:

Special circumstances such as when the test material is less than 2 in. or less than ½ in. thick are more clearly and specifically described in the “notes” so that the users and testing laboratories have clear guidelines on how to assemble test mock up specimens under different circumstances and different material geometries are detailed. Similarly, the test specimen preparation and assemblies as well as end of the test conditions, and measurements are clearly described for ease of understanding by testing personnel.

Sub-section 3.3.4 (NEW): This sub-section makes specific that the test specimen is to be weighed and recorded before the start of the test procedure. The specific purpose for this procedure is noted in sub-section 3.4.6

Section 3.4 TEST PROCEDURE (ASTM section 17): This sub-section incorporates by reference the Test Procedure section found in the ASTM E-1353-08a section 17.

Sub-section 3.4.1 is detailed above with sub-section 1.3.1.

Sub-section 3.4.2 is detailed above with sub-section 1.3.2.

Sub-section 3.4.3 (ASTM section 17.2): The purpose of the proposed language is to specify that the test specimen assembly should be constructed as described in TB 117-2013, rather than as described in section 17.2 of ASTM E-1353-08a.

Problem being addressed:

The vertical test panel as described in ASTM requires that the standard type I cover fabric is to be wrapped around the foam block on all sides. Wrapping the fabric around the edges is not necessary in this test method and can be cumbersome to assemble.

Anticipated benefits from this proposed action:

The TB 117-2013 requires that the fabric to be wrapped around the foam on the front, top and bottom only. This reduces the cover fabric dimensions which benefits manufacturers as this will save time for the technician on the assembly process of the mock-up. The standard test fabric I is a heavy fabric and it can become cumbersome to wrap the edges of a specimen.

Rationale:

The TB 117-2013 standard will not require the edges of the panel to be covered. This change is necessary to provide more consistency in the construction of the specimen as it is easier to assemble. This also reduces the possibility of air pockets which can compromise the integrity of the smoldering test.

Sub-section 3.4.4 is detailed above with sub-section 1.3.3.

Sub-section 3.4.5 (NEW): The purpose of this section is to establish the time frame to determine when testing is complete.

Problem being addressed:

The ASTM standard does not specify the timeframe after combustion that the test is considered completed.

Anticipated benefits from this proposed action:

Specifying the timeframe benefits stakeholders and the Bureau as it provides consistency in determining the specific performance of a material. It provides an accurate indication of whether the material passes the flammability standard.

Rationale:

Without adding the timeframe, the time the test is concluded is left to the interpretation of the end user. Adding the timeframe adds clarity to the standard and provides an accurate indication of whether the material passes the flammability standard and ensures consistent application of the standard.

Sub-section 3.4.6 and Sub-section 3.4.7 (NEW): These sections specify how to measure the weight loss of filling materials.

Problem being addressed:

The ASTM standard does not measure the weight loss of filling materials and instead measures filling materials by char length.

Anticipated benefits from this proposed action:

Measurement of char length may not be practical or definitive in many cases, especially in loose fill materials. Weight loss provides a more precise and reliable means of assessing the smolder behavior of the materials. The more precise method of assessing the smoldering behavior of the materials (using weight loss) ensures a higher degree of fire safety for the consumers by screening out the smolder-prone filling materials that may pose a smoldering fire hazard. Manufacturers and material suppliers will also have more confidence in the fire behavior of their products and materials.

Rationale:

There are a wide variety of filling components in the forms of solid and loose fills that are used in upholstered furniture. Weight loss measurement provides a much more accurate and reliable way of assessing the smoldering performance of different filling materials that can either exhibit different char lengths under similar test conditions or the char length may not be measurable and therefore cannot be accurately judged. Weight loss is a more reliable value pertaining to the amount of the materials consumed in the smoldering combustion and provides a more universal value of assessing the performance of the materials. In case of loose fill components, measurement of the char length is not practical.

Section 3.5 is detailed above in Section 1.4.

Annex A: (ASTM sections 1.6 and 1.7)

Annex A provides the standard test facility parameters and warns of the hazards associated with testing. The purpose is to provide the end user additional specificity in the test facility and exhaust system conditions and to warn of hazards and appropriate safety protocols.

Test Facility, Exhaust System (NEW):

Problem being addressed:

The ASTM does not specify the test facility or exhaust system conditions; however, differences in the test facility and the exhaust system can have a significant impact on the outcome of the tests conducted.

Anticipated benefits from this proposed action:

The smoldering performance of the test materials are more accurate and consistent when the test facility and exhaust system are established and maintained in the same manner. This benefits manufacturers and suppliers as they will be provided consistent results of the tests conducted on their materials, regardless of where the test is conducted. Consumer safety will be enhanced as tests conducted at different laboratories will garner similar performance results.

Rationale:

It is common practice to address specific testing specifications in scientifically written and verified testing standards. It is extremely important that all tests, regardless of where and by whom they are performed, be performed under well-defined and standardized conditions so that the external parameters such as variations in the room temperatures, relative humidities and air supply and/or air flows do not impact the test results.

Hazards: (ASTM sections 1.6 and 1.7)

Problem being addressed:

The ASTM standard generally addresses safety hazards but additional precautions and procedures are warranted.

Anticipated benefits from this proposed action:

Laboratory personnel that follow established protocols can prevent hazards and respond to hazards appropriately. Describing the hazards associated with testing and providing clear protocols is an added safety benefit to the laboratory personnel.

Rationale:

It is customary for flammability and fire testing standards and methods to contain cautionary provisions and instructions that describe the hazards associated and to provide clear instructions to maintain and ensure the safety of laboratory personnel. Describing the hazards associated with testing and providing clear protocols is an added safety benefit.

Annex B: (ASTM section 6)

Annex B provides the specifications on the standard testing materials used and referenced in the standard. The purpose of using standardized materials is to ensure consistency in testing regardless of where, and by whom, tests are performed.

Ignition Source: The specific properties and ignition strength of the cigarette ignition source have been specified.

Problem being addressed:

The ASTM standard does not define the ignition strength for the cigarette ignition source.

