MEMORANDUM

DATE: March 14, 2005

TO : ES

Through: Todd A. Stevenson, Secretary, OS

FROM : Martha A. Kosh, OS

SUBJECT: Standard to Address Open Flame Ignition of Bedclothes; Advance Notice of Proposed Rulemaking

ATTACHED ARE COMMENTS ON THE CF 05-2

COMMENT	DATE	SIGNED BY	AFFILIATION
CF 05-2-1	01/25/05	Bryan Hayward	bpghayward@att.net
CF 05-2-2	02/21/05	Douglas Kahn Chief Operating Officer	Croscill, Incorporated Royal Home Fashions Inc. 2102 Fay Street Durham, NC 27704
CF 05-2-3	02-21-05	Arthur Perry President	Soft-Tex Manufacturing Co P.O. Box 76 100 North Mohawk St Cohoes, NY 12047
CF 05-2-4	03/02/05	Mary Peterson	marypeter@webtv.net
CF 05-2-5	03/04/05	Corinne Kevorkian Senior Vice President	F. Schumacher & Co 79 Madison Ave New York, NY 10016
CF 05-2-6	03/10/05	E.L. Wright Chairman	National Textile Assoc Dan River, Inc 6 Beacon St, Suite 1125 Boston, MA 01208
CF 05-2-7	03/10/05	Carol Berkowitz MD, FAAP President	American Academy of Pediatrics Homer Building, Suite 400 N 601 13th St, NW Washington, DC 20005
CF 05-2-8	03/10/05	C.W. Bradley President & CEO	Cuddledown, Inc. 312 Canco Rd. Portland, ME 04103

Standard to Address Open Flame Ignition of Bedclothes; Advance Notice of Proposed Rulemaking

CF 05-2-9	03/11/05	Beth Ring On behalf of Franco Manufacturing Co.	Sandler, Travis & Rosenberg, P.A. Attorneys at Law 581 Fifth Avenue New York, NY 10176
CF 05-2-10	03/14/05	Phillip Wakelyn Ph.D., Senior Scientist, Environmental Health & Safety	National Cotton Council 1521 New Hampshire Ave. Washington, DC 20036
CF 05-2-11	03/11/05	Richard Taffet	Bingham McCutchen 399 Park Ave New York, NY 10022
CF 05-2-12	03/11/05	Frank Foley President	Home Fashion Products Association 355 Lexington Ave New York, NY 10017
CF 05-2-13	03/11/05	Marvin Smith General Manager	Printcraft Company, Inc P.O. Box 477 Lexington, NC 27293
CF 05-2-14	03/14/05	John Hodges Attorney On behalf of Hanover Direct Inc.	Wiley Rein & Fielding 1776 K St, NW Washington, DC 20006
CF 05-2-15	03/14/05	Bradley Bushman Vice President	Standard Textile World Headquarters One Knollcrest Dr. P.O. Box 371805 Cincinnati, OH 45222
CF 05-2-16	03/14/05	Eric Moen President & CEO	Pacific Coast Feather bobb@pcf.com
CF 05-2-17	03/14/05	Wilford Lieber President	IDFL Institute 1455 South 1100 East Salt Lake City, UT 84105
CF 05-2-18	03/14/05	Missy Branson	National Council of Textile Organizations 1776 I St, NW Suite 900 Washington, DC 20006

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CF 05-2-19	03/14/05	Alan Macdonald On behalf of Pier 1	Macdonald & Macdonald Attorneys at Law 66 River Dr. Annapolis, MD 21403
CF 05-2-20	03/14/05	Brian J Stiger Chief	State of California Bureau of Home Furnishings 3485 Orange Grove Ave. North Highlands, CA 95660
CF 05-2-21	03/16/05	Wang Xinglu Deputy Director General	the World Trade Organization, Technical Barriers to Trade Enquiry Point No. 9 Ma Dian Dong Lu, Hai Dian District, Beijing
CF 05-2-22	03/16/05	Scott Benston Vice President	Thief River Linen 232 LaBree Ave, South Thief River Falls, MN 56701
CF 05-2-23 **Ltr dated 3/3/05**	03/18/05	John Biechman Vice President Gov't Affairs	National Fire Protection Association 499 South Capitol St, NW Suite 518 Washington, DC 20003
CF 05-2-24	03/18/05	Richard Roman President/CEO Michael Proulx Director Vendor Development/Compliance	Revman International, Inc. 1211 Avenue of the Americans New York, NY 10036
CF 05-2-25	03/28/05	Dr. M. Hirschler	GBH International 2 Friar's Lane Mill Valley, CA 94942
CF 9502026	03/28/05	William Fitch Executive Vice President	Omega Point Laboratories 16015 Shady Falls Rd Elmendorf, TX 78112

Bedclothes comment

Stevenson, Todd A.

From: Chairman Stratton
Sent: Tuesday, January 25, 2005 12:11 PM
To: Stevenson, Todd A.
Subject: FW: Open Letter - fire retardant bedding cc:various news agencies

Lizzy Gary
Exec. Assistant to the Chairman
U.S. Consumer Product Safety Commission
4330 East West Highway
Bethesda, MD 20814
(301) 504-7884
(301) 504-0768 fax
egary@cpsc.gov

-----Original Message-----
From: Bryan Hayward [mailto:bpghayward@att.net]
Sent: Tuesday, January 18, 2005 10:13 PM
To: Chairman Stratton
Subject: Open Letter - fire retardant bedding cc:various news agencies

My letter concerns "bedding and bedclothes." Bedclothes are not pajamas, according to your agency, but clothes for the bed i.e. sheets.

In order to protect the utterly careless who smoke in bed and the extreme few who tip a candle while making love by candlelight (I can't believe many such people die from this), the CPSC in your profound wisdom has decided to make all bedding and sheets fire retardant.

Those of us who are a bit older may remember the fire retardant pajama fiasco. Those of us who are allergic to plastic clothes (nylon, polyester, etc.) were not allowed to buy pajamas. The retailers got smart and started selling cotton "loungewear" to us.

I forsee myself buying flannel or 500 count percale "picnic fabrics" soon. I refuse to buy flame retardant things because some imbecile can't stop smoking in bed.

I wrote the CPSC a fairly strongly but courteously worded protest before the commissioners decided to go through with the rulemaking. I heard nothing back. The press release, even between the lines, didn't address people with chemical sensitivities at all. There are far more people who have chemical sensitivities to artificial fibers than people who die in bed. It borders on CRIMINALLY NEGLIGENT to ignore those with chemical sensitivities in making rules that protect the terminally stupid from themselves and benefit no one else.

I hope that every brominated bedsheet and mattress has to be recalled when you find out 10 years from now that it causes cancer or ulcers or heaven-knows-what man-made plague.

Regards,
Bryan Hayward

Bed clothing 2

February 21, 2005

Office of the Secretary
Consumer Product Safety Commission
Washington, DC 20207-0001

Attn: Commissioners

Dear Commissioners:

While we can have an honest debate regarding the overall merits of regulations intended to reduce any harm from flammability of the top of the bed consumer products, Croscill Home offers the following concerns in regard to the direction being taken by the CPSC and in California. While any death from a home fire is tragic, such deaths are decreasing nationally without regulation, without added cost to the consumer and without potential toxic effects that regulation could engender:

1. Outdated Historical Data: Justification of the need for such regulations are based on five year old, irrelevant data, specifically from 1998 and nothing past that time other than controlled test data. Changes in consumer awareness, smoke alarms and habits make it imperative that new data be used in evaluating the fundamental premises for such regulation. In fact, house fires and deaths resulting from house fires have declined since 1998.

2. Loss of US Jobs: There is a significant chance that regulation will result in a loss of manufacturing jobs in the United States. We assume that meeting testing standards will cost between $2.00 to $5.00 per comforter at wholesale based on current solutions involving a variety of fire retardant fibers and resins in comforter fill. Our current analysis of the costs involved in importing a filled comforter versus importing a shell and filling it in the United States suggests the choice is a close one. If the costs of complying with the regulations in China or Pakistan were one-half those of complying locally, the scales could be easily be tipped in favor of importing. Furthermore, we are concerned that smaller foreign based importers would be inclined to cheat on the regulations, in the light of weak enforcement and a lack of respect of U.S. laws. This would again put us at a cost disadvantage which we could not support.

   Were the scales to tip in favor of importing finished comforters and pillows, Croscill Home would be forced to layoff some 500 employees. Furthermore, the companies that supply us fiber would shut down. The multiplier effect down the food chain (ie. box suppliers, printing companies, etc, etc...) is likely to be 2x-4x the direct loss of jobs at our company.

ROYAL HOME FASHIONS INC.
Division of Croscill, Inc.
2102 Fay Street, Durham, N.C. 27704 • (919) 683-8011
Fax (919) 682-8456 • www.croscill.com

3. Toxicity: Give the current highly litigious environment in the United States we are very concerned about currently unknown but potentially toxic effects of flame retardant fibers and chemicals. Asbestos litigation has bankrupted numerous companies. We need guarantees from the government that we will not be subject to litigation to the unknown risks of chemicals used to prevent fires. Can the commission be confident that it is not trading one risk for another?

   Before any regulation is attempted the toxicity must be addressed and the toxic effects of flammability "solutions" require complete study.

4. Test Costs and Compliance: Due to the extraordinary number of possible combinations of fiber constructions and thread counts of top of the bed products, we are concerned about the costs of testing each ensemble we create. Once again the test costs could drive the total cost to the point where jobs would be at risk. Furthermore, it could affect the timely delivery of new product into the market place.

5. Costs to the consumer: Based on solutions ranging from $2.00 to $5.00 per comforter, either the US consumer will pay between $4.00 to $10.00 more per comforter or the manufacturer will absorb the cost and some companies will go out of business.

6. Transition Time: Given the slow turn of home textile products, approximately two times per year, it will take two years to flush all old products through the system based on the following time table:
   A. Commission finalizes test procedures and measures of acceptance.
   B. Labs approved to do testing. (*Start date)
   C. Six months testing to find optimal solutions based on final procedures.
   D. Order placed for new fire retardant product. Delivery in 3 months.
   E. Begin FIFO inventory management:
      - Two months (8 weeks) to cycle through "normal" inventory at wholesaler.
      - Four months (17 weeks) additional time to liquidate obsolete and slow moving goods.
   F. Retailer
      - Six months based on 2x turns a year (4% sell through) on "normal" goods; plus,
      - Three months to liquidate slow and obsolete goods.

Total cycle time to flush the system of old goods = 24 months or two years. This transition time should be considered and addressed by the CPSC.

Based on the foregoing issues, Croscill Home believes at this time that the cost of flammability standards outweigh the benefits. We request that any proposed rule or

regulation of the flammability of bedding or bed clothes be suspended until toxicity tests are completed, and the data on home fires is brought up to date.

Thank you for your consideration.

Sincerely,

Douglas J. Kahn
Chief Operating Officer
Croscill, Inc.

CC: Lou Babraico – Premier Quilting
Tony Cassella - Croscill
Kathryn Davison - Croscill
N.C. Governor Mike Easley
David Kahn - Croscill
Bob Katen – Premier Quilting
Bob Leo – HFPA Council, Meeks & Shepard
Howard Litwack - Croscill

Bedclothes 3

Soft-Tex Manufacturing

Manufacturers of quality pillows

February 21, 2005

To Whom It May Concern:

As time draws near regarding the Bedclothes flammability burning issue, I must express my concerns on the cost/benefit factor.

As a manufacturer of bed pillows and mattress toppers since 1986, our company has tried to manufacture a clean and as close to chemical free product as possible.

The toxicity of flame retardant treatments will throw our concept out the window. The fabrics will most likely be made in a foreign country where once again, the price will win out of these chemically treated toxic fabrics.

Even though fire prevention is important, I foresee a greater threat; long term health issues arising from one inhaling the chemicals or the direct contact to the skin. How extensive are the studies of the chemicals used for fire retardant treatments and how long have the studies been conducted against humans.

Who will monitor the toxicity of the treatment of these fabrics when they are applied somewhere in Pakistan, India or China.

I believe maybe a "Product Safety Awareness" label is the best answer to help educate the end consumer of the potential concerns regarding flammability.

Regards,

Arthur Perry
President
Soft-tex Manufacturing Co.

P.O. Box 76 100 North Mohawk Street Cohoes, New York 12047 (518) 235-3645 FAX 235-0778

Stevenson, Todd A.

Mattress & bed clothes 4

From: Mary Peterson [marypeterson@webtv.net]
Sent: Wednesday, March 02, 2005 11:48 AM
To: Stevenson, Todd A.
Subject: Clean Beds

March 2, 2005

Dear Mr. Stevenson,

I would encourage your department to reconsider requiring manufacturers of mattresses to use toxic materials in mattresses. For myself I react to the chemicals in normal sheets, and must purchase organic sheets that have no dyes, resins, etc. Many people have symptoms such as joint pain, headaches, muscle pain that are treiggered by low level exposure to chemicals. They think because it is sold it must be safe. Unfortunately, more people will have their lives adverse;y affected by including chemicals in mattresses than will be affected by mattresses going into flames.

Mary Peterson

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LEGAL DEPARTMENT

F. SCHUMACHER & CO.

Corinne P. Kevorkian
Senior Vice President
General Counsel and Secretary

March 4, 2005

BY UPS SECOND DAY AIR AND BY EMAIL
Office of the Secretary
Consumer Product Safety Commission
Washington, D.C. 20207-0001

Re: ***Bedclothes ANPR***

Dear Sir or Madam:

Enclosed please find five (5) copies of F. Schumacher & Co.'s comments to the above-referenced ANPR, a copy of which is also being sent to you by email. Should you have any questions regarding the enclosed submission, please do not hesitate to contact the undersigned.

Sincerely yours,

Corinne P. Kevorkian

79 MADISON AVENUE
NEW YORK, NEW YORK 10016-7878
Phone 212.213.7753
Fax: 212.213.7664
ckevorkian@fsco.com

BEFORE THE CONSUMER PRODUCTS SAFETY COMMISSION

WASHINGTON, D.C.

In the Matter of:	70 FR 2514 16 CFR Part 1634 January 13, 2005
Bedclothes ANPR	

COMMENTS OF F. SCHUMACHER & CO.

F. Schumacher & Co. ("F. Schumacher") and its Waverly Lifestyle Division ("Waverly") submit these comments in response to the Advance Notice of Proposed Rulemaking ("ANPR") issued by the Consumer Products Safety Commission ("CPSC" or "Commission") on January 13, 2005 in connection with a standard to address open flame ignition of bedclothes. Specifically, these comments seek to address the risk of injury that may be an appropriate subject for a standard, the costs associated with such a standard and the appropriate scope of any such possible standard.

As an initial matter, F. Schumacher applauds the Commission's interest and efforts in seeking to address the risks of injury and death resulting from residential fires, and in particular those to which home furnishings products may be direct and significant contributing factors. However, F. Schumacher is convinced that any approach taken must be fashioned so as to provide the most effective solution possible for addressing a properly defined risk, but without imposing unnecessary burdens and costs, or limiting the ability of consumers to exercise their choices in selecting furnishing items for their homes. Nor should consumers or other residential occupants be exposed to unintended health or safety risks as the result of any regulation.

Accordingly, F. Schumacher submits that:

(i) The Commission inappropriately associates the risks identified in this ANPR with bedclothes;

(ii) To the extent a standard is determined to be necessary and appropriate, the risks addressed should be those resulting from mattress "flashover";

(iii) Current information continues to strongly suggest that the scope of any possible flammability standard for bedding should focus upon regulation of mattresses;

(iv) The Commission inappropriately relies on old data and insufficient testing in seeking to formulate a standard.

COMPANY INTRODUCTION

F. Schumacher is a leading designer, converter and supplier of fine decorative fabrics, wallcovering, carpets, and home fashions products. The Company, which has been in existence for 116 years, was originally founded by Frederic Schumacher, and, today, continues to be privately-owned and family-managed by the great-grand nephews of Frederic Schumacher. It is headquartered in New York City, but operates nationally with approximately 1,100 employees and with facilities and showroom locations in 18 different states. Other than through its nine outlet stores, F. Schumacher does not sell its products directly to consumers. It operates four separate product divisions servicing three distinct market segments: the Interior Design Group and the Floorcovering Group serve the high-end interior design trade, which include designers and decorators, architects and other design professionals; the Waverly Lifestyle Group serves the retail home decor market, and the FSC Home Interiors Group sells wallcovering products to the home improvement and do-it-yourself market.

F. Schumacher's Waverly Division sells fabric, wallpaper and home fashions products to retailers such as Calico Corners, Jo-Anne Fabrics, Siperstein's, Janovic Plaza, Linen's Things, J.C. Penney, Horchow, Marshalls, Belk and the like. The home fashions products that are

sourced or manufactured directly by Waverly fall into four major product categories: (1) window treatments (47%), (2) fashion bedding (36%), (3) decorative pillows (15%), and (4) tabletop and kitchen textiles (2%). Most of Waverly's home fashions products are sourced from or fabricated in small factories in China, Turkey and Mexico, and some domestic workrooms. Because the bedding and pillow categories represent approximately one-half of its home fashions business, F. Schumacher will be significantly impacted by this ANPR and any standard that is issued as a result thereof.

DISCUSSION

1. The CPSC incorrectly identified the risk of injury in this ANPR. According to the U.S. Fire Administration (USFA), based on 2000 data, kitchens were the area of the home where the highest percentage of fires started (30.6%), which is more than double the percentage of fires started in bedrooms.[1] Cooking is the cause of more than one-fourth of all residential structure fires. The peak period for residential fires was between 5 and 7 p.m., at a time when occupants are unlikely to be in their beds sleeping.[2] Approximately 72% of residential structure fires occur in one- and two-family homes, where smoke alarms are least likely to be installed or functioning. Although only 6% of U.S. homes are <u>not</u> equipped with smoke alarms, no smoke alarm was present or functioning in the majority (53%) of residential structure fires.[3] Where a fire was started by an open flame source (lighter or matches), smoke alarms were present in only about 32% of such reported residential structure fires.[4] Smoke alarms were not present in 42% of the

[1] See *Residential Structure Fires in 2000*, U.S. Fire Administration/National Fire Data Center, Topical Fire Research Series, Volume 3, Issue 9 (June 2004).
[2] Indeed, the USFA reports that the lowest percentage of fires occurs in the late night and early morning hours when most people are sleeping. Id. at 3.
[3] See *Smoke Alarm Performance in Residential Structure Fires*, U.S. Fire Administration, Topical Fire Research Series, Volume 1, Issue 15, March 2001 (revised December 2001); see also *Residential Structure Fires in 2000*, cited above, at 4.
[4] See *Residential Structure Match- or Lighter-Ignited Fires*, U.S. Fire Administration/National Fire Data Center, Topical Fire Research Series, Volume 4, Issue 2, October 2004, at 4.

residences where mattresses and bedding fires occurred, and where they were present, smoke alarms did not activate in 20% of these fires.[5] By imposing standards on the installation, operation and performance of smoke alarms in single or dual family homes, and devoting sufficient resources to educational programs and enforcement measures for homeowners, landlords and occupants of such dwellings, the CSPC is more likely to reduce the risk of serious fires, even when bedclothes were the first items to ignite, than any bedclothes standard could possibly achieve. Indeed, USFA has concluded that: "more residential structure lighter and match fires could likely be prevented if smoke alarms were installed in more residences. The lack of smoke alarms – and operating smoke alarms in the majority of residences impacted by lighter and match fires – represents the most easily preventable tragedy of lighter and match fire problem in the United States." [6]

2. According to USFA, smoking caused 25% of the mattress and bedding fires during the period examined by the CPSC for this ANPR (whereas an "open flame" was the cause in only 9% of these fires), and cigarettes were the leading form of heat in 26% of mattress and bedding fires. [7] More recent data suggests that cigarettes and lighted-tobacco products are the leading cause of fire deaths and fire related injuries.[8] Based on this data, it would appear that the CPSC's focus on bedclothes is misdirected and should be more appropriately targeted to a standard for cigarettes. In particular, the adoption of a reduced ignition propensity ("RIP") standard for cigarettes, similar to a legislation and fire safety standard for cigarettes recently adopted in the State of New York, is more likely to reduce the fire risks identified by the CPSC

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[5] See *Mattress and Bedding Fires in Residential Structures*, U.S. Fire Administration, Topical Fire Research Series, Volume 2, Issue 17; March 2002, at 3.
[6] See *Residential Structure Match- or Lighter-Ignited Fires* at 5.
[7] See *Mattress and Bedding Fires in Residential Structures* at 2.
[8] See *"Fire Safer" Cigarettes, The Effect of the New York State Cigarette Fire Safety Standard on Ignition, Smoke Toxicity and the Consumer Market,* A Preliminary Report by Hillel R. Alpert, Carrie Carpenter, Vaughn Rees, Geoffey Ferris Wayne and Gregory N. Connolly, Division of Public Health Practice, Harvard Public School of Health (January 24, 2005) (the "Connelly Report").

at a lower cost to manufacturers and consumers overall. According to the Connelly Report, such RIP standard has had no negative impact on cigarette sales, and no additional adverse toxicity effect (over and above the inherent toxicity of cigarettes).

3. As has been determined by the National Institute of Standards and Technology (NIST) and acknowledged by the Commission in the ANPR, flashover will not occur until the mattress ignites; ignition of bedclothes will not create heat sufficient to result in flashover.[9] Accordingly, while bedclothes may create an ignition source larger than a small open flame, they will still only serve as an ignition source of the mattress or other items that may have a composition sufficient to create a flashover. Further, even when ignited by a source other than bedclothes – e.g. a match, candle, lighter, electric sparks or heating source – mattresses are still capable of creating sufficient heat to result in flashover.[10]

4. Even if the proper subject matter of this ANPR is mattress and bedclothes fires, any standard to be adopted should focus on flashover caused by mattress fires. However, because the CPSC is relying on old data (1995-1999) regarding the causes and incidences of injuries in small open-flame fires, its assumptions and test results are likely to be erroneous. The CPSC should gather new data for the period 1999 to the present, during which period flame retardancy improvements were made by the mattress industry, and the CPSC should wait for the impact of the mattress ANPR before seeking to regulate bedclothes, since such bedclothes may well prove not to be a significant contributing factor in such injuries. Because most consumers

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[9] See T.J. Ohlemiller, J.R. Shields, R.G. Gann, National Institute of Standards and Technology, Flammability Assessment Methodology for Mattresses 10 (June 2000) (hereafter "NIST Phase I"). Although in some of the more recent testing conducted by the NIST significant heat release was achieved by manipulating bed assemblies and only with the largest of assemblies (i.e. king), such high heat release rate could not be consistently replicated with other bed assemblies, especially those of more standard sizes. See NIST Technical Note 1449.

[10] See e.g. Memorandum from A. Tenney, CPSC, to M. Neily, CPSC, "Current Research Program to Evaluate Open-Flame Mattress Flammability" at 4 (Apr. 25, 2001) (on file with CPSC). We also understand that flashover has become more problematic with the use of new mattress materials, including as a result of efforts to comply with 16 C.F.R. 1632. See Memorandum from R. Medford and M. Neily to the Commission, "Options to Address Open Flame Ignition of Mattresses/Bedding and Petitions of the Children's Coalition for Fire-Safe Mattresses," at 15 (Aug. 16, 2001) (on file with the CPSC).

replace their mattresses only once every 10 to 15 years, the Commission may not get reliable data on the effectiveness of any mattress flammability standard and its interplay with bedclothes for some time. However, it would be premature and unduly burdensome on the bedclothes industry for the CPSC to impose standards before such data is compiled and related testing completed.

5. Whereas the types (and number of units) of mattresses in a given household are unlikely to change more than once every 10 to 15 years, the types (and number of units) of bedclothes used in such household are likely to change frequently based on the season (e.g., heavy comforter in winter, light cotton blanket in summer), fashion trends and the individual preferences of the occupants. The number and type of items placed on the top of beds that may become an ignition source is indefinable. These items may include various bedclothes (mattress pads, sheets, pillows, pillowcases, duvet covers, quilts, comforters, etc.) as well as other items such as clothing, toys and plushed animals, newspapers and magazines, and any other household item. Any attempt to determine the fire ignition properties of each or all of these types of items would not be practicable, or even possible[11]. Moreover, regulating some but not all of these items would not effectively limit the risk of flashover as the result of mattress ignition. For example, even if filled bedclothes such as comforters were required to incorporate a barrier fabric or be made from flame retardant ("FR") yarn, the size or scope of the potential fire that might ignite the mattress would likely not be impacted in the least.[12] Other items of non-

[11] Indeed, even the ignition point of such fires is often impossible to determine. In the ANPR, the Commission acknowledges that "[u]nless someone witnessed the fire ignition, it was often difficult to determine whether the mattress or a bedclothes item...ignited first." 70 FR at 2515. However, CPSC staff made the further unsupported assumption that bedclothes had to be one of the items first ignited, without considering that other items placed on the bed (clothing, stuffed toys, magazines or newspapers, etc.) could have been the first ignition point. Because of this unsupported assumption, CPSC staff's conclusion that bedclothes ignited first in 81% of investigated fires is necessarily flawed.

[12] The CPSC has not presented any data, nor to our knowledge conducted any research, on the incidence of fatal injuries where the fire started on a twin bed as opposed to a larger size bed. It would be useful to determine the size of the market (and unit volume) for twin and full size bedclothes versus larger sizes (i.e. king). According to NIST Technical Note 1465, (T.J. Ohlemiller, *A Study of Size Effects in the Fire Performance of Beds*), bedclothes fires

regulated bedclothes or non-bedclothes that are also on top of the bed would still provide an ignition source easily sufficient to ignite the mattress. Indeed, regulating certain bedclothes would also not likely reduce the extent of protection directly for the mattress. Simply, there would be no objective means to determine that the regulated bedclothes would in fact be used on any particular bed, or even if such bedclothes were used, what other unregulated items would also be on top (or in close proximity of) the bed at the same time that could create sufficient heat to ignite a less than adequately protected mattress. Flashover condition could be the result of non-regulated items being placed on or in close proximity of the bed, such as newspapers and other paper products, a bed canopy, curtains or other window treatments, items of clothing, or stuffed animals and other toys placed on a child's bed.

6. The ANPR is overbroad and burdensome in that it proposes to regulate all types of bedclothes, even those that have not been proven, individually or in the aggregate, to cause flashover condition or to even readily ignite. No testing has been conducted of individual bedclothes of different constructions and their contributing factors (if any) to flashover condition, nor has testing been done of the effect of non-regulated fitted sheets acting as a possible flame retardant barrier to mattress ignition.[13] Sheets by themselves, for instance, are unlikely to cause flashover condition, and may in fact help to separate a mattress from the air needed for its combustion[14]. Additionally, the testing conducted by CPSC assumes that a top (flat) sheet is always used as part of a bed assembly. However, many consumers who use

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atop the lowest heat release rate mattress showed a large size dependence. Bedclothes fires yielded controlled fires for the twin size, but more significant secondary ignition threats for the king size. Based on Waverly's own sales data, only 25% or less of all bedding products are sold in the "king" size. Thus, the vast majority of bedding products would appear to be sold in sizes that are unlikely to generate the heat sufficient to lead to "flashover".

