



UNITED STATES
 CONSUMER PRODUCT SAFETY COMMISSION
 4330 EAST WEST HIGHWAY
 BETHESDA, MD 20814

BALLOT VOTE SHEET

DATE: DEC 21 2006

TO: The Commission
 Todd A. Stevenson, Secretary

THROUGH: Patricia M. Semple, Executive Director

FROM: Page C. Faulk, General Counsel
 Jeffrey R. Williams, Assistant General Counsel for Enforcement and Information
 Barbara E. Parisi, Attorney, OGC **BEP**

SUBJECT: HP 06-2, Petition Requesting Labeling Exemption for Mini Sparklers

Ballot Vote Due: JAN - 3 2007

Attached is a briefing package from the staff concerning a petition from Octavius Hunt Limited of Bristol, UK, requesting an exemption for mini sparkler packaging from a single line of the U.S. labeling requirement for sparklers that states, "For Outdoor Use Only." The staff recommends that the Commission deny the petition and direct staff to prepare a letter of denial to the petitioners.

Please indicate your vote on the following options.

I. Grant Petition HP 06-2 and direct staff to draft an ANPR.

 (Signature)

 (Date)

II. Deny Petition HP 06-2 and direct staff to prepare a letter of denial to the petitioners.

 (Signature)

 (Date)

III. Defer decision on Petition HP 06-2.

CPSC Hotline: 1-800-638-CPSC(2772) CPSC's Web Site: <http://www.cpsc.gov>

CPSC
 12/21/06
 PRODUCTS DIVISION

(Signature)

(Date)

IV. Take other action (please specify):

(Signature)

(Date)

Attachment: Briefing package on Petition HP 06-2.



UNITED STATES
 CONSUMER PRODUCT SAFETY COMMISSION
 4330 EAST WEST HIGHWAY
 BETHESDA, MD 20814

Memorandum

Date: DEC 21 2006

TO : The Commission
 Todd A. Stevenson, Secretary

THROUGH: Page C. Faulk, General Counsel *PCF*
 Patricia M. Semple, Executive Director *PS*

FROM : Jacqueline Elder, Assistant Executive Director
 Office of Hazard Identification and Reduction
 Jonathan D. Midgett, Ph.D. *JDM*
 Project Manager, Directorate for Engineering Sciences (301-504-7692)

SUBJECT : HP 06-2, Petition Requesting Labeling Exemption for Mini Sparklers

Background

On June 27, 2006, the U. S. Consumer Product Safety Commission's (CPSC) Office of the General Counsel docketed a petition (HP 06-2) by Octavius Hunt Limited of Bristol, UK, under the Federal Hazardous Substances Act, 15 U.S.C. 1261-1278. The petition requests an exemption for mini sparkler packaging from a single line of the U.S. labeling requirement for sparklers in 16 CFR 1500.14 that states, "For Outdoor Use Only." The CPSC solicited public comments on the petition from June 27 to August 28, 2006 (71 FR 36524).

The Product

Sparklers consist of hand-held metal, plastic, or bamboo sticks coated with pyrotechnic material that burns and emits showers of sparks when lit. Sparklers can burn at temperatures over 1500 degrees Fahrenheit (816 degrees Celsius). All sparklers marketed in the U.S. must bear the following statements:

- CAUTION**
- Use only under (close) adult supervision.
 (Use of the word close is optional.)
 - For outdoor use only.
 - Do not touch glowing wire (or do not touch hot plastic, wood, etc., if more descriptive).
 - Hold in hand with arm extended away from body.
 - Keep burning end or sparks away from wearing apparel or other flammable material.
- (From 16 CFR 1500.14)

Octavius Hunt Limited sells an "indoor sparkler," also referred to as a mini sparkler, with a net pyrotechnic content of less than or equal to 1.5 grams, that conforms to the British Standard for fireworks (BS 7114 Part 2:1988). Under the British Standard, the composition of indoor

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sparklers differs from outdoor sparklers. Indoor sparklers must pass more stringent tests that require burning the sparkler 200 mm above a 1-meter square paper sheet without leaving holes or scorch marks on the paper. Outdoor sparklers must have a net pyrotechnic content of less than or equal to 10 grams and may leave scorch marks on the paper that is placed 1200 mm beneath the sparkler during testing. The paper cannot ignite during the test, but the sparkler may scorch the paper.