Anticipated benefits from this proposed action:

Specifying the properties of the cigarette ignition source and the ignition strength reduces the potential of variable performance. This will benefit both stakeholders and the Bureau as testing results will be reproducible and repeatable. Further, providing the specific definition and properties allows manufacturers to procure the ignition source material from various vendors.

Rationale:

Currently there are several cigarette ignition sources available which are comprised of various properties. Without knowing the specific ignition source or its properties, the Bureau would not have a practical way of enforcing its flammability rule as performance can vary based on the ignition source used.

Standard Polyurethane Foam: The specific properties of the standard polyurethane foam substrate (SPUF) used in testing have been specified.

Problem being addressed:

The ASTM standard sets a broad-range density for the standard polyurethane foam substrate and does not currently specify the air permeability, or firmness of the polyurethane foam cushion, which is measured by the indentation force deflection (IFD).

Anticipated benefits from this proposed action:

Narrowing the density range and specifying more properties of the foam will produce more consistent testing results. This will benefit both stakeholders and the Bureau as testing results will be reproducible and repeatable. Further, providing the specific definition and properties allows manufacturers to procure the standard polyurethane foam from various vendors.

Rationale:

Testing performance can vary based on the range of density and properties of the standard polyurethane foam source used. TB 117-2013 standard sets a narrow-range density for the standard polyurethane foam substrate and specifies the IFD and air permeability. The foam specification was developed with input from foam manufacturers to ensure reproducibility and repeatability to ensure more consistent testing results. The Bureau's test data shows that in order to screen out the most smolder prone cover fabrics or the weak interliner-barriers, foam with a high density must be used in the cover fabric and barrier tests. Highly smolder-prone fabrics may pass the smoldering test if low density polyurethane foams are used as the standard substrate. The Bureau has chosen to use the highest range for standard polyurethane foam to provide greater consumer protection from smoldering sources.

Standard Type I Cover Fabric: Same as that specified in the ASTM standard.

Standard Type II Cover Fabric: A different standard cover fabric used for the barrier test is specified.

Problem being addressed:

The ASTM standard specifies the standard type II cover fabric for use in barrier testing. The

Bureau believes an alternative fabric will provide greater consumer protection.

Anticipated benefits from this proposed action: Using a more smolder prone fabric as proposed under TB 117-2013, provides a more rigorous test of the interliner-barrier material. Interliner-barrier materials that pass the test will provide greater smolder protection than the current standard Type II cover fabric.

Rationale:

TB 117-2013 standard specifies the cotton napped velvet which is used in the Bureau's current TB 117 standard. Research conducted by the Bureau demonstrates that the cotton napped velvet fabric is more smolder prone than the standard Type II cover fabric and its use will provide greater protection against smoldering fires. (Attachment 6)

Standard Cotton Sheetting: Same as that specified in the ASTM standard.

Annex C: (ASTM section 6)

Annex C provides the standard mini-mockup tester (specimen holder), miscellaneous apparatus required and to specify the extinguishing equipment.

The specimen holder is identical to that in the ASTM standard. A non-substantive change has been made to correct the numeric values. Specifically, the specimen holder specifies that "The platform is **2.5 in. (38 mm)** above the floor of the base and has a 1.5 in. (38 mm) lip at the front edge. The Bureau's standard corrects the numeric value of the platform to **1.5 in. which is 38 mm.**

Fiberglass board is added to the miscellaneous items that are used and referenced through-out the standard. The use of the fiberglass board is detailed above under Section 1: Cover Fabric Test, sub-section 1.3.4.

The extinguishing equipment is identical to those specified in the ASTM standard.

THE AMENDMENTS TO EXISTING REGULATIONS - IMPLEMENTATION OF TB 117-2013:

Proposed amendment to section 1101:

The specific purpose for the amendment to section 1101 is to clarify and update the definition of the term "Bureau".

Problem being addressed:

In 2009, the enactment of Assembly Bill No. 20 consolidated the Bureau of Electronic and Appliance Repair and the Bureau of Home Furnishings and Thermal Insulation. Under this consolidation the term "Bureau" was amended to mean the Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation as reflected in section 19004 of the Business and Professions Code.

Anticipated benefits from this regulatory action:

The amendment to this section will remove the inconsistent use of the term as it is referenced throughout the laws and regulations.

Rationale:

The amendment to section 1101 is necessary to correct the obsolete definition of the term “Bureau” and to maintain consistency with section 19004 of the Business and Professions Code. The amendment to this section is without regulatory effect.

Proposed amendments to section 1126(d)(11):

The specific purpose for the amendments to section 1126(d)(11) is to update the name of the Bureau as outlined in the proposed amendment of section 1101.

Also, the amendments to this subsection changes the references made to the current performance standard “TB 117” and its reference date “March 2000” for the specific purpose of replacing them with references made to the new standard “TB 117-2013” and its reference date “January 2013”.

Problem being addressed:

The amendment to the name of the Bureau is explained in the proposed amendment of section 1101.

The amendments to this subsection addresses the Bureau’s intent to update the statement and heading requirements on official law labels to reflect that TB 117 is to be repealed (including each reference made thereof) and replaced with the new flammability standard TB 117-2013.

Anticipated benefits from this regulatory action:

The anticipated benefit of amending the Bureau’s name is explained in the proposed amendment of section 1101.

The amendments to this subsection will benefit consumers as it provides awareness to the fire resistive properties of the product that is being purchased. This amendment allows consumers to know if the product is compliant with the new flammability standards rather than an obsolete standard.

Rationale:

The amendment to the Bureau’s name is a nonsubstantive change as explained in the proposed amendment to section 1101.

The official law label requirements within section 1126 are already established by the Bureau and followed by industry. The amendment to subsection (d)(11) makes a technical change to the statement and heading requirements on law labels which removes the reference to a repealed flammability standard and replaces it with the new standard. This is necessary to provide consistency with proposed regulations requiring that all filling materials are to be compliant with the new flammability standard and properly labeled as such. As specified in Business and Professions Code section 19081, the wording and statements thereon necessary to carry out the provision of this chapter shall be approved by the chief.

Proposed amendment to section 1126(d)(12):

The specific purpose for the amendments to section 1126(d)(12) is to update the name of the Bureau as outlined in the proposed amendment of section 1101.