[13] NIST Technical Note 1449 supports the proposition that when mattress sides were protected by a barrier fabric, such protection helped limit the contribution of the mattress to the heat release rate peak from the overall bed assembly since access to the mattress interior was denied (see NIST T.N. 1449 at 8-10). Since fitted sheet cover the sides of a mattress, they may well act as a barrier fabric even without FR treatment.

[14] A flammable bedclothes component could blanket the mattress, separating it from the air needed for its combustion. See, id. at 1.

comforters and quilts do not necessarily use a top sheet. Similarly, flat sheets are typically not used in infant bedding. Likewise, consumers do not typically use a blanket and a comforter, but one or the other. The testing conducted by NIST on behalf of the CPSC is flawed in that it assumes a bed assembly that is not necessarily the typical bed assembly used in all or even most households and at all times. Indeed, the majority of comforters, quilts and sheets on the market today are made of 100% cotton construction, and many filled items contain down or feather (which are inherently non-flammable), yet the NIST assumed a 50% cotton, 50% polyester composition, and 100% polyester fill.

7. Several of the bedclothes items proposed to be regulated are multipurpose, and manufacturers and retailers have no control over how these items will ultimately be used by the consumer. For instance, decorative pillows may be used on top of the bed, on a couch, chair or even on the floor. Similarly, a throw can be an item of bedclothes or it can be used on a chair or sofa. By regulating decorative pillows and throws, the CPSC would force manufacturers of such products to either maintain dual inventories or to have their entire inventories comply with the regulations, at a great burden and expense to these manufacturers. Additionally, decorative pillows, even if used on top of the bed, are usually removed from the bed before sleeping (when the most severe injuries or casualties caused by fires tend to occur). Thus, decorative pillows are unlikely to be a contributor to any flashover condition, and the proposed application of a flammability standard on decorative pillows is therefore unwarranted. As previously stated, F. Schumacher (like many other companies in the bedclothes industry) is both a designer, converter and supplier of decorative fabrics, and, through its Waverly division, a manufacturer of home fashions products. Many of the fabrics we create are multipurpose, meaning they can be used for different applications, e.g. to make window treatments, upholster a chair, cover a pillow or create a comforter. Short of severely crippling its distribution channels, F. Schumacher has no control

over what ultimate uses are made of its fabrics. Because F. Schumacher may sell the same piece of fabric to a bedclothes manufacturer and to a shower curtain manufacturer, the effect of this ANPR would be to require F. Schumacher (and similarly situated fabric suppliers) to either maintain duplicative inventories of FR treated and untreated fabric of the same design, or to apply FR treatment to all its fabric inventory. This would result in higher costs to F. Schumacher and to manufacturers of all home fashions products (and ultimately consumers), including carrying, sampling and handling costs, and the need for additional showroom and warehouse space. These costs are already a significant percentage of gross sales, and the increases would likely make our company (and other similarly situated companies) unprofitable.[15] While a barrier fabric alternative would be a preferable (and indeed, the only viable) alternative for our fabric business, such alternative (like any FR treatment alternative) would be cost-prohibitive for our bedding product business. Flame-resistant or flame retardant barrier materials used as interliner, ticking or batting typically range in cost from $6.15 to $9.25 per yard. If F. Schumacher had to incur this cost for all its filled bedding products, it would make its products prohibitively expensive to most consumers, especially comforters which require significantly more yardage. And of course, the barrier fabric alternative is totally unfeasible for unfilled bedding products, such as pillow covers, bedskirts, sheets and shams, blankets, etc. Given the fact that most of our products end up in homes that are the least likely to be at risk of injury from mattress fires, it would seem that a warning label alternative would be the most appropriate, least burdensome and least costly solution (e.g. "WARNING: This bedding product is not flame retardant and may increase your risk of injuries in the event of a fire.") Similar labeling

[15] The Decorative Fabrics Association and the Coalition of Converters of Decorative Fabrics (of which organizations F. Schumacher is a member) already commented at length on these costs in previous submissions made to the CPSC in response to the mattress ANPR and to the U.S. Senate Committee on Commerce, Science, and Transportation in connection with the proposed American Home Fire Safety Act.

alternatives have been adopted in the past with success for sleepwear and other apparel items, as well as various toys, and would likewise be feasible for bedclothes.

8. One of the most important characteristics required to meet consumer demands for our bedding products is the aesthetic appearance (look and feel) of a particular item. Color, texture and hand (the way a fabric feels to the touch) are all critical selling points. Regulation of certain bedclothes through the application of an FR process would likely render the products less appealing to a consumer. The testing conducted by the NIST assumes sheets and comforters constructed of 50% cotton and 50% polyester. However, most sheets and comforters on the market today have a different construction, e.g 100% cotton, and a high thread count (300 or more) to make them softer and more luxurious to the hand, which effect is likely to be ruined by any FR application. A substantial percentage of the fabrics sold by F. Schumacher and/or used to fabricate bedclothes products is comprised of highly styled cellulosic or natural fibers, such as cotton, silk, rayon and linen. Most of these fabrics are difficult to treat with chemical back-coating or similar FR application so as to pass the type of flammability standard contemplated by the Commission. Some fabrics, however, will simply not pass, even if treated. Thus, if these fabrics (or bedclothes incorporating these fabrics) were required to be chemically treated, the most popular items on the market – cotton and rayon chenilles, boucles, silks, washed fabrics, matelasse, pocket weaves, velvets – would no longer be available to consumers. Not only would they not pass a flammability test, but even if they could, they would be rendered so unattractive as to be unsaleable. Finally, many items of bedclothes, such as comforters, quilts, pillows and pillow shams, are made of multiple components that may be sourced from multiple vendors. Comforters and decorative pillows may have an average of different three fabric components and two embellishments (trims, buttons, etc.) of various construction and composition. A significant portion of our bedding products are imported to the United States or fabricated domestically by

smaller mills and contract manufacturers who simply would not be able to modify their processes to allow for production of products that would meet a FR regulation. If the regulation, for instance, called for including FR yarns in bed clothing, the capital investment required to provide the specialized processes needed to include such yarns would not be reasonable.

9. According to USFA, socioeconomic studies repeatedly show income levels are directly or indirectly tied to fire risks.[16] There is an inverse relationship between fire risk and income. The poorer population groups have the highest risk of fire injury or death. Living in an old, poorly maintained housing unit raises a household's risk of experiencing a fire because electrical wiring in many older houses and apartments poses a fire risk, and older heating, plumbing and electrical systems require adequate maintenance. Just as the quality of a household's dwelling unit can affect its fire risk, so does the quality of its furnishings. According to USFA, considerable improvements have been made in the fire safety of many types of consumer products, particularly home furnishings. Today, mattresses and upholstery are manufactured to be more resistant to ignition than ever before. Unfortunately, lower income households are more likely to have older mattresses and furnishings which ignite more readily and which increase the risk of fire and fire-related injuries and deaths.[17] Socioeconomic factors risk at the individual level also account for increased fire risks, such as incidence of careless smoking, alcohol and drug abuse, education levels, and type of housing tenure. Studies have shown that cigarette smoking is inversely related to income, so low income households are

[16] For instance, the CSPC reported that in approximately 80% of the reported cases of small open flame upholstery furniture fires reporting such information, household income was less than $35,000 annually. See *Small Open Flame Ignitions of Upholstered Furniture, Final Report*, Kimberly Long, Directorate for Epidemiology and Health Sciences – Division of Hazard analysis, September 1997 at 18

[17] See *Fire Risk*, USFA/National Fire Data Center, Topical Fire Research Series, Volume 4, Issue 7, December 2004 at 3; see also *Socioeconomic Factors and the Incidence of Fire*, USFA, FA 170, June 1997 at 15. Although this latter study (like most of the data relied on by the CPSC for this ANPR) is old and requires updating, given the downturn in the economy since the date of this study, new data is unlikely to significantly change the analysis.

arguably at greater risk from fires caused by careless smoking.[18] Closely related to careless smoking is alcohol and drug abuse. Intoxicated persons are at greater risk of falling asleep while smoking. Also, several studies have found that lower rates of owner-occupation, which are more typical in low-income communities, are related to increased fire rates. This ANPR would add considerable costs to bedclothes by forcing manufacturers to apply FR treatment to their products or use a barrier fabric, which costs would inevitably be passed on to the consumers.[19] Low-income households, who can barely afford existing bedding products, would not be able to afford these new FR products and would therefore hang on to old or second-hand non-regulated bedclothes. The risk of bedding fires to this community of users would thus not be reduced in the least, defeating the purpose of this ANPR. F. Schumacher's products, and most of our competitors' products, are targeted to higher income households, having a median annual household income of $55,300 and 72% of which are home owners. The average basket size of our WAVERLY bedding product consumer is approximately $250 (not including decorative pillows and other accessory items), well beyond the reach of most low-income households, which are most at risk of suffering fire injuries and casualties. The demographics of our consumer base (and that of many members of the Home Fashions Product Association and the Decorative Fabrics Association) do not coincide with the demographics of the consumers whom the CPSC is seeking to protect through this ANPR. Low-income households are of course as deserving of protection from fire risks, but this protection must be targeted to their circumstances (including the products they use or are likely to use) and must take into account the burden and cost of achieving such protection, which cost will be spread to all consumers. While every

[18] Id. at 22.

[19] According to our internal estimates, the cost of producing an FR queen comforter would increase by 42%, and the cost of producing a queen comforter set would increase by 39%. This assumes a per yard fabric cost of $4.50 for a FR treated 100% cotton Sateen fabric (vs. $3.00 per yard untreated), and $1.19 per square yard of FR treated 8oz. fiber fill (vs. $.058/sq yd untreated). An average comforter can range in price from $50 to $500 (and up) depending on size and construction. This ANPR would potentially increase this price range to $71-$710 (and up), making it prohibitive for most low to middle income consumers, who may have to purchase four sets per household.

consumer – regardless of income status – needs a mattress to sleep on, not every consumer needs (or even wants) or can afford all the different types of bedclothes on the market. Yet, the ANPR takes a broad-brush, shotgun approach, seeking to regulate any and all bedclothes, even those that are unlikely to ever be found (let alone contribute to flashover in mattress fires) in the households that have the highest risk of fire injury or death. In report after report, the USFA concludes that "since fires resulting from human activities account for high proportion of residential fires, public education represents one of the most important avenues for reducing the incidence and severity of home fires."[20] However, the USFA recognizes that low-income households are less likely to be willing (or able) to pay for smoke detectors and batteries on their limited budgets. If that is the case, it is all the more unlikely that low-income households will be able to pay for improved FR bedding products.

10. The adoption of a FR standard for bedclothes before full toxicity testing of such FR treatment has been conducted would be premature and irresponsible. As the Commission knows, recent information has been made known that polybrominated diphenyl ethers (PBDEs), which are used to make upholstered furniture fabrics and other products flame resistant, have been found in high levels in pregnant women and have been suspected of damaging brain and nervous system development in children.[21] Efforts are underway in Europe to develop more complete risks assessments to support possible regulatory decisions on a variety of fire retardant chemicals, including PBDEs as well as hexamromocyclododecane and antimony trioxide. The EU's concerns are focused on the environmental pollution effects of such chemicals, and to date, the EU has banned one compound, penta-BDE from use as a fire retardant. Thus, a regulation requiring the use of such chemicals may not only create greater health and environmental risks

[20] See *Socioeconomics Factors and the Incidence of Fire* at 25-26.
[21] See *Flame Retardant Exposure Linked to House Dust*, NIST Tech Beat (Jan. 5, 2005); see also, *Washington State Polybrominated Diphenyl Ether (PBDE) Cehmical Action Plan: Interim Plan*, Washington State Dept. of Ecology Pub. No. 04-03-056, Dept. of Health Pub. No. 333-068 (Dec. 31, 2004).

for consumers, but also for workers who handle the treated fabrics and home fashions products. Companies such as ours, as well as others in the home furnishings industry, could also face greater litigation and liability risks resulting from the sale of products containing such chemicals, and may well found themselves unable to secure affordable (if any) insurance coverage for such risks.

CONCLUSION

For the foregoing reasons, F. Schumacher submits that the ANPR incorrectly identifies bedclothes ignition by an open flame as a risk that should be addressed by a flammability standard. Additionally, prior to the formulation of any standard for bedclothes, the CPSC should compile and consider more recent data on the incidence of bedclothes and mattress fires, taking into account newly adopted mattress standards and the impact of the New York RIP standard on cigarettes.

Dated: March 4, 2005

Respectfully submitted,

F. SCHUMACHER & CO.

By: _____

Corinne P. Kevorkian
Senior Vice President, General Counsel and Secretary

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Bedclothes 6

National Textile Association

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March 10, 2005

Office of the Secretary
Consumer Product Safety Commission
Washington, DC 20207-0001

Re: Bedclothes ANPR

Dear Mr. Secretary:

The National Textile Association (NTA) is pleased to comment on the advance notice of proposed rulemaking, which addresses open flame ignition of bedclothes. NTA is the largest trade association in the United States that represents textile and bedclothes manufacturers. It is responding on behalf of our Textile Bedding Committee, which represents companies that supply over 85% of the top-of-the-bed products at retail in the U.S.

We recognize that the issue of bedding flammability is extremely complex. While the National Institute of Standards and Technology and other world-renowned research organizations have made large strides in improving our knowledge of this complex subject, there is still much that is not known. We commend these organizations for their efforts to learn more about the science of bedding flammability, and hope we can be helpful too.

Our members have been working cooperatively with the California Bureau of Home Furnishings and Thermal Insulation (CBHF) since it began to examine textile bedclothes flammability in 2003. Our members have participated fully in the CBHF's bedclothes task group activities and have individually evaluated products at the CBHF test facility. The ability to work closely with technical staff at the CBHF has been important for bedclothes manufacturers to evaluate their products, and investigate the impact of engineering and material changes to end-product performance and cost.

While we understand that the CPSC has not limited the array of bedclothes it will consider for regulation, we know that bed sheets and pillowcases are relatively light, as most are manufactured with fabrics ranging from 3.0 ounces per square yard (oz/sy) to 5.0 oz/sy. Fuel load is a key in determining the contribution of materials to overall heat release. Therefore, because of minimal fuel load from these products, we recommend that the agency drop sheets and pillowcases from its review and focus on other bedclothes.

Another factor to consider with sheets and pillowcases is the frequency of laundering that they undergo during their life cycle compared to other bedclothes, and the extended periods of intimate human contact. Flame-retardant finishes and alternative fibers that might be acceptable for other top-of-the-bed products may severely compromise the quality, performance and aesthetics that consumers demand for sheets and pillowcases.

Much technical work has been done by the CBHF and by individual companies, both primary bedclothes manufacturers and suppliers to these manufacturers. Because of this broad knowledge base, we encourage and recommend that the CPSC carefully examine the base of knowledge, which already exists in this area.

Though the CPSC staff hasn't attended technical sessions between individual companies and the CBHF, it is well known that a large amount of testing and evaluation has gone into the draft regulation currently under review in California. The state's focus has been to develop small-scale tests that will accurately predict the performance of filled bedclothes in a full-scale environment, and the state has made good progress in this area. Therefore, we recommend that the CPSC take advantage of what is already known by the CBHF about the flammability of filled bedclothes.

We have much concern about the impact of regulation in interstate commerce. Therefore, we encourage the commission to examine the California work carefully to see if it would address the issues under consideration at the federal level. Inconsistent regulations would be extremely disruptive to interstate commerce and would cause an enormous burden on this industry sector, which is already suffering from a variety of competitive issues.

We also feel strongly that any mandatory regulation promulgated by the agency must be enforced equally throughout the supply chain from retail to the manufacturer/importer levels. Without strong and equal enforcement throughout the chain, increased burden is placed on those companies that ensure complete compliance while organizations that are either inconsistent in compliance or completely out of compliance will have a competitive advantage.

Our comments and experience with the CBHF have primarily addressed bedclothes that are "filled." If the CPSC believes that it must address unfilled products like blankets and bedspreads, we encourage it to consider the voluntary blanket standard (ASTM standard, D-4151) that has been in use since the 1970's. In fact, we understand that the CPSC was involved in the development of this voluntary standard, which our blanket manufacturers have used since the 1970's to evaluate their products.

One aspect of the ANPR that needs to be addressed is a statement that "According to U. S. Department of Commerce 2002 import statistics, perhaps 90% of all quilts and

comforters, and perhaps 20% of bed pillows are imported." While this may be true for quilts and pillows, we question the statement about comforters.

Based on comforters produced by our committee membership and their knowledge of the marketplace, we estimate that over 90% of the comforters sold in the U.S. in 2002 were made domestically.

In closing, the committee wants to re-emphasize the importance of having a national regulation and highlight its members' cooperative work with the California Bureau of Home Furnishings. The committee also intends to cooperate fully with CPSC, and wants to encourage the agency to review the work carefully that has been accumulated by California for several years.

Please let us know if you have questions or if we can provide any additional information.

Sincerely,

Linwood Wright

E. Linwood Wright
Dan River Inc.
Chairman,
Textile Bedding Committee

Copy: Textile Bedding Committee

Stevenson, Todd A.

From: Hardy Poole [hpoole@nationaltextile.org]
Sent: Thursday, March 10, 2005 10:20 AM
To: Stevenson, Todd A.
Cc: Neily, Margaret L.; Tenney, Allyson; taylor.john@wpstv.com; phil.harrison@springs.com; wrighlin@gamewood.net; bob.stoner@springs.com; lanier.eddie@wpstv.com; lwright@danriver.com; KSpilhaus@nationaltextile.org
Subject: Bedclothes ANPR

CPSC-Bedclothes, ANPR0310.doc ...

Mr. Secretary,
Attached is our statement regarding the ANPR for Bedclothes. Please feel free to contact me if questions arise. Sincerely, Hardy

Hardy Poole
National Textile Association
Director, Regulatory and Technical Affairs
Tel 434-296-4464 Mobile 434-962-4581

Bedding comment 7

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

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Immediate Past President
Carden Johnston, MD, FAAP

March 10, 2005

Consumer Product Safety Commission
Room 502
4330 East-West Highway
Bethesda, MD 20814-4408

RE: Bedclothes ANPR

Dear Chairman Stratton:

On behalf of the 60,000 primary care pediatricians, pediatric medical subspecialists, and pediatric surgical specialists of the American Academy of Pediatrics who are dedicated to the health, safety, and well being of infants, children, adolescents, and young adults, I would like to share our support for the Consumer Product Safety Commission's (CPSC) proposed rulemaking regulating the open flame ignition of bedclothes. The Academy believes firmly that this proposed rule will enhance the safety of children from fires.

For persons of all ages, fires and burns are the fourth most common cause of unintentional injury-related death, causing more than 4,000 deaths annually.[1] Approximately 1,000 of these deaths occur among children younger than 15 years. Annual economic loss from fire-related fatal and nonfatal unintentional injury is $3.8 to $61.4 billion. Reports from the U.S. Fire Administration's National Fire Incident Reporting System data and the National Fire Protection Association state that mattresses and bedding were first to ignite in 19,400 residential fires during 1995 through 1999.

Since 1955, the Academy has been advocating for strong federal regulation of fabric flammability. Not only can bedclothes generate a fire large enough to pose a hazard of their own, but bedclothes are also a substantial ignition source for mattress fires and significantly affect the burning characteristics of the mattress and foundation. A strong regulation would not only enhance the public safety of children but would reduce economic losses as well.

The Academy recommends that the CPSC ensure that the proposed rulemaking specifically addresses two key areas relative to children's bedding. Given that a child's crib or other sleep environment is designed specifically to prevent escape, special attention must be paid to the linens used in these circumstances. The rulemaking should address crib linens specifically, including crib skirts and bumpers designed to pad the crib rails, as well as bedding for bassinets, play yards, cradles, and the like. In addition, the proposed rulemaking fails to reference accessories such as decorative canopies, curtains, or mosquito netting that are draped above and/or around a bed. Such decorative accessories are growing in popularity, especially for children's rooms. Finally, language in the rulemaking must cover future products that will appear in the marketplace.

The Academy agrees strongly with the Commission's belief that regulating the flammability of bedclothes is appropriate. Bedclothes contribute substantially to the complexity and magnitude of the mattress fire hazard. The Academy encourages the CPSC to address the additional concerns detailed above in embarking upon the development of a strong, enforceable standard. Please do not hesitate to call upon the Academy to assist the Commission in any capacity that may be appropriate.

Sincerely,

Carol D. Berkowitz MD

Carol Berkowitz, MD, FAAP
President

CDB/cp

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[1] American Academy of Pediatrics Committee on Injury and Poison Prevention. Reducing the Number of Deaths and Injuries From Residential Fires. *Pediatrics* Vol. 105 No 9. 6 June 2000.

Bedclothes comments

8

Manufacturer of Fine Home Fashions Since 1973

March 10, 2005

Office of the Secretary
Consumer Product Safety Commission
Washington DC 20207-0001

RE: Bedclothes ANPR

Dear Sir or Madam:

Cuddledown is a manufacturer and retailer of bedclothes such as pillows, comforters, sheets, etc am concerned that if the CPSC issues a flammability standard for bedclothes the result will be a term health hazard for everyone that will use these products in their everyday life. I respect you objective of protecting consumers and families from products that pose a fire hazard – potential saving 300 lives per year. And yet I am concerned that issuing such a standard would result in a potential consumer health risks for millions of Americans from prolonged exposure to the chem used in the making of nonflammable bedclothes.

In speaking to many of our suppliers, the only current method available in making nonflammabl bedclothes is through the application of chemical finishes. Many of these chemicals have been c as being possible contributors to health issues. Before implementing such a standard, it seems th more studies should be undertaken to examine what potential health issues prolonged exposure these chemicals might cause. The problem is not only health risks to consumers from sleeping o such products but also to the employees who must work with these chemicals during the manufacturing process.

Over the years, many of our customers have informed us that the use of chemicals in the manufacturing process of bedclothes adversely affects their decision to purchase a product. At point we actually kept on file a detailed list of the chemicals used to finish each fabric in our products. Most of our customers are middle-aged and their concerns over health issues increase year. Will we now have to label our products with a General Surgeon's Health Warning? "Slee on these products could be hazardous to your health? Do not sleep if you are pregnant?"

And what of the added costs incurred due to the use of these chemicals in the manufacturing pro Some of our suppliers have estimated cost increases as high as 30%. As the manufacturer and r cannot absorb all of this cost, higher retails will have to be passed on to the consumer. With so bedclothes price sensitive commodity items, will the consumer be willing to accept higher retail will this force more US textile factories to close as even more goods will need to be produced o shore to keep prices in line with the current consumer "price oriented" buying trend?

The long-term protection offered by flame retardant bedclothes also needs more in depth study. Several of our suppliers have informed us that these chemical finishes will loose their effectiven after 20 washings. Will the added expense be all for naught, in the case of products that may be washed as much as once a week? And if these chemicals come out in the wash, won't they also easily transmitted to people and children that sleep with them for 8 hours every night?

312 Canco Road, Portland, Maine 04103
Tel N° 207.761.0201 Fax N° 207.761.1948

My goal as a developer of products is to offer customers safe, high quality products at the best possible value. Will the making of bed clothing flame retardant, through the use of chemicals, r be putting a safer product on the market? Or will we inadvertently be offering customers a prod that may be more harmful to their health over the long term? Don't people have a right to sleep chemical-free bedding that is comfortable and safe?

I urge you to consider the risks I have outlined in your efforts to make bedclothes safer for the American consumer

Sincerely,

Christopher W. Bradley
President and CEO
Cuddledown Inc.

9

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BETH C. RING

SANDLER & TRAVIS
TRADE ADVISORY SERVICES
DETROIT · PORTLAND · OTTAWA

March 11, 2005

Via Federal Express
And Email (cpsc-os@cpsc.gov)

Office of Secretary
Consumer Product Safety Commission
Washington, D.C. 20207-0001

Attention: Todd Stevenson, Secretary

Re: Bedclothes ANPR (Advanced Notice of Proposed Rule)
Comments of Franco Manufacturing Co., Inc.

Dear Mr. Stevenson:

On behalf of our client, Franco Manufacturing Co., Inc., this responds to the Commission's request for comments concerning the issuance of a flammability standard to address open flame ignition of bedclothes contained in the Bedclothes ANPR, 70 Fed. Reg. 2514 (January 13, 2005 - Advance Notice of Proposed Rulemaking). Bedclothes, as defined in the ANPR, includes a variety of products, such as sheets, blankets, mattress pads, pillows, comforters, and similar products that are used as covering on a bed. Franco Manufacturing is a major supplier of many of these products to the U.S. bedding market. The company commends the Commission for its concern for the safety of American consumers, and shares the Commission's concerns with respect to its customers.

Franco Manufacturing has been closely following the progress of the proposed rulemaking standard to address open flame ignition of bedclothes. It is their understanding that the Commission is proposing the adoption of essentially the same standard as the draft of Technical Bulletin 604 issued on October 1, 2004 by the State of California, Department of Consumer Affairs, Bureau of Home Furnishings and Thermal Insulation. While the proposed standard may provide consumers with some improved fire safety, such a standard may also

introduce several significant disadvantages to the consumer that we believe the Commission should consider prior to adopting any national flammability standard for bedclothes. For the reasons set forth below, Franco Manufacturing urges the Commission to reconsider the imposition of the flammability standard for bedclothes, as currently proposed.

First the proposed flammability standard for bedclothes will require manufacturers of bedding products to modify the fiber blends used in quilted bedding products. In theory, such a modification may be a rational and viable solution; however, in practice, use of alternate fiber substitutes that meet the proposed flammability standard may not be feasible. The alternate fiber substitutes that would meet the flammability standard proposed by the Commission have very little availability in the international marketplace compared with the conventional polyester fibers. As a result, manufacturers of filled bedding products may not be able to satisfy their customers' orders, and the overall availability of such bedding products to American consumers could be affected. While it is possible that manufacturers of such alternate fiber substitutes would increase production in response to the imposition of a standard, which may relieve the problem in the long term, the availability of alternate fiber substitutes would present a problem in the immediate future and should be considered in connection with the implementation of a national standard.

Furthermore, consumers may also be confronted with significant deterioration in the products' appearance and texture resulting from the use of alternate fibers or chemically treating fabrics and/or fibers to satisfy the proposed flammability standard. The alternate fiber fills proposed by the Commission may not allow manufacturers to attain the same loft or height on the various quilted bedding products. Moreover, the proposed flammability solutions may result in a harsher feeling product. This may ultimately impact on the consumers extended use of the bedding products. Additional testing is required to ascertain the possibility of deterioration in alternate fibers and the effects of chemically treating fabrics or fibers to conform to a flammability standard.