Octavius Hunt Limited notes that burning outdoor sparklers indoors causes concern over burning residues or sparks dropping off and igniting carpets or furniture, but believes that the sampling and testing protocols required by BS 7114 ensure that indoor sparklers will not produce the same concerns. The petitioner also notes that they would make their current 4-inch long mini sparklers longer in order to meet the 4-inch handle length in the U.S. standard for hand-held fireworks devices (16 CFR 1507.7). The Office of Compliance and Field Operations has interpreted the 4-inch handle length requirement in 16 CFR 1507.7 not to apply to sparklers.

The sample mini sparkler metal packaging tubes sent by the petitioner have several lines of warnings and instructions on the packaging (capitals, punctuation, and line returns are approximately as shown below):

SPARKLERS FOR INDOOR USE
FIREWORKS SUITABLE FOR INDOOR USE MUST BE SOLD AS PACKAGED. HAND HELD SPARKLERS.
WARNINGS: USE ONLY UNDER ADULT SUPERVISION. KEEP AWAY FROM EYES AND SKIN.
KEEP AWAY FROM CLOTHING ETC. NOT TO BE GIVEN TO CHILDREN UNDER 5 YEARS OF AGE.
SPENT SPARKLERS REMAIN VERY HOT.
INSTRUCTIONS: TO BE LIT SINGLY. HOLD THE HANDLE AT ARMS
LENGTH. HOLD OVER HEAT PROOF SURFACE. MADE IN CZECK REPUBLIC.
PACKED IN THE U.K. COMPLIES WITH BS7114:PART 2:1988.

Manufacturers package mini sparklers in various ways such as paper sleeves, cardstock envelopes, and cellophane wrappers. Mini sparklers afford many uses, ranging from hand-held fireworks displays to food decorations. They come in various shapes, like hearts, stars or straight spikes. Merchants in the UK market mini sparklers for displays at birthdays, weddings, and other celebrations. Their advertisements show mini sparklers in party favors, cakes, floral arrangements, and cocktails. An internet review revealed a few U.S. firms promoting indoor uses for sparklers, but sales information on the volume of mini sparklers sold in the U.S. is unavailable (Karels, 2006).

Hazard and Risk Analysis

Mini sparklers burn quickly once lit and burn out in about 10 to 15 seconds. Users can ignite them at any point along their length. When burning, the halo of sparks around the wire shoots about 3 to 5 inches from the wire. Staff tested 4-inch long mini sparkler samples (heart-shaped and straight) with wire handles. Samples of heart-shaped sparklers burned slightly hotter than the straight sparklers as measured by a thermal imaging camera that showed temperatures reaching 800 to 1600 degrees Fahrenheit. Various portions of the wire handle heated up during the burn to about 80 to 130 degrees Fahrenheit. The hottest portion of the handle was the area closest to the flames and the handle temperature decreased farther away from the burn. Holding the flaming sparkler between thumb and forefinger with the remaining fingers curled in a loose fist, a user will feel the heat from the flame and in the wire as the burn progresses. The last few seconds of

burn are the hottest if the sparkler burns downwards from the tip, therefore burning toward the handle. The wire handle can heat up enough at a point about a half of an inch away from the sparkler flame to produce a painful sensation in the user's fingers. If the user is holding the wire consistently in the same place, the temperature rises slowly, over a few seconds. If a user switches hands or changes finger position on the wire during the burn, he/she may suddenly encounter extremely hot wire. A moderate likelihood of encountering an unexpectedly hot portion of wire exists with any user of this product during a burn or for a few moments after the last spark, especially if the user tries to switch hands during the burn. Children are especially likely not to anticipate the intense heat on the handle of the sparkler. Having longer handles as the petitioner has proposed will help lower the likelihood of feeling intense heat, but will not eliminate this risk that is common to any metal sparkler. Bamboo or plastic handles will not transmit heat as well as metal substrates, but could still generate uncomfortable heat.