TB 117-2013 supersedes TB 117. The amendment to this subsection changes the references made to the current performance standard “TB 117” and its reference date “March 2000” for the

specific purpose of replacing them with the references made to the new standard “TB 117-2013” and its reference date “January 2013”.

Problem being addressed:

The amendment to the name of the Bureau is explained in the proposed amendment of section 1101.

The amendments to this subsection addresses the Bureau’s intent to update the statement and heading requirements of invoices to reflect that TB 117 is to be repealed (including each reference made thereof) and replaced with the new flammability standard TB 117-2013.

Anticipated benefits from this regulatory action:

The anticipated benefit of amending the Bureau’s name is explained in the proposed amendment of section 1101.

The amendments to this subsection will benefit consumers as it provides awareness to the fire resistive properties of the product that is being purchased. This amendment allows consumers to know if the product is compliant with new flammability standards rather than an obsolete standard.

Rationale:

The amendment to the Bureau’s name is a nonsubstantive change as explained in the proposed amendment to section 1101.

The official law label requirements within section 1126 are already established by the Bureau and followed by industry. The amendment to subsection (d)(12) makes a technical change to the statement and heading requirements of invoices for products that meet Bureau flammability requirements which removes the reference to the repealed flammability standard and replaces it with the new standard. This is necessary to provide consistency with proposed regulations requiring that all filling materials are to be compliant with new flammability standards and properly labeled as such. As specified in Business and Professions Code section 19081, the wording and statements thereon necessary to carry out the provision of this chapter shall be approved by the chief.

Proposed amendment of section 1126(f)(Type No. 8):

The specific purpose for the amendment to section 1126(f)(Type No. 8) is to update the name of the Bureau as outlined in the proposed amendment of section 1101.

Also, the amendment to this subsection changes the reference made to the current performance standard “TB 117” for the purpose of replacing it with the reference to the new standard “TB 117-2013”.

Problem being addressed:

Subsection 1126(f)(Type No. 8) simply provides illustration of the form of law label that shall be attached to bulk materials that meets the requirements of the Bureau’s flammability standards. The amendment to the name of the Bureau is explained in the proposed amendment of section 1101.

The amendments to this subsection addresses the Bureau’s intent to update the statement and heading requirements on the law label illustrated to reflect that TB 117 is to be repealed

(including each reference made thereof) and replaced with the new flammability standard TB 117-2013.

Anticipated benefits from this regulatory action:

The anticipated benefit of amending the Bureau's name is explained in the proposed amendment of section 1101.

The amendments to this subsection will benefit stakeholders as it allows them to be aware if the product being purchased is compliant with the new flammability standard.

Rationale:

The amendment to the Bureau's name is a non-substantive change as explained in the proposed amendment to section 1101.

The office law label requirements within section 1126 are already established by the Bureau and followed by industry. The amendment to subsection (f)(Type No. 8) makes a technical change to the statements and headings on the law label which removes the reference to the repealed flammability standard and replaces it with the new standard. This is necessary to provide consistency with proposed regulations requiring that all filling materials are to be compliant with new flammability standards and properly labeled as such. As specified in Business and Professions Code section 19081, the wording and statements therein necessary to carry out the provision of this chapter shall be approved by the chief.

Proposed amendment to section 1370(a):

The specific purpose for adding "On and after July 1, 2014" to section 1370 is to define the date manufacturers must manufacture upholstered furniture in accordance with the new standard.

The specific purpose for the amendment to section 1370(a) is to add the words "and cover fabrics" to establish that these types of articles along with filling materials that are labeled as meeting the Bureau's flammability requirements shall be tested in accordance with and shall meet these requirements.

The specific purpose for adding the words "fire resistant" within the title and within this subsection is to expand the scope of this section to allow for the implementation of other appropriate test methods other than open-flame testing.

The specific purpose for the amendment to the name of the Bureau is explained in the proposed amendment of section 1101.

The changes made to this subsection amends the references made to the name of the current flammability standard TB 117, its title, and its reference date for the specific purpose of replacing each with references to the new standard TB 117-2013.

Additionally, "which is incorporated by reference" was added to incorporate the proposed technical bulletin into regulation.

Lastly, the specific purpose of adding "This section shall not apply to articles of furniture manufactured prior to July 1, 2014" is to clarify that the products manufactured prior to July 1, 2014, may continue to be offered for sale under the current standard.

Problems being addressed:

Manufacturers need a reasonable amount of time to deplete current supplies, procure testing equipment and compliant materials, and to perform testing under the new testing protocols. Manufacturers have stated that a transition period of approximately 9 months is needed from enactment to implement the new TB 117-2013 standard. A July 1, 2014 implementation date ensures manufacturers have the time needed to effectuate these changes.

The current language of this subsection limits the Bureau's authority to perform compliance testing on filling materials only. The intention of the new flammability standard is to expand flammability requirements to include cover fabrics therefore "and cover fabrics" is added to this section.

The current references made to "flame resistant" and "flame retardant" may imply that articles adhering to this subsection are to undergo open flame testing only even though the Bureau performs both open flame and smolder testing. The insertion of "fire resistance" clarifies that other testing methods are appropriate such as the proposed smoldering resistance test within TB 117-2013.

The amendment to the name of the Bureau is explained in the proposed amendment of section 1101.

The amendments to this subsection addresses the Bureau's intent to repeal current test requirements to reflect that the articles adhering to this subsection are to be tested in accordance with the new flammability requirements.

The adding of the words "which is incorporated by reference" addresses the need to incorporate the new technical bulletin into regulation.

Clarification is needed to address the Bureau's intention of allowing products manufactured prior to July 1, 2014 to continue to be offered for sale without a sell by date. Products manufactured on or after July 1, 2014 must be compliant with the new flammability standard in order to be offered for sale.

Anticipated benefit from this regulatory action:

Adding "On and after July 1, 2014" to this section will allow manufacturers ample time to come into compliance with the new standard. Further, it will substantially reduce the manufacturers cost of compliance as they have a time period to deplete their current supplies.

The adding of the words "and cover fabrics" will benefit consumers as it provides the Bureau authority to test the filling material and the cover fabrics of upholstered or reupholstered articles to ensure that they adhere to the smolder resistance requirements of the new flammability standard.