Finally, consumers will undoubtedly be faced with a significantly more expensive bedding purchase price. The alternate fibers used to satisfy TB-604 and the national standard proposed by the Commission, are much more expensive than conventional polyester fibers used in filled bedclothes. The significant cost increase incurred by manufacturers of filled products as a result of utilizing alternate fibers will be passed along to the consumer.

Franco Manufacturing also feels it is important to point out that California's Technical Bulletin 604 does not cover flat bed textiles, such as sheets, pillowcases and blankets, but rather, only regulates filled bedclothes. While the proposed test methods have been used to measure the flammability of filled bedclothes, these methods have not been used to assess the risks of flat bedclothes. Therefore, additional testing is necessary to assess the potential risk of injury and flammability of textile flat bedclothes before the Commission includes this category of

bedclothes in a national standard. However, the company is opposed to a national standard for all bedclothes.

While Franco Manufacturing is concerned with the safety of its products and the consumers who purchase such products, the company feels a responsibility to point out certain shortcomings with the proposed standards. As in all industries, there is a balance that must be drawn between relative risks and the costs of doing business. As an alternative to a national standard mirroring California's TB-604, the company suggests that the Commission consider the expansion of the various voluntary standards that exist with respect to this product category, or the use of product labeling to alert consumers of the possible risks of injury from open flame ignition of bedclothes. The consumer would then be in a position to make an informed decision at the time of purchase.

We respectfully ask that the Commission consider Franco Manufacturing's comments in its development of national flammability standards for bedding and bedclothes.

Sincerely,

SANDLER, TRAVIS & ROSENBERG, P.A.

By: _____
Beth C. Ring
Cindy R. Taber

Cc: Franco Manufacturing Co., Inc.

Bedclothes 10

National Cotton Council OF AMERICA

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March 14, 2005

Mr. Todd Stevenson
Office of the Secretary
Consumer Product Safety Commission
4330 East-West Highway, Room 502
Bethesda, MD 20814
e-mail: cpsc-os@cpsc.gov

Re: Bedclothes ANPR

Dear Mr. Stevenson:

The National Cotton Council (NCC) submits these comments in response to the U.S. Consumer Product Safety Commission (CPSC) Advanced Notice of Proposed Rulemaking (ANPR) requesting comments (70 FR 2514; 1/13/05) on the *Standard to Address Open Flame Ignition of Bedclothes.* The NCC is the central organization of the U.S. cotton industry, representing producers, ginners, cottonseed, merchants, cooperatives, warehousemen and textile manufacturers in 18 states. NCC represents approximately 25,000 cotton producers that annually produce about 20 million bales of cotton (about 500 lbs/bale) and domestic textile mills that produce apparel and home furnishings from the about 6.5 million bales of cotton that are spun into textiles in the U.S. NCC members produce products used in the bedclothes market and are directly affected by any mandatory standards that affect bedclothes. Cotton's share of the U.S. bedclothes market is about 900,000 bales of domestic cotton and 1.68 million bales if imports are included (Source: National Cotton Council of America – *Cotton Counts Its Customers*, Summary 2002 Data).

Improving the fire performance of bedclothes (i.e., comforters, mattresses pads, pillows, etc.) is a very complex matter. The California Bureau of Home Furnishings and Thermal Insulation (CA BHF), the National Institute of Science and Technology (NIST), and others have studied the flammability of bedclothes but there is still much to be learned if truly meaningful standards are desired. NCC staff and Cotton Incorporated research staff have been working cooperatively with the CA BHF as part of their "Bedclothing Task Force" since it began in 2003 and we continue to cooperate with them on this very important issue as well as on all their textile flammability issues. Just to have standards in place serves no purpose unless those standards truly improve fire performance. Any regulation proposed and promulgated by CPSC to address an unreasonable risk of death or injury due to ignition of bedclothes by small open flames and/or smoldering cigarettes should be shown to offer a significant level of increased fire safety for the public, be based on sound science, be technologically and economically feasible for industry to meet, be practical to implement, and preserve the performance, function, and aesthetics of bedclothes.

CPSC should work closely in an open and transparent way with the CA BHF in the development of any standard to address the flammability of bedclothes. Inconsistent state regulations would be extremely disruptive to interstate commerce and would cause an enormous burden on the U.S. textile industry. There

is a need for a "level playing field" in terms of compliance testing for both domestic and imported products. Any mandatory regulation promulgated by CPSC must be enforceable equally throughout the supply chain from retail to the manufacturer/importer levels. Without strong enforcement throughout the chain, an effective and meaningful regulation is not possible.

CPSC should limit the bedclothes considered for possible regulation. Sheets and pillowcases should not be part of any mandatory flammability regulation that CPSC develops for bedclothes. Sheets and pillowcases, which are relatively light fabrics, would be only a very small part of the fuel load in a bedclothes fire and would, therefore, contribute very little to overall peak heat release. In addition, flame retardant finishing treatments and inherently flame resistant fibers, which might be acceptable for other bedclothes products to make them flame resistant, most likely would compromise the quality, performance, and aesthetics of sheets and pillowcases, and could expose consumers to unnecessary and unacceptable toxicity risks. If CPSC addresses unfilled products like blankets and bedspreads, CPSC should consider the voluntary blanket standard (ASTM standard, D-4151) that has been in use since the 1970's.

There is concern that the proposed mattress regulation (proposed 16 CFR 1633; 70 FR 2470, 1/13/05), which is based in part on economics, might result in CPSC inappropriately regulating bedclothes. CPSC should not regulate mattresses indirectly by regulating bedclothes.

In addition, CPSC should thoroughly review the toxicity of any chemicals that they anticipate will likely be used to meet their performance standard for bedclothes, so that the textile industry is not faced with another "tris" situation.

Some more detailed comments follow.

CPSC should not regulate mattresses indirectly by regulating bedclothes.
There is concern that the proposed mattress regulation (proposed 16 CFR 1633; 70 FR 2470, 1/13/05), which is based in part on economics, might result in CPSC inappropriately regulating bedding. From a consumer safety standpoint it would not be appropriate for CPSC to develop and promulgate an open flame standard for mattresses that depends in any way on the fire performance of what consumers might choose to use for bedclothes. Consumers purchase and use bedclothes in a multitude of combinations, depending on their personal tastes, individual needs, and disposable incomes. Consumers choose different combinations of these products depending on the area of the country, season, climate, fashion, etc. Therefore, whatever mandatory open-flame standard CPSC develops for mattresses should not be predicated on the nature of the bedclothes, and should be restricted to the mattress.

Studies by NIST raise questions concerning the flammability of bedclothes, since some tests yielded different results depending on whether the test was performed over an inert substrate or over TB603 complying mattresses with varying levels of peak heat release (i.e., 50kW, 100kW, or 200kW). See the CPSC Briefing package on Mattresses and Bedclothes (11/1/04; Tab I pp.271-280) and various research reports by T.J Ohlemiller and R.G. Gann (*Estimating Reduced Fire Risk Resulting from an Improved Mattress Flammability Standard*. NIST Technical Note 1446, 2002; *Effect of Bed Clothes Modifications on Fire Performance of Bed Assemblies*. NIST Technical Note 1449, February 2003).

Phase One of the NIST research on mattress/bedding flammability has shown that a typical bedding combination (i.e., mattress pad, sheets, pillow, blanket, comforter) produced peak heat release rates that ranged from 50 kW to about 200 kW when tested over an inert substrate (NIST publication: T.J. Ohlemiller et al. *Flammability Assessment Methodology for Mattresses*. NISTIR 6497, June 2000). In this study the "worst case" (or most severe) bedding combination produced only about 20% of the heat (about 200kw) required to reach "flashover". Without the involvement of the major fuel load, the mattress, even

the most severe bedding combination produces much less heat than needed to reach flashover. The ignition source burners for TB603 and the proposed CPSC mattress standard (proposed 16 CFR 1633; 70 FR 2470, 1/13/05) were set based on this "worst" case to simulate the typical heat insult imposed on a mattress by bedclothes. CPSC now suggest that this was not the "worst" case, which raises questions about whether the thermal insult from the burners is severe enough.

Size Effects: T.J. Ohlemiller of NIST has released a new report, NIST Technical Note #1465, entitled, "*A Study of Size Effects in the Fire Performance of Beds*" (www.fire.nist.gov/bfrlpubs/NIST_TN_1465.pdf.). This study indicates that if the mattress is much above 50kW it does not scale up from twin to full, queen, and king. The mattress standard proposed by CPSC (proposed 16 CFR 1633; 70 FR 2470, 1/13/05) and finalized by the CA BHF, TB603, only requires the twin sized mattress to be tested as a representative for all sized mattresses of a particular type/style. Also there is much uncertainty about mattresses in these tests after 30 min. The report did not indicate what items were in the bedclothes ensemble.

In addition, CPSC has yet to release the precision and bias study on the mattress test method even though it has been finished for 6 months. This suggests that there may be problems concerning the reproducibility and meaning of the mattress flammability test. Therefore, this lack of reproducibility may also be present in the bedclothes test results.

CPSC should be required to address the questions raised by the NIST research and the precision and bias testing for mattresses before finalizing a standard for mattress/mattress foundations that could result in an unnecessary or too severe test for bedclothes, that would be in effect regulating mattresses indirectly by regulating bedclothes.

Flame retardant chemicals.

NCC continues to be concerned about the toxicity of flame retardant chemicals that may be used to meet a future federal flammability standard. The EU (6/04) and the state of CA (1/06) have banned some of these chemicals and the EU continues to review the toxicity, persistence, and bioaccumulation of some of these chemicals (see for example, *Brominated Flame Retardants, Environmental Transport and Fate, Atmospheric Transport and Fate*. Proceedings Dioxin 2003, Boston, MA, Aug. 24-29, 2003; "*Studies Show Flame Retardants Break Down, Data Said to Refute Previous Industry Studies*". BNA Daily Report for Executives, 11/24/03, p. A-24; and "*Flame Retardants in Some U.S. Women at Levels Harmful to Laboratory Animals*". BNA Daily Report for Executives, 3/9/05, p. A-44). CPSC should thoroughly review any chemicals that they anticipate will likely be used to meet their performance standards. In addition, CPSC should include a "hold harmless" provision in any standard they promulgate for flammability of bedclothes to protect the U.S. textile companies who are forced to use flame retardant chemicals to meet a potential mandatory federal flammability standard.

NCC is pleased to submit these comments for CPSC's consideration. If there are questions regarding our comments please contact me (202-745-7805 or pwakelyn@cotton.org).

Sincerely,

P J Wakelyn

Phillip J. Wakelyn, Ph.D.
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March 11, 2005

Via Email

Office of the Secretary
Consumer Product Safety Commission
Washington, D.C. 20207-0001

Re: Bedclothes ANPR

Dear Mr. Secretary:

We submit these comments as counsel to the Decorative Fabric Association ("DFA") and the Coalition of Converters of Decorative Fabrics ("CCDF") in response to the Advanced Notice of Proposed Rule Making regarding a Standard to Address Open Flame Ignition of Bedclothes, as published at 16 CFR Part 1634, January 13, 2005.

As the Commission is aware, the DFA is an association of the leading decorative fabrics and home furnishings companies in the United States, who are engaged in the wholesale distribution of high styled domestic and imported decorative fabrics. The CCDF is comprised of the leading decorative fabric converters in the United States, as well as the leading retailer Calico Corners. Members of both the DFA and CCDF are engaged in supplying fabrics used in connection with bedclothing.

The DFA and CCDF have been actively engaged in working with the CPSC in connection with the Commission's continuing efforts to address flammability issues relating to upholstered furniture and bedclothes. These organizations have also worked with the California Bureau of Home Furnishings and Thermal Insulation ("CBHF") on these issues.

The DFA and CCDF understand that the CBHF is proceeding in the development of a regulation of bedclothing. Such efforts, as commented in the instant ANPR are directed to filled bedding products. We further understand that the approach being pursued by the CBHF seeks to address the bedclothing flammability issues by focusing on the filling materials included in filled bedclothing, and would not seek to regulate the outer fabric of such bedclothing. As the DFA and CCDF have stated previously, they believe that such an approach is appropriate, and that a broader focus to include non-filled bedclothing should not be pursued.

Accordingly, the DFA and CCDF submit that the Commission's focus in connection with a standard to address open flame ignition of bedclothes should be consistent with the CBHF's approach. Otherwise, if the scope of regulation were to be broadened to include non-filled bedclothing, the standard would be potentially overly burdensome, compliance and enforcement would be impractical, and the potential risks to consumers would be unacceptable.

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Although neither the DFA nor CCDF purport to possess technical expertise, we understand that the potential heat generating risk that exists in connection with non-filled bedclothing is low. Accordingly, the burden of a regulation directed to such materials could be prohibitive in comparison to its value.

In addition, the different combinations of bedclothings – both filled and non-filled – that consumers may and do use are infinite. Thus, to seek a regulation directed at non-filled materials would be of such complexity that adherence and compliance might be difficult if not impossible.

Moreover, a regulation of non-filled bedclothes might require use of FR chemicals. The intimate contact that consumers have with bedclothing, especially sheets, pillow cases and other such non-filled items, would expose consumers to such FR chemicals. As a policy matter, the DFA and CCDF submit that such a regulation would not be appropriate and may be hazardous.

Finally, the DFA and CCDF reiterate their support for a mandatory federal regulation consistent with the foregoing in connection with bedclothing. It is important for the member companies of both the DFA and CCDF to have certainty regarding what may be their regulatory obligations, and that such obligations apply uniformly and consistently throughout the country.

Very truly yours,

Richard S. Taffet

Stevenson, Todd A.

From: Taffet, Richard S. [richard.taffet@bingham.com]
Sent: Friday, March 11, 2005 12:08 PM
To: Stevenson, Todd A.
Subject: Bedclothes ANPR

Bedclothes ANPR.PDF (123 KB)

The attached reflects comments of the Decorative Fabric Association and the Coalition of Converters of Decorative Fabrics in response to the above-referenced ANPR.

<<Bedclothes ANPR.PDF>>

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March 11, 2005

Office of the Secretary
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Attn: Todd Stevenson, Secretary

Re: Standard To Address Open Flame
Ignition of Bedclothes
Advance Notice of Proposed Rulemaking
70 Federal Register 2514 (January 13, 2005)

Dear Mr. Stevenson:

The Home Fashion Products Association, Inc., headquartered in New York, New York (hereafter "HFPA"), is a national, non-profit organization dedicated to advancing the common interests of the home fashions products industry through a variety of programs and activities. The membership encompasses over 60 manufacturers and suppliers of filled bedding products, window treatments, bath & bed décor, drapery and upholstery fabrics, kitchen textiles, table linens and related accessory classifications.

HFPA is very concerned about deaths resulting from home fires. The loss of even one life is tragic. The good news is that the nationwide number of deaths from home fires and bedroom fires has been decreasing each year. HFPA believes that this trend will continue, with heightened consumer awareness and fire safety education, and regulation of direct fire sources. Our association does not believe that any regulatory intervention by CPSC will improve the current trend.

We understand that the CPSC's Advanced Notice of Proposed Rulemaking ("ANPR") represents the beginning of the process to determine whether bedding/bedclothes present an "unreasonable risk" to home safety, whether the benefit of national flammability standard on "bedclothes" (or "bedding") outweighs the cost, and whether such a standard would be appropriate. For the following reasons, HFPA members believes that bedding/bedclothes do not pose an unreasonable risk to safety, a

national mandatory standard would be inappropriate, would not accomplish its intended result and that the cost and economic impact would outweigh any perceived benefit.

There is No Need for Regulation

The case for the regulation of bedding/bedclothes has not been proven. Without state or national regulation, home fires are decreasing and the amount of deaths and injuries are also decreasing. There is no evidence that regulating bedding/bedclothes will hasten the decline of deaths or injuries from home fires. Bedding/bedclothes do not start fires. They do not ignite spontaneously. The CPSC's efforts should continue to be concentrated on the articles that do start fires, heaters, cigarettes, lighters and candles. The U.S. Fire Administration ("USFA") has confirmed that the decline in smoking, increase in smoke detectors and measures like requiring self-extinguishing cigarettes have the most impact. *Mattress and Bedding Fires in Residential Structures*, U.S. Fire Administration, Topical Fire Research Series, Volume 2, Issue 17, March 2002.

The CPSC should urge those industries to increase their educational programs and take steps, for example, requiring lighters to be childproof. Those efforts, and similar efforts are having a dramatic effect in protecting the consumer.

HFPA believes that any regulation should be postponed indefinitely until 1) meaningful testing is complete, 2) the toxicity issue is fully addressed, and 3) home fire data is brought up to date and fully analyzed.

Toxicity Has Not Been Addressed

There has been little or no investigation into the potential toxicity of flame retardant chemicals, or other measures that the industry would be forced to use. The toxicity issue would include both the effect of flame retardant chemicals on the consumer, and the release of such chemicals into the environment. A number of chemicals used to protect against flammability have already been banned at the state level because they have proven to be toxic.

Before any regulation is attempted the toxicity must be addressed and the toxic effects of flammability "solutions" require complete study, including its long-term effects. As we all know, past attempts to protect the consumer had serious long-term implications. Asbestos (intended to prevent or retard fires), lead paint, TRIS and formaldehyde at one time were all approved for home or business use and believed to pose little or no threat to health. Time and substantial testing proved otherwise. It makes little sense for CPSC to follow that path, especially when the incidences of death and injury are decreasing.

In addition to concerns about toxicity, any flammability "solution" must be reviewed for its allergic effect on consumers, especially children. As reported in the national media, incidence of adult and juvenile asthma is increasing.

The health of the workers exposed to regulated product, the fiber and fabric workers, truckers, inventory clerks and sales people that handle the regulated product could all be affected.

Testing is Incomplete

Despite its partial testing, the CPSC has not addressed all the issues. Testing has not occurred on the myriad combinations of bedding used by the average consumer. The CPSC seems to be considering regulation without regard to the vast array of bedding/bedclothing products.

Neither has the testing considered the bedding items standing alone. For example, it is very unlikely that sheets or other unfilled products, by themselves, would cause flashover. In addition, a fitted sheet could actually help prevent flashover as it reduces the mattress' combustibility. Likewise, down and feather bedding products disintegrate when exposed to open flame and do not burn long enough or hot enough to be an ignition source.

Because testing is incomplete and there are so many variables that have not been examined by CPSC it is premature to address issues such as cleaning and laundering effects, methods and frequency.

Risk of Injury Data Must Be Up-to-Date

The CPSC must obtain and study current data on home fires, causes and resulting injuries and deaths. Changes in consumer awareness, smoke alarms and habits make it imperative that new data be used in evaluating the fundamental premises for any regulation. The CPSC indicates that the data used to measure risk of injury was compiled from 1993-1999. In fact, house fires and deaths resulting from house fires have declined each year since 1998, and in some cases are in their lowest levels in decades.

The risk of injury discussion however, makes no mention of the decrease and instead is based on admittedly difficult-to-interpret information. The CPSC also indicates that they "analyzed" 241 fire incidents from 2000-2003 and that "it is difficult to determine which ignited first, the bedding or the mattress." Then the Commission states, "In 75% of those bed clothes ignitions it was not possible to determine the type of bedclothes involved." The final, "water is wet" statement in that section, "most bedclothes did ignite at some point during the fire," is not a basis for regulation.

The CPSC states in the ANPR that it has conducted reviews of reports of home fires. That alone cannot be the basis for a Proposed Rule or Regulation. Data through 2004 must be examined. The location of the fire in the home, the time of the fire (for example, was it during usual sleeping hours?), the existence of working smoke alarms and other such factors must be considered and analyzed before the CPSC can make any determination that bedding/bed clothes present an unreasonable risk.

HFPA members ask the CPSC to answer the question, "How can bedding/bedclothing pose an unreasonable risk when deaths, injuries and property damage are decreasing without government regulation of bedding/bedclothing?"

Regulation Will Not Achieve Result

It bears repeating here that bedding/bedclothes do not start or cause fires. CPSC's efforts should continue to be concentrated on the articles that do start fires - heaters, smoking materials, lighters and candles.

One factor that will undermine the effect of any regulation is the number and type of items typically found on the tops of beds. These items will not be regulated for flammability. Plush toys, regular toys, newspapers, books, magazines, bills, tissues and clothes are part of the usual "clutter" on a bed. Even if the bedding and the mattress were to meet a flammability standard these other items could be the igniting material and the regulation would prove meaningless.

Another factor that affects the incidence of home fires, according to the U.S. Fire Administration, is the income level of the household. The USFA believes there is an inverse relationship between income and fire risk, due to poorer household maintenance, lack of working smoke alarms and quality of furnishings. *Fire Risk*, USFA/National Fire Data Center, Topical Fire Research Series, Volume 4, Issue 7, December 2004. The increased cost to the consumer of the flammability regulation would mean that lower income homes would not replace their older, non-compliant bedding/bed clothes, and if they did they would obtain replacement product through less expensive sources, like second-hand stores, garage sales and charitable organizations. The regulation would not help the people that are most at risk from fire injuries.

The CPSC also learned from the issue of children's sleepwear flammability that consumers will not buy product that physically irritates their children or them, regardless of the benefit. Bedding is in the same category. Coarse or stiff bedding will not be attractive to consumers, even if the cost could be maintained. The possibility of health issues (toxicity) would make that bedding even less attractive. As with the sleepwear, consumers will find non-compliant (but more attractive) alternatives that will render any regulation ineffective and useless.

California's Proposed Standard Is Not Basis for ANPR

California, through its Bureau of Home Furnishings and Thermal Insulation, has drafted and eventually will issue as a proposed rule, Technical Bulletin, TB-604, which sets forth the flammability tests that filled bedding products must pass in order to be sold in California. The California Bureau, limited by the implementing legislation, was only allowed to consider test results and home fire data that was 5 years old when they started their process. They are not allowed to consider cost, loss of jobs, consumer preferences or toxicity. In fact, even though the State of California recently banned the use of certain

chemicals that have been used to comply with other existing flammability regulations, the Bureau is not allowed to consider its own state's ban. Due to the narrowness of the California Bureau's mandate and its time limitations TB 604 should not be used as basis for any national regulation.

Cost Outweighs Benefit

Estimating the cost of a new regulation is difficult, especially when there are so many unresolved factors and the industry has not seen proposed "solutions". However, based on responses from our members, flammability "solutions" or treatments would increase the cost of raw materials at a minimum of 50–100%, depending on weight. This number does not include the costs of testing, higher costs of shipping or inventory. The higher cost would be multiplied down the supply chain and the U.S. consumer could pay, at a minimum, 200–400% more per finished product or the manufacturer will absorb the cost and some companies will go out of business.

Due to the extraordinary number of possible combinations of fiber constructions, and thread counts of top of the bed products, HFPA is concerned about the costs of testing each product, in each type of fabric and combinations of fabric and fibers, and ultimately the cost of testing each bedding ensemble. The practical effects of these test costs would add millions to industry's costs, which will be passed on to the consumer.

Higher costs would lead to fewer new sales and prolong a customer's use of its existing pillows and comforters. Fewer sales definitely would lead to loss of state sales tax, and negatively affect the related industries such as truckers, packers, carton providers and warehouse workers.

Higher costs due to flammability standards would also lead to companies looking to lower their costs in other areas, including cost of labor. That, in turn, could lead to more companies and retailers sourcing their bedding/bedclothes overseas, not to avoid regulation but simply to remain competitive. Outsourcing will undoubtedly lead to fewer U.S. jobs.

For example, the industry estimates that over 75% of comforters are made, processed and/or finished in the U.S. and takes issue with the contrary CPSC statement in the ANPR. The cost added by a flammability regulation, including the higher costs of safety standards (due to toxicity issues) in the factories and warehouses, would prompt many in the industry to seek other ways to lower costs and likely lead to a decrease in U.S. produced comforters.

Additionally, the companies that supply fiber to U.S. manufacturers of bedding/bedclothes would be affected and likely shut down if production were to move overseas. There is also the multiplier effect down the chain of supply (i.e. box suppliers, and printing companies would be two affected industries). Our members indicate that there is no qualifying fiber supplier in the U.S., and the imposition of a flammability standard could mean the total loss of the U.S. fiber industry.

HFPA members report that if they were to use "qualified" or "treated" fibers to meet a flammability standard, a quilted product, for example, would lose 35-40% of its "loft." To counter that they would have to use more fibers, which would increase the cost of the product. More fibers would increase the weight of the product, thereby increasing the cost of shipping and the cost of storage.

Another aspect of cost is the issue of the "feel" or "touch" of a product. Any flammability standard imposed by the CPSC would involve a change to the bedding/bedclothes' texture. Whether the flammability solution would be chemical on the fabric or fibers, or internal "inflammable" ticking, the texture of the product would change to something coarser. The harsher the feel the less likely a customer would buy the new product and a company would have invested substantially to comply, with the result of lost sales.

The extra weight needed to compensate for the loft factor, explained above, would also affect the feel of the filled bedding product. Many customers, especially high end customers, would likely look outside the U.S. to obtain their filled bedding products.

The cost of non-complying inventory must also be considered, regardless of the effective date for any new regulation. The fact is that there will be non-compliant inventory held by our members and retailers. A product could remain in inventory up to two years or more. That inventory will have to be disposed of in some way and it is doubtful that the full cost would be recovered.

Voluntary Standard Not Necessary

If the cause and effect of bedding/bedclothes and unreasonable risk could be proven, the HFPA would consider developing a voluntary compliance program. However, the connection is too nebulous at this time.

In fact, increased regulation of ignition sources and public education efforts at the local, State and National levels are achieving the same results as any CPSC regulation. The fact that home fires and deaths and injuries from home fires are decreasing each year, without any government or state regulation of bedding, is testament to the effectiveness of these efforts.

Conclusion

Based on the foregoing, HFPA members believe there is no basis for regulation of bedding/bedclothes at this time. Bedding/bedclothes have not been proven an "unreasonable risk" of the occurrence of a fire leading to death, personal injury or "significant" property damage, as substantially more testing, including long term testing, needs to be done. Additionally, the cost of a CPSC regulation undoubtedly outweighs an unproven benefit and likely would cause the regulation to be moot. The proven benefit is through regulation of ignition sources and public education.

Therefore, HFPA requests that consideration of any proposed rule or regulation of the flammability of bedding/bedclothes be suspended until toxicity tests are completed, accurate and complete information on costs is obtained and the data on home fires caused by ignition of bedding/bedclothes is brought up to date and thoroughly analyzed.

If you have any questions, please do not hesitate to contact us at (212) 297-2122.

Sincerely,

Frank Foley
President

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Mr. Jason J. Hartman
Compliance Officer
US Consumer Products Safety Commission
Room 613, 4330 East West Highway
Bethesda, Maryland 20814

March 11, 2005

Dear Mr. Hartman,

I would like to comment on the advance notice of the rules regarding bedclothes. The proposed regulations as they apply to the month and year of manufacture and potentially weight of the product could place an extreme hardship on domestic manufacturers. Remaining domestic manufacturers of bedclothing are under assault by imports. This additional burden would undoubtedly accelerate the movement of manufacturing offshore. I would propose that the change be limited to only indicating on the labeling that the product was manufactured after January 1, 2007 (which is the likely date of institution of these new regulations).