Octavius Hunt's mini sparkler package recommends the product for ages 5 years and up. Five-year old children will not be likely to understand how hot the sparkler will get during a burn. However, they will probably understand that the wire farther down the handle will be cooler and will be likely to alter their holding position to correct any discomfort that they feel from the heat. In general, heat conductive materials like metal produce a painful sensation in adult hands when they reach about 120 degrees F. Many, possibly most, 5 year olds would find the heat generated by the sparkler at a position about 1 inch from the sparkler flame to be uncomfortable, possibly painful, even though the temperature at the handle's midpoint is less than 120 degrees F. If children feel discomfort from the heat, they are likely to reposition their grip on the handle reflexively or drop the sparkler.

Users must be careful not to drop the sparkler when repositioning their grip. When repositioning their grip, the chances of a user accidentally touching a hotter portion of the wire are higher. Some users may reflexively drop the sparkler if they unexpectedly touch a hot spot. Some children may accidentally drop the sparkler because they find the heat uncomfortable. Some children may purposely put it down without foreseeing any of the consequences of placing a burning sparkler on furniture, clothing, or carpeting. Even if adults are closely supervising children, they may not be able to prevent children from reflexively dropping the product. Catching the product if it falls is extremely unlikely and potentially injurious. These kinds of mishaps are common to all sparklers whether used indoors or outdoors.

Mini sparklers are also intended for use in decorations. Decorative sparklers in cakes or table arrangements can come into close proximity to table cloths, napkins, paper plates, flower decorations, and clothing. The only public commenter, John Biechman of the National Fire Protection Association (NFPA), noted that they have a record of an unspecified sparkler in a cupcake starting an apartment fire that caused \$1.6 million of property damage. The CPSC has a record of another unspecified sparkler used as a Christmas tree decoration starting a serious fire. Compared to using sparklers outdoors, the proximity to flammable materials indoors significantly increases the potential for damage and injury when mishaps occur indoors with lit sparklers.

According to estimates from the National Electronic Injury Surveillance System (NEISS), 1,374 sparkler-related injuries were treated in emergency departments during 2005; an additional 1,609

injuries treated at non-emergency medical settings during 2005 have been estimated using the CPSC's Injury Cost Model (ICM) (Karels, 2006). Sparkler-related injuries cost society an estimated \$80.3 million in 2005 (Karels, 2006). About 50% of all sparkler-related injuries treated in emergency rooms involved children under age 6 years; about 60% of children's injuries involved burns to the hands and feet (Karels, 2006). Sparkler-related children's injuries totaled an estimated \$31.5 million (Karels, 2006). These incidents are not strictly comparable to mini sparklers because indoor sparklers have shorter burn durations, less pyrotechnic weight, and emit fewer residues. However, mini sparklers burn at the same temperature as outdoor sparklers and will elicit very similar play behaviors, uses, and mishaps from consumers, likely involving burns to the hands and feet of children under the age of 6 years. Children may accidentally drop them or brush them against clothing. The same accident scenarios that occur outside with sparklers will likely occur inside, but with an additional increased risk for house fires and property damage.

Public Comment

The CPSC received one public comment during the 60-day comment period. John Biechman reports that the National Fire Protection Association (NFPA) opposes granting the petition. He notes (without citation) that sparklers, fountains and novelties accounted for two of every five fireworks injuries reported to hospital emergency rooms in 2004, including most of the injuries to pre-school children. Mr. Biechman also argues that the scorch test in the British Standard does not reflect a realistic use pattern for sparklers in cakes, noting that paper plates and tablecloths will be closer to the sparklers than the 200 mm required in the British test. In the NFPA's opinion, the suggested change in the labeling requirements for sparklers would encourage and increase indoor use of sparklers.