Adding the words "fire resistant" to this subsection broadens the Bureau's authority to conduct smolder resistance testing of products with the anticipated benefit of reducing fires ignited by smoking materials which is the leading ignition source of fires today.

The anticipated benefit of amending the Bureau's name is explained in the proposed amendment of section 1101.

The repeal of the test requirements set forth in the current flammability standard would benefit stakeholders as the test requirements of the new flammability standard aim to decrease the fire potential of today's primary ignition sources.

Incorporating the new TB 117-2013 by reference allows for easy referencing as it is a multiple page document.

Incorporating "This section shall not apply to articles of furniture manufactured prior to July 1, 2014" allows products compliant with the current standard to continue to be offered for sale without a sell by date. This reduces the cost of compliance to manufacturers as they are able to deplete current inventories.

Rationale:

Adding "On and after July 1, 2014" to section 1370 is necessary to provide sufficient time for compliance. The Bureau historically sets a prospective date for compliance when implementing new standards as new equipment, and test protocols are required. Further, it will substantially reduce and or eliminate the manufacturers cost of compliance as they have a time period to deplete their current supplies.

Adding "and cover fabrics" to this subsection is necessary as it provides consistency with the flammability requirements set forth in section 1374(a). The adding of this language also provides the Bureau authority to confirm that the cover fabrics, along with filling material, are conforming to the requirements of 1374(a) through compliance testing of these articles.

Under Business and Professions Code section 19161 the Bureau is given authority to adopt regulations to define fire retardant as it is used in this section. The adding of the language "fire resistant" is necessary to clarify other testing methods such as smolder resistance testing are appropriate.

The amendment to the Bureau's name is a non-substantive change as explained in the proposed amendment to section 1101.

Updating the flammability standard within this subsection is necessary to provide consistency with the amendments to section 1374(a), which establishes the flammability requirements of the new flammability standard, and also sections 1374.3(a) and 1374.3(b) which establishes the proposed labeling requirements of articles adhering to these sections. This regulatory action authorizes the Bureau test products in accordance with proposed flammability requirements to ensure that articles labeled as compliant with 1374(a) are not making untrue or misleading statements.

It is necessary to incorporate the new TB 117-2013 by reference as it is a stand-alone document that should be referenced by manufacturers to understand the performance requirements that are to be met.

Updating this subsection is necessary to provide clarification that the current inventory of products may continue to be sold without a sell by date in order to reduce the cost of compliance to manufacturers. It also makes clear that products manufactured after July 1, 2014 shall comply with this proposed regulation.

Proposed repeal of section 1370(b):

The specific purpose of repealing section 1370(b) is to remove reference to an obsolete standard.

Problem being addressed:

Technical Bulletin 105 is a voluntary fabric flammability standard and has not been practiced by the Bureau or manufacturers for over 10 years. The repeal of this section addresses the Bureau's intent to remove nonessential language for cleanup purposes.

Anticipated benefit from this regulatory action:

This action is without regulatory effect.

Rationale:

The language in this subsection is unnecessary as this standard is obsolete and has not been practiced by the Bureau or industry. Furthermore, fabric flammability requirements are to be mandated as part of the new standard TB 117-2013.

Proposed amendment to section 1373.2:

The specific purpose for adding "On and after July 1, 2014" to section 1373.2 is to define the date manufacturers must manufacture upholstered furniture in accordance with the new standard.

The amendment to this subsection changes each reference directly related to the current flammability standard TB 117, including the language "Section A, Part I; Section A, Part II and Section D, Part II", for the purpose of replacing each reference with language specific to the new flammability standard TB 117-2013.

The specific purpose for the amendment to the name of the Bureau is explained in the proposed amendment of section 1101.

Lastly, the specific purpose of adding "This section shall not apply to flexible polyurethane foam manufactured prior to July 1, 2014" is to clarify that the products manufactured prior to July 1, 2014, may continue to be offered for sale under the current standard.

Problem being addressed:

Manufacturers need a reasonable amount of time to deplete current supplies, procure testing equipment and compliant materials, and to perform testing under the new testing protocols.

The open flame testing requirement for filling materials fails to provide adequate consumer protection from fires related to smoldering ignition sources which is the primary cause of fires today. For this reason, the Bureau's intention is to repeal TB 117 and replace it with the new flammability standard TB 117-2013.

The amendment to the name of the Bureau is explained in the proposed amendment of section 1101.

Clarification is needed to address the Bureau's intention of allowing flexible polyurethane foam manufactured prior to July 1, 2014 to continue to be offered for sale without a sell by date. Flexible polyurethane foam manufactured on or after July 1, 2014 must be compliant with the new flammability standard in order to be offered for sale.

Anticipated benefit from this regulatory action:

Adding “On and after July 1, 2014” to this section will allow manufacturers ample time to come into compliance with the new standard. Further, it will substantially reduce the manufacturers cost of compliance as they have a sufficient time period to deplete their current supplies.

The proposed regulatory action benefits all stakeholders as it establishes a performance standard which aims to address the primary and greatest source of upholstered furniture, smolder ignition sources.

The anticipated benefit of amending the Bureau’s name is explained in the proposed amendment of section 1101.

Incorporating “This section shall not apply to flexible polyurethane foam manufactured prior to July 1, 2014” allows products compliant with the current standard to continue to be offered for sale without a sell by date. This reduces the cost of compliance to manufacturers as they are able to deplete current inventories.

Rationale:

Adding “On and after July 1, 2014” to section 1373.2 is necessary to provide sufficient time for compliance. The Bureau historically sets a prospective date for compliance when implementing new standards as new equipment, and test protocols are required. Further, it will substantially reduce the manufacturers cost of compliance as they have a sufficient time period to deplete their current supplies.

This proposed regulatory action is necessary to establish the requirement that all flexible polyurethane foam must meet the fire resistance requirements of the new flammability standard TB 117-2013. The proposed amendment to this section maintains consistency with the provisions of Business and Professions Code section 19161.3 which mandate that all flexible polyurethane foam shall be fire retardant as adopted by the Bureau.

The amendment to the Bureau’s name is a non-substantive change as explained in the proposed amendment to section 1101.