The US manufacturers that I have spoken with would like to work in conjunction with CPSC to find a solution that is acceptable to all parties. At this time this additional information is proposed for display on the law label itself. This in turn affects numerous States which have bedding regulations. These States are represented by ABFLO. I believe it is important at this point to differentiate the manufacturer of bedclothes from the manufacturer of mattresses. There were no labeling issues with TB603 because the process of manufacturing mattresses is radically different than the process for bedclothes. As a label manufacturer, my company produces labels for both industries. I have taken the time to tour the facilities of both industries on numerous occasions which gives me a unique perspective. If my first proposal to only include the statement above (manufactured after January 1, 2007) is unacceptable then it may be wisest to consider a second label as opposed to the addition of month and year information on the law label.

I certainly hope the industry will be given an opportunity to reach an acceptable solution for all parties concerned. This cooperation will prevent the loss of US jobs in an industry already decimated by domestic job losses to foreign competition. I will be happy to participate in the process. Thank you very much for your consideration.

Sincerely,
Marvin L. Smith
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March 14, 2005

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Office of the Secretary
Consumer Product Safety Commission
Washington, DC 20207-0001

Re: Bedclothes ANPR

Dear Consumer Product Safety Commission:

Hanover Direct, Inc. (Hanover) respectfully submits these comments on the Consumer Product Safety Commission's Advance Notice of Proposed Rulemaking to consider a flammability standard relating to bedclothes. 70 Fed. Reg. 2514 (Jan. 13, 2005).

Hanover, through its wholly-owned subsidiaries, is a major retailer of quality bedding and other household furnishings. Its bedding is sold primarily through The Company Store® and Domestications®. Hanover has a long history in providing consumers with quality bedding. For example, The Company Store® began in 1911 in Wisconsin as The La Crosse Garment Company, founded on the traditional handcrafting skills of those who settled there in the 1800s. Its expertise in making warm down comforters and featherbeds has expanded into a wide variety of bedding products. Hanover also owns two apparel divisions that source, cause to be manufactured, and sell (in their women's and men's apparel catalogs and websites) bedclothes manufactured by third parties.

CPSC has requested comment on particular bedclothes that should be included in or excluded from a proposed bedclothes standard. Hanover questions whether there is need for new requirements relating to bedclothes; bedding is subject to a number of safety rules already, and the CPSC mattress standard is already proposed to be amended. The negative impacts of more onerous rules for bedclothes would be substantial for Hanover in relation to both the products it manufactures and products sourced from others. Negative impacts would be suffered by others in the bedclothes industry as well. In any event, no notice of proposed rulemaking on further requirements for bedclothes should be issued unless and until the matter has been fully evaluated and such a proposal be deemed warranted.

Bedclothes have intimate contact with the human body for many hours a day and play a central role in obtaining beneficial rest -- which is critical to human wellbeing, health, safety, and productivity. It is essential that bedclothes continue to be comfortable and restful, and that regulatory actions be avoided that would degrade these qualities, create irritating or downright unhealthy conditions, impact the environment, or impose unnecessary costs. As stated by CPSC Commissioner Thomas H. Moore on December 21, 2004, "We cannot afford to be cavalier about this massive introduction of FR [flame-retardant] chemicals into the homes of

Americans, which will only be compounded by any regulation we may adopt on upholstered furniture."

Bedding is already subject to substantial rules. Mattresses are subject to a CPSC flammability standard. 16 C.F.R. Part 1632. The mattress standard has been proposed to be strengthened. 70 Fed. Reg. 2470 (Jan. 13, 2005). Mattress pads are already subject to a CPSC flammability standard. 16 C.F.R. Part 1632.[1] In addition, as noted by CPSC, there are voluntary standards that apply to bedding items. ASTM D4151-92 (2001) measures ease of ignition and surface flame spread of blankets. Underwriters Laboratories has a standard for electric blankets. Further, CPSC has the general authority to act against substantial product hazards. See 16 C.F.R. Part 1115. Imposition of additional requirements on bedclothes appears unwarranted.

Additional regulation of bedclothes would be economically burdensome -- including substantial costs for manufacturing, treatment, testing, quality assurance and monitoring, recordkeeping, and compliance. CPSC has acknowledged in its notice of proposed rulemaking for mattresses, 70 Fed. Reg. 2470 (Jan. 13, 2005), that "[t]he extent to which bedclothes can be modified in a manner that is technologically practicable and economically feasible is unclear at this time."

---

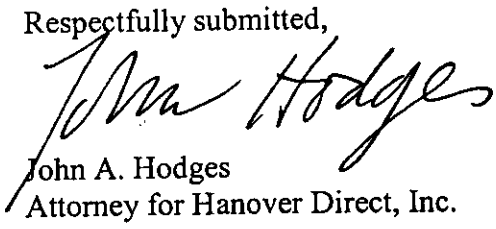
[1] The ANPR therefore is in error by stating that "[c]urrently, there are no mandatory flammability requirements for residential bedclothes in the United States."

Even the highly activist State of California is moving somewhat cautiously. As pointed out by CPSC in its ANPR, California's Bureau of Home Furnishings and Thermal Insulation (CBHF) Draft Technical Bulletin 604 does not cover textiles such as sheets, pillowcases, and blankets. Whatever one may think of its potential coverage of "filled" bedding, the fact that the CBHF does not cover textile products such as sheets, pillowcases, and blankets is a strong indication that no additional regulation of these items is warranted. And, with respect to filled bedclothes, we believe that CPSC should take no further action at least until testing in California has been completed and evaluated. (We will be submitting comments to California with respect to its rulemaking.) Indeed, a full analysis and evaluation should precede any potential notice of proposed rulemaking relating to bedclothes.

In summary, in light of existing provisions relating to mattresses and bedclothes, the proposed strengthening of the rules for mattresses, the questionability of additional rules for bedclothes, and the potential health, welfare, environmental and economic impacts involved, we believe that additional requirements for bedclothes are unwarranted. We urge that CPSC take no further action with respect to bedclothes at this time. We will comment further should CPSC issue a notice of proposed

rulemaking. In the meantime, we would be pleased to discuss this matter with CPSC.

Respectfully submitted,



John A. Hodges
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March 14, 2005

John A. Hodges
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Office of the Secretary
Consumer Product Safety Commission
Washington, DC 20207-0001

Re: Bedclothes ANPR

Dear Consumer Product Safety Commission:

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CPSC has requested comment on particular bedclothes that should be included in or excluded from a proposed bedclothes standard. Hanover questions whether there is need for new requirements relating to bedclothes; bedding is subject to a number of safety rules already, and the CPSC mattress standard is already proposed to be amended. The negative impacts of more onerous rules for bedclothes would be substantial for Hanover in relation to both the products it manufactures and products sourced from others. Negative impacts would be suffered by others in the bedclothes industry as well. In any event, no notice of proposed rulemaking on further requirements for bedclothes should be issued unless and until the matter has been fully evaluated and such a proposal be deemed warranted.

Bedclothes have intimate contact with the human body for many hours a day and play a central role in obtaining beneficial rest -- which is critical to human wellbeing, health, safety, and productivity. It is essential that bedclothes continue to be comfortable and restful, and that regulatory actions be avoided that would degrade these qualities, create irritating or downright unhealthy conditions, impact the environment, or impose unnecessary costs. As stated by CPSC Commissioner Thomas H. Moore on December 21, 2004, "We cannot afford to be cavalier about this massive introduction of FR [flame-retardant] chemicals into the homes of

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In summary, in light of existing provisions relating to mattresses and bedclothes, the proposed strengthening of the rules for mattresses, the questionability of additional rules for bedclothes, and the potential health, welfare, environmental and economic impacts involved, we believe that additional requirements for bedclothes are unwarranted. We urge that CPSC take no further action with respect to bedclothes at this time. We will comment further should CPSC issue a notice of proposed

rulemaking. In the meantime, we would be pleased to discuss this matter with CPSC.

Respectfully submitted,

John Hodges

John A. Hodges
Attorney for Hanover Direct, Inc.

STANDARD TEXTILE

15

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March 14, 2005

Consumer Product Safety Commission (CPSC)
Office of the Secretary
Room 502
4330 East-West Highway
Bethesda, MD

Re: Bedclothes ANPR

Standard Textile would specifically like to address the scope of the proposed (Draft) standard intended to address open flame ignition of bedclothes. Currently we serve two "institutional" marketplaces that utilize bedclothes – healthcare and hospitality.

The magnitude of "residential" death and injury as reported by the NFPA is significant (440 deaths and 2,230 injuries annually). When looking specifically at acute care healthcare facilities and hospitality, the incidences reported does not indicate that there is the same magnitude of a problem or even that the same types of hazards exists. We would like the CPSC to consider exempting healthcare and hospitality applications from the proposed standard. This is due to three factors – a proactive industry that does not have a rate of incidences that indicate intervention is needed, current FR test methods/requirements for institutional textile and regulations/controls that are in place that minimize the risk these institutional facilities have relative to "residential" applications.

Proactive Initiatives
In healthcare, the one area that has been identified as a fire risk accounting for several deaths a year is due to the growth and use of electro-optical systems including lasers. In 2002 ISO/TC 172/SC 9 "Electro-Optical Systems (including lasers)" published an initial standard ISO 11810:2002 titled "Optical and Optical Instruments – Laser and laser related equipment – Test method for the laser resistance of surgical drapes and/or patient-protective covers".

In addition, there is a draft for two sections of ISO 11810 specifically related to textiles – Test method and classification for the laser resistance of surgical drapes and/or patient protective covers. Part 1 is for primary ignition and penetration and Part 2 is for secondary ignition.

It is important to note that other than this effort, Standard Textile is not aware of other textile related flammability hazards of this magnitude in the institutional marketplace.

Current FR Requirements
We believe that the current FR requirements that are in place are adequate to ensure that textiles being used within institutional applications are effective in helping to maintain a safe environment. Please note that the California standards are routinely specified in bids outside of the state. These include:

- California Technical Bulletin 117 – This is both an open flame test and a cigarette smoldering test for upholstery fabrics.

- California's Title 19 – This is a flame ignition standard that measures the time of burning for wearing apparel, sheets, pillowcases, etc.
- Code of Federal Regulations 16 CFR 1632 (FF4-72) – This is a cigarette test for mattresses and mattress pads.
- Code of Federal Regulations 16 CFR 1615/1616 – Flammability of children's sleepwear.
- Code of Federal Regulations 16 CFR 1610 (formerly federal method CS 191-53) – Flammability of wearing apparel.

Regulations/Controls
We believe that part of the success and currently low incidence rates of fatalities in institutional facilities (healthcare and hospitality) are due to regulations/controls that go beyond what you find in residential applications. These include:

- The United States Hotel and Motel Fire Safety Act of 1990.
- Facility design including building materials, egresses and fire suppression devices like sprinkler systems, e.g., guidelines for design and construction of hospital and healthcare facilities by the American Institute of Architects Press 1996.
- Training and education of facility employees including evacuation processes.
- Regulatory Oversight by local/state fire marshals.
- Healthcare inspections by the Joint Commission for accreditation of healthcare facilities including a comprehensive accreditation manual for hospitals and guidelines for healthcare linen service – 1993.

We appreciate your consideration of the above points relative to our request that both healthcare and hospitality textiles be exempted from this "residential" oriented FR standard.

If you have any questions or would like further input from Standard Textile, please do not hesitate to let me know.

Sincerely,

STANDARD TEXTILE CO., INC.

Bradley J. Bushman
Vice President, Technical Affairs.

cc: Richard Stewart

Stevenson, Todd A.

From: Penny Keyes [pkeyes@standardtextile.com]
Sent: Monday, March 14, 2005 1:16 PM
To: Stevenson, Todd A.
Cc: Richard Stewart
Subject: Bedclothes ANPR

See attached document for comment on the Bedclothes ANPR. If you have any problems opening this document, please let me know.

Regards,

Bradley J . Bushman
Vice President Technical Affairs
Standard Textile Co., Inc.

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Stevenson, Todd A.

From: Bob Burton [bobb@pcf.com]
Sent: Monday, March 14, 2005 12:33 PM
To: Stevenson, Todd A.
Subject: Bedclothes ANPR

To: Office of the Secretary, Consumer Product Safety Commission

RE: Bedclothes ANPR

We are writing in response to the commissions request for comments on the Standard To Address Open Flame Ignition of Bedclothes. Pacific Coast Feather Company is a US based manufacturer of bedding products, with over 2,000 employees. PCF supports the commissions efforts to decrease the risk of home fires and reduce the number of resulting fatalities. Nationwide fire statistics show the number of deaths from home fires and bedroom fires has been decreasing each year. Due to this decrease, the high cost and uncertainty of national regulation in this area, and the reasons listed below, PCF does not believe the adoption of a national flammability standard on bedclothes is necessary.

Data Must Be Up-to-Date

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The CPSC must obtain and study current data on home fires, causes and resulting injuries and deaths. Changes in consumer awareness, smoke alarms and habits make it imperative that new data be used in evaluating the fundamental premises for any regulation. In fact, house fires and deaths resulting from house fires have declined since 1998.

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The CPSC states in the ANPR that it has conducted reviews of reports of home fires. That alone cannot be the basis for a Proposed Rule or Regulation. Data through 2004 must be examined. The location of the fire in the home, the time of the fire (for example, was it during usual sleeping hours?), the existence of working smoke alarms and other such factors must be considered and analyzed before the CPSC can make any determination that bedding/bed clothes present an unreasonable risk.<!--[if ! supportEmptyParas]--><!--[endif]-->

The Act Ignores Cost and Benefit Studies

The Consumer Product Safety Act requires the study of any new standards costs and benefits. There has not been a full investigation into the costs to consumers, retailers, or vendors of complying with the proposed regulation. PCF expects the costs to be significant and the Commission should not ignore them..

PCF also believes that the increased cost will lead to consumers replacing their pillows and comforters less frequently. This longer replacement cycle will lead to lower sales with a corresponding multiplier effect throughout the supply chain. Many industries will be impacted. Raw material suppliers, trucking, and retail workers to name a few.

Environmental Impact Will Not Be Considered

There has been little or no investigation into the potential toxicity of flame retardant chemicals, or other measures, that the industry would be forced to use. The toxicity issue should include both the effect of flame retardant chemicals on the consumer, and the release of such chemicals into the environment. Consumers should not be forced to purchase a product with unknown chemical risks.

These are important issues that must be evaluated before any flammability standard can be properly considered by the CPSC.

Regulation will not achieve result

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One factor that will undermine the effect of any regulation is the number and type of items typically found on the tops of beds. These items will not be regulated for flammability. Plush toys, regular toys, newspapers, and clothes are part of the usual "clutter" on a bed. Even if the bedding and the mattress were to meet a flammability standard these other items could be the igniting material.

<!--[if !supportEmptyParas]--> <!--[endif]-->

Another factor that affects the incidence of home fires, according to the U.S. Fire Administration, is the income level of the household. The USFA believes there is an inverse relationship between income and fire risk, due to poorer household maintenance, lack of working smoke alarms and quality of furnishings. The increased cost to the consumer of the flammability regulation would mean that lower income homes would not replace their older, non-compliant bedding/bed clothes, and if they did they would obtain replacement product through less expensive sources, like second-hand stores, garage sales and charitable organizations.

<!--[if !supportEmptyParas]-->

Therefore, any regulation would not help the people that need it the most.

California's Proposed Standard Is Not Basis for ANPR

<!--[if !supportEmptyParas]-->

California, through its Bureau of Home Furnishings and Thermal Insulation, has drafted and will issue as a proposed rule, Technical Bulletin, TB-604, which sets forth the flammability tests that filled bedding products must pass in order to be sold in California. The California Bureau, limited by the implementing legislation, was

only allowed to consider test results and home fire data that was 5 years old when they started their process. They are not allowed to consider cost, loss of jobs, consumer preferences or toxicity. In fact, even though the State of California recently banned the use of certain chemicals that have been used to comply with other existing flammability regulations, the Bureau is not allowed to consider its own state's ban. Due to the narrowness of the California Bureau's mandate and its time limitations TB 604 should not be used as basis for any national regulation.

Scope of standard should be narrowed

PCF believes that the labeling of feather and down filled products as potential fire hazards is inappropriate. California's own full-scale fire tests specifically failed to demonstrate that feather and down filled products contribute significantly to bedroom fires. In addition, the Moody's guide for insurance underwriters states that feather and down does not burn.

Feather and down filled bedclothes are lightweight, and use special high thread count down-proof fabrics. The consumer who purchases feather and down products is expecting the ultimate sleeping experience. There currently is no way to modify these products to meet an undefined standard that will not severely impact this experience.

PCF supports market-driven, non-government regulation of the flammability of home furnishing products. PCF also believes in giving the consumer a choice. A choice between a product manufactured with added chemicals, or one without.

Conclusion

Based on the foregoing, PCF requests that the Commission does not act upon a national standard for bedclothes. Instead, PCF urges the Committee to focus any regulatory and educational efforts on the true causes of tragic home fires. The CPSC should be allowed to completely investigate and test not only the flammability of filled bed clothing, but also test the proposed "solutions", weighing all factors - including cost and toxicity - that would affect the U.S. consumer.

Thank you for your consideration.

Eric A. Moen

President and Chief Operating Officer

Pacific Coast Feather Company

206-624-1057

17

Stevenson, Todd A.

From: wilfordlieber@aol.com
Sent: Monday, March 14, 2005 1:01 PM
To: Stevenson, Todd A.
Cc: info@idfl.com
Subject: Bedclothes ANPR

Flammability ledclothes ASTM S. lammability Down & Feathers I...

Dear CPSC,

I am writing about the ANPR for flammability of bedclothes.

My detailed comments are found in two attachments.

1. A copy of my comments to the ASTM flammability seminar about 18 months ago. The information that I provided then is still applicable to the current request for comments.

2. An IDFL fact sheet on the flammability of down and feathers.

In short summary my comments deal with three factors:

1. Bedclothing regulation deals with products that the consumers will spend 1/3 of their lives in an intimate way. The fabrics and treatments will touch the skin of the consumer for 8 hours a day 365 days a year for their entire lives. Any possible health concerns for fire treatments should be carefully evaluated. Also, any reduction in comfort of the bedding textiles will have enourmous consequence.

2. Mattress are very different that bedclothing. A mattress is a very standardized shape and size. The mattress industry has worked with the flammability issue for many years. Mattresses are big price items. In contrast, a single bed can have SKUs of bed clothing. My current hotel has 21 different, separate labeled pieces of bedclothing. Many of which are very small in expense.

3. The bedclothing industry has 1000's of large and very small vendors. The standards for all of this variety of material will be difficult at best. Most of the new products will be used with old heirloom products that will never meet any proposed standards.

Standards for Mattresses are fairly straightforward. Proposed standards for bedclothing must deal with so many new issue.

My request is that CPSC carefull;y review ALL of the issues involved and make a very careful decision.

Best regards,

Wilford K. Lieber
President, IDFL Institute

1455 South 1100 East
Salt Lake City, UT 84105
Tel 801 467 7611
Fax 801 467 7711

email : wilf@idfl.com or wilfordlieber@aol.com

ASTM FLAMMABILITY SEMINAR – Oct 2003

I am pleased to represent the bed clothing industry in responding to the proposed regulation of bed clothing for flammability standards. Mr. Leo Hollander, Chairman of the Board of Hollander Home Fashions, had also hoped to be here and give information from an manufacturers perspective. He could not attend and I have included his comments in my presentation.

Mine will not be a technical discussion. I will not use any professional charts and displays. I do not have any sensational pictures or stories. I will simply try to voice a common point of view in the industry. Many others have similiar opinions, even among the regulatory community, but are afraid to publicly state them.

Who do I represent?

I specifically represent the down and feather industry. IDFL has tested down & feather products for 25 years. However, a majority of down and feather companies also manufacturer bed clothing with synthetic and other natural fill.

I will try to represent two perspectives in my presentation:

1. First, I will do my best to represent the concerns of the bed clothing industry.

2. Second, I will attempt to represent the point of view of the consumer in all of this. I feel strongly that the consumer's viewpoint has been left out entirely in the ongoing discussion of bed clothing flammability regulations.

The Industry Perspective on Reducing Fire Deaths and Injuries

The men and women in this industry are sensitive to flammability of their products and are willing to do their part to reasonably reduce the risk of death and injury from fire. These people have families and children. They, just like the fire professionals and regulatory proponents, want to reduce the risk of fires.

I have 5 children in their teens and early 20's. I vividly recall all of the matches and candles and burning of things in the basement, in the yard, in the tree-house and even in their bedrooms. As a parent, I have worried about them burning the house down, as well as a hundred or thousand other risk-prone things that kids do everyday. I have seen fires racing down a dry hillside dangerously close to my home and only a month ago I witnessed a near-disaster house fire starting in the bedroom of a house very close to our office. An off-duty police officer spotted the fire and rescued the sleeping residents.

One of the dilemmas in stating any opposition to proposed flammability regulations is that proponents will brand you with all kinds of names: anti fire-protection, anti children safety, anti fire professionals. You may as well be anti-smoky the bear and part of some vast conspiracy greedily wanting to make money at the expense of children.

It is politically "unthinkable" to vote against expanded fire regulation, regardless of merit. It is just as difficult for industry or regulatory officials to step up to the plate and openly oppose or even question such regulation.

The industry does not necessarily oppose flammability standards for bed clothing.

However, the industry has some very harsh things to say about the current way that this bullet train of regulations is speeding through the countryside without any chance that this regulatory train will slow down long enough at the next station to pick up the important passengers of industry and consumers. We have a valid concern that the industry might suffer irreparable harm in the short term and the consumers might suffer minor to catastrophic harm in the long term.

We have several concerns about the regulations for bed clothing:

Where are the test methods?

1. The test methods are brand-new and still under review and tinkering. No one that we know in the bed clothing industry has ever independently used these test methods. Gordon has carefully explained the possible methods at a few meetings and a industry staff have viewed possible test methods in California. The meetings initiated more questions than answers.

2. As of this writing, we are still not in possession of an acceptable, tried and proven test method in order to comply with yet undisclosed regulations.

3. We are less that 90 days from a possible implementation and have no idea what components would have to be utilized in order to conform with the yet undisclosed regulation.

4. The ASTM process for acceptance of even a simple test method is deliberately very tedious and time-consuming to avoid errors and poor test methods. It requires immense input and meetings and revisions and editings. It requires round robin test series. The process usually takes years. Is such a careful effort being applied in the test method for bed clothing? I suspect not.

5. I realize that California is under a legal obligation to come up with such a method in a very short time. Because of this one bill pushed by one assemblyman in California – are we forced to invent a possible unsatisfactory test method that will likely affect not only 30 million people in California but 280 million people nationwide.

We politely, but forcefully request that any discussion of potential regulations be delayed until a careful ASTM-like review of test methods take place.

What are the costs to the industry and eventually to the consumer?

This information is from several manufactures including Hollander Home Fashions and Louisville Bedding.

1. Because we know so little about the proposed regulations and test methods it is very difficult to estimate the impact of new flammability standards.

2. If we were to hazard an educated estimate, our research shows cost increases of fiberfill components in excess of 400%. What this means is that if current fiber fill is $.80 per pound, the future cost will be $4.00 per pound.

3. Currently, a fiberfill bed pillow wholesales at $4.00 to $5.00 and retails around $10.00. Just the filling alone of a 20 oz. pillow increases from $1.00 to $4.80. The wholesale price is doubled on the filling along. Other components and processes will likely also require change and increased costs. The wholesale price of the pillow will likely jump to around $10 and the retail price will go as high as $23.00.

4. The economic hardships to the average consumer will be great. Statistically, a $23.00 pillow sells at only 15-20% volume of a $10.00 pillow.

5. A dramatic reduction in pillows sales would occur because the lower priced pillows would be eliminated from the marketplace. We estimate an industry sales loss in California alone of 8-9 million dollars. With an average 8% sales tax rate, the reduction in sales tax in California would be $500,000-600,000.

6. One side effect will be that consumers will not replace pillows as often. Regardless of industry efforts to inform consumers that pillows can be laundered or dry-cleaned – a great many consumers never do this. They simply replace pillows after long use. If this replacement period is lengthened, the health risks associated with dust and germs will increase. Health costs and sick days will increase.

7. Americans spend one third of their entire lives intimately close to bed clothing. Any adverse impact on such bed clothing has enormous consequence.

8. The possible dramatic drop in pillow sales will effect all kinds of related industries from packaging to transportation.

9. Layoffs in the bed-clothing industry would follow. Pillows continue to be manufactured in the USA because the raw materials costs are low.

10. Polyester filled comforters represent a different challenge. The cost of polyester in a comforter is minimum compared to the cost of covering fabrics. We suspect that inexpensive polyester-filled comforters would have to be eliminated from the marketplace for months.

11. New weaving designs with new fillproof materials would have to developed. We would have to discover new comfortable, breathable, fill-proof flame-resistant fiber blends or add chemical retardants with their associated toxicity and carcinogenic risks.

12. Feather and down filled-products also are a mystery in regard to the test methods. Down and feathers are relatively non-flammable but fail one of the proposed tests for weight loss after the fabric shell burns (because the down disperses after the shell is ruptured during a burn.

13. Down and feather products have the same problems in the cost of replacing covering fabrics.

We request that any implementation of regulation be delayed until a careful cost-benefit analysis with input from all interested parties including the consumer.

What are the short and long-term risks to the consumers from the possible solutions to make bed-clothing more flame retardant?

The issue of risk to the consumer is a real one. If flammability regulation takes place the consumer has literally no chance of opting out of the program. In all other safety and fire regulations, there is usually a way of opting out. If child's fire retardant sleepwear were to cause a minor allergic or uncomfortable reaction, the parents could opt for the child to wear a t-shirt and shorts. Airbags can legally be disabled for very small people who would be killed by the impact of the airbag.

280 million Americans sleep on top of, under and around bed clothing. There is no way out. Not only do all 280 million people use these products in a intimate fashion, they use them 8 hours a day, 7 days a week, 365 days a year, 27,000 days or 210,000 hours in a lifetime.

The only way out for a consumer is to turn up the heat to 80° and sleep on the floor with no covers. – but wait a minute – I am sure that the carpet is full of regulatory-mandated chemicals. I guess the only way for a consumer to opt out of the regulation is to sleep on the front lawn with down underwear and down jackets. This may just be a bonanza for the down industry after all.

In all seriousness, we need to carefully consider the risks to consumers who will spend 1/3 of their lives with new chemicals, new woven materials, or new barrier fabric linings.

Three possible solutions exist to meet possible flammability regulations. These solutions exist for both the filling and the fabric coverings.

1. Fire-retardant chemicals.
2. New weaves and fiber blends.
3. New barrier fabric linings

Risks of chemical solutions to reduce flammability of bed-clothing.

This is an obvious concern.