Regulatory Options/Recommendation

The Commission could grant the petition for a labeling exemption for mini sparklers and begin rulemaking, deny the petition and direct the staff to send a denial letter to the petitioner, or defer a decision on the petition.

Staff does not believe the use of a mini sparkler indoors constitutes a "minor hazard," as defined by section 3(c) of the FHSA, which would warrant an exemption from current labeling regulations, for the following reasons:

1. the record of injuries associated with outdoor sparklers which are used in similar ways and burn at similar high temperatures as indoor sparklers (>1500 degrees F), and the likelihood that indoor sparklers will produce similar mishaps as outdoor sparklers, and
2. the expected increased risk of burns and residential fires associated with sparklers used indoors.

Therefore, staff recommends that the Commission deny the petition and direct the staff to send a denial letter to the petitioner.

References

Karels, T. R. (2006). Mini sparkler petition. Memorandum to Jonathan D. Midgett, Project Manager. U. S. Consumer Product Safety Commission, Bethesda, MD.



UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
WASHINGTON, DC 20207

Memorandum

Date: November 28, 2006

TO : Jonathan D. Midgett, ESHF
Project Manager, Mini Sparkler Petition

THROUGH: Gregory R. Rodgers, Ph.D, Associate Executive Director, Economic Analysis *GBR*
Deborah V. Aiken, Ph.D, Senior Staff Coordinator *DVA*

FROM : Terrance R. Karels, Directorate for Economic Analysis *TRK*

SUBJECT : Mini Sparkler Petition

Sparklers marketed in the U.S. are required by Section 3(b) of the Federal Hazardous Substances Act to bear a label stating that the products are for outdoor use only. In May 2006, the Commission was petitioned by Octavius Hunt Limited (Bristol, UK) to exempt mini sparklers from the U.S. labeling requirements for sparklers. The exemption would allow the company to remove the term "For Outdoor Use Only" from its packaging for these products. The purpose of this memo is to provide information on the estimated societal costs associated with sparkler injuries, and comment on the extent of sales in the United States.

Available data from the National Electronic Injury Surveillance System (NEISS¹) do not specifically report injuries associated with mini sparklers. If there are any injuries associated with mini sparklers, they would be included with injuries in the broader category for "sparklers." For 2005, the NEISS estimate for the number of sparkler-related injuries treated in emergency departments was 1,374. Information available from the CPSC's Injury Cost Model (ICM) indicates that an additional 1,609 injuries were treated by medical staff outside of emergency department settings.²

¹ The NEISS is a probability sample of U.S. hospitals with emergency departments, and is considered to be the primary injury data collection source for the CPSC.

² The ICM is an analytical tool designed to measure the direct and indirect costs associated with product-related injuries. The ICM is structured to measure the four basic categories of injury costs: medical costs, work losses, pain and suffering, and product liability and legal costs.

Emergency room treated injuries associated with sparklers involving children under age 6 were estimated at 687 for 2005. (This age group accounts for about 50% of all sparkler-related injuries.) Based on the ICM, an estimated 838 injuries to that group would have been treated by medical staff outside an emergency room setting. Of these, about 60 percent involved burns to the hand and foot.

The ICM estimates that, in 2005, the average cost of injuries associated with sparklers was \$26,248, representing a total cost of \$80.3 million (including those injuries treated in hospital emergency departments and doctor or clinic visits). The estimated cost of injuries to children under the age of 6 was about \$20,665. Thus, for the 1,525 total medically attended injuries to children under the age of 6, the total estimated cost in 2005 was about \$31.5 million. As with injuries, the estimated societal costs apply to all sparklers, and are not specific to mini sparklers.

Mini sparklers are currently offered for sale in the U.S., but information on the amount of sales is unavailable; thus, it is not possible to estimate the proportion of the sparkler market that mini sparklers constitute. In addition to the petitioner, an internet search revealed other U.S. firms promoting sparklers for indoor use.