Updating this subsection is necessary to provide clarification that the current inventory of flexible polyurethane foam may continue to be sold without a sell by date in order to reduce the cost of compliance to manufacturers. It also makes clear that flexible polyurethane foam manufactured after July 1, 2014 shall comply with this proposed regulation.

Proposed amendment to section 1374(a):

The specific purpose for adding “On and after July 1, 2014” to section 1374(a) is to define the date manufacturers must manufacture upholstered furniture in accordance with the new standard.

Adding “and cover fabrics” to section 1374(a) is for the specific purpose of expanding the scope of this subsection to reflect that, in addition to filling materials, the cover fabrics of any article of upholstered or reupholstered furniture are to meet the Bureau's flammability standards.

The specific purpose of removing the words "all filling materials" is to maintain grammatical consistency.

The amendment to this section also makes a grammatical change to the name of the Bureau.

The amendment to section 1374(a) also establishes that the test requirements of the current TB 117 are to be replaced with the new flammability standard TB 117-2013.

Lastly, the specific purpose of adding “This section shall not apply to filling materials and cover fabric manufactured prior to July 1, 2014” is to clarify that the filling materials and cover fabric manufactured prior to July 1, 2014, may continue to be offered for sale under the current standard.

Problem being addressed:

Manufacturers need a reasonable amount of time to deplete current supplies, procure testing equipment and compliant materials, and to perform testing under the new testing protocols.

The current language of this subsection limits the Bureau's authority to enforce flammability requirements on filling materials. The intent of the new flammability standard is to expand the flammability requirements to include cover fabrics.

Removing the words "all filling material" is for cleanup purposes.

The amendment to the name of the Bureau is explained in the proposed amendment of section 1101.

The open flame testing requirement for filling materials is obsolete and fails to provide adequate consumer protection from fires related to smoldering ignition sources which is the primary cause of fires today. For this reason, the Bureau's intention is to repeal TB 117 and replace it with the new flammability standard TB 117-2013.

Clarification is needed to address the Bureau's intention of allowing filling materials and cover fabric manufactured prior to July 1, 2014 to continue to be offered for sale without a sell by date. Filling materials and cover fabric manufactured on or after July 1, 2014 must be compliant with the new flammability standard in order to be offered for sale.

Anticipated benefit from this regulatory action:

Adding “On and after July 1, 2014” to this section will allow manufacturers ample time to come into compliance with the new standard. Further, it will substantially reduce the manufacturers cost of compliance as they have a sufficient time period to deplete their current supplies.

The adding of “and cover fabrics” will benefit consumers as it establishes that filling material and cover fabrics of upholstered or reupholstered furniture are to adhere to the smolder resistant requirements of the new flammability standard.

Removing the words "all filling material" is for grammatical purposes only.

The anticipated benefit of amending the Bureau's name is explained in the proposed amendment of section 1101.

The repeal of the current flammability standard would benefit stakeholders as the test requirements of the new flammability standard aim to decrease the fire potential of today's primary ignition sources.

Incorporating “This section shall not apply to filling materials and cover fabric manufactured prior to July 1, 2014” allows products compliant with the current standard to continue to be offered for

sale without a sell by date. This reduces the cost of compliance to manufacturers as they are able to deplete current inventories.

Rationale:

Adding “On and after July 1, 2014” to section 1374(a) is necessary to provide sufficient time for compliance. The Bureau historically sets a prospective date for compliance when implementing new standards as new equipment, and test protocols are required. Further, it will substantially reduce the manufacturers cost of compliance as they have a sufficient time period to deplete their current supplies.

The adding of “and cover fabrics” to this subsection is necessary for the purpose of establishing the flammability requirements of the new TB 117-2013. The cover fabric of upholstered furniture is an essential component addressed in TB 117-2013 as it is the first item of an upholstered piece of furniture to ignite. Adding this language provides the Bureau authority to set forth smolder resistance requirements on the cover fabric.

Referencing “all filling material” twice is redundant. This amendment has no regulatory effect.

The amendment to the Bureau’s name is a non-substantive change as explained in the proposed amendment to section 1101.

The current flammability standard is obsolete and fails to provide adequate consumer protection from fires related to smoldering ignition sources which is the primary cause of fires today. To appropriately address smoldering ignition sources TB 117 is being repealed and replaced with the new flammability standard TB 117-2013. Updating the flammability standard within this subsection is necessary to provide consistency with the amendments to section 1370(a), which establishes the proposed testing requirements, and also sections 1374.3(a) and 1374.3(b) which establishes the proposed labeling requirements of articles adhering to this subsection. The amendments to this section provide consistency with Business and Professions Code section 19161 which specifies that upholstered furniture and reupholstered furniture is to meet fire retardant requirement in a manner specified by the Bureau.

Updating this subsection is necessary to provide clarification that the current inventory of filling materials and cover fabric may continue to be sold without a sell by date in order to reduce the cost of compliance to manufacturers. It also makes clear that filling materials and cover fabric manufactured after July 1, 2014 shall comply with this proposed regulation.

Proposed amendment to section 1374(c):

The specific purpose of deleting “On and after March 1, 1992” is to remove nonessential language.

Problem being addressed:

The language is outdated and should be removed for grammatical and style purposes.

Anticipated benefits from this regulatory action:

This action is without regulatory affect.

Rationale:

This amendment is necessary to remove nonessential language to allow for easier interpretation.

Proposed amendment to section 1374(e):

The specific purpose for the amendment to section 1374(e) is to make grammatical corrections which removes the words “and may comply with” and adds the words “either” and “or” in order to clarify that public occupancies and public assembly areas are required to meet either section 1374(a) or 1374(c).

Problem being addressed:

The current language is unclear and may lead those subject to it to misinterpret the intent of this subsection.

Anticipated benefit from this regulatory action:

The grammatical corrections ensure that industry guidelines are clarified and the intent of this subsection is not in question.

Rationale:

The amendments to this subsection are without regulatory effect. The grammatical corrections are necessary to clarify specific guidelines and instructions which allow public occupancies and public assembly areas, which are fully sprinklered, to meet the test requirements of TB 117-2013 or the test requirements of TB 133. In its current text, it could be misinterpreted as having to meet both requirements.