It is more than just a concern. It is a real risk to the health and well being of the consumer. It has potential catastrophic implications to the consumer and to the industry.

May I read from the August 2003 newsletter of the Association of Bedding and Furniture Law Officials (ABFLO). This is the association that the California regulatory agency proposing these regulations belongs to.

> " The European Parliament and the EU ministers have unanimously agreed to ban the marketing and use of two chemical flame retardants. Penta and OctaBDE beginning July 1, 2004.
>
> Penta BDE and OctaBDE chemical flame retardants are used almost exclusively in polyurethane foam that is used in mattresses and upholstered furniture.
>
> The decision was taken after the EU had done a careful risk assessment study and found that both chemicals were bio-accumulating and were found in human breast milk. Their study also showed that the chemicals posed numerous environmental risks."

I assume that these chemicals were reviewed before implementation for possible side effects. I assume that no one purposely put harmful chemicals in mattress. However, it was difficult to test the accumulative effect of 210,000 hours of sleeping on such mattresses. And the foam in the mattress never touched the human skin. It was separated by the mattress fabric, the mattress pad and sheets.

The potential risk of chemical-laced bed clothing that touches human skin for 210,000 hours is something that needs enormous study before implementation.

I defy anyone to even think about a regulation requiring chemical retardants without absolute certainty that it will not pose a short or long-term health risk.

Asbestos was first used in the 1st century. It was used for 1900 years in a myriad of uses above all in fireproofing products such as safety clothing for fire-fighters. We all know the horrible disaster of asbestos. After a latent period of up to 30 years and more it causes a variety of cancers. Large and small industries have gone bankrupt in resolving the asbestos

> **The industry demands that any regulation requiring the use of chemical fire retardants be delayed until a comprehensive health study be completed outlining the effect of human skin contact to such chemicals over the period of 210,000 hours.**

Yes, there might be other possible non-chemical solutions to meet yet undisclosed flammability standards.

What about new fiber blends and new weaves?

The regulators have indicated that alternate fibers blends and weaves may exist to meet possible flammability standards.

1. For hundreds of years researchers in the bed clothing industry have investigated and developed fabrics which provide a comfortable warm sleep. The consumer has a myriad of fabrics, finishes and textures to choose from to meet her individual needs.

2. The development has increased geometrically over the past 10-20 years.

3. For centuries down comforters were encased in the same cotton downproof fabrics. During the past 20 years hundreds of new fabrics have appeared as down comforter shells.

4. Our family has slept under traditional white cotton down comforters for decades. The kind my father brought from Switzerland when the family emigrated to the USA. After buying some fleece covered down blankets last year, I find all of my kids wrapped in the down blanket without sheets (top or bottom) or duvet covers.

5. New fabrics continue to appear at breath-taking volume.

6. We have questions about these new flame retardant blends and fabrics

    a. How many of existing fabrics will be forced to disappear because of the new regulations?

    b. Have the new blends been tested to determine human skin reactions?

    c. Do any of the new blends have some fibers containing flame retardant chemicals?

    d. Have the new fabric blends been subjected to long term consumer use?

    e. What are the costs of the new fabrics?

What about barrier linings in filled products.

Some discussion exists about using barrier fabrics between the outer shell of filled products and the filling. Although these barrier layers might allow many existing fabrics to be used – .Several questions need to be raised about these barrier products.

1. Will these barrier layers have any chemical retardants?
2. Will these barrier products negate the characteristics of the outer fabric such as breathability or weight?
3. Have these barrier products been subjected to long term use by consumers?
4. What is the added cost to the consumer for the barrier lining?

CONSUMER VIEWPOINT OF FLAMMABILITY REGULATION

Scattered in the above are many items related to the consumer point of view.

Several basic questions need to be answered successfully for the consumer?

1. **What will the new products cost?**
2. **Can I choose NOT to buy flame retardant products?**
3. **Will I sleep as well with the new products?**
4. **Will the new products be as comfortable as my old products?**
5. **Is there any short or long-term health risk with the new products?**
6. **What is the real fire risk associated with the existing bed clothing?**
7. **Exactly, how will the new products reduce the risk of fire?**

We hope that regulatory officials seriously consider the issues that we have raised this afternoon. This speeding train needs to be slowed down before we put the entire bed clothing industry and long term consumer health at great risk.

FLAMMABILITY OF DOWN & FEATHERS

Down and feathers are among the least flammable bedding filling material according to various government and industry sources.

Which government agencies are proposing bedding flammability standards in the USA.?

The Bureau of Home Furnishings and Thermal Insulation in the State of California.have two areas of regulation: See their website for additional information —> www.dca.ca.gov/bhfti

1. Beginning in January 2005 a new flammability standard for mattresses will be enforced. This is TB-603 which is a much stricter than the previous mattress standard.

2 California State Law requires the Bureau to review the part that bed clothing (any bedding product that is filled) in home fires. If bedding plays a significant role, the Bureau must develop flammability standards. Such standards are being reviewed and developed by the Bureau under the name of TB-604. A proposed standard will be developed by the end of 2004. Implementation and enforcement dates are not known.

The Consumer Product Safety Commission (CPSC) of the USA federal government is contemplating the implementation of nationwide flammability standards for both mattresses and bed clothing. These would likely be similar to the proposed California regulations.
The CPSC also has a website ----> www.cpsc.gov

Are down and feathers flammable?

All textile products burn when exposed long enough to an open flame. Down and feathers smolder but have a more difficult time igniting. (Especially compared to other fill materials.)

In the intial testing of bedding products by the California Bureau, down and feather products pass the proposed standards of the proposed bedclothing flammability regulation. They do the best of any filling in t hese preliminary tests. The American Down Association (ADFS) has requested that down and feather products be exempt from these regulations.

British tests show that non-treated down and feathers pass flammability standards equal to flame-retardent treated synthetic materials.

Do other countries have flammability standards?

The Europeans have been reluctant to adopt flammability standards for bedding products because of the concern for the environment problems of flame-proof fabrics and comfort problems.

The British have amont the most stringent flammability standards for bedding. Comforters are exempt for these standards, however. We do not know of flammability standards in Canada.

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18

Stevenson, Todd A.

From: Missy Branson [mbranson@ncto.org]
Sent: Monday, March 14, 2005 2:24 PM
To: Stevenson, Todd A.
Subject: ANPR -- Bedclothes

Attached are NCTO's comments on the CPSC notice of ANPR for bedclothes. Please let me know if you have any questions.

Missy J. Branson
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NCTO
NATIONAL COUNCIL of TEXTILE ORGANIZATIONS

March 14, 2005

Office of the Secretary
Consumer Product Safety Commission
Washington, DC 20207-0001
Via email: cpsc-os@cpsc.gov

Re: Bedclothes ANPR

Dear Sir/Madam:

These comments are submitted by the National Council of Textile Organizations pursuant to the advanced notice of proposed rulemaking published in the January 13, 2005, issue of the ***Federal Register*** (16 CFR Part 1634) calling for a possible Consumer Product Safety Commission (CPSC) standard to address open flame ignition of bedclothes.

The National Council of Textile Organizations (NCTO) is a new group designed to represent the entire spectrum of the United States textile sector, from fibers to finished products, from machinery manufacturers to power suppliers. NCTO consists of four separate councils representing the fiber, fabric, supplier and yarn industries, each with its own board representation. Many of the fabric and yarn manufacturer members of NCTO were formerly members of the American Textile Manufacturers Institute (ATMI) and the American Yarn Spinners Association (AYSA), two organizations which had an extensive history of working with the CPSC on consumer safety issues affecting the domestic textile sector. After the creation of NCTO in early 2004, these two organizations were subsequently dissolved by their respective boards of directors.

The American textile sector is certainly aware of the fact that textile products burn, and that is why we, through our predecessor organizations, have worked with CPSC on flammability issues for many years. The industry has consistently urged that any proposed flammability standards on the end uses of textile products be comprehensive in nature – that is, they don't single out the textile component(s) of such items but rather address every aspect of the finished products. We have also consistently urged that any proposed standards should be based on sound scientific research, and that they be technically feasible and economically viable for the textile industry, our customers and the American consumer. This includes ensuring a range of choices for the American consumer.

As has been noted in previous industry comments to the Commission, American textile companies range greatly, from small, family-owned businesses to large, publicly-held corporations. Virtually all American textile manufacturers, regardless of size or ownership, are facing very real and serious threats to their continued survival as a result of the elimination of all quantitative limitations (quotas) on imported textile and apparel products on January 1, 2005. In this light, any new standards that might impose additional costs on U.S. manufacturers, or reduce consumer demand for our products or the end products made by our customers, would be a cause of grave concern.

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While the industry has been working with CPSC for some time regarding a possible rulemaking on open flame ignition of mattresses and mattress/foundation sets (16 CFR Part 1633), and NCTO would respectfully request that we be informed of and permitted to participate where warranted in future discussions on this subject, these comments today pertain more specifically to the advanced notice of proposed rulemaking (ANPR) on a standard to address open flame ignition of bedclothes (16 CFR Part 1634).

As indicated in the ANPR, "the term 'bedclothes' can include a variety of products, such as sheets, blankets, mattress pads, pillows, comforters, and similar products that are used as covering on a bed." This list constitutes a wide variety of products with many dissimilar uses (many of which are by the choice of the consumer and completely out of our control) and features, including fibers, fiber mix, content, etc. Indeed, as specifically stated in the ANPR, "products that contain fibrous or other materials are called 'filled' bedding...(and) because of their greater mass or fuel load, filled products are likely to contribute more significantly to a mattress fire than unfilled products, such as sheets and blankets." This bears out the apprehension our industry has previously expressed with respect to possible flammability standards – that any standards must be comprehensive and address all components of the product, not just the textile material(s) contained therein. This is particularly true in that U.S. textile manufacturers often sell their fabrics to other companies for further processing and assembly and thus we have no control over the fill contents of the end product, which as noted above are likely to contribute more significantly to a mattress fire.

As such, we would urge the Commission to consider very carefully the feasibility of establishing a single standard to cover such a broad array of variables. We would respectfully suggest that the Commission consider following the lead of the California Bureau of Home Furnishings, which has issued draft Technical Bulletin 604 to regulate only filled bedclothing, not purely textile products such as sheets, pillowcases and blankets.

We also reiterate our previously expressed concern over the lack of significant data that might show that fire hazards could be reduced if certain items within the broad category of "bedclothes" were regulated.

We also renew the worries previously expressed by the industry with respect to upholstery fabric – that is, that any chemical treatment of the fabric of the various bedclothes products could have a significant and adverse impact on consumer sales, as such treatment could have a major impact on the "feel" and thus the desirability of certain products.

Finally, we must emphasize our very real fear that imported bedclothes products, while in theory accountable to any standards we would face, would in all likelihood be an area extremely prone to undetected cheating. Currently, only two percent of cargo containers bearing imported textile products are inspected to determine whether they actually hold what they purport to contain, and that their country of origin is what is claimed on the shipping documents. The chances

of any such containers containing bedclothes which are actually tested before they enter the U.S. market are virtually non-existent. Only after-the-fact random testing might discover some violations of any standards, and by then how many thousand-fold additional such items would have already been sold to U.S. consumers? As a suggestion, the Commission, should it choose to pursue a rulemaking in this area, might want to explore making retailers (and/or importers) responsible for independent testing of a representative sampling of each shipment of any such bedclothes before they are ever put on the shelves.

As always, the United States textile industry looks forward to working with the Commission to ensure the safety of the American consumer in a responsible manner. If you have any questions, please contact me at (202) 756-1440, or via email at cjohnson@ncto.org.

Sincerely,

Cass Johnson
President

ALAN S. MACDONALD
DIRECT (301) 261-1277
FAX (410) 280-8667
EMAIL: ALAN@MACMACLAW.COM

March 14, 2005

3/15/05
~~CONFIDENTIAL~~ Todd

Via Facsimile (301) 504-0127

Todd A. Stevenson
Office of the Secretary
U.S. Consumer Product Safety Commission
Washington, DC 20207-0001

Re: Bedclothes ANPR

Dear Mr. Stevenson,

On behalf of Pier 1 and pursuant to section 4(g) of the Flammable Fabrics Act, I am responding to the Advanced Notice of Proposed Rulemaking regarding the Standard to Address Open Flame Ignition of Bedclothes.

Pier 1 fully supports the Commission's efforts to prevent bed fires and related injuries. Pier 1 is concerned that without proper and specific definition of "bedclothes" a wide range of products that are not intended for use on beds might be included in adopted standards. Specifically, Pier 1 believes that the term "pillow" could include decorative pillows that are used throughout homes and are not sleeping accessories.

There are several important differences between sleeping and decorative pillows. First, sleeping pillows are used and located exclusively on beds. Decorative pillows are usually used in dens and living rooms, on sofas and chairs. If decorative pillows are used on a bed, they are solely for daytime appearance and are removed for sleeping. Therefore, associating decorative pillows with sleeping pillows for flammability standards is illogical.

Second, sleep pillows are designed to be used with a pillowcase, decorative pillows are not. Sleep pillows were tested by the National Institute of Standards and Technology with pillowcases. Therefore the test results are not applicable to decorative pillows.

Third, sleep pillows have relative size uniformity. Standard pillows are 20x 26, Queen Pillows are 20 x 30 and King pillows are 20 x 36. Decorative pillows are usually much smaller and do not typically exceed 25 inches on any side.

Fourth, sleep pillows are designed for neck and head comfort while sleeping and are filled with material intended to maximize comfort. Decorative pillows are designed for aesthetic appearance and do not have functional uses.

Given the differences in design and use between sleep and decorative pillows, it would be inappropriate to include decorative pillows in any bedclothes rulemaking. As decorator pillows are not intended to be slept on, including them in flammability standards for bedclothes is overbroad. I suggest that a definition of sleep pillow be included in any bedclothes flammability regulations. Pillows with no more than 25 inches on any side and pillows that are not designed or intended to be covered by a pillowcase ought to be exempt from this rulemaking.

The California Department of Consumer Affairs, in its Draft Technical Bulletin 604 made a distinction between sleep pillows and decorative pillows. While Pier 1 believes that the distinction made by California is too general, it is important to note that distinctions between pillow types has been recognized.

Further, pursuant to the Consumer Product Safety Act, Pier 1 requests that you not disclose these comments and treat them as confidential. 3/15/05 Todd per M. Macdonald

Thank you for the opportunity to present our comments, and please do not hesitate to call me if you have any questions.

Sincerely,

Alan S. Macdonald

cc: M. Ells

MACDONALD + MACDONALD

FACSIMILE TRANSMITTAL SHEET

TO: Todd A. Stevenson	FROM: Alan Macdonald
COMPANY: CPSC	DATE: 3/14/2005
FAX NUMBER: 301-504-0127	TOTAL NO. OF PAGES INCLUDING COVER: 3
PHONE NUMBER:	SENDER'S REFERENCE NUMBER:
REFERENCE:	YOUR REFERENCE NUMBER:

☐ URGENT ☐ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

Please see attached letter.

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STATE OF CALIFORNIA - STATE AND CONSUMER SERVICES AGENCY

ARNOLD SCHWARZENEGGER, Governor

State of California Department of Consumer Affairs

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March 14, 2005

U.S. Consumer Product Safety Commission
Office of the Secretary
Washington, DC 20207-0001

Subject: Comments on "Bedclothes ANPR"

Assembly Bill 603 (AB 603), signed into California law in August 2001, mandated the California Bureau of Home Furnishings and Thermal Insulation (Bureau) to adopt a standard for the open-flame resistance of mattresses, mattress sets and futons (Footnote 1). This standard, known as Technical Bulletin 603 (TB 603), mandates limited fire growth in mattresses, mattress/box spring sets, and futons when exposed to a large open flame for 30 minutes. In addition, AB 603 mandates the Bureau to adopt an open flame standard for filled bedclothing items such as comforters, bedspreads, pillows, and mattress pads, if research finds that these items contribute to mattress fires.

At the Bureau's request, the American Textile Manufacturer's Institute (ATMI) conducted a survey of the U.S. residential filled textile bedding product market to capture the types and volumes of products currently being sold (Footnote 2). This information was helpful to the Bureau in obtaining a deeper understanding of the scope of potentially regulated products in this market and other ancillary issues affecting the safety, labeling and costs of these products.

The majority of bedroom fire scenarios not caused by smoldering (cigarette) sources involve a small open flame source (match, candle. or lighter) or an electrical resistance heater igniting an article of filled bedclothing. The resulting fire grows to eventually involve the mattress. The combination of the burning bedclothes and burning mattress or mattress set, along with other combustibles in the room, often leads to a life-threatening condition in a bedroom in a short period of time. Thus, safety improvements can be achieved by slowing down the rate of growth of this fire scenario.

Research conducted by the Bureau and the National Institute of Standards and Technology (NIST), which was supported by the Consumer Product Safety Commission (CPSC) and sponsored by the Sleep Products Safety Council (SPSC), involved an assessment of the flaming insult typically seen by a mattress from burning bedclothes (Footnote 3) and the development of a methodology to determine the amount of fire contribution from a mattress (Footnote 4). NIST also performed research to determine how modifications in the flammability of bedclothing products (pillows, comforters and mattress pads) might improve the fire safety environment of a bedroom (Footnote 5). As a result of this work and related research conducted by the Bureau, it was determined that filled bedclothing products once ignited contribute to mattress fires. These conclusions support the need for a standard U.S.

addressing the risk associated with the flaming ignition of bedclothing products placed on top of a mattress.

Bureau research to develop a small-flame resistance standard for bedclothing, to be known as Technical Bulletin 604 (TB 604), began in the Spring of 2003. A TB 604 Industry Task Force consisting of material suppliers, manufacturers, wholesalers and retailers of bedclothing, was formed to assist the Bureau in development of this standard. Various bedding standards such as those used in the European Union were also reviewed for relevance. Based on NIST work, and our own research, the Bureau developed a draft TB 604 standard that is still under discussion, dated Oct. 1, 2004 (Footnote 6). The Bureau recommends that this draft TB 604 standard be used as a model for moving forward on development of a federal bedclothing standard.

Development of an enforceable standard for bedclothing is not as straightforward a process as for mattresses, due to the wide variety of types of products included in this category. There is also significant variation in the sizes, shapes, thickness, geometric configurations, functionality and costs of bedclothing products. Also, given the size and weights of these products relative to mattresses, the number of companies producing them is greater and the geographical distribution of the sources is more widespread. Due to these and other factors, a choice must be made between a full-scale (burn room) test performed on the actual product and a bench-scale test (performed in a standard laboratory hood) on a mockup of the product. The Bureau's recommendation to adopt this bench-scale test protocol outlined in the draft TB 604 standard, or some variant of it, recognizes the need to compromise between a costly finished-product standard, which must be performed in a full-scale fire test facility and a small-scale test.

While the Bureau reserves comment on the possible need for mandatory prototype testing, we encourage manufacturers to establish thorough quality control, employee training and product testing programs. Periodic product testing should be performed to help ensure that no changes occur in material components or construction processes that would cause failure of the standard.

Prior to the opening of the formal rulemaking process for adoption of the California standard, the Bureau has decided to proceed with a precision and bias inter-laboratory test study. Given the lack of prior benchmark standards for bedclothing products in California, and the United States, a precision and bias study to validate this proposed standard and give it additional scientific validity is needed. Also, an inter-laboratory study is a reasonable expectation of any standards development process, consistent with sound science. The study will help to confirm that a number of different laboratories can conduct this test and produce the same results, within acceptable limits. It will also help to establish the expected tolerance in results from test to test (repeatability) and the tolerance expected when the test is done on identical products by a number of different laboratories (reproducibility).

Finally the study will establish the expected level of precision and bias in the numbers generated, to aid in setting effective and reasonable pass-fail criteria. If a number of laboratories can reproduce comparable data based on this proposed TB 604 test protocol, this will help to demonstrate that the test is robust and can legitimately be used as an enforcement tool for establishing a new fire performance baseline for these consumer products. When a final report on this precision and bias study is issued, it will become part of the California public record and will be forwarded to CPSC as a supporting document for the federal rulemaking process.

The Bureau appreciates the close collaboration with the Consumer Product Safety Commission's technical staff and with the textile industry in partnering to develop this draft standard.

Best regards,

Brian J. Stiger
Chief

Footnotes:

1) California Assembly Bill 603 (Dutra), Chaptered August 2001.

2) "ATMI Survey on the U.S. Residential Filled Textile Bedding Products Market" (Executive Summary), Spring 2002.

3) "Flammability Assessment Methodology for Mattresses", Ohlemiller, T. J.; Shields, J. R.; McLane, R. A.; Gann, R. G., NISTIR 6497; 94 p. June 2000

4) "Estimating Reduced Fire Risk Resulting From An Improved Mattress Flammability Standard", Ohlemiller, T. J.; Gann, R. G., NIST TN 1446; 80 p., August 2002

5) "Effect of Bed Clothes Modifications on Fire Performance of Bed Assemblies", Ohlemiller, T. J., Gann, R. G., NIST TN 1449, 37 p. February 2003.

6) California Bureau of Home Furnishings and Thermal Insulation, Technical Bulletin # 604 (Draft), "Test Procedure and Apparatus for the Flame Resistance of Filled Bedclothing", October 1, 2004

Attachment: Technical Bulletin 604 Draft Standard, Oct. 1, 2004

State of California

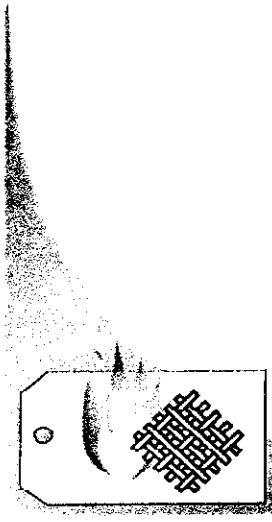
Department of Consumer Affairs

DRAFT

October 1, 2004

TECHNICAL BULLETIN 604

Test Procedure and Apparatus for the Flame Resistance of Filled Bedclothing



Bureau of Home Furnishings & Thermal Insulation

California Department of Consumer Affairs

Test Procedure and Apparatus for the Flame Resistance of Filled Bedclothing

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Test Procedure and Apparatus for the Flame Resistance of Filled Bedclothing

Scope

The test procedures outlined in this document are intended for use in determining the resistance of filled bedclothing or top-of-the-bed items to flame propagation when subjected to a small open flame. These items include comforters, quilted duvet covers, quilted bed pads, bedspreads, bed pillows and bed-rest cushions, mattress pads, quilted bed shams, quilted pillowcases, padded headboards, foam topper pads (covered and bare), etc. The tests do not apply to non-filled bedding items such as blankets, sheets and pillowcases.

Section 1 – Flat Filling Materials Component Test - Open-flame Resistance:

1.1 Scope - This test applies to filling materials used in bedclothing items such as comforters and bedspreads which are designed to lie flat on or around a mattress foundation, including synthetic (manufactured) and natural textile filling materials that can be carded, garnetted, air-layered or otherwise formed into a continuous fiber web consisting of battings, pads, etc. It also applies to mattress pads that are filled with flat filling material and have a thickness greater than 50 mm (2 in.). It applies to resilient cellular (slab stock and molded) foam pads used in pillows and mattress pads. The test measures the ability of a flat (horizontal) sample to resist a certain percentage of weight loss by a given time when subjected to a small open-flame ignition source applied at a corner of the sample. For the purposes of this standard, synthetic fibers include: acetate, acrylic, azlon, fiberglass, metallic, modacrylic, nylon, nitrile, polyolefin (polyethylene and polypropylene), polyester, rayon (viscose), polyvinylidene chloride, polyvinyl chloride, polylactic acid (corn fiber), vinyon, spandex, manufactured rubber fibers and all other forms of synthetic fibers, and any copolymer fiber consisting of two or more monomeric polymers. Natural fibers include vegetable fibers (cotton, coco, excelsior, flax, jute, kapok, milkweed, moss, palma, sisal, tula, hemp, etc.) or animal fibers (horse, hog or cattle hair, silk, wool, etc.).

1.2 Summary of Test Method - This method tests a sample of the filling material enclosed in standard sheeting fabric or in its actual fabric. The test specimen is place on a horizontal cement board on a weighing device and ignited on one corner with a small open flame. Weight loss is recorded and used to assess the performance of the specimen under these test conditions.

1.3 Significance and Use - This test method is designed to measure the response of a filling material test sample in a bedclothing mock-up configuration, to a small open-flame ignition source, representing a match, candle or cigarette lighter. When contacted by a small open-flame source, filling materials may contribute to fire propagation (flaming and/or charring) in bedclothing causing sustained burning. This test provides an indication of the interaction between the filling material and adjacent materials within the bedclothing, such as cover fabric (simulated by the standard fabric) and the resulting propagation of fire in its early stages.

1.4 Test Apparatus and Materials - The horizontal cement board covered with aluminum foil and weighing scale, is described in Annex C (Weighing Device)

Gas Burner Tube and Regulators - The gas train and accessories are the same as in Annex A.

Standard Sheeting Fabric – Shall be 50% cotton/50% polyester, fabric weight 3.2 (±0.5) ounces per sq. yd, 150-200 threads per square inch, white in color, not treated with flame retardant, laundered and dried at least once before use.

Thickness Measurement Plate – see Annex D.

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1.5 Test Facility and Hazards - The test facility, exhaust system and hazards are described in Annex B.

1.6 Washing and Laundering procedure – See Annex E.

1.7 Conditioning - Condition test specimens prior to the test for a minimum of 24 hours at 23 ± 5 °C (73 ± 9 °F) and 50 ± 10% RH if the sample is taken from a finished article of bedclothing, conditioning does not begin until the component is removed from the bedclothing.

If conditions in the test area are not the same as in the conditioning area, tests should begin within 10 minutes of removal from conditioning area.

1.8 Sample Preparation

1.8.1 Option A - Test Filling Material as a Component with Standard Fabric

1. The specimen shall consist of multiple layers of the fiber batting, fiber pad or resilient cellular foam inserted in a case.
2. To construct the case, cut two 394 mm X 394 mm (15 ½ in. X 15 ½ in.) swatches of the standard sheeting fabric.
3. Sew three sides of the two swatches together or fold a 381 mm X 762 mm (15 in. X 30 in.) piece such that the finished dimensions of the case shall be 381 mm X 381 mm (15 in. X 15 in.).
4. Cut multiple layers of each specimen to 305 mm x 305 mm (12 in. x 12 in.) in the thickness of use.
5. Stack several layers of the filling material to the thickness of approximately 102 mm (4 in.).
6. Place the layers on a hard surface. Place a Thickness Measurement Plate (Annex D) horizontally on the top of the cushion. The optimal thickness of the cushion under the weight of the plate shall be close to 89 mm (3 ½ in.) but not less than 89 mm (3 ½ in.). Add or remove layers of the fill to the stack (if necessary) until the specified total thickness is obtained.
7. Carefully insert the stack of the filling material into the fabric case to make a cushion.
8. Sew or staple the fourth edge of the case to completely encase the fill. Prepare specimens in triplicate.