Proposed amendment to section 1374.3(a) and 1374.3(b):

The specific purpose for the amendments to section 1374.3(a) and 1374.3(b) is to update the name of the Bureau, as outlined in the proposed amendment of section 1101.

Also, the amendments to these subsections repeals the reference made to the current performance standard “TB 117” for the purpose of replacing it with the reference to the new standard “TB 117-2013”.

Problem being addressed:

The amendment to the name of the Bureau is explained in the proposed amendment of section 1101.

The amendment to the statement made on the flammability label addresses the intent to repeal TB 117 and each reference made thereof in order to replace each reference with TB 117-2013.

Anticipated benefits of this regulatory action:

The anticipated benefit of amending the Bureau’s name is explained in the proposed amendment of section 1101.

Stakeholders will benefit from this action as they are informed, from the statement made on the flammability label, that a product is compliant with updated flammability standards rather than an obsolete standard.

Rationale:

The amendment to the Bureau’s name is non-substantive and is explained in the proposed amendment to section 1101.

The proposed amendments to this section are necessary to provide consistency with the provisions of Business and Professions Code section 19161 which states that all furniture and reupholstered furniture shall be fire retardant and labeled in a manner specified by the bureau.

IMPLEMENTATION OF THE UPHOLSTERED FURNITURE EXEMPTIONS AND REPEAL OF THE EXEMPTION LABEL:

The implementation of the upholstered furniture exemptions and repeal of the exemption label will make the following changes to existing regulation:

Proposed repeal of section 1374.1:

The specific purpose for the repeal of section 1374.1 is to remove the requirement to have an exemption label for items that are exempt from meeting the Bureau's flammability requirements.

Problem being addressed:

The Bureau finds that affixing an exemption label on products that are exempt from regulation by the Bureau does not benefit consumers. Further, the current verbiage in the label implies that the article for which the label is attached failed to meet the Bureau's flammability standard, leading to consumer confusion. Confusion regarding the label has historically been problematic for the Bureau and for manufacturers of exempted products. The Bureau finds that the requirement for an exemption label is unnecessary and unduly burdensome on manufacturers.

Anticipated benefit:

The amendment made to this section will benefit consumers as it eliminates the common misunderstanding that the product is a non-compliant product, when it is exempted by regulation. It benefits stakeholders as it removes the label requirement and costs associated with the label.

Rationale:

Currently, the Bureau requires that all exempted products which are specified in regulation must have an exemption label affixed and failure to label the product or label it with incorrect verbiage is subject to citation and fine. The Bureau finds that affixing an exemption label on products that are exempt from regulation does not benefit consumers. Further, the current verbiage in the label implies that the article for which the label is attached failed to meet the Bureau's flammability standard, leading to consumer confusion.

The requirement for an exemption label is unnecessary and unduly burdensome on manufacturers.

Proposed amendment to section 1374.2(c):

The specific purpose for the amendment to section 1374.2(c) is to clarify that infant walkers, booster seats, car seat, changing pads, floor play mats, highchair pads, highchairs, infant swings, bassinets, infant seats, infant bouncers, nursing pads, playards, playpen side pads, infant mattresses, infant mattress pads, and portable hook-on chairs shall be exempt from the Bureau flammability requirements along with the previously exempted strollers, infant carriers and nursing pillows.

Problem being addressed:

The Bureau has determined that the fourteen (17) baby and infant products are subject to flammability standards unnecessarily as they are not prone to cause or sustain a serious fire if ignited.

Anticipated benefits of this regulatory action:

All stakeholders will benefit from this regulatory action as there will be no need for any flame resistant methods, including flame retardant chemicals. Use of non-flame retardant treated material is less expensive than flame retardant treated material. This would also alleviate the environmental and health concerns that have arisen. Environmental groups have also asserted that as an added benefit.

Rationale:

The Bureau finds that these items contain a much lesser fuel load content (i.e. foam, batting) than average adult seating furniture therefore the chances these items would cause or sustain a serious fire is very minimal. The proposed amendments to this subsection are necessary to carry out the provisions of Business and Professions Code section 19161.5 which state that the chief of the bureau may exempt items of upholstered furniture which are deemed not to pose a serious fire hazard.

Proposed amendment to section 1374.3(e):

The specific purpose of the amendment is to eliminate the reference of section 1374.1 in this section of regulation as it is proposed to be repealed. The purpose for repeal is detailed in section 1374.1 above.

Proposed amendment to section 1383.2(a):

The specific purpose of the amendment is to eliminate the citation and fine provision related to exempted labels. Under section 1374.1, exempted labels are proposed to be repealed.

Problem being addressed:

The current regulation authorizes the Bureau to cite and fine manufacturers that fail to affix an exemption label on products that are specified in regulations as being exempt. With the repeal of the labeling requirement, the citation and fine provision should also be repealed.

Anticipated benefit:

The Bureau has determined that it is not an added benefit to consumers to affix an exemption label on products that are exempt from regulation. Further, it is unnecessary and an added cost to manufacturers.

Rationale:

The current regulatory requirement is to place an exemption label on exempted items that are specified in regulation. It is unnecessary and an added cost to manufacturers to label items that are exempt from regulation. The Bureau has determined that it does not provide added consumer protection to affix an exemption label on products. Further, the current verbiage in the label implies that the article for which the label is attached failed to meet the Bureau's flammability standard.

Proposed amendment to Table of Contents:

Eliminate the reference of section 1374.1 in this section of regulation as it is being repealed. The purpose for this change is detailed in section 1374.1 above.

Underlying Data

Attachments:

1. Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation, "Requirements, Test Procedures and Apparatus for Testing the Flame Retardance of

- Filling Materials Used in Upholstered Furniture”, Technical Bulletin 117, March 2000
2. Babrauskas, V.; Krasny, J.F. “Fire Behavior of Upholstered Furniture”, National Bureau of Standards, November 1985
 3. Mehta, S. Memorandum to D. Ray, “Upholstered Furniture Full Scale Chair Tests – Open Flame Ignition Results and Analysis”, U. S. Consumer Product Safety Commission, May 2012
 4. “Upholstered Furniture Flammability: Regulatory Options for Small Open Flame & Smoking Material Ignited Fires”, U. S. Consumer Product Safety Commission, October 1997
 5. Fansler, L.; Scott, L. Memorandum to D. Ray, “Performance Criteria, and Standard Materials for the CPSC Staff Draft Upholstered Furniture Standard”, U. S. Consumer Product Safety Commission, May 2005
 6. Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation Laboratory Data, “Development of a Flammability Standard for Testing the Smolder Resistance of Upholstered Furniture”, October 2012
 7. Ahrens, M. “Home Fires that Began with Upholstered Furniture”, National Fire Protection Association, August 2011
 8. “Civilian Fire Fatalities in Residential Buildings (2008-2010)”, U.S. Department of Homeland Security, February 2012
 9. “Smoking-Related Fires in Residential Buildings (2008-2010)”, U.S. Department of Homeland Security, June 2012
 10. Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation Laboratory Data, “California Statistical Data Related to Mortality and Fire-Related Losses”
 11. Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation, “Requirements, Test Procedure and Apparatus for Testing the Smolder Resistance of Material Used in Upholstered Furniture”, Technical Bulletin 117-2013, January 2013

Business Impact

Upholstered Furniture Flammability Standard: This regulation will not have a significant adverse economic impact on businesses. This initial determination is based on research and testimonies reporting that 80-85% of U.S. manufacturers currently comply with the voluntary standard ASTM E-1353-08a. The test methods of this voluntary standard are well known and practiced by industry and laboratories. The Bureau has based the development TB 117-2013 on these test methods for the purpose of saving manufacturers money in duplicative testing efforts as opposed to implementing a brand new standard.

The Bureau anticipates that TB 117-2013 will have a negligible impact since its resemblance to the voluntary standard lessens manufacturer’s obligation to perform additional testing. Further, manufacturers have until July 1, 2014, to meet the requirements set forth in the new TB 117-2013 standard. This will allow manufacturers ample time to deplete current inventories and to begin procuring materials that are compliant with the new standard. Also, manufacturers would not need to test or re-test any components or materials, provided that such difference(s) will not cause the upholstered furniture to exceed the specified test criteria. A majority of manufacturers can demonstrate this by using the results from historical data and comparable testing or they may opt to use an interliner-barrier material between the cover fabric and the foam for fabrics that are known to be borderline or may produce questionable test results. This can be done in lieu of retesting the fabric. Manufacturing upholstered furniture with such an

interliner-barrier material is common practice as it enhances the cushion and comfort level for consumer satisfaction.

Manufacturers have stated that with a transition period of until July 1, 2014, the impact of implementing TB 117-2013 would be minor and absorbable. This transition period will substantially reduce and/or eliminate the manufacturer's costs of compliance as they have a sufficient time period to deplete their current supplies. In addition, substituting flame retardant materials for smolder resistant fabrics or interliner-barriers will offset the costs for manufacturers.

There will be no economic impact on furniture retailers as they may sell through their current inventory of products without the restriction of a sell by date. Any new products purchased by retailers, on or after July 1, 2014, must meet the requirements of the new TB 117-2013 standard.

Furniture products that are subject to these flammability standards must have attached a flammability and official law label just as previously required. The proposed grammatical changes to these labels may incur an insignificant initial cost for reprinting new labels. Therefore, the Bureau finds that the impact on businesses will be negligible.

Upholstered Furniture Exemptions: The exemption of seventeen (17) baby and infant products from flammability requirements will not have a significant adverse economic impact on businesses. This initial determination is based on research and testimony reporting that exempting these products from flammability standards reduces the need to use flame retardant filling materials. Manufacturers would instead be able to purchase and use the less expensive non-flame retardant filling materials therefore saving in material costs.

All products that are subject to exemption from flammability standards must have attached an official law label describing the filling materials being used, as previously required. Products exempt from meeting flammability requirements will no longer be required to have a label attached stating such exemption. This will be a cost savings to manufacturers of exempted products.

Economic Impact Assessment

This regulatory proposal will have the following effects:

- It will not create or eliminate jobs within the State of California because this proposal will have a minor impact on current manufacturing practices. A majority of the furniture currently manufactured already complies with the new flammability standard. The remaining would design furniture with use of smolder resistant fabrics or interliner-barriers. Use of interliner-barriers is prevalent in upholstered furniture as it enhances the cushion and comfort level for consumer satisfaction. All exempt products will continue to require an official law label describing the filling materials being used however; a flammability label stating that the product is exempt from meeting flammability standards is no longer required. All non-exempted products subject to this regulatory proposal must have flammability and official law labels attached as previously required. Therefore, the creation or elimination of jobs within the State of California is unlikely.

- It will not create new business or eliminate existing businesses within the State of California because this proposal will have a minor impact on current manufacturing practices. A majority of the furniture currently manufactured already complies with the new flammability standard. The remaining would design furniture with use of smolder resistant fabrics or interliner-barriers. Use of interliner-barriers is prevalent in upholstered furniture as it enhances the cushion and comfort level for consumer satisfaction. All exempt products will continue to require an official law label describing the filling materials being used however; a flammability label stating that the product is exempt from meeting flammability standards is no longer required. All non-exempted products subject to this regulatory proposal must have flammability and official law labels attached just as previously required. Therefore, current business status is likely to remain status quo.
- It will not affect the expansion of businesses currently doing business within the State of California because this proposal will have a minor impact on current manufacturing practices. A majority of the furniture currently manufactured already complies with the new flammability standard. The remaining would design furniture with use of smolder resistant fabrics or interliner-barrier. Use of interliner-barriers is prevalent in upholstered furniture as it enhances the cushion and comfort level for consumer satisfaction. All exempt products will continue to require an official law label describing the filling materials being used however; a flammability label stating that the product is exempt from meeting flammability standards is no longer required. All non-exempted products subject to this regulatory proposal must have flammability and official law labels attached just as previously required. Therefore, expansion of businesses is unlikely.
- This regulatory proposal benefits the health and welfare of California residents as it provides greater fire safety protection against smoldering materials which is the leading ignition source of fires and losses today. This will provide consumers with a more realistic approach to fire safety in addition to reducing the upholstered furniture's smolder ignition potential.