1.8.2 Option B - Test Filling Material with Actual Fabric - The test specimen shall be constructed by the same method as described in 1.8.1 except the actual cover fabric (and barrier fabric, if applicable) and FR threads are used to construct the case.

1.9 Test Procedure (This test procedure applies to test specimens under both Option A and Option B)

1. Place the weighing scale and accessories in a test hood (See Annex B) containing adequate ventilation to exhaust smoke and combustion gases.
2. Place a 356 mm X 356 mm (14 in. X 14 in.) piece of 6 mm (¼ in.) thick cement board covered with aluminum foil on the top of the weighing scale and the catch pan.
3. Tare out the weight.
4. Place the test specimen on the cement board that is covered with a sheet of aluminum foil and record initial weight.
5. Subject the front right hand side corner of the test specimen to a 35 mm (1 3/8 in.) high gas flame. Place the tip of the burner tube at 19 mm (¾ in.) below the corner of the specimen for 20 seconds, then remove the flame.

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6. Record the weight of the test specimen at least every 15 seconds. Record the weight of the test specimen at 3 minutes and 6 minutes.
7. Continue test until all traces of flaming and smoldering have ceased or weight loss exceeds the test criteria. Make and record observations regarding the final condition of the test specimen.

1.10 Calculations

- The following weight measurements of each cushion test specimen shall be used:
  1. **A** = Pre-test weight of cushion, g
  2. **B** = Weight of cushion at 3 minutes, g
  3. **C** = Weight of cushion at 6 minutes, g

- Calculate weight loss at 3 minutes and weight loss percentage at 6 minutes using the equations below:
  1. Weight loss at 3 minutes, g

     $$D = A - B$$

  2. Percentage of weight loss at 6 minutes, WL%

     $$E = 100 \times (A-C)/A,$$

  3. Average weight loss of triplicate tests at 3 minutes, g

     $$D_{average} = (D_1 + D_2 + D_3)/3,$$

     Where: D_1 = weight lose of specimen 1 at 3 minutes, D_2 = weight loss of specimen 2 at 3 minutes, and D_3 = weight loss of specimen 3 at 3 minutes.

  4. Calculate average weight loss percentage of triplicate tests at 6 minutes, WL%

     $$E_{average} = (E_1 + E_2 + E_3)/3,$$

     Where: E_1 = weight loss % of specimen 1 at 6 minutes, E_2 = weight loss % of specimen 2 at 6 minutes, and E_3 = weight loss % of specimen 3 at 6 minutes.

1.11 Pass/Fail Criteria

Foam

The specimen fails to meet the requirements of this test procedure if either of the following conditions is reached:

1. The average gross (fabric and fill) weight loss percentage of triplicate samples exceeds 25.0% in 6.0 minutes
2. The weight loss percentage of any individual specimen exceeds 30.0% in 6.0 minutes.

Other Filling Materials

The specimen fails to meet the requirements of this test procedure if any of the following conditions is reached:

1. The average gross (fabric and fill) weight loss of triplicate samples at 3.0 minutes exceeds 25.0 g.
2. The average gross (fabric and fill) weight loss percentage of triplicate samples exceeds 30.0% in 6.0 minutes.

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3. The weight loss percentage of any individual specimen exceeds 35.0% in 6.0 minutes.

1.12 Test Report

The test report shall contain, at a minimum, the following information:

- Name and address of the test laboratory.
- Date of the test(s).
- Operator conducting the test.
- Complete description of the test materials.
- Complete description of any procedures different from those described in this test method.
- Recorded data of original weights, weights at 3 minutes and weights at 6 minutes of triplicate samples.
- Calculated results of weight loss at 3 minutes ($D_1, D_2, D_3, D_{average}$), weight loss percentage at 6 minutes ($E_1, E_2, E_3, E_{average}$).
- Observations shall be made, and included in the report, of the behavior of the specimen in response to the application of the burner, specifically noting the following:
- Extended smoldering (non-flaming) combustion.
- Statement of overall Pass/Fail results.

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Section 2: Pillow/Cushion and Loose-filling Materials Component Test - Open-Flame Resistance

2.1 Scope - This test applies to all pillows and bed cushions, except 1) solid foam (molded and slabstock) pillows and 2) pillows meeting the exemption criteria stated below. It also covers loose filling component materials used in other bulk items of bedclothing, such as bedrest cushions, padded headboards, comforters and bedspreads. The test also applies to mattress pads containing loose fills and having a thickness greater than 50 mm (2 in.). Loose fillings include shredded polyurethane and other (latex, etc.) cellular foams, feathers and down, ungarnetted (loose) synthetic, natural and natural/synthetic-blend fibers, polystyrene beads, buckwheat hulls, etc. The test also applies to synthetic (manufactured) and natural filling materials (as described in Section 1.1- Scope), which are formed into a continuous fiber web consisting of battings, pads, etc. and rolled up and/or folded to form a pillow insert. All pillows, except foam pillows, that have dimensions less than 380 mm X 380 mm (15 in. X 15 in.) and weigh no more than 400 grams are exempted from this test. The test measures weight loss when fillings are encased in ticking to form a pillow or cushion and tested with a small, open-flame ignition source.

2.2 Summary of Test Method - This method applies to all filling materials, regardless of the type used, placed in pillows and cushions and also applies to loose filling materials used in any type of bedclothing product. The materials are encased in the standard sheeting fabric or in a ticking/fabric used in the actual bedclothing product to encase the loose filling. The sample is tested against a small open-flame ignition source applied for 20 seconds. The weight loss of specimen is recorded and used to assess the performance of the specimen under these test conditions.

2.3 Significance and Use - Loose filling materials are frequently used in bedclothing items such as pillows and bedrest cushions to impart comfort (resiliency). Due to the presence of significant mixtures of air with these fillings and the large concentration of fuel in bulk products, they may ignite easily and propagate flame rapidly, if the cover fabric is breached and compromised by an open-flame source, such as a match, candle or cigarette lighter or similar size ignition source. Layers or rolls of garnetted or felted fiber pads and battings, may also ignite and propagate

rapidly due to their inherent flammability. Cover tickings may also contribute to burning and may interact negatively with fills to increase the amount of burning.

2.4 Test Apparatus and Materials-

The horizontal cement test board covered with aluminum foil and resting on a weighing scale is described in Annex C (Weighing Device).

Gas Burner Tube and Regulators - The gas train and accessories are the same as in Annex A.

Standard Sheeting Fabric – Shall be 50% cotton/50% polyester, fabric weight 3.2 (±0.5) ounces per sq. yd, 150-200 threads per square inch, white in color, not treated with flame retardant, laundered and dried at least once before use.

2.5 Test Facility and Hazards - The test facility, exhaust system and hazards are described in Annex B.

2.6 Washing and Laundering Procedure – See Annex E.

2.7 Conditioning - Condition test specimens prior to the test for a minimum of 24 hours at 23 ± 5 °C (73 ± 9 °F) and 50 ± 10% RH. If the sample is taken from a finished article of bedclothing, conditioning does not begin until the component is removed from the article.

If conditions in the test area are not the same as in the conditioning area, tests should begin within 10 minutes of removal from conditioning area.

2.8 Sample Preparation

2.8.1- Option A Test Filling Material as a Component with Standard Fabric -

1. Use a standard cover fabric (50% cotton/50% polyester) to construct a 330 mm X 330 mm (13 in. × 13 in.) (finished size) test pillowcase. Sew the pillow/cushion fabric first on three sides.
2. Pack the loose filling material into above pillowcase to such density that the weight of the filling materials should compose of 85% - 90% of the total gross weight (filling and fabric case).
3. Sew the fourth edge to completely encase the filling material.

2.8.2- Option B Test Filling Material as a Composite-

1. The test specimen shall be constructed by the same method as described in 2.8.1 except that the actual cover fabric (and barrier fabric) and FR thread should be used and the density of the mock-up pillow should be as close as possible to the actual pillow density.
2. If the existing cushion from the finished product is approximately the size of the test cushion (with dimension not exceeding 381 mm X 381 mm (15 in. X 15 in), it can be tested in lieu of constructing a standard-sized test cushion.

2.9 Test Procedure (This test procedure applies to test specimens under both Option A and Option B)

1. Place the weighing scale and accessories in a test hood (See Annex B) containing adequate ventilation to exhaust smoke and combustion gases.

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2. Place a 356mm X 356 mm (14 in. X 14 in.) piece of 6 mm (¼ in.) thick cement board covered with aluminum foil on the top of the weighing scale and the catch pan.
3. Tare out the weight.
4. Place the test specimen on the cement board that is covered with a sheet of aluminum foil and record initial weight.
5. Subject the front right hand side corner of the test specimen to a 35 mm (1 3/8 in) high gas flame. Place the tip of the burner tube at 19 mm (¾ in.) below the corner of the specimen for 20 seconds, then remove the flame.
6. Record the weight of the test specimen at least every 15 seconds. Record the weight at 6 minutes.
7. Continue test until all traces of flaming and smoldering have ceased or weight loss exceeds the test criteria. Record observations regarding the final condition of the test specimen.

2.10 Calculation

- The following weight measurements of each cushion test specimen shall be made:
  1. **A** = Pre-test weight of cushion, g
  2. **C** = Weight of cushion at 6 minutes, g
- Calculate weight loss percentage at 6 minutes using the equations presented below:
  1. Percentage of weight loss at 6 minutes, WL%

     $E = 100 \times (A-C)/A$

  2. Average weight loss percentage of triplicate tests at 6 minutes, WL%

     $E_{average} = (E_1 + E_2 + E_3)/3,$

     Where E_1 = weight loss % of specimen 1 at 6 minutes, E_2 = weight loss % of specimen 2 at 6 minutes, and E_3 = weight loss % of specimen 3 at 6 minutes.

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2.11 Pass/Fail Criteria

The specimen fails to meet the requirements of this test if any of the following conditions is reached:

1. The gross (fabric and fill) average weight loss percentage of the triplicate samples exceeds 25.0%.
2. The weight loss percentage of any specimen exceeds 30.0% in 6.0 minutes.

2.12 Test Report

The test report shall contain at a minimum, the following information:

- Name and address of the test laboratory.
- Date of the test.
- Operator(s) conducting test.
- Complete description of test materials.
- Complete description of any changes in the described standard test method.
- Recorded data of original weights and weights at 6 minutes of triplicate samples.
- Calculated results of weight loss percentage at 6 minutes ($E_1, E_2, E_3, E_{average}$).
- Observations shall be made, and included in the report, of the behavior of the specimen in response to the application of the burner, specifically noting the following:
  1. Extended smoldering (non-flaming) combustion.
- Statement of overall Pass/Fail results.

Section 3 – Mattress Pad Filling Materials Test - Open-flame Resistance:

3.1 Scope - This test applies to all synthetic (manufactured) and natural textile fillling materials that are used in mattress pads that are less than 50 mm (2 in.) thick. Materials can be loose filling or carded, garnetted, air-layered or otherwise formed into a continuous fiber web consisting of battings and pads, etc. Synthetic (manufactured) fibers and natural fibers include all types as described in Section 1.1- Scope. Any mattress pad having a swatch size of 990 mm (39 in.) X 1900 mm (75 in.) (twin size equivalent) and weighing no more than 400 grams is exempted from this test, regardless of the size of the actual product. All mattress pads with thickness greater than 50 mm (2 in.) and containing flat fillings should be tested per Section 1, if they contain flat fillings and per Section 2 if they contain loose fillings. The thickness should be measured on the original mattress pad piece with actual ticking by using the plate specified in Annex D.

3.2 Summary of Test Method - In this test method a sample of the filling material is sandwiched between four swatches of standard sheeting fabrics. Two swatches of sheeting are placed on the top of the filling material and two are laid underneath. A specimen of the actual sample of the filled bedding item with its top and bottom ticking materials intact, the specimen is sandwiched between two pieces of standard sheeting fabric. The specimen is subjected to a small open flame applied to the top center surface. Observations of the burning behavior and patterns are used to assess the performance of the specimen under these test conditions.

3.3 Significance and Use - This test method is designed to measure the response of a filling material test sample in a mattress pad mock-up configuration, to a small open-flame ignition source, representing a match, candle or cigarette lighter. When contacted by a small open-flame source, filling materials may contribute to fire propagation (flaming and/or charring) in mattress pads causing sustained burning. The test provides an indication of the interaction between the filling material and adjacent materials within the bed environment, such as cover fabric and mattress surface. A mattress pad that passes this standard is less likely to result in a fire that propagates from the bedclothing articles over the mattress pad to the mattress itself.

3.4 Test Apparatus and Materials - The test specimen is placed on ¼ in. a cement board. The horizontal cement board covered with aluminum foil and resting on a weighing scale is described in Annex C (Weighing Device).

Gas Burner Tube and Regulators - The gas train is the same as in Annex A.

Standard Sheeting Fabric – Shall be 50% cotton/50% polyester, fabric weight 3.2 (±0.5) ounces per sq. yd, 150-200 threads per square inch, white in color, not treated with flame retardant, laundered and dried at least once before use.

3.5 Test Facility and Hazards - The test facility, exhaust system and hazards are described in Annex B.

3.6 Washing and Laundering Procedure – See Annex E.

3.7 Conditioning - Condition test specimens prior to the test for a minimum of 24 hours at 23 ± 5 °C (73 ± 9 °F) and 50 ± 10% RH If the sample is taken from a finished article of bedclothing, conditioning does not begin until the component is removed from the bedclothing.

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If conditions in the test area are not the same as in the conditioning area, tests should begin within 10 minutes of removal from conditioning area.

3.8 Sample Preparation

3.8.1 Option A – The Fill Component Test

1. Cut four 305 mm X 305 mm (12 in. X 12 in.) pieces of standard sheeting fabric and the filling materials to be used in the actual product.

3.8.2 Option B – The Actual Composite Test

1. Cut two 305 mm X 305 mm (12 in. X 12 in.) pieces of standard sheeting fabric and the filling material with ticking fabrics to be used in the actual product.

3.9 Test Procedure (This test procedure applies to test specimen under both Option A and Option B)

1. Option A – Place two 305 mm X 305 mm (12 in. X 12 in.) pieces of standard sheeting fabric horizontally on the test platform. Fully smooth out the sheets such that there are no folds or air gaps in between or under the sheets. Place the 305 mm X 305 mm (12 in. X 12 in.) piece of the filling material on top of the test fabrics.
   Option B – Place one piece of standard sheeting fabric on test platform and then place the filling material with original unraveled ticking fabrics on top.
2. Option A - Place two pieces of standard sheeting fabric on top of the filling materials.
   Option B – Place one piece of standard sheeting fabric on the top of the ensemble.
3. Place the top square metal frame (Annex F) over the top sheeting.
4. Subject the top surface of the test specimen to a 35 mm (1 3/8 in) high gas flame oriented at 30 degree with respect to the horizontal line. Place the tip of the burner at the center of the top surface for 20 seconds, then remove the flame.
5. Continue the test until all traces of flaming and smoldering have ceased. Record observations regarding penetration of the flame through filling material specimen.

3.10 Pass/Fail Criteria

Mattress pad without flame resistant barrier/fabric:
The specimen fails to meet the requirements of this test if either of the following conditions is reached:

1. The flame burns through the bottom sheet and creates a void in the sheet.
2. The flame creates a void of greater than 51 mm (2 in.) in any direction in the filling material.

Mattress pad with flame resistant barrier/fabric:
The specimen fails to meet the requirements of this test if either of the following conditions is reached:

1. The flame burns through the bottom sheet and creates a void in the sheet.
2. The flame creates a void of greater than 13 mm (0.5 in.) in any direction in the flame resistant barrier material or fabric.

3.11 Test Report

The test report shall contain at a minimum, the following information:

- Name and address of the test laboratory.
- Date of the test.
- Operator(s) conducting test.

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- Complete description of test materials.
- Complete description of any changes in the described standard test method.
- Observations shall be made, and included in the report, of the behavior of the specimen in response to the application of the burner, specifically noting the following:
    1. Extended smoldering (non-flaming) combustion.
    2. Observation regarding penetration of the flame through filling material specimen and bottom fabric sheet.
- Recorded measurements related to voids of filling materials, bottom fabrics and flame resistant barriers/fabrics, if applicable.
- Statement of overall Pass/Fail results.

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ANNEX A

Flame Ignition Source

Butane Gas Flame Ignition Source

- The burner tube shall consist of a length of stainless steel tube, 8.0 ± 0.1 mm (5/16 ± 0.004 in) outside diameter, 6.5 ± 0.1 mm (0.256 ± 0.004 in) internal diameter and 200 ± 5 mm (8 ± 1/4 in) in length, connected to a cylinder containing butane.
- C.P. Grade butane, 99.0% purity with 2-stage regulator shall be provided.
- The following items are required to connect the butane cylinder to the burner tube: clear, flexible tubing (2.5 m to 3.0 m (8 to 10 ft) in length, 7.0 ± 1.0 mm (1/4 ± 0.04 in) I.D.), a mass flow meter (optional), a fine adjustment needle valve, an on-off valve (optional) and a cylinder regulator capable of providing a nominal outlet pressure of 2.8 kPa (28 mbar).
- The flow rate of butane shall be 45 ± 2 ml/min (354 ± 16 cfm) at 23 °C (73 °F), which produces a flame height of approximately 35 mm (1 3/8 in) (measured from the center end of the burner tube when held horizontally and the flame allowed to burn freely in air).

NOTE: The following specific items have been found to be satisfactory for the butane gas train: Air Products CP grade, 99.0% purity butane, 20 lb. cylinder; Matheson 2-stage regulator, Model 8-2-510; Matheson 9.0 kPa pressure gauge, P/N 63-3103; Matheson fine control valve, brass, Model 4170 series; Matheson mass flow meter, Model 8112-0422, 200 standard cubic centimeter (sccm) range (a mass flow meter has been found to be particularly useful for resetting the butane flow from day to day).

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ANNEX B

Test Facility, Exhaust System and Hazards

Test Facility/Exhaust System

- The test area shall be a room with a volume greater than 20 m^3 (in order to contain sufficient oxygen for testing) or a smaller area equipped with inlet and extraction systems permitting the necessary flow of air. Airflow rates shall be between 0.02 m/s and 0.2 m/s, measured in the locality of the test specimen position specimen to provide adequate air without disturbing the burning behavior.

Note: These rates of airflow have been shown to provide adequate oxygen without physically disturbing the burning behavior of the ignition source or the specimen.

- A means of extracting smoke and combustion gases from the test area shall be provided.

Hazards

- There are potential risks associated with running any fire test. It is essential that suitable precautions be taken, which include the provision of breathing apparatus and protective clothing.
- Products of combustion can be irritating and dangerous to test personnel. Test personnel must avoid exposure to smoke and gases produced during testing.
- Suitable means of fire extinguishment shall be at hand. When the termination point of the experiment has been reached, the fire is extinguished, if necessary, with carbon dioxide or water. Presence of a back-up fire extinguisher (water hose) is recommended.
- It may be difficult to judge when all combustion in a test specimen has ceased, even after extinguishment, due to potential burning deep inside the specimen. Care should be taken that specimens are disposed of only when completely inert.

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ANNEX C

Weighing Device

- A means of weighing the specimen and providing a display or electronic output of the weight is necessary. The device must be capable of accommodating the entire test frame with the specimen in place and must be capable of reading 1± 0.5 g.
- A means for recording the weight of the specimen at intervals equal to or less than every 15 seconds during the test shall be provided. Typically, a load (balance) cell with computer or chart recorder readout is used, with readings taken every 5 or 6 seconds. A test operator manually reading a clearly visible readout of the weighing device is adequate for this test procedure.

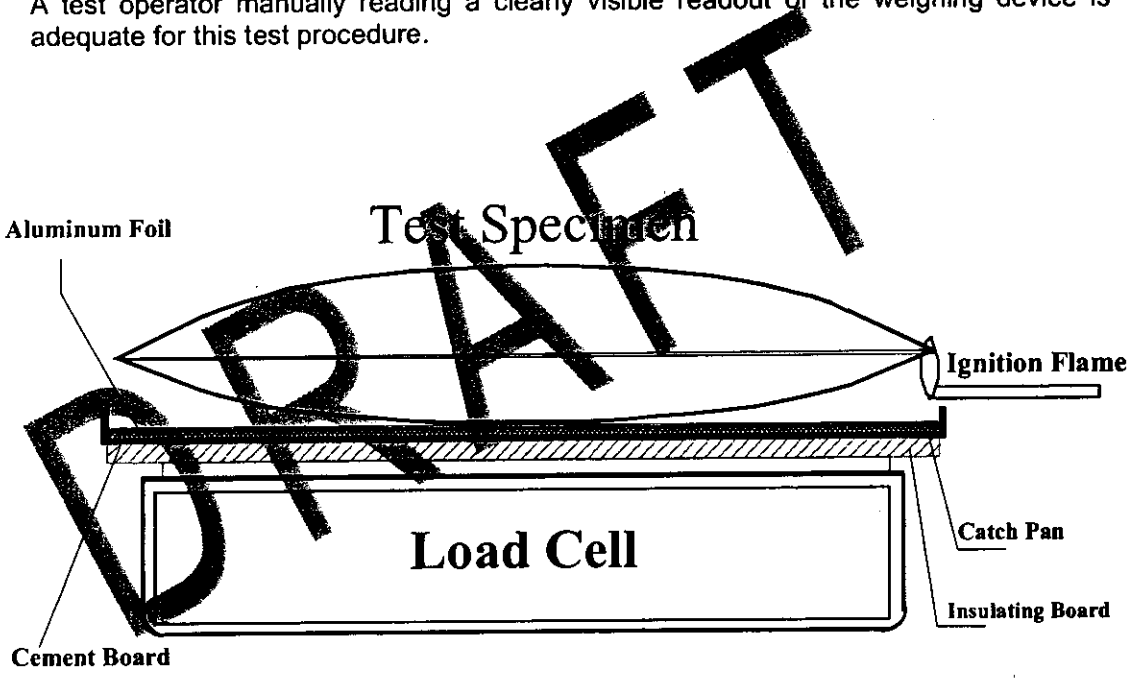

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Figure C1: Assembly for weighing specimen during testing

ANNEX D

Thickness Measurement Plate

In order to set the thickness of the test cushion specimens uniformly and consistently, construct a square platen made of 1/8 in. thick Plexiglas board with the dimensions of 305 mm X 305 mm (12 in. X 12 in.). A small piece of Plexiglas in any shape (square or round) shall be used as a handle to lift and position the plate. The total weight of the thickness measurement plate shall be 325 (±25) grams.

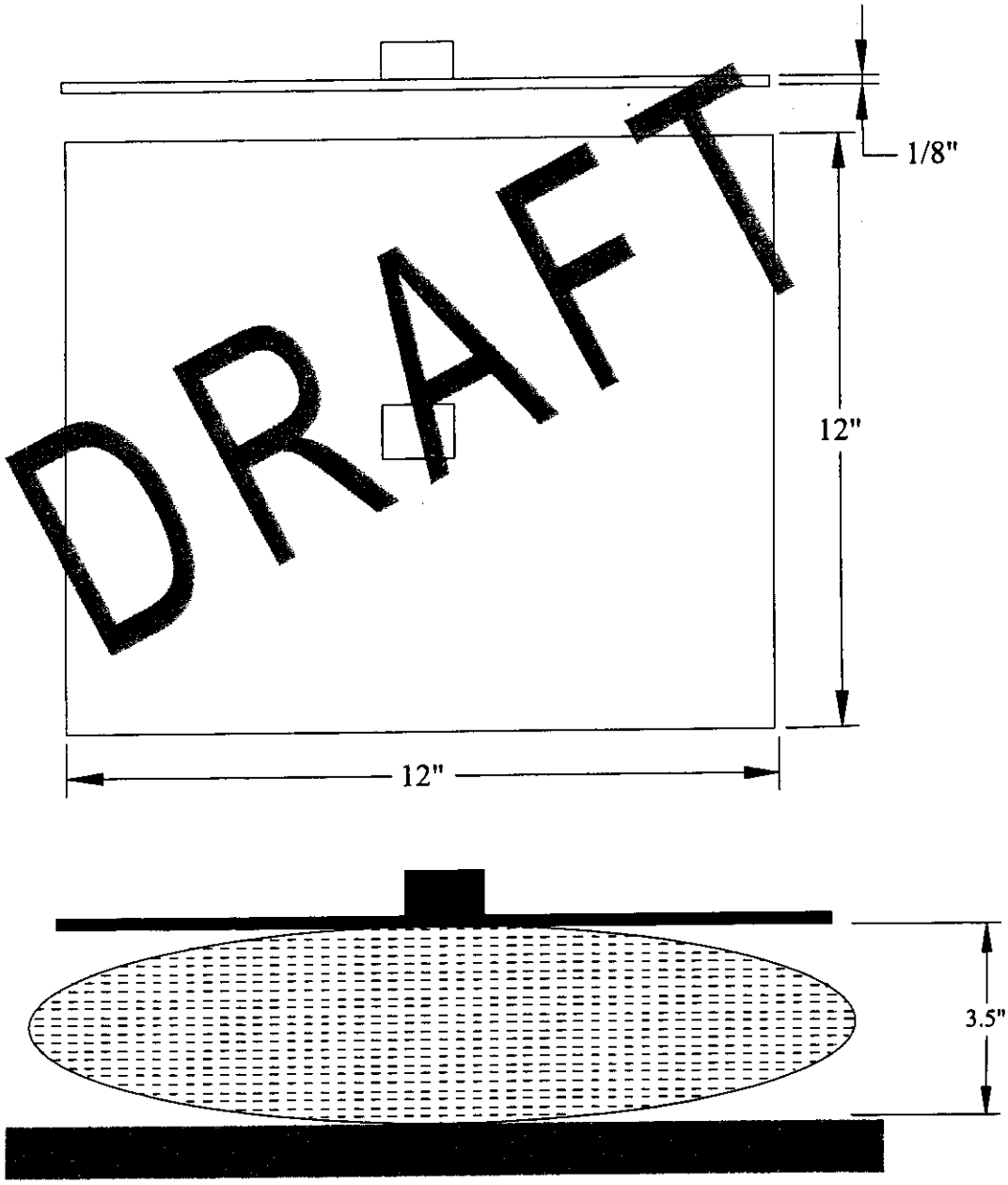

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Figure D1: Thickness Measurement Plate Made of Plexiglass

ANNEX E

Washing and Laundering Procedure

Products containing a chemical fire retardant treatment, as designated on the care label with the letter "T" or otherwise identified, shall be tested after washing and drying by the below procedure equivalent to 16 Code of Federal Regulations 1632.5. Washing shall be performed in accordance with sections 8.2.2 and 8.2.3 of AATCC Test Method 124-1996, using wash temperature V (60 ±3 deg. C, 140 ±5 deg. F) specified in Table II of that method, and the water level, agitator speed, washing time, spin speed and final spin cycle specified for ``Normal/Cotton Sturdy" in Table III. Drying shall be performed in accordance with section 8.3.1(A) of AATCC Test Method 124-1996 ``Appearance of Fabrics after Repeated Home Laundering," Tumble Dry, using the exhaust temperature (66 ± 5 deg. C, 150 ± 10 deg. F) and cool down time of 10 minutes specified in the ``Durable Press" conditions of Table IV. (iii). Maximum washer load shall be 3.64 Kg (8 pounds) and may consist of any combination of test samples and dummy pieces. (iv) AATCC Test Method 124-1996 ``Appearance of Fabrics after Repeated Home Laundering," is found in Technical Manual of the American Association of Textile Chemists and Colorists, vol. 73, 1997, which is incorporated by reference. Copies of this document are available from the American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, North Carolina 27709. This document is also available for inspection at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. (v) A different number of wash and dry cycles using another procedure may be specified and used, if that procedure has previously been found to be equivalent by the Bureau.

Mattress pads shall be washed and dried 5 times as described above, prior to flammability testing. Comforters, bedspreads, sleeping pillows, decorator pillows, bed rest cushions and similar items shall be washed and dried 5 times prior to testing.

Such laundering is not required of bedclothing items, such as mattress pads, intended for one-time use or items not intended to be laundered. Items not susceptible to being laundered and which are labeled "dry clean only" shall be dry-cleaned by a procedure previously found acceptable by the Bureau.

If no chemical fire retardant treatment is used on the product, no laundering or dry cleaning is required.

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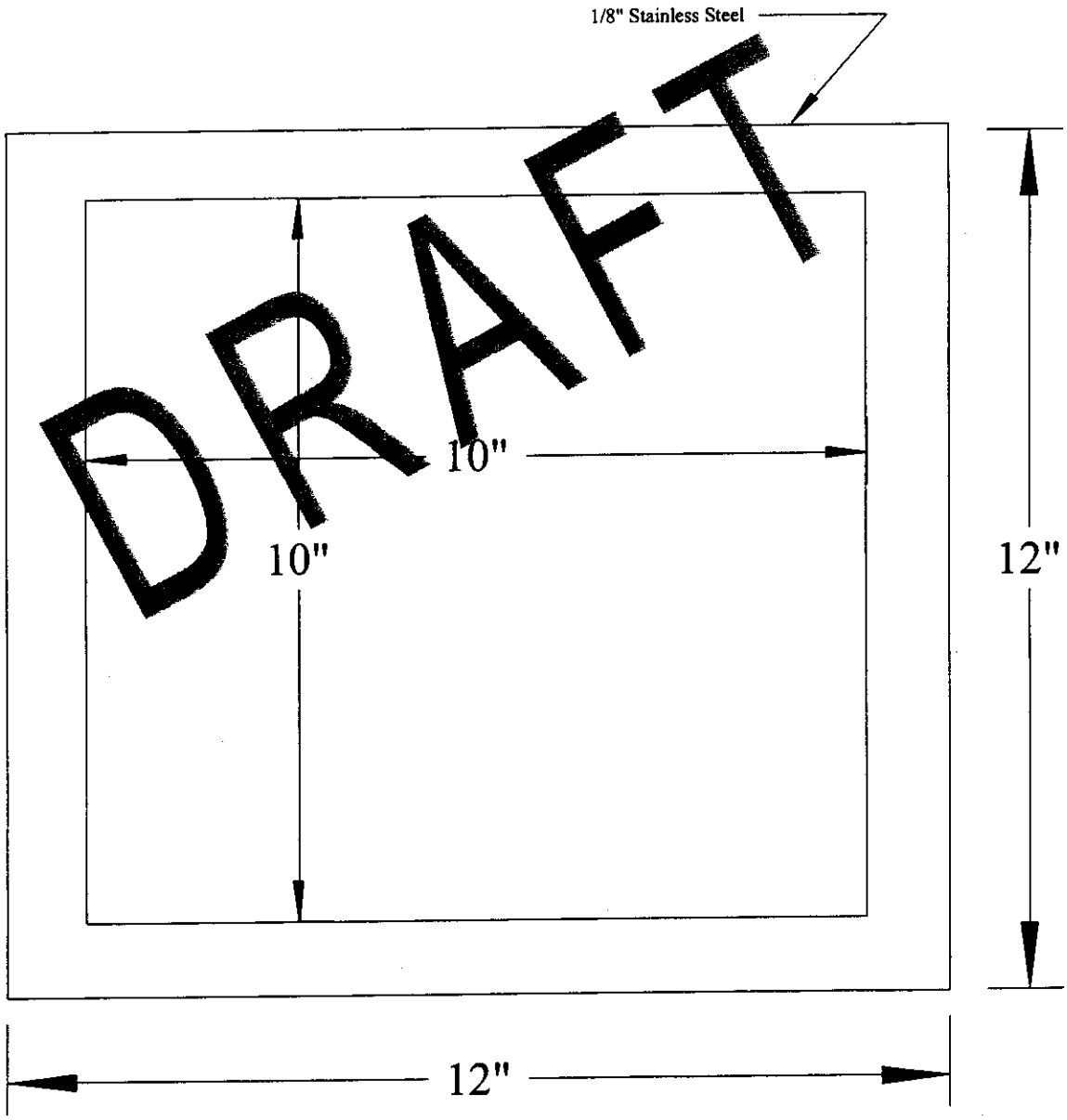
ANNEX E

Metal Frame

This metal plate is used on top of sample ensemble in Section 3. It is made of 1/8 in. thick stainless steel with the inside openings of 254 mm X 254 mm (12 in. X 12 in.).



APPENDIX A – Glossary

Barrier - A layer of material (fabric, batting or pad) that is intended to reduce the flame spread of a bedclothing item, when secured to a combustible material or otherwise interposed between the material and the potential fire source, by delaying ignition and combustion of the material when the barrier is exposed to fire. Same as an interliner.

Bedclothing - A unit of interior furnishing with a resilient filling material, covered in whole or in part with fabric or related material, that is intended for use or may be expected to be used in homes, as an accessory on a mattress, mattress set or futon. Also, known as a "top of the bed" product.

Bedrest Cushion- Any item used on top of a bed as an accessory to a mattress, mattress set or futon for the purpose of supporting the head, back and arms while resting or sleeping and consisting of quilted filling material.

Bedspread – A thin, item used as a decorative cover for a mattress set and consisting of quilted filling material.

Char Length - The distance on a test sample from the point of contact of the ignition source to the outermost char zone.

Combustion - An exothermic, self-sustaining reaction involving a solid or liquid, and or gas phase fuel. It can occur through flaming, glowing or smoldering.

Comforter - A quilted item used as a thermal-insulating cover for a mattress set and consisting of a fabric cover and a resilient filling. Generally thicker than a bedspread.

Component Test - Any test measuring the fire response of an individual element or part of an article of bedclothing. The test may involve use of standard substrate materials (i.e., standard sheeting fabric) other than the tested component.

Composite Test- Any test measuring the fire response of a combination of two or more component materials used to construct a finished article of filled bedclothing.

Cover Fabric - The outermost layer of fabric or related material used to enclose the main support system and filling used in the bedclothing item.

Flame - Combustion characterized by the presence of a visible flame after removal of the ignition source.

Flame-Resistant - An adjective term referring to the ability of a component of bedclothing to withstand flame impingement or offer protection from flame.

Flame-Retardant - An adjective term referring to a bedclothing component which has had a flame-retardant chemical, coating or treatment added to it to impart greater flame-resistance.

Foam topper pad/overlay – A product made from resilient polymer foam (polyurethane, latex, etc.) designed to rest on a mattress to provide additional resiliency and which may be covered by a ticking in whole or in part or bare.

Ignition - Initiation of combustion. It is perceived by the presence of any visible flaming, glowing, or smoldering after removal of the ignition source.

Insert – A portion of a bedclothing product which consists of the filling material and any structural materials and barrier, if present, but not the outer decorative covering. Examples: pillow insert, cushion insert, comforter insert.

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Interliner - Same as Barrier.

Mattress pad – A product designed to cover the top, sides or entire surface of a mattress or futon to offer protection and additional resiliency and which contains quilted filling material covered by a fabric or ticking.

Padded headboard/base/footboard – A structural element of a bed containing a concealed filling material covered by a fabric.

Pillow (bed) - Any item used on top of a bed as an accessory to a mattress, mattress set or futon for the purpose of resting the head or any other portion of the body while sleeping.

Pillow (decorator) - Any item used on top of a bed as an accessory to a mattress, mattress set or futon for the purpose of decoration only.

Quilted – Refers to any article of bedclothing that contains a concealed filling material covered by a fabric.

Self-Extinguishment - The termination of any visible combustion within a defined time period (i.e,10 minutes) of the test flame removal before the specimen is consumed.

Small Open-Flame - A flaming ignition source that simulates the heat output of a match, candle, or cigarette lighter.

Smoldering - Combustion characterized by smoke production, without visible flame or glowing.

Standard Sheeting Material – A woven fabric used as a standard substrate in flammability tests to simulate the performance of a textile material during burning and the interaction of barriers and filling materials with a fabric.

"Top of the Bed" Product – Also known as Bedclothing.

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APPENDIX B

Additional Observations

Section 1

Observations of the test as described below may be valuable in assessing test results:
Observations shall be made, and included in the report, of the behavior of the specimen in response to the application of the burner, specifically noting the following:

- Specimen's response to burner application.
- Unusual or irregular burning patterns.
- Extended smoldering combustion.

Section 2

Observations of the test as described below may be valuable in assessing test results:
Observations shall be made, and included in the report, of the behavior of the specimen in response to the application of the burner, specifically noting the following:

- Specimen's response to burner application
- Unusual or irregular burning patterns.
- Extended smoldering combustion.

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Comments of China on US Notification G/TBT/N/USA/96

Dear Sir or Madam,

We respectfully submit the enclosed comments of China on your notification circulated by WTO as follows:

G/TBT/N/USA/96 Standard To Address Open Flame Ignition of Bedclothes; Advance Notice of Proposed Rulemaking

The comments are in English and Chinese.

Please acknowledge receipt of the comments by e-mail to tbt@aqsiq.gov.cn.

Thank you very much for your consideration of our comments.

Best regards

Wang Xinglu
Deputy Director General
China WTO/TBT National Enquiry Point
No. 9 Ma Dian Dong Lu, Hai Dian District, Beijing
Post Code: 100088
Tel: 86-10-82260611/0618
Fax:86-10-82262448
E-mail: tbt@aqsiq.gov.cn

Annex 2

Comments of China on US Notification G/TBT/N/USA/96

The Chinese industries have conducted a detailed study on the US Notification G/TBT/N/USA/96, and come up with the following comments:

We are seriously concerned with the development of the proposed regulation described in Notification G/TBT/N/USA/96.

We would like to know whether the following two factors be taken into consideration when preparing the above mentioned draft regulation. If the answer is yes, please let us know how they were considered? If the answer is no, then we suggest that the regulation be drafted following the two factors be considered.

1. Bedclothes are products in direct contact with human skin. If for the purpose of preventing fire accidents, the retardant chemicals are used, then it will do harm to human health.

2. Due to the fact that bedclothes are various in kind and are used in such a random manner, therefore, the term "bedclothes" should be determined and its coverage should be clarified.

中国对美国 G/TBT/N/USA/96 号通报的
评议意见

中国产业界对美国G/TBT/N/USA/96号通报进行了认真研究，提出评议意见如下：

我们严重关注贵国G/TBT/N/USA/96号通报所述法规提案的制定进程，请问在制定上述法规时是否充分考虑了以下两个因素？如果是，请解释贵方是如何考虑的？如果否，建议贵方予以考虑后再制定该法规。

1、床上用品是与人的皮肤直接接触的产品，如果为了防止床上用品因燃烧造成火灾而使用阻燃剂，对人体健康会产生危害。

2、鉴于床上用品种类繁杂，并且使用的随机性变化很大，因此，应对“床上用品”这一术语给予定义，并明确其覆盖范围。

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Bedclothes

Stevenson, Todd A.

From: Scott Bentson [sbentson@trlinen.com]
Sent: Wednesday, March 16, 2005 7:21 PM
To: Stevenson, Todd A.
Cc: LBentson@trlinen.com
Subject: Bedclothes ANPR

Office of the Secretary
Consumer Product Safety Commission

Re: Bedclothes ANPR

As the owner of a small, Minnesota-based company that designs and manufactures high-end, custom-made bed linens and related products for interior designers and their clients, I wish to express my point of view as to how such proposed regulations might affect our business. While I fully realize that our personal business interests are of secondary importance to overall consumer safety, please consider the following points:

1. Thief River Linen is a small company with a national reputation located in a rural area of Minnesota. We employ 8 people on a full-time basis and another 6 who sew in their own homes on a part-time basis. We show and sell our products nationally. Our bed linen customers are primarily interior designers. Our business niche is a rather small one and we are in no position to compete successfully with the very large companies that dominate the bed linen industry by importing products for the mass market that are far less costly than ours. We do not sell directly to end consumers. On an annual basis, we probably sell about 200-250 custom bed linen sets composed of a bed top (duvet cover, coverlet, etc.), a bed skirt, multiple decorative pillows, a throw, a sheet set and pillow cases. Our company also makes decorative pillows, window panels (curtains) and various other home accessory items.

2. Our high-end, "luxury" bed linen business depends upon delivering exceptional style, quality of construction and, most importantly, luxurious fabrics to design-oriented consumers who choose and are willing to pay for that quality. Certainly, a major component in the perception of quality is the fabric – color, pattern and texture as well as "hand" – how does the fabric feel and how does it drape. I'm sure you can appreciate from your own experience the impact of the tactile experience in bed linens. I do not know what flammability regulations may be coming and what impact they will have on those fabric qualities that make our products unique and desirable, but I am very concerned that it will be adverse as far as our customers are concerned.

3. As there is no one type of fabric that is exclusive to bed linens, we seek high quality fabrics of any type that will be appropriate to our products. Unless flammability regulations are applied uniformly to all fabrics (apparel, upholstery, others) sold in the U.S. or, unless all companies that supply fabrics are required to offer some sort of optional flammability-reducing process, I can only imagine that it would fall to even a small producer like us to treat all the fabrics that we use for bed linens in some way that would meet the coming regulations. I really doubt that we would be able to absorb the cost of doing so and that it would not have an adverse effect on the fabric (our products) and, therefore, our ability to maintain our position in the marketplace. Is there is a simple, easy, cheap and effective process that substantially reduces or eliminates the risk of burning up in bed but does not adversely affect the inherently desirable qualities of fine fabrics? If so, never mind, flammability regulations will be no problem for us.

4. As we see imported fabrics and products devour the domestic textile industry and as we see virtually all clothing (look at the tags!) and almost all other textile products being imported from overseas, I suspect that these regulations, whatever they turn out to be, will make it even more difficult for small companies to

survive in the financial shadows of the larger ones. Perhaps that's just the way it is – survival of the biggest and most powerful along with a further reduction in choices and quality for consumers. Obviously, I have a point of view about this.

5. Finally, you should be aware that, like many other small companies, we are sitting with substantial fabric inventory that, presumably, does not meet the future flammability standards. I would hope that the implementation of these regulations will allow some reasonable time and opportunity to move that inventory.

Let me propose that consideration be given to regulations that allow small producers to continue to work with that small group of design-sensitive customers who choose to take the risk in order to experience the benefits of fine fabrics and design on their bed. I do understand, of course, that there is a benefit and a responsibility to protect the public from the risk of unreasonably flammable bed linens, particularly when the consumer has reason to believe that they are safe when they go to sleep at night.

To me, regulations such as those being considered are most properly targeted to benefit the largest number of people, especially those who may incorrectly believe that they are sleeping safely. Those who buy $39.95 bed-in-a bag sets and those who stay in some hotels may very well need the protection.

Scott Bentson, V.P.
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National Fire Protection Association

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March 9, 2005

Office of the Secretary
Consumer Product Safety Commission
Bethesda, Maryland 20207

Re: Bedclothes ANPR

Dear Mr. Secretary:

I am writing on behalf of the National Fire Protection Association (NFPA) in support of the Consumer Product Safety Commission's January 13, 2005 Advance Notice of Proposed Rulemaking on Open Flame Ignition of Bedclothes. NFPA has supported your work on mattresses, which has been progressing through the rulemaking process. We fully support your current ANPR for bedclothes.

As you have correctly stated, mattresses are not generally used alone. It is appropriate to address the flammability of bedclothes which are used in conjunction with mattresses. As you also noted, the bedclothes are usually ignited before the mattresses themselves. According to NFPA statistics, each year, there are approximately 24,500 fires where mattresses and bedding are the first to ignite. These fires result in an annual average of 508 civilian deaths, 2,555 civilian injuries, and over $320 million in property damage.

We appreciate an opportunity to comment on this important matter. We also commend you for your work on this and all consumer safety issues. NFPA is prepared to assist the CPSC in carrying out its responsibilities with respect to bedclothes. Please contact us should you need any further information.

Sincerely,

John C. Biechman
Vice President
Government Affairs

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Revman International, Inc

March 11, 2005

Office of the Secretary
Consumer Product Safety Commission
Washington, D. C. 20207-0001

To Whom It May Concern:

Revman International is a marketing, design, and sales company in the home furnishing industry for more than fifteen years. Revman International has many nationally recognized brands and services primarily department stores and specialty retailers. Revman International opposes the proposed CPSC rulemaking for flammability of bedclothes as stated in 16 CFR Part 1634 published in the Federal Register / Vol. 70, No. 9 / Thursday, January 13, 2005 / Proposed Rules due to insufficient data, leading to implementation and cost concerns. Revman International believes there is an alternative to reduce death and fire loss caused by mattress and bedding related fires.

I. Insufficient Data.

Tremendous variability exists in fiber content, construction, weight, color, surface texture, and finishes of bedclothes consistent with fashion products. Insufficient data exists to determine the hazard posed by specific types of bedclothes. Raised surface products are also known to have different ignition and burning propensities as compared to flat products. Tightly woven products also have different ignition and burning characteristics than more loosely constructed products. The flammability impact of many chemical finishes used on bedclothes is not known nor is the potential interaction with flame retardant chemicals. It was noted in the proposed CPSC rulemaking for Flammability of bedclothes as stated in 16 CFR Part 1634 published in the Federal Register / Vol. 70, No. 9 / Thursday, January 13, 2005 / Proposed Rules that "...the investigations could not provide information on which types of bedclothes were more likely to ignite..." Unreasonable risk of the flammability hazards produced by specific bedclothes has not been demonstrated by the CPSC.

Many flame retardants have also been shown to pose considerable risk from personal exposure to treated products and the flame retardant chemicals. Note that flame retardants used in children's sleepwear in the 1970's were later determined to be carcinogens.

Many flame retardants also create environmental impacts both at the chemical manufacturer as well as at the textile manufacturing plant. These impacts must be

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considered by CPSC and comprehensive data should be developed and disseminated. Shifting consumer risks to other media rather than reducing risk should not be done.

Confusion regarding the materials is further demonstrated by comparing the scope of bedclothes in the California draft regulations to the scope of bedclothes offered by the CPSC:

> ***California***
> *Filled bedclothes contain fibrous or other materials within a cover.*
> ***CPSC***
> *Sheets, blankets, pillows, mattress pads, foam pads, comforters, quilts.*

II. Implementation

Implementation of the proposed rules for bedclothes would significantly impact the business activities of Revman. The advanced notice for mattresses and mattress pads was published on October 11, 2001. Since that time the U. S. Consumer Product Safety Commission has conducted research and testing to support the development of flammability regulations for mattresses. The mattress industry has also had more than 3.5 years to review the available research, investigate technology approaches, and assess the impact on the mattress industry. The potential impacts and technological challenges for the bedclothes industry is greater than for the mattress industry due to the variety of products that are used, normal consumer washing of bedclothes, and the market size.

It is also incumbent on the CPSC to consider the availability of reliable, cost effective technologies that will achieve the desired reduction in burning characteristics of bedclothes once those standards have been properly established. Some technologies may exist that are effective for certain products. The availability and cost of technology such as flame retardant fill for comforters is a concern if there is a sudden increase in demand. However, reliable, cost effective technologies do not exist for all bedclothes products.

A large percentage of bedclothes are manufactured from cotton fiber. Technologies are extremely limited that can be used to treat cotton materials and establish durable, wash-resistant, flame retardant properties in a cost effective manner. Many existing flame retardant products also negatively impact the desirable comfort characteristics of cotton bedclothes. Flame retardant treatment also frequently changes the color of the treated fabric. The reformulation of existing colors to match the colors that are approved by retailers would be expensive and very time-consuming.

US trade policy has created a market in which a high percentage of bedclothes are imported. Even if cost effective options were available for flame retardant treatment of the materials, the logistics of implementing such a system on a global basis will have a negative effect on the business of Revman. Establishing testing, approval, and recording keeping will not only be expensive but the time to properly develop this infrastructure

would be extensive. Delay in product delivery will add significant costs to Revman in a very cost-competitive business environment.

III. Cost

Because of insufficient data, unknowns regarding implementation, availability of efficient technologies, testing, and potential legal liabilities, it is difficult to estimate the cost of this regulation. However, preliminary analysis indicates the following.

-Currently flame retardant poly fill will cost an additional $0.86 per pound which translates to additional comforter costs of $2.19 for a twin, $2.61 for a full, $2.98 for a queen, and $3.47 for a king. This would potentially add in excess of three million dollars to Revman International's cost.
-Currently it is estimated that flame retardant treatment of sheeting fabric would potentially add more than one dollar per yard to the cost of sheets, or more than $3 for a twin sheet set, $3.75 for a full, $4.25 for a queen, and $5.25 for a king sheet set. This would potentially add several more million dollars to Revman International's cost.

IV. Alternative

It is probable that higher consumer net benefits would be achieved by raising the flammability standard for mattresses rather than imposing poorly defined regulations on bedclothes. Mattresses utilizing flame resistant materials and flame retardant chemicals generally are not in direct prolonged contact with the skin. Mattress flame retardant treatments do not need to be durable to laundering and/or dry-cleaning.

Summary

Revman International opposes the proposed CPSC rulemaking for flammability of bedclothes as stated. The home furnishing industry has insufficient data to comply with the proposed rules. Implementation, with current technology limitations will prevent compliance of many products and will add costs and risks without proven net benefits. The potential impacts and technology challenges for the bedclothes industry is greater than the mattress industry due to the variability of fiber content, construction, weight, color, surface texture and finishes consistent with a fashion business.

Very truly yours,

Richard Roman,
President/CEO

Michael Proulx
Director Vendor Development/Compliance

GBH International

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Bedclothes

Office of the Secretary,
Consumer Product Safety Commission,
Washington, DC 20207–0001

March 28, 2005

Dear Sir/Madam,

I would like to comment on the proposed regulatory activities by the Commission associated with the fire safety of bed clothes. I apologize that my input is late and is being presented after the recommended closing date of March 14, 2005. However, I hope that the Commission may still consider my input. As a fire safety professional, I am very pleased that the Consumer Product Safety Commission is taking the leadership in attempting to provide fire-safe bed clothes for all Americans. I strongly believe that this has the potential for considerably lowering the number of fire victims associated with mattress burning, especially children. I have also, separately, been able to comment on the activities of the California Bureau of Home Furnishings and Thermal Insulation and on the proposed rulemaking for mattresses by CPSC.

I agree that it is important to consider the flammability of filled/padded bed clothes, because the potential amount of heat released by the paddings can be a significant contributor to a fire. I also agree that the fire safety of bed clothes can affect the fires that result from mattresses. Thus, I agree that the flammability of filled/padded bed clothes should be regulated.

The NIST study in NIST TN 1449 involved 3 mattresses as follows: a standard mattress (M1) with no fire protection included, a mattress with a ticking/fabric barrier and no fire retarded padding/foam (M3) and a mattress with a slightly fire retarded ticking fabric (meeting FMVSS 302) and a very slightly fire retarded foam (meeting the traditional California TB 117, which has been shown to provide almost no fire safety once an upholstery item, furniture or mattress, has been ignited). It is not at all surprising that the bed clothes caused a much more severe fire in each case. As I have explained in other writings (including my comment on the mattress proposed rulemaking) the use of barriers as the sole fire safety strategy is easily overcome once the barrier is breached and the fuel-intense padding is exposed; therefore mattress M3 becomes virtually identical to mattress M1 once the barrier has been broken. In the case of mattress M5, the extremely high flammability of CA TB 117 foam means that it will release large amounts of heat rapidly once it gets going.

In fact, the major effect of using CA TB 117 foam as opposed to standard foam is that it will (a) afford a small amount of additional time and (b) resist a slightly more severe ignition source, before it becomes involved and generates a fire almost as large as standard foam. Testing I conducted showed this and was published as: "Residential Upholstered Furniture in the United

States and Fire Hazard", M.M. Hirschler, Business Communications Company Fifteenth Ann. Conference on Recent Advances in Flame Retardancy of Polymeric Materials, June 7-9, 2004, Stamford, CT, Ed. M. Lewin, p. 300-315, Norwalk, CT, 2004.

In fact, once an upholstery item has reached a "detectable fire size" of 50 kW (per CBUF), any prior effect becomes meaningless. Note that work by the Combustion Behaviour of Upholstered Furniture (CBUF) project indicated that "It is important that the ignition conditions (size of ignition source and time and point of attack) during standardised testing, will not influence the results of the hazard analysis." (B. Sundstrom, "CBUF - Fire Safety of Upholstered Furniture - the final report on the CBUF research programme" - European Commission - Measurements and Testing Report EUR 16477 EN, Interscience Communications, London, UK, 1996, p. 65). From that, CBUF authors conclude that the critical fire safety considerations are based on the heat released once a "detectable fire size" of 50 kW is reached and they call the period from application of the ignition source until a detectable fire size is observed as the "ignition period". They further show that testing with an ignition source that is too small can lead to a false sense of safety, while testing with more severe ignition sources leads to very similar heat release rate curves. Clearly, the results in NIST TN 1449 seem to indicate that the ignition source used is too small to properly evaluate the mattresses.

While requiring improved fire performance for filled bed clothes, the issues are different when dealing with unfilled bed clothes, such as sheets, pillow cases and comforters. In this case, it is likely that the difference in fire performance between standard materials and those passing a fire test is of small importance in terms of fire hazard, unless the materials used are heavily fire retarded or have intrinsically good fire performance. It is not necessary in the 21st century to repeat the approach of the 1950s in terms of the regulation associated with the standard for the flammability of clothing textiles, 16CFR1630 (note that the blanket fire test referenced in the ANPRM, ASTM D 4151, is very similar to ASTM D 1230, which is the ASTM version of 16CFR 1630). Note that extremely flammable fabrics are not normally used for bed clothes. The fire performance of fabrics used for unfilled bed clothes is likely to be more a function of the fabric weight (areal density) than of the fabric composition, and improved fire performance (in terms of ignitability and flame spread) is likely to result from using heavier weight fabrics (see, e.g.: "Fabric Flammability: Survey of Flame Spread of Modern Fabrics", M.M. Hirschler and T. Piansay, Business Communications Company Seventh Ann. Conference on Recent Advances in Flame Retardancy of Polymeric Materials, May 20-22, 1996, Stamford, CT, Ed. M. Lewin, pp. 263-274, Norwalk, CT, 1996.). Of course, heavier fabrics will inevitably have higher fuel content (and thus higher heat release), but the difference should be small since almost any "normal" fabric for use in such applications would be easily ignitable. In summary, I suggest that regulation, if needed at all (and that is doubtful), follow the knowledge gained over many years from the use of the standard for the flammability of clothing textiles, 16CFR1630, so that fabrics with "normal flammability" are excluded from testing. The reason for this is that I believe that it is clear that regulation in the area of unfilled bed clothes has a very low probability of being very cost effective and there are many other areas where fire safety regulation is critical and would have a much greater impact.