As an added benefit, this regulatory proposal significantly reduces or eliminates manufacturer's reliance on materials treated with flame retardant chemicals. While the Bureau does not regulate or mandate the use of flame retardant chemicals, manufacturers are predominantly using flame retardant chemicals to meet the requirements of TB 117. It is the Bureau's understanding that many manufacturers, who are no longer compelled to make materials open-flame resistant, will no longer use flame retardant chemicals in their products. Consumer groups have cited this as an added benefit of the proposed regulatory change. This position is also espoused by the Governor's Office. Therefore, the health and welfare of California residents will benefit from this regulatory proposal as non-flame retardant materials are specified in the TB 117-2013 standard.

- This regulatory proposal benefits worker safety because this regulatory proposal significantly reduces manufacturer's reliance on materials treated with flame retardant chemicals. While the Bureau does not regulate or mandate the use of flame retardant chemicals, manufacturers are predominantly using flame retardant chemicals to meet the requirements of TB 117. It is the Bureau's understanding that many manufacturers, who are no longer compelled to make materials open-flame resistant, will no longer use flame retardant chemicals in their products. Consumer groups have cited this as an

added benefit of the proposed regulatory change. This position is also espoused by the Governor's Office. Therefore, worker safety will benefit from this regulatory proposal as non-flame retardant materials are specified in the TB 117-2013 standard.

- This regulatory proposal benefits the state's environment because this regulatory proposal significantly reduces manufacturer's reliance on materials treated with flame retardant chemicals. While the Bureau does not regulate or mandate the use of flame retardant chemicals, manufacturers are predominantly using flame retardant chemicals to meet the requirements of TB 117. It is the Bureau's understanding that many manufacturers, who are no longer compelled to make materials open-flame resistant, will no longer use flame retardant chemicals in their products. Consumer groups have cited this as an added benefit of the proposed regulatory change. This position is also espoused by the Governor's Office. Therefore, the state's environment will benefit from this regulatory proposal as non-flame retardant materials are specified in the TB 117-2013 standard.

Specific Technologies or Equipment

The TB 117-2013 specifies specific equipment, materials and measurements for testing. These specifications are found throughout TB 117-2013. The specific dimensions, sizes and specifications for such items such as foam, standard reference material and draft enclosure are necessary to provide consistent test results and accurate indications of whether a material does in fact pass these flammability standards. These items can be acquired from various sources and are widely available. A one-time cost of approximately \$200.00 may be incurred for the enclosure if manufacturers choose to use it for testing and do not already have this item; however, the costs for the enclosure and the standard reference material are cost neutral as manufacturers are able to eliminate the ongoing costs of mixed gases, butane and the maintenance of these items, which were required to perform open-flame testing. With no standard testing method and apparatus, the Bureau would have no practical way of enforcing its flammability rules.

It is important to note that TB 117-2013 describes, in detail, the specific way the Bureau proposes to test the flammability of upholstered furniture. While manufacturers may be wise to test their products using the same apparatus, it is not mandatory. A manufacturer may choose not to perform any test at all and may still create an item of upholstered furniture that passes TB 117-2013. The Bureau is only concerned with whether an item passes or fails TB 117-2013 and not whether a manufacturer is performing the TB 117-2013 test. As such, TB 117-2013 is not a prescriptive standard.

Consideration of Alternatives

No reasonable alternative to the regulatory proposal would be either more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons and equally effective in achieving the purposes of the regulation in a manner that ensures full compliance with the law being implemented or made specific.

Set forth below are the alternatives which were considered and the reasons each alternative was rejected:

Alternative One: The Bureau has considered the alternative of keeping the status quo. The Bureau could continue to enforce Technical Bulletin 117; however it does not adequately test

fabric which is the first item to ignite and does not test the interactions of components of upholstery furniture (e.g., fabric, batting and interior foam) which is more indicative of a real world fire scenario. Additionally, studies show that fire retardant (FR) tested foam does not provide a meaningful difference in egress time from non-FR foam and increases smoldering propensity.

For the reasons cited above, continuation of the current testing methods is not a viable option.

Alternative Two: The Bureau has considered the alternative of requiring use of interior fire-barriers with open flame testing of Non-FR materials.

Fire-barriers slow down peak heat release time, reduce the time to room flashover, and increase escape time. Under federal rule 16 CFR 1633, fire barrier materials are effectively used in all mattresses constructed since 2007. Fire barriers commonly used on mattresses are typically fire barrier materials either wrapped around the mattress prior to adding the quilted cover material, or fire resistant barriers are quilted in the mattress covering.

Although fire-barrier materials are effectively used in mattress construction, mattresses are standard in size and shape. The use of fire-barrier materials is currently problematic in the construction of upholstered furniture, as upholstered furniture varies greatly. Adding fire-barrier materials to upholstered furniture would be cumbersome based on the various sizes, styles and components of upholstered furniture items. Further, fire-barrier materials would need to be upholstered under the cover fabric. Wrapping the item or quilting the fabric is not a workable option. Upholstering fire-barriers would add another manufacturing step and require double stitching (first of the fire-barrier material and then the cover fabric). It can also adversely affect the comfort and appearance of the product, as bunching at seams and tufting may occur.

Furniture industry estimates that the cost of adding fire-barriers to increase consumer costs by \$300- \$500 per large items such as sofas. Mandating fire-barriers is cost prohibitive at this time.

The Bureau understands that fire-barrier technology is still evolving and that fire data, trends and studies of residential fires continue to emerge. In view of that, the Bureau will continue its ongoing efforts to evaluate and re-evaluate its flammability standards through research, testing and keeping abreast of new technologies. As part of this ongoing effort, the Bureau will commence a two-year study on available and emerging fire barrier materials and other relevant technologies to examine their open flame fire resistant properties, to monitor and evaluate cost effectiveness, and determine their applicability in open flame testing of upholstered furniture. These efforts will be in-conjunction with other governmental agencies and interested stakeholders.

As materials become more conducive to upholstered furniture manufacturing processes, they become more cost effective and readily available on the market, the Bureau will consider these and other methods for future regulatory changes.