Note that there are certain tests that can give results that are misleading when dealing with thermoplastic materials (including fabrics). For example, FMVSS 302 (used for fabrics in the automotive arena) is a test that can be passed by a material that melts away when exposed to a heat source such as a flame, without exhibiting good fire performance. Such fire tests should be avoided when regulating padding materials, since they are often thermoplastics: polyurethane foams and polyester fiberfill are both thermoplastic materials.

Melting and dripping with the formation of flaming drips is a severe fire hazard and should constitute a criterion for failing a system. When flaming drips occur they can cause the ignition of materials or products on the floor and spread the fire easily. Moreover, materials that melt and drip away from the flame (unless the flame is applied directly from above) "cheat" the test by appearing to meet the requirements but, in effect, not really "burning" under the test conditions, while they would burn under realistic fire conditions.

One area where there is a great potential need for regulation in terms of filled bed clothes is that of sleeping bags. Such products are routinely used in the near proximity of campfires and are heavily filled, but are not required to meet any fire standard. The industry used to require its members to meet the CPAI 75 fire test and then, when that was not kept up-to-date, they were told to meet ASTM F 1955. However, sleeping bag manufacturers are now not meeting any fire test and the potential exists for serious personal injuries from ignition of such bed clothes.

Thus, I recommend the following:

(I) ***Regulate filled bed clothes in a way that the padding/foam is required to meet a certain level of fire performance, for example at least the draft February 2002 version of CA TB 117, to limit the heat release possible in the bedroom.***

(ii) ***Ensure that the regulation cannot be met simply by using barriers.***

(iii) ***Avoid regulation based purely on minimal intensity flames, such as the fire tests in ASTM D 4151 of ASTM D 1230 (i.e. 16CFR1630), which cannot ensure good fire performance of the fabrics.***

(iv) ***Ensure that tests are not used that can be met by materials simply on the basis of melting away from the flame without exhibiting improved fire performance.***

(v) ***Do not regulate unfilled bed clothes.***

(vi) ***Regulate sleeping bags which are filled bed clothes, using the same pass-fail criteria and the same tests as other filled bed clothes.***

Yours sincerely

Dr. Marcelo M. Hirschler

Stevenson, Todd A.

From: GBHint@aol.com
Sent: Monday, March 28, 2005 10:14 PM
To: Stevenson, Todd A.
Cc: Tenney, Allyson; Neily, Margaret L.
Subject: Bedclothes ANPR

Dear sir/madam:

please find attached comments on the bedclothes ANPR. I apologize for being late with these comments, but I hope they can still be taken into account.

Yours faithfully

Marcelo M. Hirschler
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[redacted]

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Mattress & Bedclothes

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March 28, 2005

Office of the Secretary
Consumer Product Safety Commission
4330 East-West Highway
Bethesda, MD 20814

Re: Mattress NPR

Dear Sir or Madam:

Omega Point Laboratories, Inc. (OPL) appreciates the opportunity to comment on the Standard for the Flammability (Open Flame) of Mattresses and Mattress/Foundation Sets and the Standard to Address Open Flame Ignition of Bedclothes; Proposed Rules. *See* 70 FR at 2470 (Jan 13, 2005).

OPL is the leading tester of mattresses for flammability characteristics in the world having conducted test on thousands of mattresses and mattress mock-ups or components for compliance with CPSC and California Bureau of Home Furnishings cigarette ignition resistance requirements, U.S. Navy open flame resistance tests, NFPA and ASTM test standards, and now CA BHF Standard TB 603. OPL is accredited by the American Association for Laboratory Accreditation (A2LA), and the International Accreditation Service (IAS) as qualified to conduct all of these tests as well as many others. OPL is an active member in the ASTM Committee E05 on Fire Tests, the NFPA Fire Test Technical Committee, the ISO TC 92 on Fire Test Standards, and the American Council of Independent Laboratories (ACIL).

OPL proposes that the Commission require that test results to demonstrate compliance with the proposed rule only be obtained by an accredited, independent laboratory. The requirement to perform testing at a competent laboratory that does not have a potential conflict of interest is necessary to give the general public confidence that products indeed provide the level of safety that is intended by the proposed rule. There are several organizations that already provide accreditation services to fire testing laboratories and that could expand the scope of their accreditation to include the proposed mattress flammability test standard.

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ACCREDITED
No. 0689-01

ACIL defines an independent testing firm as a commercial entity engaged in analysis, testing, inspection, materials engineering, sampling, product certifying, research or development, and related consulting services for the public. An independent laboratory is not affiliated with any institution, company or trade group that might affect its ability to conduct investigations, render reports, or give professional counsel objectively and without bias.

As noted in the attached proposed amendment to the Proposed Rulemaking (see §16633.2 Definitions (r) and (s) and §1633.4 Prototype testing requirements (d),) OPL strongly urges the CPSC to mandate the use of accredited laboratories to support the Commission's mission—to reduce deaths and injuries associated with mattress fires by limiting the size of the fire generated by a mattress or mattress and foundation set.

Commissioner Moore has noted that the tests required to properly implement this standard are complex and sophisticated and the competence of the laboratories performing these tests must be assured. During the staff presentation on December 9, 2004, both he and Chairman Stratton expressed concern regarding ensuring that laboratories were qualified to conduct this test. In his press release announcing his vote for the proposed rule Commissioner Moore stated the following:

> *"The test itself is quite precise and it will be imperative that labs performing this test for mattress manufacturers learn to do it properly. I will be very interested to read the report of the inter-lab study on the NIST test methodology which will make findings on the repeatability and the reproducibility of the test. The accreditation of labs that will do this test will be important to ensuring that the tests are done correctly. This is important, not only for the safety of consumers, but also to ensure a fair application of the standard across the mattress industry. The choice of test facility should give a manufacturer/importer neither an advantage nor a disadvantage in meeting this standard."*

While the inter-lab study is not yet available to the public, accreditation is the nationally and internationally recognized system to provide that assurance. While most nations have a single accreditation and testing system, the U.S. free enterprise system provides multiple, competitive accreditors. As a means to assure the competency and impartiality of these accreditors the National Cooperation for Laboratory Accreditation (NACLA) has been established. This body accredits the Laboratory Accrediting Organizations, ensuring that they are in fact neutral and impartial as well as competent.

The independence of those conducting the tests is equally important. It is vital to consumer confidence that those assuring the conformance of the mattresses to the standard be free of any undue commercial, financial or other pressures that might influence their technical judgment.

We applaud the Commission for its initiative to ensure public health and safety in this important area and strongly urge you to consider these important amendments to the proposed rule. We also applaud the manufacturers for their support in establishing a reasonable and responsible safety requirement for their products aimed at the protection of the public.

Sincerely,

William E. Fitch, P.E., No. 55296
Executive Vice President

J. Response to Comments On the ANPR

On October 11, 2001, the Commission published an ANPR in the **Federal Register**. 66 FR 51886. During the comment period, the Commission received sixteen written comments from businesses, associations and interested parties representing various segments of the mattress and bedding industries. After the close of the comment period, the Commission received a number of additional comments, including one from the California Bureau of Home Furnishings and Thermal Insulation urging the Commission to adopt California's TB 603 as a federal standard. Significant issues raised by all of these comments are discussed below. [14&15]

5. *Comment*. Two commenters recognize the sophistication and complexity of the test method used in California TB 603 and potentially in a federal standard. They suggest that CPSC explore laboratory accreditation programs to insure test labs are properly qualified to conduct this complex test.

Response. The interlaboratory study may identify laboratory practices, equipment, and other related factors that must be controlled to ensure consistent and accurate test results. The report and findings of the study will be available to the public; and appropriate guidance can be provided to interested laboratories. While accrediting test laboratories is not a CPSC function, the Commission supports industry and commercial laboratory development of such a program.

PART 1633—STANDARD FOR THE FLAMMABILITY (OPEN-FLAME) OF MATTRESSES and MATTRESS AND FOUNDATION SETS

Subpart A—The Standard

Sec.
1633.1 Purpose, scope and applicability.
1633.2 Definitions.
1633.3 General requirements.
1633.4 Prototype testing requirements.
1633.5 Prototype pooling and confirmation testing requirements.
1633.6 Quality assurance requirements.
1633.7 Mattress test procedure.
1633.8 Findings.
1633.9 Glossary of terms.

Subpart B—Rules and Regulations

1633.10 Definitions.
1633.11 Records.
1633.12 Labeling.
1633.13 Tests for guaranty purposes, compliance with this section, and "one of a kind" exemption.

Subpart C—Interpretations and Policies

1633.14 Policy clarification on renovation of mattresses.
Figure 1 to Part 1633—Test Assembly, Shown in Furniture Calorimeter (Configuration A)
Figure 2 to Part 1633—Test Arrangement in 3.05m Â~ 3.66m (10 ft Â~ 12 ft) Room (Configuration B)
Figure 3 to Part 1633—Details of Horizontal Burner Head
Figure 4 to Part 1633—Details of Vertical Burner Head
Figure 5 to Part 1633—Details of Burner Stand-off
Figure 6 to Part 1633—Burner Assembly Showing Arms and Pivots (Shoulder Screws), in Relation to, Portable Frame Allowing Burner Height Adjustment
Figure 7 to Part 1633—Elements of Propane Flow Control for Each Burner
Figure 8 to Part 1633—Jig for Setting Mattresses and Foundation Sides in Same Plane
Figure 9 to Part 1633—Burner Placements on Mattress/Foundation
Figure 10 to Part 1633—Jig for Setting Burners at Proper Distances from Mattress/Foundation
Figure 11 to Part 1633—Diagrams for Glossary of Terms
Appendix A to Part 1633—Calibration of Propane Flowmeters
Appendix B to Part 1633—Burner Operation Sequence

Authority: 15 U.S.C. 1193, 1194.

Subpart A—The Standard

§ 1633.1 Purpose, scope, and applicability.

(a) *Purpose.* This Part 1633 establishes flammability requirements that all mattress and mattress and foundation sets must meet before sale or introduction into commerce. The purpose of the standard is to reduce deaths and injuries associated with mattress fires by limiting the size of the fire generated by a mattress or mattress and foundation set during a thirty minute test.

(b) *Scope.* (1) All mattresses and all mattress and foundation sets, as defined in § 1633.2(a) and § 1633.2(b), of any size, manufactured or imported after [the effective date of this standard] are subject to the requirements of the standard.

(2) One-of-a-kind mattresses and foundations may be exempted from testing under this standard in accordance with § 1633.13(c).

(c) *Applicability.* The requirements of this part 1633 shall apply to each "manufacturer" (as that term is defined in § 1633.2(i)) of mattresses and/or mattress and foundation sets which are manufactured for sale in commerce.

§ 1633.2 Definitions.

In addition to the definitions given in section 2 of the Flammable Fabrics Act as amended (15 U.S.C. 1191), the following definitions apply for purposes of this part 1633.

(a) *Mattress* means a resilient material or combination of materials enclosed by a ticking (used alone or in combination with other products) intended or promoted for sleeping upon.

(1) This term includes, but is not limited to, adult mattresses, youth mattresses, crib mattresses (including portable crib mattresses), bunk bed mattresses, futons, flip chairs without a permanent back or arms, sleeper chairs, and water beds or air mattresses if they contain upholstery material between the ticking and the mattress core. Mattresses used in or as part of upholstered furniture are also included; examples are convertible sofa bed mattresses, corner group mattresses, day bed mattresses, roll-away bed mattresses, high risers, and trundle bed mattresses. See § 1633.9 Glossary of terms, for definitions of these items.

(2) This term excludes mattress pads, mattress toppers (items with resilient filling, with or without ticking, intended to be used with or on top of a mattress), sleeping bags, pillows, liquid and gaseous filled tickings, such as water beds and air mattresses that contain no upholstery material between the ticking and the mattress core, upholstered furniture which does not contain a mattress, and juvenile product pads such as car bed pads, carriage pads, basket pads, infant carrier and lounge pads, dressing table pads, stroller pads, crib bumpers, and playpen pads. See § 1633.9 Glossary of terms, for definitions of these items.

(b) *Foundation* means a ticking covered structure used to support a mattress or sleep surface. The structure may include constructed frames, foam, box springs, or other materials, used alone or in combination.

(c) *Ticking* means the outermost layer of fabric or related material of a mattress or foundation. It does not include any other layers of fabric or related materials quilted together with, or otherwise attached to, the outermost layer of fabric or related material.

(d) *Upholstery material* means all material, either loose or attached, between the mattress ticking and the core of a mattress, if a core is present.

(e) *Edge seam* means the seam or border edge of a mattress or foundation that joins the top and/or bottom with the side panels.

(f) *Tape edge* means an edge seam made by using binding tape to encase and finish raw edges.

(g) *Binding tape* means a fabric strip used in the construction of some edge seams.

(h) *Seam thread* means the thread used to form stitches in construction features, seams, and tape edges.

(i) *Manufacturer* means an individual plant or factory at which mattresses and/or mattress and foundation sets are manufactured or assembled. For purposes of this Part 1633, an importer is considered a manufacturer.

(j) *Prototype* means a specific design of mattress and corresponding foundation, if any, which, except as permitted by § 1633.4(b), is the same in all material respects as, and serves as a model for, production units intended to be introduced into commerce.

(k) *Prototype pooling* means a cooperative arrangement whereby one or more manufacturers may rely on a prototype produced by a different manufacturer.

(l) *Production lot* means any quantity of finished mattresses or mattress and foundation sets that are produced in a production interval defined by the manufacturer, and are intended to replicate a specific prototype that complies with this part 1633.

(m) *Confirmation test* means a premarket test conducted by a manufacturer that is relying on a pooled prototype produced by another manufacturer. A confirmation test must be conducted in accordance with the procedures set forth in § 1633.7 to confirm that the manufacturer can produce a mattress and corresponding foundation, if any, that is identical to the prototype in all material respects.

(n) *Specimen* means a mattress and corresponding foundation, if any, tested under this part.

(o) *Twin size* means any mattress with the dimensions 38 inches (in) (96.5 centimeters (cm)) x 74.5 in. (189.2 cm), all dimensions may vary by Â} 1/2 in. (Â} 1.3 cm)

(p) *Qualified prototype* means a prototype that has been tested in accordance with § 1633.4(a) and meets the criteria stated in § 1633.3(b).

(q) *Core* means the main support system that may be present in a mattress, such as springs, foam, water bladder, air bladder, or resilient filling.

(r) *Accredited Laboratory* means a laboratory that has been accredited as competent to perform specific tests or specific types of tests in accordance with all elements of ISO/IEC Standard 17025 by an accreditation body which is recognized by the National Cooperation for Laboratory Accreditation (NACLA).

(s) *Independent Laboratory* means one that is able to demonstrate that it is impartial and that it and its personnel are free from any undue commercial, financial and other pressures which might influence their technical judgement. The third-party testing laboratory should not engage in any activities that may endanger the trust in its independence of judgement and integrity in relation to its testing activities. The third-party testing laboratory or its personnel cannot be the designer, manufacturer, supplier, installer, purchaser, owner, user nor maintainer of the item, material or products they test or calibrate nor the authorized representative of any of these parties.

§ 1633.3 General requirements.

(a) *Summary of test method*. The test method set forth in § 1633.7 measures the flammability (fire test response characteristics) of a mattress specimen by exposing the specimen to a specified flaming ignition source and allowing it to burn freely under well-ventilated, controlled environmental conditions. The flaming ignition source shall be a pair of propane burners. These

burners impose differing fluxes for differing times on the top and sides of the specimen. During and after this exposure, measurements shall be made of the time-dependent heat release rate from the specimen, quantifying the energy generated by the fire. The rate of heat release must be measured by means of oxygen consumption calorimetry.

(b) *Test criteria*. When testing the mattress or mattress and foundation set in accordance with the test procedure set forth in § 1633.7, the specimen shall comply with both of the following criteria:

(1) The peak rate of heat release shall not exceed 200 kilowatts ("kW") at any time within the 30 minute test; and

(2) The total heat release shall not exceed 15 megajoules ("MJ") for the first 10 minutes of the test. In the interest of safety, the test operator should discontinue the test and record a failure if a fire develops to such a size as to require suppression for the safety of the facility.

(c) *Testing of mattress and corresponding foundation*. Mattresses to be offered for sale with a foundation shall be tested with that foundation. Mattresses to be offered for sale without a foundation shall be tested alone.

(d) *Compliance with this standard*. Each mattress or mattress and foundation set sold or introduced into commerce after [the effective date of this standard] shall meet the test criteria specified in paragraph (b) of this section and otherwise comply with all applicable requirements of this part 1633.

§ 1633.4 Prototype testing requirements.

(a) Except as otherwise provided in paragraph (b) of this section, each manufacturer shall cause three specimens of each prototype to be tested according to § 1633.7 and obtain passing test results according to § 1633.3(b) before selling or introducing into commerce any mattress or mattress and foundation set based on that prototype, unless the manufacturer complies with the prototype pooling and confirmation testing requirements in § 1633.5.

(b) Notwithstanding the requirements of paragraph (a) of this section, a manufacturer may sell or introduce into commerce a mattress or mattress and foundation set based on a prototype that has not been tested according to § 1633.3(b) if that prototype differs from a qualified prototype only with respect to:

(1) Mattress/foundation size (*e.g.*, twin, queen, king);

(2) Ticking, unless the ticking of the qualified prototype has characteristics (such as chemical treatment or special fiber composition) designed to improve performance on the test prescribed in this part; and/or

(3) The manufacturer can demonstrate, on an objectively reasonable basis, that a change in any component, material, or method of construction will not cause the prototype to exceed the test criteria specified in § 1633.3(b).

(c) All tests must be conducted on specimens that are no smaller than a twin size, unless the largest size mattress or mattress and foundation set produced is smaller than a twin size, in which case the largest size must be tested.

(d) All tests conducted to establish compliance with this section shall be conducted by an accredited, independent laboratory.

(~~e~~d)(1) If each of the three specimens meets both the criteria specified in § 1633.3(b), the prototype shall be qualified. If any one (1) specimen fails to meet the test criteria of § 1633.3(b), the prototype is not qualified.

(2) Any manufacturer may produce mattresses and foundations, if any, for sale in reliance on prototype tests performed before [the effective date of this Standard], provided that such tests were conducted in accordance with all requirements of this section and § 1633.7 and yielded passing results according to the test criteria of § 1633.3(b).

§ 1633.5 Prototype pooling and confirmation testing requirements.

(a) *Prototype pooling.* One or more manufacturers may rely on a prototype produced by another manufacturer provided that:

(1) The prototype meets the requirements of § 1633.4; and

(2) The mattresses or mattress and foundation sets being produced based on the prototype have components, materials, and methods of construction that are identical in all material respects to the prototype except as otherwise permitted by § 1633.4(b).

(b) *Confirmation testing.* Any manufacturer ("Manufacturer B") producing mattresses or mattress and foundation sets in reliance on a prototype produced by another manufacturer ("Manufacturer A") shall cause to be tested in accordance with § 1633.7 at least one (1) specimen produced by Manufacturer B of each prototype of Manufacturer A upon which said Manufacturer B is relying. The tested specimen must meet the criteria under § 1633.3(b) before Manufacturer B may sell or introduce any mattresses or mattress and foundation sets based on the pooled prototype.

(c) *Confirmation test failure.* (1) If the confirmation test specimen fails to meet the criteria of § 1633.3(b), the manufacturer thereof shall not sell any mattress or mattress and foundation set based on the same prototype until that manufacturer takes corrective measures, tests a new specimen, and the new specimen meets the criteria of § 1633.3(b).

(2) If a confirmation test specimen fails to meet the criteria of § 1633.3(b), the manufacturer thereof must notify the manufacturer of the prototype of the test failure.

§ 1633.6 Quality assurance requirements.

(a) *Quality assurance.* Each manufacturer shall implement a quality assurance program to ensure that mattresses and mattress and foundation sets manufactured for sale are identical in all material respects to the prototype on which they are based. At a minimum these procedures shall include:

(1) Controls, including incoming inspection procedures, of all mattress and mattress and foundation set components and materials to ensure that they are identical in all material respects to those used in the prototype;

(2) Designation of a production lot that is represented by the prototype; and

(3) Inspection of mattresses and mattress and foundation sets produced for sale sufficient to demonstrate that they are identical to the prototype in all material respects.

(b) *Production testing.* Manufacturers are encouraged to conduct, as part of the quality assurance program, random testing of mattresses and mattress and foundation sets being produced for sale according to the requirements of §§ 1633.3 and 1633.7.

(c) *Failure of mattresses produced for sale to meet flammability standard.* (1) *Sale of mattresses and foundations.* If any test performed for quality assurance yields results which indicate that any mattress or mattress and foundation set of a production lot does not meet the criteria of § 1633.3(b), or if a manufacturer obtains test results or other evidence that a component or material or construction/assembly process used could negatively affect the test performance of the mattress as set forth in § 1633.3(b), the manufacturer shall cease production and distribution in commerce of such mattresses and/or mattress and foundation sets until corrective action is taken.

(2) *Corrective actions.* A manufacturer must take corrective action when any mattress or mattress and foundation set is manufactured or imported for sale fails to meet the flammability test criteria set forth in § 1633.3(b).

Subpart B—Rules and Requirements

§ 1633.10 Definitions.

(a) *Standard* means the Standard for the Flammability (Open-Flame) of Mattresses and Foundations (16 CFR part 1633, subpart A).

(b) The definition of terms set forth in § 1633.2 of the standard shall also apply to this subpart.

§ 1633.11 Records.

(a) *Test and manufacturing records— General.* Every manufacturer (including importers) or other person initially introducing into commerce mattresses or mattress and foundation sets subject to the standard, irrespective of whether guarantees are issued relative thereto, shall maintain the following records:

(1) Test results and details of each test performed by or for that manufacturer (including failures), whether for prototype, confirmation, or production, in accordance with § 1633.7. Details shall include: Location of test facility, type of test room, test room conditions, prototype or production identification number, and test data including the peak rate of heat release, total heat release in first 10 minutes, a graphic depiction of the peak rate of heat release and total heat release over time. These records shall include the name and signature of person conducting the test, the date of the test, and a certification by the person overseeing the testing as to the test results and that the test was carried out in accordance with the Standard. For confirmation tests, the identification number must be that of the prototype tested.

(2) Video and/or a minimum of eight photographs of the testing of each mattress or mattress and foundation set, in accordance with § 1633.4 (one taken before the test starts, one taken within 45 seconds of the start of the test, and the remaining six taken at five minute intervals, starting at 5 minutes and ending at 30 minutes), with the prototype identification number or production lot identification number of the mattress or mattress foundation set, date and time of test, and name and location of testing facility clearly displayed.

(b) *Prototype records.* In addition to the records specified in paragraph (a) of this section, the following records related to prototype testing shall be maintained:

(1) Unique identification number for the qualified prototype and a list of the unique identification numbers of each prototype based on the qualified prototype.

(2) A detailed description of all materials, components, and methods of construction for each prototype mattress or prototype mattress and foundation set. Such description shall include at a minimum, the specifications of all materials and components, name and location of each material and component supplier, and a physical sample of each material and component of the prototype.

(3) A list of which models and production lots of mattresses or mattress and foundation sets are represented by each prototype identification number.

(4) Where a prototype is not required to be tested before sale, pursuant to § 1633.4(b), the prototype identification number of the qualified prototype on which the mattress to be offered for sale is based, and, at a minimum, the manufacturing specifications and a description of the materials substituted and/or the size change, photographs or physical specimens of the substituted materials, and documentation based on objectively reasonable

criteria that the change in any component, material, or method of construction will not cause the prototype to exceed the test criteria specified in § 1633.3(b).

(5) Identification, composition, and details of the application of any flame retardant treatments and/or inherently flame resistant fibers or other materials employed in mattress components.

(c) *Pooling confirmation test records.* With respect to pooling confirmation testing, records shall be maintained to show:

(1) The prototype identification number assigned by the original prototype manufacturer.

(2) Name and location of the prototype manufacturer.

(3) Copy of prototype test records, and records required by paragraph (b)(2) of this section.

(4) A list of models of mattresses, and/ or mattress and foundation sets, represented by the prototype.

(d) *Quality assurance records.* In addition to the records required by paragraph (a) of this section, the following quality assurance records shall be maintained:

(1) A written copy of the manufacturer's quality assurance procedures.

(2) Records of any production tests performed. Production test records must be maintained and shall include in addition to the requirements of paragraph (a) of this section, an assigned production lot identification number and the identification number of the prototype associated with the specimen tested.

(3) For each prototype, the number of mattresses or mattress and foundation sets in each production lot based on that prototype.

(4) The duration of manufacture of the production lot, *i.e.*, the start and end dates of production of that lot.

(5) Component, material and assembly records. Every manufacturer conducting tests and/or technical evaluations of components and materials and/or methods of construction must maintain detailed records of such tests and evaluations.

(e) *Record retention requirements.* The records required under this section shall be maintained by the manufacturer (including importers) for as long as mattresses/foundations based on the prototype in question are in production and shall be retained for 3 years thereafter. Records shall be available upon the request of Commission staff.

§ 1633.12 Labeling.

(a) Each mattress or mattress/ foundation set subject to the standard shall bear a permanent, conspicuous, and legible label containing:

(1) Name of the manufacturer;

(2) Location of the manufacturer, including street address, city and state;

(3) Month and year of manufacture;

(4) Model identification;

(5) Prototype identification number for the mattress; and

(6) A certification that the mattress complies with this standard.

(b) The information required on labels by this section shall be set forth separately from any other information appearing on such label. Other information, representations, or disclosures, appearing on labels required by this section or elsewhere on the item, shall not interfere with, minimize, detract from, or conflict with the required information.

(c) No person, other than the ultimate consumer, shall remove or mutilate, or cause or participate in the removal or mutilation of, any label required by this section to be affixed to any item.

Stevenson, Todd A.

From: William E. Fitch [wm_fitch@ix.netcom.com]
Sent: Monday, March 28, 2005 7:29 PM
To: Stevenson, Todd A.
Subject: Mattress NPR

Omega Point Laboratories, Inc. hereby submits the attached comments on the proposed CPSC Mattress NPR.

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